Attachment 2

Academic Affairs

Consent Agenda Supplemental Information - Curriculum Proposals

In order by College, not by the Curriculog Agenda

https://kstate.curriculog.com/agenda:604/form

	Concurrent Mechanical Engineering (B.S.) and Business Administration (MBA)(new) Electrical Engineering (EE) (B.S.) Leadership Technical Studies Certificate Program (discontinue) Mechanical Engineering (ME) (B.S.)	 Page 166 Page 169 Page 170
Human Ecology	Community Health Certificate (new) Dietetics (B.S. Early Childhood Education (B.S.) Family and Community Services (M.S.) (discontinue full degree program) Family Studies and Human Services (M.S.) (new emphasis in Family and Community Services) Family and Consumer Sciences Teacher Licensure Program (B.S.) Kinesiology (B.S.)	Page 174 Page 178 Page 188 Page 191 Page 193 Page 195 Page 201
Technology and Aviation	Unmanned Aircraft Systems Minor (RUAS)	Page 205
Veterinary Medicine	Food Animal Veterinary Certificate (new)	Page 207

Agriculture

Agricultural Communications and Journalism – Agricultural Option
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13974&returnto=7394
Contact person: Jason Ellis

FROM:		TO:	
Core (15 credit hours)		**Core (15 credit hours)**	
ENGL 100 Expository Writing I	3	ENGL 100 Expository Writing I	3
ENGL 200 Expository Writing II	3	ENGL 200 Expository Writing II	3
MATH 100 College Algebra	3	MATH 100 College Algebra	3
COMM 106 Public Speaking I	3	COMM 106 Public Speaking I	3
ECON 110 Principles of Macroeconomics	3	ECON 110 Principles of Macroeconomics	3
Sciences (11-12 credit hours)		**Sciences (11-12 credit hours)**	
Chemistry	4	Chemistry	4
CHM 110 & 111, 210		CHM 110 & 111, 210	
BIOL 198 Principles of Biology	4	BIOL 198 Principles of Biology	4
Science Elective – 1 course (minimum 3 hours)	3-4	Science Elective – 1 course (minimum 3 hours)	3-4
~~CHM; BIOCH; BIOL; PHYS 113, 213; ASI 400, 500, 533; AGRON 335, 360, 375/385~~		See adviser for approved list	
Analytical Reasoning (3 credit hours)		**Analytical Reasoning (3 credit hours)**	
~~STAT 325-799, MATH 150-599, AGCOM 425, MC 316, 396~~		See adviser for approved list	
Humanities and Social Sciences (6 credit hours)		**Humanities and Social Sciences (6 credit hours)**	
~~One course must be from K-State 8 Human Diversity Choose from: AMETH 160 to 501; ANTH; ARCH 301; ART; DANCE; ECON 120 to 799; ENGL 150, 210 to 299 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799; ENVD 250, 251, 655, 670, 671; FSHS; GEOG 100, 200, 201, 300 to 799; GWSS; HDFS; HIST; Modern Language; MUSIC; PHILO; POLSC; PSYCH; SOCIO; SOCWK; THTRE~~		See adviser for approved list	
Business, Economics (9 credit hours)		**Business, Economics (9 credit hours)**	
MKTG 400 Introduction to Marketing	3	MKTG 400 Introduction to Marketing	3
Business, Economics Elective ≥300	3	Business, Economics Elective ≥300	3
~~AGEC 300-799; ENTRP 300-799; ACCTG 300-799; FINAN 300-799; MKTG 300-799; MGMT 300-799; ECON 300-799; PFP 300-799~~		See adviser for approved list	
Business, Economics Elective	3	Business, Economics Elective	3
~~AGEC; ENTRP; ACCTG; FINAN; MKTG; MGMT; ECON; PFP~~		See adviser for approved list	
Agriculture (23-26 credit hours)		**Agriculture (23-26 credit hours)**	
Foundations – 3 courses	8-11	Foundations – 3 courses	8-11
		See adviser for approved list	
		Advanced	15
		Minimum 9 hours	
		See adviser for approved list	
		Minimum 6 hours	
		See adviser for approved list	
		Communications (47 credit hours)	
		Journalism and Mass Communications Core – 13 hours	
		MC 110 Mass Communication in Society	3
		MC 130 Writing Conventions & Mechanics	1
		Principles course	3
		See adviser for approved list	

~~Must be from at least 2 programs~~
~~Choose from: AGEC 120, 121; AGED 300; AGRON 220, 305; ASI 102, 350; ATM 160; ENTOM 300, 301, 305, 312, 320; FDSCI 302; GRSC 101, 150; HORT 201; PLPTH 500; PMC 275~~

Advanced 15
Minimum 9 hours
~~AGCOM 450; AGEC 300-799; AGED 300-799; AGRON 300-799; ASI 300-799; ATM 300-799; ENTOM 300-799; FDSCI 300-799; FOR 300-799; GRSC 300-799; HORT 300-799; PLPTH 300-799; PMC 300-799~~
Minimum 6 hours
~~AGCOM 450; AGEC; AED; AGRON; ASI; ATM; ENTOM; FDSCI; FOR; GRSC; HORT; PLPTH; PMC~~

Communications (47 credit hours)

Journalism and Mass Communications Core – 13 hours
- MC 110 Mass Communication in Society 3
- MC 130 Writing Conventions & Mechanics 1
- Principles course 3
  - ~~Choose from: MC 120, 160, 180~~
- Writing course 3
  - ~~Choose from: MC 200, 221, 280~~
- MC 340 Editing 3

Agricultural Communications Core – 28 hours
- Foundations
  - AGCOM 110 Intro to Ag Comm ~~3~~
  - AGCOM 210 Layout and Design Principles 3
  - AGCOM 300 Careers in Ag Comm 3
- Skill Development
  - AGCOM 345 Appl of Layout and Printing 3
  - AGCOM 435 Video in Agriculture and Food 3
  - AGCOM 590 New Media Technologies 3
- Advanced Strategy and Application
  - AGCOM 410 Agricultural Student Magazine 3
  - AGCOM 550 Internship in Ag Comm 1
  - AGCOM 610 Crisis Communications 3
- Capstone
  - AGCOM 600 Capstone Seminar in Ag Comm 3

Communications Electives 6
~~AGCOM 300-799, CNRES 531, COMM 320-799~~

Unrestricted Electives 2-6

Total credit hours required for graduation: 120

- Writing course 3
  - See adviser for approved list
- MC 340 Editing 3

Agricultural Communications Core – 28 hours
- Foundations
  - AGCOM 100 Ag Comm Orientation 1
  - AGCOM 110 Intro to Ag Comm 2
  - AGCOM 210 Layout and Design Principles 3
  - AGCOM 300 Careers in Ag Comm 3
- Skill Development
  - AGCOM 345 Appl of Layout and Printing 3
  - AGCOM 435 Video in Agriculture and Food 3
  - AGCOM 590 New Media Technologies 3
- Advanced Strategy and Application
  - AGCOM 410 Agricultural Student Magazine 3
  - AGCOM 550 Internship in Ag Comm 1
  - AGCOM 610 Crisis Communications 3
- Capstone
  - AGCOM 600 Capstone Seminar in Ag Comm 3

Communications Electives 6
See adviser for approved list

Unrestricted Electives 2-6

Total credit hours required for graduation: 120

RATIONALE: The removal of "restricted electives" lists from the curriculum is to ease the advising and curriculum process. This list will be available from advisers.

The addition of AGCOM 100 is to separate orientation content from AGCOM 110, making it a true introductory course.

IMPACT**:** These changes have no impact to other programs as the entire restricted electives lists as previously listed are included on the advising guides.

A potential impact for the AGCOM 110 change would be with JMC because AGCOM 110 is listed as a sub for MC 131 and 132 in the writing academy courses. Steve Smethers was contacted Sept 14, 2018.

Subject: Re: AGCOM 110 course change
Date: Monday, October 1, 2018 at 2:59:32 PM Central Daylight Time
From: Steven Smethers
To: Jason Ellis

Jason, the A.Q. Miller School faculty endorses your proposed action on Ag Comm 110. A year ago, we designed the MC 130-132 classes to be flexible to accommodate your needs, and we have long understood that ACJ would only require MC 130 to be taught.

I'm sorry it took so long for me to get back to you!

J. Steven Smethers, Ph.D.
Associate Director for Undergraduate Studies
A.Q. Miller School of Journalism and Mass Communications
104-B Kedzie Hall
Kansas State University
Manhattan, Kansas 66506
785-532-5286 OFFICE

Agricultural Communications and Journalism – Environmental Option

Contact person: Jason Ellis
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13975&returnto=7394

FROM:		TO:	
CORE	**15**	**CORE**	**15**
ENGL 100 Expository Writing I	3	ENGL 100 Expository Writing I	3
ENGL 200 Expository Writing II	3	ENGL 200 Expository Writing II	3
MATH 100 College Algebra	3	MATH 100 College Algebra	3
COMM 106 Public Speaking I	3	COMM 106 Public Speaking I	3
ECON 110 Principles of Macroeconomics	3	ECON 110 Principles of Macroeconomics	3
SCIENCES	**18**	**SCIENCES**	**18**
Chemistry	4	**Chemistry**	4
Select 4 hours		**Select 4 hours**	
CHM 110 & 111, 210		CHM 110 & 111, 210	
Biological Sciences		**Biological Sciences**	
BIOL 198 Principles of Biology	4	BIOL 198 Principles of Biology	4
BIOL 303 Ecology of Environmental Problems	3	BIOL 303 Ecology of Environmental Problems	3
Physical Science		**Physical Science**	
Select 3 hours	3	**Select 3 hours**	3
~~AGRON 335; BIOCH 110, 265, 521; CHM 230,350, 531; GEOG 221,340,508,720,725,730; GEOL 100,105, 115,125,506~~		See adviser for approved list	
Select 4 hours	4	**Select 4 hours**	4
~~PHYS 113 Gen Physics, PHYS 115 Descriptive Physics, PHYS 101 & 103 Physical World/Lab~~		See adviser for approved list	
ANALYTICAL REASONING	**3**	**ANALYTICAL REASONING**	**3**
Minimum 3 hours		**Minimum 3 hours**	
~~STAT 325-799, MATH 150-599, AGCOM 425, MC 316, MC 396~~		See adviser for approved list	
HUMANITIES AND SOCIAL SCIENCES	**6**	**HUMANITIES AND SOCIAL SCIENCES**	**6**
Minimum 6 hours		**Minimum 6 hours**	
~~AMETH 160 to 501; ANTH; ARCH 301; ART; DANCE; ECON 120 to 799; ENGL 150, 210 to 299 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799; ENVD 250, 251, 655, 670, 671; FSHS; GEOG 100, 200, 201, 300 to 799; GWSS; HIST; Modern Language; MUSIC; PHILO; POLSC; PSYCH; SOCIO; SOCWK; THTRE~~		See adviser for approved list	
BUSINESS AND ECONOMICS	**6**	**BUSINESS AND ECONOMICS**	**6**
MKTG 400 Intro to Marketing	3	MKTG 400 Intro to Marketing	3
Business and Economics Elective	3	**Business and Economics Elective**	3
Minimum 3 hours		**Minimum 3 hours**	
~~ACCTG 231 TO 799; AGEC 308, 315, 318, 410 TO 712; ECON 300 TO 799; FINAN 250 TO 799; MANGT 366 TO 799; MKTG 450 TO 799~~		See adviser for approved list	

AGRICULTURE & NATURAL RESOURCES	**24**
AGEC 525 NR/Env Econ	3
GENAG 582 NR/Environment Science Project	3
Introductory Agriculture Electives	
AGEC 120 AgEcon/Agbus	3
AGRON 305 Soils	4
PMC 275 Intro NR Mgmt	3
Select 1 course	3-4
~~AGRON 220 OR HORT 201; ASI 102; ATM 160; ENTOM 300,301,305,312, 313,320; FDSCI 302; PLPTH 500~~	
Agriculture and Natural Resources Electives	4-5
~~AGRON 330, 335, 375, 501,515,635,645,746; ATM 558, 653,661; ENTOM 680,692~~	
COMMUNICATIONS	**41**
Journalism and Mass Communications Core	13
MC 110 Mass Communication in Society	3
MC 130 Writing Conventions & Mechanics	1
MC 340 Editing	3
Principles Course	3
Select 1 course	
~~MC 120, 160, 180~~	
Writing Course	3
Select 1 course	
~~MC 200, 221, 280~~	
Agricultural Communications Core	28
Foundations	
AGCOM 110 Intro to Ag Comm	~~3~~
AGCOM 210 Layout and Design Principles	3
AGCOM 300 Careers in Ag Comm	3
Skill Development	
AGCOM ~~305~~ Appl of Layout and Design	3
AGCOM 435 Video in Agriculture and Food	3
AGCOM 590 New Media Technologies	3
Advanced Strategy and Application	
AGCOM 712: Env Comm	3
AGCOM 550 Internship in Ag Comm	1
AGCOM 610 Crisis Communications	3
Capstone	
AGCOM 600 Capstone Seminar in Ag Comm	3
UNRESTRICTED ELECTIVES	**7**
Total credit hours required for graduation:	**120**

AGRICULTURE & NATURAL RESOURCES	**24**
AGEC 525 NR/Env Econ	3
GENAG 582 NR/Environment Science Project	3
Introductory Agriculture Electives	
AGEC 120 AgEcon/Agbus	3
AGRON 305 Soils	4
PMC 275 Intro NR Mgmt	3
Select 1 course	3-4
<u>See adviser for approved list</u>	
Agriculture and Natural Resources Electives	4-5
<u>See adviser for approved list</u>	
COMMUNICATIONS	**41**
Journalism and Mass Communications Core	13
MC 110 Mass Communication in Society	3
MC 130 Writing Conventions & Mechanics	1
MC 340 Editing	3
Principles Course	3
Select 1 course	
<u>See adviser for approved list</u>	
Writing Course	3
Select 1 course	
<u>See adviser for approved list</u>	
Agricultural Communications Core	28
Foundations	
<u>AGCOM 100 Ag Comm Orientation</u>	<u>1</u>
AGCOM 110 Intro to Ag Comm	<u>2</u>
AGCOM 210 Layout and Design Principles	3
AGCOM 300 Careers in Ag Comm	3
Skill Development	
AGCOM <u>345</u> Appl of Layout and Design	3
AGCOM 435 Video in Agriculture and Food	3
AGCOM 590 New Media Technologies	3
Advanced Strategy and Application	
AGCOM 712: Env Comm	3
AGCOM 550 Internship in Ag Comm	1
AGCOM 610 Crisis Communications	3
Capstone	
AGCOM 600 Capstone Seminar in Ag Comm	3
UNRESTRICTED ELECTIVES	**7**
Total credit hours required for graduation:	**120**

RATIONALE: The removal of "restricted electives" lists from the curriculum is to ease the advising and curriculum process. This list will be available from advisers.

The addition of AGCOM 100 is to separate orientation content from AGCOM 110, making it a true introductory course.

The course change from AGCOM 305 to 345 is to align with the approved course number.

IMPACT**:** These changes have no impact to other programs as the entire restricted electives lists as previously listed are included on the advising guides.

A potential impact for the AGCOM 110 change would be with JMC because AGCOM 110 is listed as a sub for MC 131 and 132 in the writing academy courses. Steve Smethers was contacted Sept 14, 2018.

Subject: Re: AGCOM 110 course change
Date: Monday, October 1, 2018 at 2:59:32 PM Central Daylight Time
From: Steven Smethers
To: Jason Ellis

Jason, the A.Q. Miller School faculty endorses your proposed action on Ag Comm 110. A year ago, we designed the MC 130-132 classes to be flexible to accommodate your needs, and we have long understood that ACJ would only require MC 130 to be taught.

I'm sorry it took so long for me to get back to you!

J. Steven Smethers, Ph.D.
Associate Director for Undergraduate Studies
A.Q. Miller School of Journalism and Mass Communications
104-B Kedzie Hall
Kansas State University
Manhattan, Kansas 66506
785-532-5286 OFFICE

B.S. in Agriculture: Agricultural Education
Contact person: Jonathan Ulmer
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13790&returnto=7394

Rationale: Curriculum changes are being proposed to address issues that were seen since our move to 120 credit hours. The wording of the Humanities and Social Sciences requirements have been changed to reflect the challenges in advising. While students will still be required to take classes in these sections outside of the College of Agriculture, it will not be required that these courses meet a K-State 8 requirement, although it will still be recommended. Also, in the Social Science requirement, PSYCH 110 has been added as an option to HDFS 110, this was done to align with the Department of Curriculum and Instruction. EDSEC 376 was removed and replaced with EDCI 320, C&I deleted 376 and replaced it with 320. The lists of restricted electives are being removed to ease the advising and curriculum process. The list will be available from advisors. Free electives are being changed from 3 hours to 0-3 hours to reflect the variability in some of the course choices that students will have in enrollment. These changes have been reviewed and approved by the Agricultural Education Advisory Committee.

Impact Statement: The moving of the list of restricted electives will not impact the enrollment in the approved classes. The addition of PSYCH 110 may have an impact on Psychological Sciences and Human Development and Family Studies. Both departments have been contacted.

FROM:	TO:
Communications (8 credit hours) COMM 105 – Public Speaking (2) ENGL 100 – Expository Writing I (3) ENGL 200 – Expository Writing II (3)	**Communications (8 credit hours)** COMM 105 – Public Speaking (2) ENGL 100 – Expository Writing I (3) ENGL 200 – Expository Writing II (3)
Humanities (3 credit hours) Literature or Fine Arts (3) ~~Must be tagged as meeting the K-State 8 Aesthetic requirement. Must be taken outside of the College of Agriculture.~~	**Humanities (3 credit hours)** Literature or Fine Arts (3) See advisor for approved list
Social Sciences (6 credit hours) HDFS 110 Introduction to Human Development (3)	**Social Sciences (6 credit hours)** HDFS 110 Introduction to Human Development (3) OR PSYCH 110 General Psychology
Global Issues and Perspectives Elective (3) ~~Must be tagged as meeting the K-State 8 Global Issues and Perspectives requirements. Must be taken outside of the College of Agriculture.~~	Global Issues and Perspectives Elective (3) See advisor for approved list
Quantitative Science (6 credit hours)	**Quantitative Science (6 credit hours)**

MATH 100 – College Algebra (3) OR Higher level math course (3)	MATH 100 – College Algebra (3) OR Higher level math course (3)
STAT 325 – Introduction to Statistics (3)	STAT 325 – Introduction to Statistics (3)
Natural Sciences (8 credit hours)	**Natural Sciences (8 credit hours)**
BIOL 198 – Principles of Biology (4)	BIOL 198 – Principles of Biology (4)
CHM 110 – General Chemistry (3)	CHM 110 – General Chemistry (3)
CHM 111 – General Chemistry Laboratory (1)	CHM 111 – General Chemistry Laboratory (1)
	Financial Management (3 credit hours) See advisor for approved list
Agricultural Science (14 credit hours)	**Agricultural Science (14 credit hours)**
AGEC 120 – Agricultural Economics and Agribusiness (3)	AGEC 120 – Agricultural Economics and Agribusiness (3)
AGRON 220 – Crop Science (4) OR HORT 201 – Principles of Horticultural Science (4)	AGRON 220 – Crop Science (4) OR HORT 201 – Principles of Horticultural Science (4)
AGRON 305 – Soils (4)	AGRON 305 – Soils (4)
ASI 102 – Principles of Animal Science (3)	ASI 102 – Principles of Animal Science (3)
Restricted Agricultural Science Electives (9) credit hours)	**Restricted Agricultural Science Electives (6 credit hours)**
Food Products and Processing (3) ASI 350, ASI 405, ASI 640, FDSCI 302, FDSCI 305, GRSC 150 with 151	Food Products and Processing (3) See advisor for approved list
Agricultural Production with Lab (3) AGRON 330, AGRON 515, AGRON 630, AGRON 635, ENTOM 305 with 306, ENTOM 320, ASI 315, ASI 320, ASI 400 with 401, ASI 524, ASI 535, HORT 350, HORT 374, HORT 520, HORT 570, HORT 585	Agricultural Production with Lab (3) See advisor for approved list
Financial Management (3) AGEC 202, AGEC 308, PFP 105	
Agricultural Mechanics (6 credit hours)	**Agricultural Mechanics (6 credit hours)**

AGED 260 – Agricultural Construction (3) Power, Structural, and Technical Systems Elective(s) (3) ~~ATM 160, AGED 210, AGED 212, AGED 262, AGED 264~~ **Additional Agricultural Science Courses (12 credit hours)** Complete 12 hours of College of Agriculture courses approved by your advisor. Of these, at least 3 courses must be 3 credit hours or higher at the 300 level or higher and represent at least 3 different programs in the College of Agriculture. ~~(AGCOM, AGEC, AGRON, ASI, ATM, ENTOM, FDSCI, GRSC, HORT, PLPTH)~~ **Free Electives (3 credit hours)** **PROFESSIONAL EDUCATION** **Pre-professional (7 credit hours)** AGED 300 – Introduction to Agricultural Education (1) AGED 505 – Field Experience in Agricultural Education (1) EDCI 310 – Foundations of Education (3) EDSEC 620 – Principles of Philosophy of Career and Technical Education (2) **Block I (11 credit hours)** EDCI 318 – Educational Technology for Teaching and Learning (1) EDCEP 315 – Educational Psychology (3) ~~EDSEC 376 – Core Teaching Skills: Secondary/Middle (3)~~ EDSP 323 – Exceptional Students in the Secondary School (2) AGED 400 – Leadership and Professional Development in Agricultural Education (2) **Block II (15 credit hours)**	AGED 260 – Agricultural Construction (3) Power, Structural, and Technical Systems Elective(s) (3) <u>See advisor for approved list</u> **Additional Agricultural Science Courses (12 credit hours)** Complete 12 hours of College of Agriculture courses approved by your advisor. Of these, at least 9 credit hours must be 300 level or higher and represent at least 3 different programs in the College of Agriculture. **Free Electives (<u>0-3</u> credit hours)** **PROFESSIONAL EDUCATION** **Pre-professional (7 credit hours)** AGED 300 – Introduction to Agricultural Education (1) AGED 505 – Field Experience in Agricultural Education (1) EDCI 310 – Foundations of Education (3) EDSEC 620 – Principles of Philosophy of Career and Technical Education (2) **Block I (11 credit hours)** EDCI 318 – Educational Technology for Teaching and Learning (1) EDCEP 315 – Educational Psychology (3) <u>EDCI 320 – Core Teaching Skills (3)</u> EDSP 323 – Exceptional Students in the Secondary School (2) AGED 400 – Leadership and Professional Development in Agricultural Education (2) **Block II (15 credit hours)**

AGED 500 – Methods of Teaching Agriculture in the Secondary and Middle Schools (3) AGED 520 – Block II Lab: Content area Methods and Field Experience (2) AGED 621 – Program Planning in Agricultural Education (3) AGED 625 – Inquiry-Based Curriculum in Agricultural STEM and Biotechnology Education (3) EDCEP 525 – Interpersonal Relations in the Schools (1) EDSEC 455 – Teaching in a Multicultural Society (1) EDSEC 477 – Content Area Literacies and Diverse Learners (2) AGED 600 – Senior Seminar (0) **Block III (12 credit hours)** EDSEC 586 – Teaching Internship in Secondary Schools (12) **Total credit hours required for graduation (120)**	AGED 500 – Methods of Teaching Agriculture in the Secondary and Middle Schools (3) AGED 520 – Block II Lab: Content area Methods and Field Experience (2) AGED 621 – Program Planning in Agricultural Education (3) AGED 625 – Inquiry-Based Curriculum in Agricultural STEM and Biotechnology Education (3) EDCEP 525 – Interpersonal Relations in the Schools (1) EDSEC 455 – Teaching in a Multicultural Society (1) EDSEC 477 – Content Area Literacies and Diverse Learners (2) AGED 600 – Senior Seminar (0) **Block III (12 credit hours)** EDSEC 586 – Teaching Internship in Secondary Schools (12) **Total credit hours required for graduation (120)**

Units that may be directly impacted by these changes have been notified. These are:

College of Education - Department of Curriculum and Instruction

Personal Financial Planning
Family Studies and Human Services
Psychological Sciences

Subject: Re: Adding PSYCH 110 to Curriculum
Date: Friday, August 31, 2018 at 10:45:40 AM Central Daylight Time
From: Michael Young
To: Jonathan Ulmer

Fully endorsed. Psych 110 seems much more applicable for your students given its broad coverage of topics on human behavior.
Cheers,
Mike
--

Prof. Michael Young
Head, Department of Psychological Sciences
Kansas State University
hPp://www.k-state.edu/psych/research/youngmike.html

Subject: Re: Move of PFP 105 in Curriculum
Date: Friday, August 31, 2018 at 10:40:37 AM Central Daylight Time
From: Martin Seay
To: Jonathan Ulmer

Jon,
Thank you for the information and update. Glad to hear that your students have been enjoying the course and we hope they will continue to take it in the future. I understand the need to make things easier. I appreciate the heads up.
Thank you,
Martin
--
Martin Seay, Ph.D., CFP®
Program Director and Associate Professor of Personal Financial Planning
School of Family Studies and Human Services
Kansas State University
Phone: (785) 532-1486

Subject: RE: Curriculum Change in Agricultural Educa4on
Date: Monday, September 3, 2018 at 2:47:24 PM Central Daylight Time
From: Sonya Lutter
To: Jonathan Ulmer
CC: Kari Morgan, Kathryn Thompson-Laswell
Attachments: image002.png
Hi Jon,
I understand the need to make changes to curriculum from time to time for various reasons. I appreciate your email and will notify my faculty. I hope that your students will still see the value in HDFS 110 and continue to enroll in that course.

Sonya
SONYA BRITT-LUTTER, Ph.D., CFP®
Interim Director, School of Family Studies and Human Services
Associate Professor, Personal Financial Planning
College of Human Ecology, Kansas State University
302 Jus4n Hall
Manhattan, KS 66506
785-532-1472

Agricultural Technology Management (B.S.)

Contact person: John Slocombe
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13788&returnto=7373

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. The reduction in credit hours was achieved by reducing Humanities and/or Social Sciences from nine to six credits. These six credits of electives in Humanities and Social Sciences are in addition to the requirements of ECON 110 and six credits of communications electives for all students.

Impact Statement: All of the following departments have a possible impact: AMETH, ANTH, ARCH, ART, DANCE, ECON, ENGL, GEOG, GWSS, HIST, MUSIC, PHILO, POLSC, PSYCH, SOCIO, SOCWK, THTRE, the Department of Modern Languages and the School of Family Studies and Human Services. We are in the process of contacting Louise Benjamin and Sonya Britt-Lutter to notify them of these potential impacts.

Agricultural technology management emphasizes the application and integration of agricultural/biological sciences, agricultural engineered systems, and business to manage human and natural resources in the production and processing of food and agricultural products. It prepares men and women for technical management positions in food and agricultural industries that require an understanding of both technology and management. Agricultural technology management graduates are typically employed in technical sales, service, and management in agricultural production operations, agribusiness and food and feed processing industries, government agencies, and companies. Courses are designed to apply physical science concepts and problem solving to food and agricultural systems. Supporting courses provide a foundation of mathematics, chemistry, business, and computer and communication skills. Technical electives are available to develop a degree program that meets personal career objectives. The curriculum is administered by the Department of Biological and Agricultural Engineering and leads to the bachelor of science degree in agriculture with a major in Agricultural Technology Management. **Engineering equipment fee** Students enrolling in ATM courses will be assessed the engineering fee plus any university wide technology fee.	Agricultural technology management emphasizes the application and integration of agricultural/biological sciences, agricultural engineered systems, and business to manage human and natural resources in the production and processing of food and agricultural products. It prepares men and women for technical management positions in food and agricultural industries that require an understanding of both technology and management. Agricultural technology management graduates are typically employed in technical sales, service, and management in agricultural production operations, agribusiness and food and feed processing industries, government agencies, and companies. Courses are designed to apply physical science concepts and problem solving to food and agricultural systems. Supporting courses provide a foundation of mathematics, chemistry, business, and computer and communication skills. Technical electives are available to develop a degree program that meets personal career objectives. The curriculum is administered by the Department of Biological and Agricultural Engineering and leads to the bachelor of science degree in agriculture with a major in Agricultural Technology Management. **Engineering equipment fee** Students enrolling in ATM courses will be assessed the engineering fee plus any university wide technology fee.

Bachelor's degree requirements **General Requirements (38 credit hours)**	**Bachelor's degree requirements** **General Requirements (38 credit hours)**
Communication Electives Credits: 6 (from List 1) Humanities and/or Social Sciences electives Credits: ~~9~~ (from List 2) BIOL 198 - Principles of Biology Credits: 4 CHM 210 - Chemistry I Credits: 4 COMM 105 - Public Speaking IA Credits: 2 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 MATH 205 - General Calculus and Linear Algebra Credits: 3 PHYS 113 - General Physics I Credits: 4	Communication Electives Credits: 6 (from List 1) Humanities and/or Social Sciences electives Credits: 6 (from List 2) BIOL 198 - Principles of Biology Credits: 4 CHM 210 - Chemistry I Credits: 4 COMM 105 - Public Speaking IA Credits: 2 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 MATH 205 - General Calculus and Linear Algebra Credits: 3 PHYS 113 - General Physics I Credits: 4
ATM / BAE courses (31 credit hours)	**ATM / BAE courses (31 credit hours)**
ATM 101 - Introduction to Biological and Agricultural Engineering and TechnologyCredits: 1 ATM 160 - Engineered Systems and Technology in Agriculture Credits: 3 ATM 450 - Sensors and Controls for Agricultural and Biological Systems Credits: 3 ATM 545 - Processing and Storage of Grains Credits: 3 ATM 558 – Hydrology and Soil Erosion Management Credits: 3 BAE 350 - Off Road Machinery Systems Credits: 2 BAE 351 - Machinery Systems Lab Credits: 1 Choose a minimum of 15 hours from List 3	ATM 101 - Introduction to Biological and Agricultural Engineering and TechnologyCredits: 1 ATM 160 - Engineered Systems and Technology in Agriculture Credits: 3 ATM 450 - Sensors and Controls for Agricultural and Biological Systems Credits: 3 ATM 545 - Processing and Storage of Grains Credits: 3 ATM 558 – Hydrology and Soil Erosion Management Credits: 3 BAE 350 - Off Road Machinery Systems Credits: 2 BAE 351 - Machinery Systems Lab Credits: 1 Choose a minimum of 15 hours from List 3
Business and Management Courses (18 credit hours)	**Business and Management Courses (18 credit hours)**
ACCTG 231 - Accounting for Business Operations **Credits:** 3 ECON 110 - Principles of Macroeconomics **Credits:** 3	ACCTG 231 - Accounting for Business Operations **Credits:** 3 ECON 110 - Principles of Macroeconomics **Credits:** 3
Statistics Requirement (3 credit hours)	**Statistics Requirement (3 credit hours)**
Choose one of the following courses: STAT 325 - Introduction to Statistics Credits: 3 STAT 340 - Biometrics I Credits: 3 STAT 350 - Business and Economic Statistics I Credits: 3	Choose one of the following courses: STAT 325 - Introduction to Statistics Credits: 3 STAT 340 - Biometrics I Credits: 3 STAT 350 - Business and Economic Statistics I Credits: 3
Management Requirement (3 credit hours)	**Management Requirement (3 credit hours)**
Choose one of the following courses: MANGT 390 - Business Law I Credits: 3	Choose one of the following courses: MANGT 390 - Business Law I Credits: 3

MANGT 420 - Principles of Management Credits: 3
MANGT 421 - Introduction to Operations Management Credits: 3

Business and Management Elective (6 credit hours)

(choose a minimum of 6 hrs from List 5)

Technology Courses (11 credit hours)

IMSE 250 - Introduction to Manufacturing Processes and Systems **Credits:** 2
IMSE 251 - Manufacturing Processes Laboratory **Credits:** 1
ME 212 - Engineering Graphics **Credits:** 2
Technology Electives **Credits:** 6 (Choose from List 3 and 4)

Agricultural science courses (10 credit hours)

AGRON 305 - Soils **Credits:** 4
Agricultural Science Electives **Credits:** 6 (minimum of 6 credit hrs from List 6, 7 or 8; all 6 credit hrs must be College of Agriculture courses)

Restricted electives (12 credit hours)

Choose a minimum of 12 credit hours all from the same list (6 of the 12 credit hours must be 400 level or higher; may use Lists 4, 5, 6, 7, or 8)

Free electives (3 credit hours)

Lists of recommended courses

List 1: Communication Electives

AGCOM 400 - Agricultural Business Communications **Credits:** 3
AGCOM 410 - Agricultural Student Magazine **Credits:** 1-5
AGED 706 - Principles of Teaching Adults in Extension **Credits:** 3
COMM 311 - Business and Professional Speaking **Credits:** 3
COMM 321 - Public Speaking II **Credits:** 3
COMM 322 - Interpersonal Communication **Credits:** 3
COMM 325 - Argumentation and Debate **Credits:** 3
COMM 326 - Small Group Discussion Methods **Credits:** 3
COMM 726 - Seminar in Persuasion **Credits:** 3
ENGL 300 - Expository Writing III **Credits:** 3
ENGL 516 - Written Communication for the Sciences **Credits:** 3

MANGT 420 - Principles of Management Credits: 3
MANGT 421 - Introduction to Operations Management Credits: 3

Business and Management Elective (6 credit hours)

(choose a minimum of 6 hrs from List 5)

Technology Courses (11 credit hours)

IMSE 250 - Introduction to Manufacturing Processes and Systems **Credits:** 2
IMSE 251 - Manufacturing Processes Laboratory **Credits:** 1
ME 212 - Engineering Graphics **Credits:** 2
Technology Electives **Credits:** 6 (Choose from List 3 and 4)

Agricultural science courses (10 credit hours)

AGRON 305 - Soils **Credits:** 4
Agricultural Science Electives **Credits:** 6 (minimum of 6 credit hrs from List 6, 7 or 8; all 6 credit hrs must be College of Agriculture courses)

Restricted electives (12 credit hours)

Choose a minimum of 12 credit hours all from the same list (6 of the 12 credit hours must be 400 level or higher; may use Lists 4, 5, 6, 7, or 8)

Free electives (3 credit hours)

Lists of recommended courses

List 1: Communication Electives

AGCOM 400 - Agricultural Business Communications **Credits:** 3
AGCOM 410 - Agricultural Student Magazine **Credits:** 1-5
AGED 706 - Principles of Teaching Adults in Extension **Credits:** 3
COMM 311 - Business and Professional Speaking **Credits:** 3
COMM 321 - Public Speaking II **Credits:** 3
COMM 322 - Interpersonal Communication **Credits:** 3
COMM 325 - Argumentation and Debate **Credits:** 3
COMM 326 - Small Group Discussion Methods **Credits:** 3
COMM 726 - Seminar in Persuasion **Credits:** 3
ENGL 300 - Expository Writing III **Credits:** 3
ENGL 516 - Written Communication for the Sciences **Credits:** 3

MC 200 - News Reporting and Writing Across Platforms **Credits:** 3 MKTG 542 - Fundamentals of Professional Selling **Credits:** 3 **List 2: Humanities and/or Social Science Electives** American Ethnic Studies–any course Architecture, Planning and Design–any course in history or appreciation of architecture or environmental design Anthropology–any course Art–course in appreciation and theory Dance–any course Economics–above ECON 110 Principles of Macroeconomics English–any except courses in composition Gender, Women, and Sexuality Studies–any course Geography–any except GEOG 221 Introductory Physical Geography History–any course Family Studies and Human Services–any course Modern Languages–any course Music–any course in theory or appreciation of music Philosophy–any course Political Science–any course Psychology–any course Sociology, Anthropology, and Social Work–any course Theatre–any course **List 3: ATM Electives** ATM 250 - Chemical Application Systems **Credits:** 2 ATM 251 - Chemical Application Systems Laboratory **Credits:** 1 ATM 455 - Engines and Power Transfer **Credits:** 3 ATM 460 - Internship in Agricultural Technology Management **Credits:** 1-3 ATM 511 - Agricultural Building Systems **Credits:** 3 ATM 515 - Problems in Agricultural Technology Management **Credits:** 1-18 ATM 550 - Precision Agriculture Technologies **Credits:** 3 ATM 653 - Water Management and Irrigation Systems **Credits:** 2 ATM 654 - Water Management and Irrigation Systems Lab **Credits:** 1 ATM 661 - Watershed Assessment and Management **Credits:** 3 **List 4: Technology Electives** AGRON 655 - Site Specific Agriculture **Credits:** 3 GENAG 582 - Natural Resources/Environmental Science Project (NRES) **Credits:** 3	MC 200 - News Reporting and Writing Across Platforms **Credits:** 3 MKTG 542 - Fundamentals of Professional Selling **Credits:** 3 **List 2: Humanities and/or Social Science Electives** American Ethnic Studies–any course Architecture, Planning and Design–any course in history or appreciation of architecture or environmental design Anthropology–any course Art–course in appreciation and theory Dance–any course Economics–above ECON 110 Principles of Macroeconomics English–any except courses in composition Gender, Women, and Sexuality Studies–any course Geography–any except GEOG 221 Introductory Physical Geography History–any course Family Studies and Human Services–any course Modern Languages–any course Music–any course in theory or appreciation of music Philosophy–any course Political Science–any course Psychology–any course Sociology, Anthropology, and Social Work–any course Theatre–any course **List 3: ATM Electives** ATM 250 - Chemical Application Systems **Credits:** 2 ATM 251 - Chemical Application Systems Laboratory **Credits:** 1 ATM 455 - Engines and Power Transfer **Credits:** 3 ATM 460 - Internship in Agricultural Technology Management **Credits:** 1-3 ATM 511 - Agricultural Building Systems **Credits:** 3 ATM 515 - Problems in Agricultural Technology Management **Credits:** 1-18 ATM 550 - Precision Agriculture Technologies **Credits:** 3 ATM 653 - Water Management and Irrigation Systems **Credits:** 2 ATM 654 - Water Management and Irrigation Systems Lab **Credits:** 1 ATM 661 - Watershed Assessment and Management **Credits:** 3 **List 4: Technology Electives** AGRON 655 - Site Specific Agriculture **Credits:** 3 GENAG 582 - Natural Resources/Environmental Science Project (NRES) **Credits:** 3

GEOG 508 - Geographic Information Systems I **Credits:** 4 GRSC 540 - Process Calculations in Food Systems **Credits:** 3 GRSC 541 - Process Calculations in Food Systems Laboratory **Credits:** 1 GRSC 560 - Electricity and Industrial Power Distribution **Credits:** 3 GRSC 555 - Cereal Food Plant Design **Credits:** 3 Any Other College of Engineering Course	GEOG 508 - Geographic Information Systems I **Credits:** 4 GRSC 540 - Process Calculations in Food Systems **Credits:** 3 GRSC 541 - Process Calculations in Food Systems Laboratory **Credits:** 1 GRSC 560 - Electricity and Industrial Power Distribution **Credits:** 3 GRSC 555 - Cereal Food Plant Design **Credits:** 3 Any Other College of Engineering Course
List 5: Agribusiness and Management Electives	**List 5: Agribusiness and Management Electives**
Any Agricultural Economics Course ACCTG 241 - Accounting for Investing and Financing **Credits:** 3 ECON 520 - Intermediate Microeconomics **Credits:** 3 ECON 530 - Money and Banking **Credits:** 3 ECON 681 - International Trade **Credits:** 3 FINAN 450 - Principles of Finance **Credits:** 3 GRSC 530 - Management Applications in the Grain Processing Industries **Credits:** 3 IMSE 501 - Industrial Management **Credits:** 3 MANGT 390 - Business Law I **Credits:** 3 MANGT 421 - Introduction to Operations Management **Credits:** 3 MKTG 400 - Introduction to Marketing **Credits:** 3 MKTG 450 - Consumer Behavior **Credits:** 3	Any Agricultural Economics Course ACCTG 241 - Accounting for Investing and Financing **Credits:** 3 ECON 520 - Intermediate Microeconomics **Credits:** 3 ECON 530 - Money and Banking **Credits:** 3 ECON 681 - International Trade **Credits:** 3 FINAN 450 - Principles of Finance **Credits:** 3 GRSC 530 - Management Applications in the Grain Processing Industries **Credits:** 3 IMSE 501 - Industrial Management **Credits:** 3 MANGT 390 - Business Law I **Credits:** 3 MANGT 421 - Introduction to Operations Management **Credits:** 3 MKTG 400 - Introduction to Marketing **Credits:** 3 MKTG 450 - Consumer Behavior **Credits:** 3
List 6: Biological, Natural Resource & Environmental Electives	**List 6: Biological, Natural Resource & Environmental Electives**
AGRON 220 - Crop Science **Credits:** 4 AGRON 330 - Weed Science **Credits:** 3 AGRON 335 - Environmental Quality **Credits:** 3 AGRON 360 - Crop Growth and Development **Credits:** 3 AGRON 375 - Soil Fertility **Credits:** 3 AGRON 385 - Soil Fertility Laboratory **Credits:** 2 AGRON 501 - Range Management **Credits:** 3 AGRON 515 - Soil Genesis and Classification **Credits:** 3 AGRON 550 - Forage Management and Utilization **Credits:** 3 AGRON 630 - Crop Improvement and Biotechnology **Credits:** 3 AGRON 635 - Soil and Water Conservation **Credits:** 3 AGRON 655 - Site Specific Agriculture **Credits:** 3 ASI 500 - Genetics **Credits:** 3 BIOL 303 - Ecology of Environmental Problems **Credits:** 3 BIOL 330 - Public Health Biology **Credits:** 3 BIOL 455 - General Microbiology **Credits:** 4	AGRON 220 - Crop Science **Credits:** 4 AGRON 330 - Weed Science **Credits:** 3 AGRON 335 - Environmental Quality **Credits:** 3 AGRON 360 - Crop Growth and Development **Credits:** 3 AGRON 375 - Soil Fertility **Credits:** 3 AGRON 385 - Soil Fertility Laboratory **Credits:** 2 AGRON 501 - Range Management **Credits:** 3 AGRON 515 - Soil Genesis and Classification **Credits:** 3 AGRON 550 - Forage Management and Utilization **Credits:** 3 AGRON 630 - Crop Improvement and Biotechnology **Credits:** 3 AGRON 635 - Soil and Water Conservation **Credits:** 3 AGRON 655 - Site Specific Agriculture **Credits:** 3 ASI 500 - Genetics **Credits:** 3 BIOL 303 - Ecology of Environmental Problems **Credits:** 3 BIOL 330 - Public Health Biology **Credits:** 3 BIOL 455 - General Microbiology **Credits:** 4

BIOL 500 - Plant Physiology **Credits:** 3 BIOL 513 - Physiological Adaptations of Animals **Credits:** 4 BIOL 529 - Ecology **Credits:** 3 BIOL 612 - Freshwater Ecology **Credits:** 4 CHM 315 - Environmental Science: A Chemistry Perspective **Credits:** 3 ENTOM 300 - Economic Entomology **Credits:** 3 ENTOM 301 - Insects and People **Credits:** 3 GENAG 582 - Natural Resources/Environmental Science Project (NRES) **Credits:** 3 GENAG 670 - Introduction to Agricultural Resources and Environmental Management **Credits:** 2 GEOG 221 - Introductory Physical Geography **Credits:** 4 GEOG 508 - Geographic Information Systems I **Credits:** 4 GEOL 305 - Earth Resources **Credits:** 3 GEOL 506 - Environmental Studies **Credits:** 3 PLPTH 500 - Principles of Plant Pathology **Credits:** 3 Horticulture and Natural Resources courses with consent of advisor	BIOL 500 - Plant Physiology **Credits:** 3 BIOL 513 - Physiological Adaptations of Animals **Credits:** 4 BIOL 529 - Ecology **Credits:** 3 BIOL 612 - Freshwater Ecology **Credits:** 4 CHM 315 - Environmental Science: A Chemistry Perspective **Credits:** 3 ENTOM 300 - Economic Entomology **Credits:** 3 ENTOM 301 - Insects and People **Credits:** 3 GENAG 582 - Natural Resources/Environmental Science Project (NRES) **Credits:** 3 GENAG 670 - Introduction to Agricultural Resources and Environmental Management **Credits:** 2 GEOG 221 - Introductory Physical Geography **Credits:** 4 GEOG 508 - Geographic Information Systems I **Credits:** 4 GEOL 305 - Earth Resources **Credits:** 3 GEOL 506 - Environmental Studies **Credits:** 3 PLPTH 500 - Principles of Plant Pathology **Credits:** 3 Horticulture and Natural Resources courses with consent of advisor
List 7: Animal Sciences Electives	**List 7: Animal Sciences Electives**
AGRON 501 - Range Management **Credits:** 3 AGRON 550 - Forage Management and Utilization **Credits:** 3 AGRON 551 - Forage Management and Utilization Laboratory **Credits:** 1 ASI 102 - Principles of Animal Science **Credits:** 3 ASI 315 - Livestock and Meat Evaluation **Credits:** 3 ASI 318 - Fundamentals of Nutrition **Credits:** 3 ASI 320 - Principles of Feeding **Credits:** 3 ASI 400 - Farm Animal Reproduction **Credits:** 3 ASI 422 - Livestock Sales Management **Credits:** 0-1 ASI 450 - Principles of Livestock Selection **Credits:** 2 ASI 470 - Form and Function in Livestock **Credits:** 2 ASI 510 - Animal Breeding Principles **Credits:** 3 ASI 512 - Bovine Reproductive Technologies **Credits:** 2 ASI 515 - Beef Science **Credits:** 3 ASI 521 - Horse Science **Credits:** 3 ASI 524 - Sheep and Meat Goat Science **Credits:** 3 ASI 533 - Anatomy and Physiology **Credits:** 4 ASI 535 - Swine Science **Credits:** 3 ASI 620 - Beef Systems Management **Credits:** 2 ASI 655 - Behavior of Domestic Animals **Credits:** 3 BIOCH 265 - Introductory Organic and Biochemistry **Credits:** 5 ENTOM 305 - Animal Health Entomology **Credits:** 2 ENTOM 306 - Animal Health Entomology Laboratory **Credits:** 1	AGRON 501 - Range Management **Credits:** 3 AGRON 550 - Forage Management and Utilization **Credits:** 3 AGRON 551 - Forage Management and Utilization Laboratory **Credits:** 1 ASI 102 - Principles of Animal Science **Credits:** 3 ASI 315 - Livestock and Meat Evaluation **Credits:** 3 ASI 318 - Fundamentals of Nutrition **Credits:** 3 ASI 320 - Principles of Feeding **Credits:** 3 ASI 400 - Farm Animal Reproduction **Credits:** 3 ASI 422 - Livestock Sales Management **Credits:** 0-1 ASI 450 - Principles of Livestock Selection **Credits:** 2 ASI 470 - Form and Function in Livestock **Credits:** 2 ASI 510 - Animal Breeding Principles **Credits:** 3 ASI 512 - Bovine Reproductive Technologies **Credits:** 2 ASI 515 - Beef Science **Credits:** 3 ASI 521 - Horse Science **Credits:** 3 ASI 524 - Sheep and Meat Goat Science **Credits:** 3 ASI 533 - Anatomy and Physiology **Credits:** 4 ASI 535 - Swine Science **Credits:** 3 ASI 620 - Beef Systems Management **Credits:** 2 ASI 655 - Behavior of Domestic Animals **Credits:** 3 BIOCH 265 - Introductory Organic and Biochemistry **Credits:** 5 ENTOM 305 - Animal Health Entomology **Credits:** 2 ENTOM 306 - Animal Health Entomology Laboratory **Credits:** 1

List 8: Processing Technology Electives	List 8: Processing Technology Electives
ASI 350 - Meat Science **Credits:** 3 ASI 361 - Meat Animal Processing **Credits:** 2 ASI 370 - Principles of Meat Evaluation **Credits:** 2 ASI 405 - Fundamentals of Milk Processing **Credits:** 3 ASI 608 - Dairy Foods Processing & Technology **Credits:** 3 ASI 610 - Processed Meat Operations **Credits:** 2 FDSCI 302 - Introduction to Food Science **Credits:** 3 FDSCI 305 - Fundamentals of Food Processing **Credits:** 3 FDSCI 430 - Food Products Evaluation **Credits:** 3 FDSCI 690 - Principles of HACCP and HARPC **Credits:** 3 FDSCI 694 - Food Plant Management **Credits:** 3 FDSCI 695 - Quality Assurance of Food Products **Credits:** 3 GRSC 150 - Principles of Milling **Credits:** 2 GRSC 500 - Milling Science I **Credits:** 2 GRSC 510 - Feed Technology I **Credits:** 3 GRSC 540 - Process Calculations in Food Systems **Credits:** 3 GRSC 541 - Process Calculations in Food Systems Laboratory **Credits:** 1 GRSC 602 - Cereal Science **Credits:** 3 GRSC 560 - Electricity and Industrial Power Distribution **Credits:** 3 GRSC 620 - Extrusion Processing in the Food and Feed Industries **Credits:** 4 GRSC 530 - Management Applications in the Grain Processing Industries **Credits:** 3 GRSC 651 - Food and Feed Product Protection **Credits:** 4 GRSC 555 - Cereal Food Plant Design **Credits:** 3 **Total credit hours required for graduation: (minimum of ~~123~~)**	ASI 350 - Meat Science **Credits:** 3 ASI 361 - Meat Animal Processing **Credits:** 2 ASI 370 - Principles of Meat Evaluation **Credits:** 2 ASI 405 - Fundamentals of Milk Processing **Credits:** 3 ASI 608 - Dairy Foods Processing & Technology **Credits:** 3 ASI 610 - Processed Meat Operations **Credits:** 2 FDSCI 302 - Introduction to Food Science **Credits:** 3 FDSCI 305 - Fundamentals of Food Processing **Credits:** 3 FDSCI 430 - Food Products Evaluation **Credits:** 3 FDSCI 690 - Principles of HACCP and HARPC **Credits:** 3 FDSCI 694 - Food Plant Management **Credits:** 3 FDSCI 695 - Quality Assurance of Food Products **Credits:** 3 GRSC 150 - Principles of Milling **Credits:** 2 GRSC 500 - Milling Science I **Credits:** 2 GRSC 510 - Feed Technology I **Credits:** 3 GRSC 540 - Process Calculations in Food Systems **Credits:** 3 GRSC 541 - Process Calculations in Food Systems Laboratory **Credits:** 1 GRSC 602 - Cereal Science **Credits:** 3 GRSC 560 - Electricity and Industrial Power Distribution **Credits:** 3 GRSC 620 - Extrusion Processing in the Food and Feed Industries **Credits:** 4 GRSC 530 - Management Applications in the Grain Processing Industries **Credits:** 3 GRSC 651 - Food and Feed Product Protection **Credits:** 4 GRSC 555 - Cereal Food Plant Design **Credits:** 3 **Total credit hours required for graduation: (minimum of 120)**
Note	**Note**
Must satisfy K-State 8 general education requirements.	Must satisfy K-State 8 general education requirements.

Agronomy (B.S.) - Business and Industry Option

Contact person: Michel Ransom
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13933&returnto=7375

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. The reduction in credit hours was achieved by allowing students to select one course from CHM 350, BIOCH 265, and PHYS

113. Students could choose to take the course not selected as a Natural and Applied Sciences Elective. In addition, the restricted electives list in the natural and applied sciences was changed from two courses to three hours. Additional reduction in credit hours was achieved by adjusting general electives. The revision also aims to improve advising efficiency, create improved harmony across the six Agronomy options, simplify restricted elective lists, and update course titles. All courses that we previously listed in a specific restricted elective list continue to be included in a generic restricted elective list that advisors see.

Impact Statement: All of the following departments have a possible impact, and we are in the process of contacting the departments for the following prefixes: AGCOM, ASI, ATM, BIOCH, BIOL, CHM, COMM, ENGL, ENTOM, GEOG, MATH, MKTG, PHYS, and the Department of Modern Languages.

Eight email responses available in Curriculog related to impact statement: ASI, BIOCH, BIOL, ENGL, GEOG, MATH, AGCOM, and ENTOM.

FROM:	TO:
AGRONOMY (~~32~~ 33):	AGRONOMY (33):
AGRON 101 Agronomy Orientation (1)	AGRON 101 Agronomy Orientation (1)
AGRON 220 Crop Science (4)	AGRON 220 Crop Science (4)
AGRON 305 Soils (4)	AGRON 305 Soils (4)
AGRON 330 Weed Science (3)	AGRON 330 Weed Science (3)
AGRON 360 Crop Growth & Development (3)	AGRON 360 Crop Growth & Development (3)
AGRON 375 Soil Fertility (3)	AGRON 375 Soil Fertility (3)
AGRON 405 Internship in Agronomy (3)	AGRON 405 Internship in Agronomy (3)
Select one course from:	Select one course from:
AGRON 502 Agronomy International Travel Experience (3)	AGRON 502 Agronomy International Travel Experience (3)
AGRON 602 Agronomy Capstone Experience (3)	AGRON 602 Agronomy Capstone Experience (3)
AGRON 655 Site Specific Agriculture (3)	AGRON 655 Site Specific Agriculture (3)
GENAG 582 NRES Project (3)	GENAG 582 NRES Project (3)
AGRON Electives (~~8~~ 9)	AGRON Electives (9)
~~COMM/SOC. SCI./HUMAN./ECON/BUS~~ (38)	SOCIAL SCIENCES, HUMANITIES, & BUSINESS (38)
ACCTG 231 Acctg. for Business Operations (3)	ACCTG 231 Acctg for Business Operations (3)
COMM 105 Public Speaking IA (2)	COMM 105 Public Speaking IA (2)
ECON 110 Prin. Macroeconomics (3)	ECON 110 Prin. Macroeconomics (3)
ENGL 100 Expository Writing I (3)	ENGL 100 Expository Writing I (3)
ENGL 200 Expository Writing II (3)	ENGL 200 Expository Writing II (3)
Ag Econ & Ag Bus/Bus Admin Electives (12)	Ag Econ & Ag Bus/Bus Admin Electives (12)

Communications Elective (3) ~~Select from:~~ ~~AGCOM 400 Ag. Business Communications (3)~~ ~~AGCOM 410 Ag. Student Magazine (3)~~ ~~ENGL 300 Expository Writing (3)~~ ~~ENGL 417 Written Comm. for the Workplace (3)~~ ~~ENGL 516 Written Comm. for the Sciences (3)~~ ~~MKTG 542 Fund. of Professional Selling (3)~~ ~~COMM 311 Business and Prof. Speaking (3)~~ ~~COMM 321 Public Speaking II~~ ~~COMM 325 Argumentation and Debate~~ ~~COMM 526 Persuasion (3)~~ ~~Any second level or above foreign language~~	Communications Elective (3)
Social ~~Sci.~~/Humanities Electives (9)	Social Sciences/Humanities Electives (9)
GENERAL ELECTIVES (~~12-17~~)	GENERAL ELECTIVES (<u>10-12</u>)
~~BIOLOGICAL/PHYSICAL SCI. (28-32)~~ BIOCH 265 Intro. Organic/Biochemistry (5) OR CHM 350 General Organic Chemistry (3) BIOL 198 Principles of Biology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CIS 102 Intro. Spreadsheet Applic. (1) MATH 100 College Algebra (3) STAT 350 Business & Econ. Statistics (3) ~~Two of the following courses:~~ ~~AGRON 645 Soil Microbiology (3)~~ ~~ASI 500 Genetics (3)~~ ~~BIOL 455 General Microbiology (4)~~ ~~BIOL 500 Plant Physiology (3)~~ ~~BIOL 529 Fundamentals of Ecology (3)~~ ~~GEOG 508 Geographic Inform. Syst. I (4)~~ ~~MATH 205 Gen. Calc. & Linear Algebra (3)~~ PHYS 113 General Physics (4)	<u>NATURAL & APPLIED SCIENCES</u> (<u>25-27</u>) BIOL 198 Principles of Biology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CIS 102 Intro Spreadsheet Applic (1) MATH 100 College Algebra (3) STAT 350 Business & Econ Statistics (3) <u>One of the following courses:</u> BIOCH 265 Intro Organic & Biochem (5) CHM 350 General Organic Chemistry (3) <u>CHM 531 Organic Chemistry 1 (3)</u> PHYS 113 General Physics 1 (4) <u>Natural & Applied Sciences Elective (3)</u>
AGRICULTURE (12) AGEC 120 Ag Econ & Agribusiness (3) or ECON 120 Prin Micro Economics (3) ENTOM 300 Economic Entomology (3)	AGRICULTURE (12) AGEC 120 Ag Econ & Agribusiness (3) or ECON 120 Prin Micro Economics (3) ENTOM 300 Economic Entomology (3) <u>Or</u> <u>ENTOM 312 General Entomology (3)</u>

PLPTH 500 Plant Pathology (3) Agriculture Elective (3) **Total credit hours required for graduation: (~~127~~)**	PLPTH 500 Plant Pathology (3) Agriculture Elective (3) **Total credit hours required for graduation: (120)**

Agronomy (B.S.) - Consulting and Production Option

Contact Person: Michel Ransom
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13934&returnto=7375

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. The reduction in credit hours was achieved by moving ATM 653 and 654 from required to a restricted elective list and by allowing students to select one course from CHM 350, BIOCH 265, and PHYS 113. However, students could choose to take the course not selected as a Natural and Applied Sciences Elective, which has been added. For consistency across all options, AGEC 308 or ACCTG 231 were moved to the Agriculture category. Additional reduction in credit hours was achieved by adjusting general electives. The revision also aims to improve advising efficiency, create improved harmony across the six Agronomy options, simplify restricted elective lists, and update course titles. All courses that we previously listed in a specific restricted elective list continue to be included in a generic restricted elective list that advisors see.

Impact Statement: All of the following departments have a possible impact, and we are in the process of contacting the departments for the following prefixes: AGCOM, ASI, ATM, BIOCH, BIOL, CHM, COMM, ENGL, GEOG, MKTG, COMM, PHYS, and the Department of Modern Languages.

Eight email responses available in Curriculog related to impact statement: AGCOM, ASI, ATM/BAE, BIOCH, BIOL, ENGL, GEOG, and ENTOM.

FROM:	TO:
AGRONOMY (~~34~~ 35): AGRON 101 Agronomy Orientation (1) AGRON 220 Crop Science (4) AGRON 305 Soils (4) AGRON 330 Weed Science (3) AGRON 360 Crop Growth & Development (3) AGRON 375 Soil Fertility (3) AGRON 385 Soil Fertility Lab (2) AGRON 405 Internship in Agronomy (3) AGRON 650 Integrated Weed Management (3) Select one course from: AGRON 602 Agronomy Capstone Experience (3)	AGRONOMY (35): AGRON 101 Agronomy Orientation (1) AGRON 220 Crop Science (4) AGRON 305 Soils (4) AGRON 330 Weed Science (3) AGRON 360 Crop Growth & Development (3) AGRON 375 Soil Fertility (3) AGRON 385 Soil Fertility Lab (2) AGRON 405 Internship in Agronomy (3) AGRON 650 Integrated Weed Management (3) Select one course from: AGRON 602 Agronomy Capstone Experience (3)

AGRON 502 Agronomy International Travel Experience (3) AGRON 655 Site Specific Agriculture (3) GENAG 582 NRES Project (3)	AGRON 502 Agronomy International Travel Experience (3) AGRON 655 Site Specific Agriculture (3) GENAG 582 NRES Project (3)
~~AGRON~~ Elective (~~5~~-6)	Agronomy Electives (6)
~~COMM/SOC. SCI./HUMAN./ECON/BUS~~ (~~26~~) ACCTG 231 Acctg. for Business Operations (3) OR AGEC 308 Farm and Ranch Management (3) COMM 105 Public Speaking I (2) ECON 110 Prin. Macroeconomics (3) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3)	SOCIAL SCIENCES & HUMANITIES (23): COMM 105 Public Speaking I (2) ECON 110 Prin. Macroeconomics (3) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3)
Communications Elective (3)	Communications Elective (3)
~~Select from:~~ ~~AGCOM 400 Ag. Business Communications (3)~~ ~~AGCOM 410 Ag. Student Magazine (3)~~ ~~ENGL 300 Expository Writing (3)~~ ~~ENGL 417 Written Comm. for the Workplace (3)~~ ~~ENGL 516 Written Comm. for the Sciences (3)~~ ~~MKTG 542 Fund. of Professional Selling (3)~~ ~~COMM 311 Business and Prof. Speaking (3)~~ ~~COMM 321 Public Speaking II~~ ~~COMM 325 Argumentation and Debate~~ ~~COMM 526 Persuasion (3)~~ ~~Any second level or above foreign language~~	
Social ~~Sci.~~/Humanities Electives (9)	Social Sciences & Humanities Electives (9)
GENERAL ELECTIVES (~~5-10~~)	GENERAL ELECTIVES (7-9)
~~BIOLOGICAL/PHYSICAL SCI~~. (~~29-32~~) BIOCH 265 Intro. Organic/Biochemistry (5) OR CHM 350 General Organic Chemistry (3) BIOL 198 Principles of Biology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CIS 102 Intro. Spreadsheet Applic. (1) MATH 100 College Algebra (3) PHYS 113 General Physics (4) STAT 340 Biometrics (3)	NATURAL & APPLIED SCIENCES (25-27) BIOL 198 Principles of Biology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CIS 102 Intro Spreadsheet Applic (1) MATH 100 College Algebra (3) STAT 340 Biometrics (3) One of the following courses: BIOCH 265 Intro Organic & Biochem (5) CHM 350 General Organic Chemistry (3)

~~One of the following courses:~~ ~~AGRON 645 Soil Microbiology (3)~~ ~~ASI 500 Genetics (3)~~ ~~BIOL 455 General Microbiology (4)~~ ~~BIOL 500 Plant Physiology (3)~~ ~~BIOL 529 Fundamentals of Ecology (3)~~ ~~GEOG 508 Geographic Information Syst I (4)~~ ~~PHYS 114 General Physics II (4)~~ AGRICULTURE (28-~~29~~) AGEC 120 Ag Econ & Agribusiness (3) or ECON 120 Prin Micro Economics (3) ~~ATM 653 Water Management and Irrigation Systems (2)~~ ~~ATM 654 Water Management and Irrigation Systems Lab (1)~~ ENTOM 300 Economic Entomology (3) OR ENTOM 312 General Entomology (~~2~~) ~~AND~~ ~~ENTOM 313 Gen. Entomology Lab (1)~~ ENTOM 612 Insect Pest Diagnosis (2) PLPTH 500 Plant Pathology (3) PLPTH 585 Crop Diseases (2) Agriculture Electives (12) **Total credit hours required for graduation: (~~127~~)**	CHM 531 Organic Chemistry I (3) PHYS 113 General Physics 1 (4) Natural & Applied Sciences Elective (3) AGRICULTURE (28): AGEC 120 Ag Econ & Agribusiness (3) or ECON 120 Prin Micro Economics (3) ACCTG 231 Acctg. for Business Operations (3) or AGEC 308 Farm and Ranch Management (3) ENTOM 300 Economic Entomology (3) or ENTOM 312 General Entomology (3) ENTOM 612 Insect Pest Diagnosis (2) PLPTH 500 Plant Pathology (3) PLPTH 585 Crop Diseases (2) Agriculture Electives (12) **Total credit hours required for graduation: (120)**

Agronomy (B.S.) - Plant Science and Biotechnology Option

Contact person: Michel Ransom
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13935&returnto=7375

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. The reduction in credit hours was achieved by moving MATH 150 from required to a restricted electives list and by adjusting general electives. Although the number of hours in social sciences and humanities appear to be reduced, required courses in AGEC 120 or ECON 120 and AGEC 315 have been moved to a new agriculture category. In addition, the apparent reduction in applied and natural sciences is caused by the move of ENTOM 300 or ENTOM 312 and PLPTH 500 to the new agriculture category. The revision also aims to improve advising efficiency, create improved harmony across the six Agronomy options, simplify restricted elective lists,

and update course titles. All courses that we previously listed in a specific restricted elective list continue to be included in a generic restricted elective list that advisors see.

Impact Statement: All of the following departments have a possible impact, and we are in the process of contacting the departments for the following prefixes: AGCOM, ATM, BIOCH, BIOL, CHM, COMM, ENGL, ENTOM, MATH, MKTG, PHYS, PLPTH, and the Department of Modern Languages.

Six email responses available in Curriculog related to impact statement: BIOCH, BIOL, ENGL, MATH, PLPTH, and ENTOM.

FROM:	TO:
AGRONOMY (36): AGRON 101 Agronomy Orientation (1) AGRON 220 Crop Science (4) AGRON 305 Soils (4) AGRON 330 Weed Science (3) AGRON 360 Crop Growth & Development (3) AGRON 375 Soil Fertility (3) AGRON 405 Internship in Agronomy (3) AGRON 610 Biotechnology (3) AGRON 630 Crop Improvement & Biotech (3) Select one course from: AGRON 502 Agronomy International Travel Experience (3) AGRON 602 Agronomy Capstone Experience (3) AGRON 655 Site Specific Agriculture (3) GENAG 582 NRES Project (3) ~~AGRON~~ Electives (6) ~~COMM/SOCIAL SCI./HUMANITIES/ECON (26)~~ AGEC 120 Agricultural Economics and Agribusiness (3) AGEC 315 Contemporary Issues in Global Food and Agricultural Systems (3) COMM 105 Public Speaking I (2) ECON 110 Prin. Macroeconomics (3) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communications Elective (3) ~~Select from:~~ ~~AGCOM 400 Ag. Business Communications (3)~~ ~~AGCOM 410 Ag. Student Magazine (3)~~ ~~ENGL 300 Expository Writing (3)~~	AGRONOMY (36): AGRON 101 Agronomy Orientation (1) AGRON 220 Crop Science (4) AGRON 305 Soils (4) AGRON 330 Weed Science (3) AGRON 360 Crop Growth & Development (3) AGRON 375 Soil Fertility (3) AGRON 405 Internship in Agronomy (3) AGRON 610 Biotechnology (3) AGRON 630 Crop Improvement & Biotech (3) Select one course from: AGRON 502 Agronomy International Travel Experience (3) AGRON 602 Agronomy Capstone Experience (3) AGRON 655 Site Specific Agriculture (3) GENAG 582 NRES Project (3) <u>Agronomy</u> Electives (6) <u>SOCIAL SCIENCES & HUMANITIES (20)</u> COMM 105 Public Speaking I (2) ECON 110 Prin. Macroeconomics (3) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communications Elective (3)

~~ENGL 417 Written Comm. for the Workplace (3)~~ ~~ENGL 516 Written Comm. for the Sciences (3)~~ ~~MKTG 542 Fund. of Professional Selling (3)~~ ~~COMM 311 Business and Prof. Speaking (3)~~ ~~COMM 321 Public Speaking II~~ ~~COMM 325 Argumentation and Debate~~ ~~COMM 526 Persuasion (3)~~ ~~Any second level or above foreign language~~	
Social ~~Sci.~~/Humanities Electives (6)	Social Sciences/Humanities Electives (6)
GENERAL ELECTIVES (~~11~~)	GENERAL ELECTIVES (4-7)
~~BIOLOGICAL/PHYSICAL SCI. (54-55)~~ BIOL 198 Principles of Biology (4) BIOL 450 Modern Genetics (4) OR ASI 500 Genetics (3) BIOL 500 Plant Physiology (3) BIOL 501 Plant Physiology Lab (1) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CHM 350 General Organic Chemistry (3) CIS 102 Intro. Spreadsheet Applic. (1) ENTOM 300 Economic Entomology (3) MATH 100 College Algebra (3) ~~MATH 150 Plane Trigonometry (3)~~ PLPTH 500 Plant Pathology (3) PHYS 113 General Physics I (4) STAT 340 Biometrics (3) ~~Plus 12 credit hours from the following courses:~~ ~~AGRON 680 Plant Genetics (3)~~ ~~BIOCH 521 General Biochemistry (3)~~ ~~BIOL 529 Fundamentals of Ecology (3)~~ ~~BIOL 675 Genetics of Microorganisms (3)~~ ~~BIOL 676 Molecular Genetics Lab (3)~~ ~~ENTOM 732 Intro. Plant Resist. To Pests (2)~~ ~~cross-listed as AGRON 732, PLPTH 732~~ ~~ENTOM 745 Plant Resistance to Insects (2)~~ ~~MATH 220 Analytical Geom&CalculusI (4)~~ ~~MATH 221 Analytical Geom&CalculusII(4)~~ ~~PHYS 114 General Physics II (4)~~ ~~PLPTH 585 Crop Diseases (2)~~ ~~PLPTH 755 Plant Resistance to Diseases (2)~~	NATURAL & APPLIED SCIENCES (45-48) BIOL 198 Principles of Biology (4) BIOL 450 Modern Genetics (4) OR ASI 500 Genetics (3) BIOL 500 Plant Physiology (3) BIOL 501 Plant Physiology Lab (1) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CHM 350 General Organic Chemistry (3) OR CHM 531 Organic Chemistry 1 (3) OR BIOCH 265 Intro Organic & Biochem (5) CIS 102 Intro Spreadsheet Applic (1) MATH 100 College Algebra (3) PHYS 113 General Physics I (4) STAT 340 Biometrics (3) Natural & Applied Sciences Elective (12) AGRICULTURE (12) AGEC 120 Ag Econ & Agribusiness (3) or ECON 120 Prin Micro Economics (3) AGEC 315 Cont. Issues in Global Food & Ag. Sys. (3) ENTOM 300 Economic Entomology (3) Or ENTOM 312 General Entomology (3) PLPTH 500 Plant Pathology (3)

Total credit hours required for graduation: (~~127~~)	**Total credit hours required for graduation: (120)**

Agronomy (B.S.) - Precision Agriculture Option

Contact person: Michel Ransom
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=14008&returnto=7375

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. The reduction in credit hours was mostly achieved by adjusting general electives. In addition, CHM 350 or BIOCH 265 is no longer required, but one of these courses could be taken as a natural and applied sciences elective. The revision also aims to improve advising efficiency, create improved harmony across the six Agronomy options, simplify restricted elective lists, and update course titles. All courses that we previously listed in a specific restricted elective list continue to be included in a generic restricted elective list that advisors see.

Impact Statement: All of the following departments have a possible impact, and we are in the process of contacting the departments for the following prefixes: AGCOM, ASI, ATM, BIOCH, BIOL, CHM, COMM, ENGL, ENTOM, GEOG, GEOL, MKTG, PMC, PHYS, PLPTH, and the Department of Modern Languages.

Nine email responses available in Curriculog related to impact statement: AGCOM, ASI, ATM/BAE, BIOCH, BIOL, GEOG, ENGL, PLPTH, and ENTOM.

FROM:	TO:
AGRONOMY (~~37~~38):	AGRONOMY (38):
AGRON 101 Agronomy Orientation (1)	AGRON 101 Agronomy Orientation (1)
AGRON 202 Intro. to Precision Ag. Software (3)	AGRON 202 Intro. to Precision Ag. Software (3)
AGRON 220 Crop Science (4)	AGRON 220 Crop Science (4)
AGRON 305 Soils (4)	AGRON 305 Soils (4)
AGRON 330 Weed Science (3)	AGRON 330 Weed Science (3)
AGRON 360 Crop Growth & Development (3)	AGRON 360 Crop Growth & Development (3)
AGRON 375 Soil Fertility (3)	AGRON 375 Soil Fertility (3)
AGRON 385 Soil Fertility Lab (2)	AGRON 385 Soil Fertility Lab (2)
AGRON 405 Internship in Agronomy (3)	AGRON 405 Internship in Agronomy (3)
AGRON 515 Soil Genesis and Classification (3)	AGRON 515 Soil Genesis and Classification (3)
AGRON 655 Site Specific Agriculture (3)	AGRON 655 Site Specific Agriculture (3)

Two courses from: AGRON 335 Environmental Quality (3) AGRON 625 Applications of Nutrient Mgmt. (3) AGRON 640 Cropping Systems (3) AGRON 650 Integrated Weed Management (3) AGRON 746 ~~Physical Properties of Soils~~ (3) AGRON 645 Soil Microbiology (3)	Two courses from: AGRON 335 Environmental Quality (3) AGRON 625 Applications of Nutrient Mgmt. (3) AGRON 640 Cropping Systems (3) AGRON 650 Integrated Weed Management (3) AGRON 746 Environmental Soil Physics (3) AGRON 645 Soil Microbiology (3)
~~COMM/SOCIAL SCI./HUMANITIES/ECON~~ (24): COMM 105 Public Speaking I (2) ECON 110 Principles of Macroeconomics (3) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) GEOG 302 Cartography and Them Map (3) GEOG 508 Geographic Info Systems 1 (4)	SOCIAL SCIENCES & HUMANITIES (24): COMM 105 Public Speaking I (2) ECON 110 Principles of Macroeconomics (3) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) GEOG 302 Cartography and Them Map (3) GEOG 508 Geographic Info Systems 1 (4)
Communications Elective (3) ~~Select from:~~ ~~AGCOM 400 Ag. Business Communications (3)~~ ~~AGCOM 410 Ag. Student Magazine (3)~~ ~~COMM 311 Business and Prof. Speaking (3)~~ ~~COMM 321 Public Speaking II~~ ~~COMM 325 Argumentation and Debate~~ ~~COMM 526 Persuasion (3)~~ ~~ENGL 300 Expository Writing (3)~~ ~~ENGL 417 Written Comm. for the Workplace (3)~~ ~~ENGL 516 Written Comm. for the Sciences (3)~~ ~~GEOG 302 Cartography & Thematic Mapping (3)~~ ~~GEOG 508 Geographic Information Sys. I (4)~~ ~~MKTG 542 Fund. of Professional Selling (3)~~ ~~Any second level or above foreign language~~	Communications Elective (3)
Social ~~Sci.~~/Humanities Elective (3)	Social Sciences/Humanities Elective (3)
GENERAL ELECTIVES (~~8~~ ~~12~~)	GENERAL ELECTIVES (6)
~~BIOLOGICAL/PHYSICAL SCI.~~ ~~(36-39~~): ~~BIOCHM 265 Intro. Organic & Biochemistry (5)~~ ~~OR~~ ~~CHM 350 General Organic Chemistry (3)~~ BIOL 198 Principles of Biology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) MATH 100 College Algebra (3) MATH 150 Plane Trigonometry (3) PHYS 113 General Physics I (4) STAT 340 Biometrics (3)	NATURAL & APPLIED SCIENCES (34): BIOL 198 Principles of Biology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) MATH 100 College Algebra (3) MATH 150 Plane Trigonometry (3) PHYS 113 General Physics I (4) STAT 340 Biometrics (3)

Two courses from: GEOG 605 Remote Sensing of the Environment (3) GEOG 608 Geographic Information Sys. II (3) UAS 270 Intro. to Unmanned Aircraft Syst. (3) UAS 373 Small Unmanned Aircraft Design for Non-Aviators (3) UAS 463 Intro for Autopilots and Mission Planning for Non-Aviators (3) ~~One course from:~~ ~~ASI 500 Genetics (3)~~ ~~BIOL 529 Fundamentals of Ecology (3)~~ ~~BIOL 500 Plant Physiology (3)~~ ~~ATM 450 Sensors & Controls for Ag. & Biol. Sys. (3)~~ ~~ATM 653&654 Irrigation Practices & Lab (3)~~ ~~PLPTH 585 Crop Diseases (2)~~ ~~ATM 250&251 Chemical Applic. Syst. & Lab (3)~~ AGRICULTURE (18): AGEC 120 Ag. Economics and Agribusiness (3) OR ECON 120 Prin. Microeconomics (3) ATM 550 Precision Ag. Technologies (3) ENTOM 300 Economic Entomology (3) PLPTH 500 Plant Pathology (3) Agriculture Electives (6) **Total credit hours required for graduation: (~~127~~)**	Two courses from: GEOG 605 Remote Sensing of the Environment (3) GEOG 608 Geographic Information Sys. II (3) UAS 270 Intro. to Unmanned Aircraft Syst. (3) UAS 373 Small Unmanned Aircraft Design for Non-Aviators (3) UAS 463 Intro for Autopilots and Mission Planning for Non-Aviators (3) Natural & Applied Sciences Elective (3) AGRICULTURE (18): AGEC 120 Ag. Economics and Agribusiness (3) OR ECON 120 Prin. Microeconomics (3) ATM 550 Precision Ag. Technologies (3) ENTOM 300 Economic Entomology (3) Or ENTOM 312 General Entomology (3) PLPTH 500 Plant Pathology (3) Agriculture Electives (6) **Total credit hours required for graduation: (120)**

Agronomy (B.S.) - Range Management Option

Contact person: Michel Ransom
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13936&returnto=7375

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. The reduction in credit hours was mostly achieved by adjusting general electives. PHYS 113 is no longer required, but it could be taken as a natural and applied sciences elective. The revision also aims to improve advising efficiency, create improved

harmony across the six Agronomy options, simplify restricted elective lists, and update course titles. All courses that we previously listed in a specific restricted elective list continue to be included in a generic restricted elective list that advisors see.

Impact Statement: All of the following departments have a possible impact, and we are in the process of contacting the departments for the following prefixes: AGCOM, COMM, ENGL, ENTOM, MKTG, COMM, PHYS, and the Department of Modern Languages.

Three email responses available in Curriculog related to impact statement: AGCOM, ENGL, and ENTOM.

FROM:	TO:
AGRONOMY (~~35~~ 36):	AGRONOMY (36):
AGRON 101 Agronomy Orientation (1)	AGRON 101 Agronomy Orientation (1)
AGRON 220 Crop Science (4)	AGRON 220 Crop Science (4)
AGRON 305 Soils (4)	AGRON 305 Soils (4)
AGRON 501 Range Management (3)	AGRON 501 Range Management (3)
AGRON 515 Soil Genesis and Classification (3)	AGRON 515 Soil Genesis and Classification (3)
AGRON 560 ID Range & Pasture Plants (1)	AGRON 560 ID Range & Pasture Plants (1)
AGRON 660 Grassland Monitoring & Ass. (2)	AGRON 660 Grassland Monitoring & Ass. (2)
AGRON 661 Grassland Monitoring & Ass. Lab (1)	AGRON 661 Grassland Monitoring & Ass. Lab (1)
AGRON 670 Range Management Problems (3)	AGRON 670 Range Management Problems (3)
AGRON 681 Range Ecology (3)	AGRON 681 Range Ecology (3)
AGRON 762 Range Grasses (2)	AGRON 762 Range Grasses (2)
AGRON 790 Range Management Planning (3)	AGRON 790 Range Management Planning (3)
Select one course from:	Select one course from:
AGRON 502 Agronomy International Travel Experience (3)	AGRON 502 Agronomy International Travel Experience (3)
AGRON 602 Agronomy Capstone Experience (3)	AGRON 602 Agronomy Capstone Experience (3)
AGRON 655 Site Specific Agriculture (3)	AGRON 655 Site Specific Agriculture (3)
GENAG 582 NRES Project (3)	GENAG 582 NRES Project (3)
~~AGRON~~ Elective (~~2 or~~ 3)	Agronomy Elective (3)
~~COMM/SOCIAL SCI./HUMANITIES/ECON~~ (23)	SOCIAL SCIENCES & HUMANITIES (23):
COMM 105 Public Speaking I (2)	COMM 105 Public Speaking I (2)
ECON 110 Prin. Macroeconomics (3)	ECON 110 Prin. Macroeconomics (3)
ENGL 100 Expository Writing I (3)	ENGL 100 Expository Writing I (3)
ENGL 200 Expository Writing II (3)	ENGL 200 Expository Writing II (3)
Communications Elective (3)	Communications Elective (3)
~~Select from:~~	
~~AGCOM 400 Ag. Business Communications (3)~~	

~~AGCOM 410 Ag. Student Magazine (3)~~ ~~ENGL 300 Expository Writing (3)~~ ~~ENGL 417 Written Comm. for the Workplace (3)~~ ~~ENGL 516 Written Comm. for the Sciences (3)~~ ~~MKTG 542 Fund. of Professional Selling (3)~~ ~~COMM 311 Business and Prof. Speaking (3)~~ ~~COMM 321 Public Speaking II~~ ~~COMM 325 Argumentation and Debate~~ ~~COMM 526 Persuasion (3)~~ ~~Any second level or above foreign language~~	
Social ~~Sci.~~/Humanities Electives (9)	Social Sciences/Humanities Electives (9)
GENERAL ELECTIVES (~~12-15~~)	GENERAL ELECTIVES (9-11)
~~BIOLOGICAL/PHYSICAL SCI~~. (~~42-44~~) BIOCH 265 Intro. Organic/Biochemistry (5) OR CHM 350 General Organic Chemistry (3) BIOL 198 Principles of Biology (4) BIOL 500 Plant Physiology (3) BIOL 529 Fundamentals of Ecology (3) OR BIOL 504 Plant Ecology (3) BIOL 551 Taxonomy of Flowering Plants (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CIS 102 Intro. Spreadsheet Applic. (1) GEOL 100 Earth in Action (3) MATH 100 College Algebra (3) MATH 150 Plane Trigonometry (3) ~~PHYS 113 General Physics (4)~~ ~~Biol. & Phys. Sci. Elective~~ (3)	NATURAL & APPLIED SCIENCES (38-40): BIOCH 265 Intro. Organic/Biochemistry (5) or CHM 350 General Organic Chemistry (3) BIOL 198 Principles of Biology (4) BIOL 500 Plant Physiology (3) BIOL 529 Fundamentals of Ecology (3) OR BIOL 504 Plant Ecology (3) BIOL 551 Taxonomy of Flowering Plants (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CIS 102 Intro. Spreadsheet Applic. (1) GEOL 100 Earth in Action (3) MATH 100 College Algebra (3) MATH 150 Plane Trigonometry (3) Natural and Applied Sciences Elective (3)
AGRICULTURE (12) AGEC 120 Ag Econ & Agribusiness (3) or ECON 120 Prin. Micro Economics (3) ASI 102 Principles of Animal Science (3) ASI 515 Beef Science (3) ENTOM 300 Economic Entomology (3)	AGRICULTURE (12): AGEC 120 Ag Econ & Agribusiness (3) or ECON 120 Prin. Micro Economics (3) ASI 102 Principles of Animal Science (3) ASI 515 Beef Science (3) ENTOM 300 Economic Entomology (3) or ENTOM 305 Animal Health Entomology (2) and ENTOM 306 Animal Health Entomology Lab (1)

Total credit hours required for graduation: (~~127~~)	**Total credit hours required for graduation: (120)**

Agronomy (B.S.) - Soil and Environmental Science Option

Contact person: Michel Ransom
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13937&returnto=7375

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. The reduction in credit hours was achieved by reducing agronomy and general electives. Although the number of hours in social sciences and humanities appear to be reduced, required courses in AGEC 120 or ECON 120 and AGEC 525 have been moved to a new agriculture category. The revision also aims to improve advising efficiency, create improved harmony across the six Agronomy options, simplify restricted elective lists, and update course titles. All courses that we previously listed in a specific restricted elective list continue to be included in a generic restricted elective list that advisors see.

Impact Statement: All of the following departments have a possible impact, and we are in the process of contacting the departments for the following prefixes: AGCOM, ATM, BAE, BIOCH, BIOL, CHM, COMM, ENGL, GEOG, GEOL, MATH, MKTG, PHYS, PMC, and the Department of Modern Languages.

Nine email responses available in Curriculog related to impact statement: AGCOM, ATM/BAE, BIOCH, BIOL, ENGL, EOG, GEOL, MATH, and HNR.

FROM:	TO:
AGRONOMY (~~42~~): AGRON 101 Agronomy Orientation (1) AGRON 220 Crop Science (4) AGRON 305 Soils (4) AGRON 335 Environmental Quality (3) AGRON 375 Soil Fertility (3) AGRON 405 Internship in Agronomy (3) AGRON 515 Soil Genesis&Classification (3) AGRON 605 Soil & Environ. Chemistry (3) AGRON 645 Soil Microbiology (3) AGRON 746 ~~Physical Properties of Soils~~ (3) Select one course from: AGRON 502 Agronomy International Travel Experience (3) AGRON 602 Agronomy Capstone Experience (3) AGRON 655 Site Specific Agriculture (3) GENAG 582 NRES Project (3)	AGRONOMY (36): AGRON 101 Agronomy Orientation (1) AGRON 220 Crop Science (4) AGRON 305 Soils (4) AGRON 335 Environmental Quality (3) AGRON 375 Soil Fertility (3) AGRON 405 Internship in Agronomy (3) AGRON 515 Soil Genesis&Classification (3) AGRON 605 Soil & Environ. Chemistry (3) AGRON 645 Soil Microbiology (3) AGRON 746 Environmental Soil Physics (3) Select one course from: AGRON 502 Agronomy International Travel Experience (3) AGRON 602 Agronomy Capstone Experience (3) AGRON 655 Site Specific Agriculture (3) GENAG 582 NRES Project (3)

~~AGRON~~ Electives ~~(9)~~	Agronomy Electives (3)
~~COMM/SOCIAL SCI./HUMANITIES/ECON (26)~~ AGEC 120 – Ag Econ & Agribusiness (3) or ECON 120- Prin Micro Economics (3) AGEC 525 Natural Resources/Environ. Econ. (3) COMM 105 Public Speaking I (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communications Elective (3) ~~Select from:~~ ~~AGCOM 400 Ag. Business Communications (3)~~ ~~AGCOM 410 Ag. Student Magazine (3)~~ ~~ENGL 300 Expository Writing (3)~~ ~~ENGL 417 Written Comm. for the Workplace (3)~~ ~~ENGL 516 Written Comm. for the Sciences (3)~~ ~~MKTG 542 Fund. of Professional Selling (3)~~ ~~COMM 311 Business and Prof. Speaking (3)~~ ~~COMM 321 Public Speaking II~~ ~~COMM 325 Argumentation and Debate~~ ~~COMM 526 Persuasion (3)~~ ~~Any second level or above foreign language~~	SOCIAL SCIENCES & HUMANITIES (20) COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communications Elective (3)
Social ~~Sci.~~/Humanities Electives (6) One of the following courses: ANTH 260 Intro. To Archaeology (3) GEOG 340 Geography of Natural Res. (3) HIST 511 Environmental History (3) SOCIO 536 Environmental Sociology (3)	Social Sciences & Humanities Electives (6) One of the following courses: ANTH 260 Intro To Archaeology (3) GEOG 340 Geography of Natural Res (3) HIST 511 Environmental History (3) SOCIO 536 Environmental Sociology (3)
GENERAL ELECTIVES (~~14~~)	GENERAL ELECTIVES (8-10)
~~BIOLOGICAL/PHYSICAL SCI. (45~~) BIOL 198 Principles of Biology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CHM 350 General Organic Chemistry (3) CIS 102 Intro. Spreadsheet Applic. (1) GEOL 100 Earth in Action (3) GEOL 103 Geology Lab (1)	NATURAL & APPLIED SCIENCES (45-47) BIOL 198 Principles of Biology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) CIS 102 Intro. Spreadsheet Applic. (1) GEOL 100 Earth in Action (3) GEOL 103 Geology Lab (1) MATH 100 College Algebra (3)

MATH 100 College Algebra (3) MATH 150 Plane Trigonometry (3) PHYS 113 General Physics I (4) STAT 340 Biometrics (3) 12 hours from the following courses: ~~AGRON 695 Climate Change and Agr. (3)~~ ~~AGRON 700 Agricultural Meteorology (3)~~ ~~ATM 661 Water & Waste in Environ. (3)~~ ~~BAE 560 Hydrology for Biol. Systems (3)~~ ~~BIOCH 521 General Biochemistry (3)~~ ~~BIOL 500 Plant Physiology (4)~~ ~~BIOL 529 Fundamentals of Ecology (3)~~ ~~CHM 371 Chemical Analysis (4)~~ ~~PMC 375 Intro. Natural Resource Mgmt. (3)~~ ~~GEOG 508 Geographic Information Syst.(4)~~ ~~GEOG 535 Fund. of Climatology (3)~~ ~~GEOG 605 Remote Sensing of Environ. (3)~~ ~~GEOG 725 Geography Water Resources (3)~~ ~~GEOL 506 Environmental Studies (3)~~ ~~GEOL 520 Geomorphology (3)~~ ~~MATH 220 Analy. Geometry & Calc. I (4)~~ ~~MATH 221 Analy. Geometry & Calc. II (4)~~ ~~PHYS 114 General Physics II (4)~~ **Total credit hours required for graduation: (~~127~~)**	MATH 150 Plane Trigonometry (3) PHYS 113 General Physics I (4) STAT 340 Biometrics (3) One of the following courses: CHM 350 General Organic Chemistry (3) CHM 531 Organic Chemistry I (3) BIOCH 265 Intro Organic & Biochem (5) Natural & Applied Sciences Electives (12) AGRICULTURE (9): AGEC 120 Ag Econ & Agribusiness (3) or ECON 120 Prin Micro Economics (3) AGEC 525 Natural Resource and Environmental Economics (3) Agriculture elective (3) **Total credit hours required for graduation: (120)**

Animal Health Management Certificate - NEW

Contact person: Deborah Kohl

Proposed by:

Dr. Allen Featherstone
Department Head, Agricultural Economics MAB Program Director afeather@ksu.edu

785.532.4441

Mr. Paul Casady
Executive in Residence, K-State Olathe
Certificate Subject Matter Expert pscasady@ksu.edu
913.541.1220

A. **Introduction**

The increasing complexity of the global animal health industry has created a need for additional training for employees of this industry in the management of organizations in this industry. Critical issues include the redefinition of animal health as a whole and the complexities that have arisen with pharmaceutical impact in food supplies; the breadth of species included in animal health (food and companion); veterinary epidemics and the one health concept; consolidation of companies; increasing regulation; "downstream customer" influence and knowledge; workforce diversification; and the competition for resources in human/animal markets.

The aim of this certificate program is to provide a series of courses and experiences that will equip employees in animal health industries with economic and animal agriculture specific management tools to enable them to lead and manage organizations in the animal health sector. The certificate will be open to individuals meeting the admissions criteria delineated in Section E and is not limited to Master of Agribusiness students.

B. **Curriculum Overview**

The following courses will be required to earn the certificate (total of 20 hours):

AGEC 713 Agribusiness Financial Management

AGEC 713 is the study of the tools used in finance. The course discusses the applications of corporate finance to agribusiness. Financial management, long-term investment analysis, and an introduction to the concepts of risk and return are the main focus of this course. It is intended that the course go well beyond the introductory level—to actually being able to use the tools and to understand corporate finance and how it can be used to better manage agricultural firms. The course is designed for students actively working in agribusiness.

AAI 840 Regulatory Aspects of Drug and Vaccine Development in the Animal Health Industry

This course explores the topic of regulations associated with animal health product development and manufacturing. Topics for discussion will include an overview of the regulatory affairs process in the U.S. and other countries, drug and vaccine classifications and the approval process, GCP/GLP guidelines, drug and vaccine efficacy and safety testing, human and environmental safety issues, and future challenges and current industry needs. Topic discussions are led by experienced professionals in each area from academia, government, and industry.

AGEC 700 Applied Agribusiness Economics

This course examines market forces, demand, supply, individual consumer and firm behavior, and market structure. Basic market structure models covered include perfect competition, monopolistic competition, oligopoly and monopoly. Game theory provides a useful tool to understand both business and personal relationships. Economic tools and models are related to business strategies and real-world decision making throughout the course.

AGEC 780 Economic Issues in the Global Animal Health Industry

AGEC 780 provides a forum to study the economics and business challenges and opportunities confronting the animal health industry. These conversations are important because of the increasing trade in animal and livestock products and the attendant sanitary and health risks they present, the changing regulator environments as incomes increase around the world and increases in ethical consumer segments in all countries. The course is also important because of increasing concentration of the animal health industry and the need for the industry's stakeholders to operate in multiple countries under multiple regulator regimes. AGEC 780 explores the different health and related policy issues in the various significant animal sectors with the view to providing the sectors' practitioners with the tools to develop the appropriate responses to these issues to ensure sustainable superior performance. To accomplish this, we will look at the facts of the issues, understand their implications for the various

stakeholders in the sector and formulate appropriate responses based on careful and objective analyses to achieve specified objectives.

MGMT 820 Behavioral Management Theory

This course is designed to introduce the student to the fundamental concepts of organizational behavior. The primary focus is on gaining a better understanding of the behavior of individuals and groups within organizations. A great deal of emphasis is placed on examining how the class concepts relate to the day-to-day operations of a business and to the student's future or current career. Each student will leave the course better prepared to manage others and their own careers.

AGEC 735 Sales and Marketing in the Animal Health Industry**

This course introduces students to sales and marketing in the complex world of the animal health industry. Emphasis is placed on understanding product life cycles; product development; forecasting; planning; promotion and compliance; positioning and branding; as well as promotion and compliance. Understanding of market research for effective decision making. Markets addressed include business to business food animal markets and companion animal consumer markets. Sales and sales management examine sales processes used and skills required in the animal health industry. Effective go to market strategies are examined. Key account management basics are reviewed. Incorporation and effective interaction between marketing and sales are analyzed.

AGEC 890 Advanced Food and Agribusiness Strategy

The overall objective of this course is to build students' strategic thinking and decision making skills through the application of economics and agribusiness management tools. Upon completing AGEC 890, students should be able to identify and evaluate their strategic environments, analyze their opportunities and challenges, and develop and execute effective strategies that produce sustainable performance. These capabilities should help enhance students' career opportunities and their self-satisfaction.

C. **Meeting Educational Objectives**

The courses for this certificate will equip employees in animal health industries with economic and animal agriculture specific management tools to enable them to lead and manage organizations in the animal health sector. Successful completion of AGEC 713 and 700 require understanding and application of key finance and economic decision-making tools. Successful completion of MANGT 820 requires and understanding of key management tools and that the student evaluate themselves and their teams from a managerial perspective. AAI 840 and AGEC 780 provide in depth perspective on the regulatory agencies, consumer dynamics and legal constraints that influence how business is conducted in the animal health sector. AGEC 735 and AGEC 890 require students to apply industry specific sales and marketing techniques and effective strategy to position a company for success in the animal health industry.

D. **Statement of Need**

Market Demand

Over a seven-year period, K-State has collected market demand information to inform planning for academic and professional development programming. The findings have consistently reflected a clear and ongoing need for educational offerings focused on regulatory affairs in the animal health industry.

Further discussions with various leaders of the animal health industry have consistently identified the opinion that talent acquisition, development, and retention are critically important for the industry to be successful and meet the needs of the future market demands.

Survey of Educational and Professional Development Needs in the Animal Health Corridor
In 2010, Kansas State University conducted a survey of industry needs in the Animal Health Corridor spanning from Columbia, MO to Manhattan, KS. Of the 446 industry responses to the survey, 177 respondents (40%) indicated interest in programming focused on "policy and regulations". The results show strong interest in "policy and regulations" programming at the graduate level (81 respondents) and bachelor level (62 respondents). The interest in "policy and regulations" education spanned from executives (34.5% of executive respondents) and mid-managers (39.3% of mid-manager respondents) to non-managers (42% of non-manager respondents).

Meetings with Industry
From 2012-2014, K-State Olathe met with industry representatives who consistently confirmed the need for educational opportunities that cover selected topics in regulatory affairs. Interested organizations at that time were Boehringer Ingelheim, Merck Animal Health, Ceva, Expedite, Kansas City Area Life Sciences Institute, and DuPont/Danisco. The topics requested were:

- Policies and regulatory requirements for United States Department of Agriculture(USDA), Food and Drug Administration (FDA), Environmental Protection Agency(EPA) Federal Aviation Administration (FAA), and Department of Transportation(DOT)
- Global strategies including historical perspectives, social aspects, and methods to ensure safety
- Good x Practice (GXP), validation, study design, and applied statistics

Industry Roundtable
In 2016, K-State Olathe invited industry representatives to a roundtable discussion focused on the educational needs of their employees. Of the 22 organizations, 14 indicated strong interest in programming focused on "regulatory aspects of drug and vaccine development in animal health". Interested participating organizations included: Ceva, Bayer Crop Science, Bayer Animal Health, George Butler & Associates, Aratana, U.S. Food & Drug Administration, Kansas City Area Life Sciences Institute, MRI Global, Merck Animal Health, Boehringer Ingelheim, Norbrook, Cardinal Health, and KC Animal Health Corridor.

Comparative/Locational Advantage
There are not any other animal health undergraduate or graduate programs in the Kansas City area, in the region, or in the USA.

E. Certificate Administration

The certificate will be administered in conjunction with the Master of Agribusiness (MAB) program's animal health cohort at the K-State Olathe (KSUO) Campus. The lead graduate faculty member for the certificate will be the program director for the MAB program, who will work closely with the academic staff at KSUO. The program staff for the MAB will lead marketing and recruitment efforts in concert with K-State's Global Campus (KSUGC) and KSUO. Students will be required to have pre-requisite coursework consisting of a minimum of three undergraduate hours in the following courses: Accounting, Statistics (or Genetics), Micro or Macro Economics, or their equivalents. International students must meet the current admissions requirements of the graduate school as they pertain to degree requirements and TOEFL/IELTS scores. Student progress toward certificate completion will be monitored by the program coordinator of the Master of Agribusiness program using the AHMC Student Advising Worksheet and plan included in Appendix D. The certificate's administration and effectiveness will be reviewed every two years in sync with the Planning and Assessment review schedule.

F. **Estimated Budget**

All costs for this certificate will be covered within the costs associated with running the Master of Agribusiness program, its on-campus session, and the offering of AAI 740 which are currently met through tuition collected for the MAB. There will be no new costs incurred through the certificate program that would not be covered by tuition for those courses.

G. **Faculty**

Faculty associated with the certificate include

i. Dr. Paige Adams,
ii. Dr. Vincent Amanor Boadu,
iii. Dr. Andrew Barkley,
iv. Dr. Allen Featherstone,
v. Dr. Bill Turnley,
vi. Dr. Aleksan Shanoyan and

Consulting on context for curriculum materials will be provided by Executive in Residence at K-State Olathe, Mr. Paul Casady. Mr. Casady will not be a faculty of record on any courses within the certificate, but will serve as champion for the program in industry.

Complete Curriculum Vitaes for these individuals are included in Appendix C

H. **Graduate Certificate Coordinator**

Dr. Allen Featherstone, Program Director, Master of Agribusiness Program
342 Waters Hall
afeather@ksu.edu

I. **Student Learning Outcomes and Assessment plan**

The goals of the certificate program are to provide education, training and research to improve animal health industry management and leadership through an interdisciplinary approach.

Student Learning Outcomes of the certificate are:

1. Students will demonstrate comprehension of key management and economic principles necessary for the effective leadership of an animal health company.

2. Students will identify and analyze animal health industry issues and explain how these issues impact business in the animal health industry.

3. Students will apply key economic and management tools to develop effective strategies for positioning in support of an animal health company's business objectives.

The assessment of these student learning outcomes is included in Appendices A and B

J. **Endorsements/ Support**

Letters of support from the following individuals are attached in Appendix E.

Dean Ralph Richardson, K-State Olathe
Interim Dean Ernie Minton, College of Agriculture
Dean Kevin Gwinner, College of Business

Kansas State University – Department of Agricultural Economics

Animal Health Management Certificate
SLO Assessment Form-Course level assessment

Student: _____Year-Semester: _____Course: _____
Last Name, First Name

Faculty Member: _____

Directions to the faculty members evaluating: *Place a check mark on the line in front of the rubric description for each Student Learning Outcome Assessment that best reflects the quality of the learning of the student in your course.*

	1. Deficient	2. Acceptable	3. Proficient	4. Exemplary
Demonstrate comprehension of key management and economic principles necessary for the effective leadership of an animal health company.				
Level of comprehension of key management principles in animal health reflected in course work.	__ Reflects unacceptably low level of comprehension.	__ Reflects acceptable level of comprehension.	__ Reflects above average level of knowledge.	__ Reflects outstanding level of knowledge.
Level of comprehension of economic principles in animal health reflected in course work.	__ Reflects unacceptably low level of comprehension.	__ Reflects acceptable level of comprehension.	__ Reflects above average level of comprehension.	__ Reflects outstanding level of comprehension.
Students will identify and analyze animal health industry issues and explain how these issues impact business in the animal health industry.				
Level of ability to identify industry issues reflected in course work.	__ Reflects unacceptably low ability to identify industry issues.	__ Reflects acceptable ability to identify industry issues.	__ Reflects above average ability to identify industry issues.	__ Reflects outstanding ability to identify industry issues.
Level of ability to analyze industry issues reflected in course work.	__ Reflects unacceptably low ability to identify industry issues.	__ Reflects acceptable ability to identify industry issues.	__ Reflects above average ability to identify industry issues.	__ Reflects outstanding ability to identify industry issues.
Level of ability to explain how issues impact business in animal health industry reflected in course work.	__ Reflects unacceptably low ability to explain impact.	__ Reflects acceptable ability to explain impact.	__ Reflects above average ability to explain impact.	__ Reflects outstanding ability to explain impact.
Students will apply key economic and management tools to develop effective strategies for positioning in support of an animal health company's business objectives.				

Level of ability to develop strategies in support of an animal health company's business objectives.	__ Reflects unacceptably low ability to develop strategies.	__ Reflects acceptable ability to develop strategies.	__ Reflects above average ability to develop strategies.	__ Reflects outstanding ability to develop strategies.

	1. Deficient	**2. Acceptable**	**3. Proficient**	**4. Exemplary**
Knowledge: *An advanced level of historical factual knowledge relevant to one's individual fields of study.*				
Level of factual knowledge reflected in coursework.	__ Reflects unacceptably low level of knowledge.	__ Reflects acceptable level of knowledge.	__ Reflects above average level of knowledge.	__ Reflects outstanding level of knowledge.
Communications Skills: *The ability to express oneself clearly, accurately, and professionally in both oral and*				
Level of communications skills reflected in coursework.	__ Reflects unacceptably low ability to express oneself clearly, accurately and professionally.	__ Reflects acceptable ability to express oneself clearly, accurately and professionally.	__ Reflects above average ability to express oneself clearly, accurately and professionally.	__ Reflects outstanding ability to express oneself clearly, accurately and professionally.
Attitudes and Professional Conduct: *The ability to engage in professional conduct, integrity, and ethical*				
Level of attitude and professionalism reflected in coursework.	__ Does not honor the needs and best interests of the profession or demonstrate a pattern of professional behavior. {absence, tardiness, failure to complete tasks, or academic dishonesty.	__ Reflects acceptable ability to honor the needs and best interests of the profession or demonstrate a pattern of professional behavior such as promptness, task completion, maintaining confidentiality, and academic honesty.	__ Consistently and appropriately honors the needs and best interests of the profession demonstrating a pattern of professional behavior such as promptness, task completion, maintaining confidentiality, and academic honesty.	__ Consistently and appropriately honors the needs and best interests of the profession demonstrating a pattern of professional behavior while actively seeks or leads opportunities to select or create appropriate new forums to become involved the profession.

Animal Health Management Certificate
Assessment Plan

Student Learning Outcome 1:

Students will demonstrate **comprehension** of *key management and economic principles necessary for the effective leadership of an animal health company*.

Assessment Measure(s):

- Homework assignments and summative assessments in the following courses will measure comprehension of key management principles: MANGT 820, AGEC 700
- Homework assignments and summative assessments in the following courses will measure comprehension of key economic principles: AGEC 713, AGEC 700, AGEC 780
- Faculty will complete a rubric measuring this outcome for each student in the certificate program.

Assessment timeline:

- The outcome will be measured in each course of the Animal Health Certificate leading up to the Capstone Class, AGEC 890.
- Faculty will complete a rubric evaluating progress toward SLO1 for each student in the certificate program at the culmination of each course.

Plan for annual faculty review of outcome data:

Faculty teaching courses in the certificate program will meet once a year to discuss progress toward student learning outcomes and what adjustments need to be made. Minutes of these meetings will be included in the review of the program.

Animal Health Management Certificate
Assessment Plan

Student Learning Outcome 2:

Students will **identify and analyze** *animal health industry issues* and **explain** *how these issues impact business in the animal health industry.*

Assessment Measure(s):

- Homework assignments and summative assessments in the following courses will require students to identify and analyze animal health industry issues AAI 840, AGEC 780,
- Students will develop and propose a sales and marketing plan for a new animal health product that will demonstrate understanding of the issues specific to the animal health industry.

Assessment timeline: *(when, where, and how often the outcome will be measured)*

- At the conclusion of AGEC 780 the faculty will complete a rubric for each student evaluating their progress toward SLO2.
- The sales and marketing plan will be developed and presented in the AGEC 735 Sales and Marketing Course in the summer semester of the certificate program and evaluated with a rubric.
- The CAPSTONE project is completed in the final semester of the certificate in AGEC 890 and will be evaluated with a rubric.

Plan for annual faculty review of outcome data:

Faculty teaching courses in the certificate program will meet once a year to discuss progress toward student learning outcomes and what adjustments need to be made. Minutes of these meetings will be included in the review of the program.

Animal Health Management Certificate
Assessment Plan

Student Learning Outcome 3:

Students will **apply** *key economic and management tools* to **develop** *effective strategies for positioning in support of an animal health company's business objectives.*

Assessment Measure(s): (*must include at least one direct measure)*

- The CAPSTONE project will be completed in AGEC 890, the final course in the certificate program.

Assessment timeline: *(when, where, and how often the outcome will be measured)*

- The CAPSTONE project is completed in the final semester of the certificate in AGEC 890 and will be evaluated with a rubric.

Plan for annual faculty review of outcome data:

Faculty teaching courses in the certificate program will meet once a year to discuss progress toward student learning outcomes and what adjustments need to be made. Minutes of these meetings will be included in the review of the program.

	Fall 2018	Tuition	Spring 2019	Tuition	Summer 2019	Tuition	Fall 2019	Tuition
Course Number	AGEC 713		AGEC 780		AGEC 735**		AGEC 890	
Course Title	Agribusiness Financial Management		Economic Issues in the Global Animal Health Industry		Sales and Marketing in the Animal Health Industry		Advanced Agribusiness Management	
Actual Dates	August 13-October 26, 2018		December 3, 2018 - March 29, 2019		June 3-August 2, 2019		September 3-December 6, 2019	
		$ 2,307.75		$ 2,307.75		$ 2,307.75		$ 2,307.75
Course Number	AAI 840		AGEC 700					
Course Title	Regulatory Aspects of Drug and Vaccine Development in the Animal Health Industry		Applied Agribusiness Economics					
Actual Dates	August 20-December 7, 2018		November 5, 2018-February 8, 2019					
		$ 2,307.75		$ 2,307.75				
			MANGT 820 Behavioral Management					
			March 25-May 31, 2019	$ 2,307.75				
Total Credit Hours/Tuition	5	$ 4,615.50	9	$ 6,923.25	3	$ 2,307.75	3	$ 2,307.75

Total Tuition: $ 16,154.25

Animal Sciences and Industry (B.S.) - Animal Products Option

Contact person: Dave Nichols
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13917&returnto=7378

Rationale: This proposed curriculum change is due to the Kansas Board of Regents mandate of 120 credit hours to achieve a bachelor's degree. This was accomplished through a reduction of 3 credit hours in Humanities/Social Sciences. The curriculum also reduced 3 credit hours from the Business electives.

Impact Statement: This proposal has potential impact on departments in the colleges of Arts and Sciences and Human Ecology due to the reduction of three hours of humanities/social sciences. Dr. Louise Benjamin from the College of Arts and Sciences and Dr. Bronwyn Fees from the College of Human Ecology have been contacted.

The reduction of three hours of business electives could potentially impact the College of Business and the Department of Agriculture Economics. Dr. Chwen Sheu from the College of Business and Dr. Christine Wilson from the Department of Agriculture Economics have been contacted.

FROM:	TO:
General Courses ASI 101 - Foundations in Animal Sciences & Industry Credits: 1 ~~or~~ ~~GENAG 200 - Topics in Agriculture Credits: 0-3~~ ~~Topic - College Careers (0 credits)~~ BIOL 198 - Principles of Biology Credits: 4 CHM 110 - General Chemistry Credits: 3 CHM 111 - General Chemistry Laboratory Credits: 1 COMM 105 - Public Speaking IA Credits: 2 ECON 110 - Principles of Macroeconomics Credits: 3 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 MATH 100 - College Algebra Credits: 3	**GENERAL COURSES** **(20 hrs)** ASI 101 - Foundations in Animal Sciences & Industry Credits: 1 BIOL 198 - Principles of Biology Credits: 4 CHM 110 - General Chemistry Credits: 3 CHM 111 - General Chemistry Laboratory Credits: 1 COMM 105 - Public Speaking IA Credits: 2 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 MATH 100 - College Algebra Credits: 3
Agriculture Select 2 courses from 2 other Agriculture departments-minimum of 5 credit hours (1 hour courses cannot be applied) ~~AGCOM - Any course in AGCOM~~ ~~AGEC - Any course in AGEC~~ ~~AGRON - Any course in AGRON~~	**BIOSCIENCES** **(9 hrs)** BIOCH 265 - Intro Organic & Biochemistry Credits: 5 OR BIOCH 266 – Elementary Organic and Biochemistry with Home and Virtual Laboratory Credits: 5 BIOL 455 - General Microbiology Credits: 4

~~- ASI 660~~

~~- ATM - Any course in ATM~~

~~- ENTOM - Any course in ENTOM~~

~~- FDSCI 660~~

~~- FOR - Any course in FOR~~

~~- GENAG 450, 505~~

~~- GRSC - Any course in GRSC~~

~~- HORT - Any course in HORT~~

~~- PLPTH - Any course in PLPTH~~

Biosciences
BIOCH 265 - Introductory Organic and Biochemistry Credits: 5

BIOL 455 - General Microbiology Credits: 4

Humanities/Social Science (minimum of 9 credit hours)
~~Must be taken from more than one department. Maximum 3 credit hours in performance courses.~~
~~- AMETH 160 to 501~~

~~- ANTH - Any course in ANTH~~

~~- ARCH 301~~

~~- ART - Any course in ART~~

~~- DANCE 120 to 200, 225 to 420, 495 to 690~~

~~- DEN 325, 450~~

~~- ECON 120 to 799~~

~~- ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799~~

~~- ENVD 250, 251~~

~~- FSHS - Any course in FSHS~~

~~- GEOG 100, 200, 201, 300 to 799~~

~~- GWSS - Any course in GWSS~~

~~- HIST - Any course in HIST~~

~~- Modern Languages - Any course in ARAB, CHINE, FREN, GRMN, ITAL, JAPAN, LATIN, RUSSN, SPAN~~

~~- MUSIC - Any course in MUSIC~~

COMMUNICATIONS ELECTIVE **(2-5 hrs)**
Select 1 course

See departmental list

BUSINESS & ECONOMICS **(12 hrs)**
ACCTG 231 - Accounting for Business Operations Credits: 3

Select 9 hours

See departmental list

AGRICULTURE ELECTIVES **(5 hrs)**
Select 2 courses from 2 other Agriculture departments not FDSCI- 1 hour courses cannot be applied
Minimum of 5 credit hours

See departmental list

MATH/STATISTICS/COMPUTERS **(6 hrs)**
Select 1 course
STAT 325 - Introduction to Statistics Credits: 3

STAT 340 - Biometrics I Credits: 3

STAT 350 - Business and Economic Statistics I Credits: 3

Minimum 3 hours
ASI 290 – Microcomputer Apps in Animal Science **Credits: 3**
CIS – Any course
MATH 150-799
STAT 325, 340, 350
AGEC 115 – Decision Tools for Ag Econ & AgBus **Credits: 2**

HUMANITIES/SOCIAL SCIENCES **(9 hrs)**
ECON 110 - Principles of Macroeconomics **Credits:** 3

Humanities/Social Sciences Electives
Maximum 3 hours from participatory courses. Courses must be taken from at least 2 different departments.

Minimum 6 hrs

See departmental list

ANIMAL SCIENCE/FOOD SCIENCE CORE **(46-47)**
ASI 102 - Principles of Animal Science Credits: 3

ASI 105 - Animal Sciences and Industry Credits: 1

ASI 106 - Dairy and Poultry Science Credits: 1

ASI 318 - Fundamentals of Nutrition Credits: 3

ASI 580 - Animal Sciences & Industry Career Prep Credits: 1

FDSCI 302 - Introduction to Food Science Credits: 3

FDSCI 600 - Food Microbiology Credits: 2

~~- PHILO - Any course in PHILO~~

~~- POLSC - Any course in POLSC~~

~~- PSYCH - Any course in PSYCH~~

~~- SOCIO - Any course in SOCIO~~

~~- SOCWK - Any course in SOCWK~~

~~- THTRE - Any course in THTRE~~

Business & Economics
ACCTG 231 - Accounting for Business Operations Credits: 3

~~(Minimum 12 credit hours)~~
~~- AGEC 202 to 420, 445 to 799~~

~~- ACCTG 241 to 799~~

~~- FINAN - Any course in FINAN~~

~~- ENTRP - Any course in ENTRP~~

~~- MANGT - Any course in MANGT~~

~~- MKTG - Any course in MKTG~~

Mathematics/Statistics/Computers
(Select 1 course)
STAT 325 - Introduction to Statistics Credits: 3

STAT 340 - Biometrics I Credits: 3

STAT 350 - Business and Economic Statistics I Credits: 3

Minimum 3 credit hours

- ASI ~~490~~
- CIS ~~101 to 104~~
- MATH 150~~, 205, 210, 211, 220, 221, 222~~
- STAT 341, 351

Communications
(Select 1 course)
~~- AGCOM 310, 400, 410, 590 & 610~~

~~- ASI 326, 420, 470 & 495~~

~~- COMM 311, 321, 322, 326~~

~~- ENGL 417, 510, 516~~

FDSCI 601 - Food Microbiology Lab Credits: 2

OR

FDSCI 307 – Applied Microbiology for Meat and Poultry Processors Credits: 3

FDSCI 690 - Principles of HACCP and HARPC Credits: 3

FDSCI 695 - Quality Assurance of Food Products Credits: 3

Animal Products
Select 1 course
ASI 350 - Meat Science Credits: 3

ASI 405 - Fundamentals of Milk Processing Credits: 3

Animal Management
Select 1 course
ASI 515 - Beef Science Credits: 3
ASI 524 - Sheep and Meat Goat Science Credits: 3
ASI 535 - Swine Science Credits: 3
ASI 621 - Dairy Cattle Management Credits: 3
ASI 645 - Poultry Management Credits: 3

ASI/FDSCI Electives
Maximum of 6 hrs internship. 9 hours must be 500 or higher
Minimum 18 hours
ASI 315 - Livestock and Meat Evaluation Credits: 3

ASI 361 - Meat Animal Processing Credits: 2

ASI 370 - Principles of Meat Evaluation Credits: 2

ASI 495 - Advanced Meat Evaluation Credits: 2

ASI 500 - Genetics Credits: 3

ASI 510 - Animal Breeding Principles Credits: 3

ASI 533 - Anatomy and Physiology Credits: 4

ASI 561 - Undergraduate Research in Animal Sciences & Industry Credits: 0-3

ASI 599 - Animal Science Internship Credits: 1-6

ASI 608 - Dairy Foods Processing & Technology Credits: 3

ASI 610 - Processed Meat Operations Credits: 2

ASI 640 - Poultry Products Technology Credits: 3

ASI 650 - Identification and Data Management of Food Animals Credits: 2

ASI 655 - Behavior of Domestic Animals Credits: 3

~~GENAG 450~~

~~MC 110, 111, 112, 120 & 180~~

Animal & Food Science

ASI 102 - Principles of Animal Science Credits: 3

ASI 105 - Animal Sciences and Industry Credits: 1

ASI 106 - Dairy and Poultry Science Credits: 1

ASI 318 - Fundamentals of Nutrition Credits: 3

ASI 580 - Animal Sciences and Industry Career Preparation Credits: 1

FDSCI 302 - Introduction to Food Science Credits: 3

FDSCI 600 - Food Microbiology Credits: 2

FDSCI 601 - Food Microbiology Lab Credits: 2

FDSCI 690 - Principles of HACCP and HARPC Credits: 3

FDSCI 695 - Quality Assurance of Food Products Credits: 3

(Select 1 course)

ASI 350 - Meat Science Credits: 3

ASI 405 - Fundamentals of Milk Processing Credits: 3

(Select 1 course)

ASI 515 - Beef Science Credits: 3

ASI 524 - Sheep and Meat Goat Science Credits: 3

ASI 535 - Swine Science Credits: 3

ASI 621 - Dairy Cattle Management Credits: 3

ASI 645 - Poultry Management Credits: 3

(Select 18 credit hours)

ASI 315 - Livestock and Meat Evaluation Credits: 3

ASI 361 - Meat Animal Processing Credits: 2

ASI 370 - Principles of Meat Evaluation Credits: 2

ASI 495 - Advanced Meat Evaluation Credits: 2

ASI 500 - Genetics Credits: 3

ASI 658 - Animal Growth and Development Credits: 3

ASI 662 - Special Topics Animal Sciences Credits: 0-6

ASI 776 – Meat Industry Technology Credits: 3

OR

ASI 777 - Meat Technology Credits: 3

FDSCI 305 - Fundamentals of Food Processing Credits: 3

FDSCI 430 - Food Products Evaluation Credits: 3

FDSCI 501 – Food Chemistry Credits: 3

FDSCI 530 - Undergraduate Research Credit: 1-3

FDSCI 603 - Food Science Internship Credits: 1-6

FDSCI 710 - Kosher and Halal Food Regulations Credit: 2

FDSCI 725 – Food Analysis Credits: 3

FDSCI 730 – A Multidisciplinary Overview of Food Safety & Security Credits: 3

FDSCI 731 – Food Protection & Defense Credits:2

FDSCI 740 – R&D of Food Products Credits: 4

FDSCI 791 - Advanced Applications of HACCP Credit: 3

Unrestricted Electives **(7-11)**

Total credit hours required for graduation: (120)

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45 hours must be at the 300-level or above

Must satisfy K-State 8 general education requirements.

ASI 510 - Animal Breeding Principles Credits: 3 ASI 533 - Anatomy and Physiology Credits: 4 ASI 561 - Undergraduate Research in Animal Sciences & Industry Credits: 0-3 ASI 608 - Dairy Foods Processing & Technology Credits: 3 ASI 610 - Processed Meat Operations Credits: 2 ASI 640 - Poultry Products Technology Credits: 3 ASI 650 - Identification and Data Management of Food Animals Credits: 2 ASI 655 - Behavior of Domestic Animals Credits: 3 ASI 658 - Animal Growth and Development Credits: 3 ASI 777 - Meat Technology Credits: 3 FDSCI 305 - Fundamentals of Food Processing Credits: 3 FDSCI 430 - Food Products Evaluation Credits: 3 FDSCI 603 - Food Science Internship Credits: 1-6 ~~(1-3 credit hours)~~ Total credit hours required for graduation: ~~(126)~~ 45 hours must be at the 300-level or above Must satisfy K-State 8 general education requirements.	

Animal Sciences and Industry (B.S.) - Bioscience/Biotechnology Option

Contact person: David Nichols
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13918&returnto=7378

Rationale: This proposed curriculum change is due to the Kansas Board of Regents mandate of 120 credit hours to achieve a bachelor's degree. This was accomplished through a reduction of 3 credit hours in Humanities/Social Sciences. The curriculum also reduced 3 credit hours from unrestricted electives.

Impact Statement: This proposal has potential impact on departments in the colleges of Arts and Sciences and Human Ecology due to the reduction of three hours of humanities/social sciences. Dr. Louise Benjamin from the College of Arts and Sciences and Dr. Bronwyn Fees from the College of Human Ecology have been contacted.

The Division of Biology may be impacted by the addition of BIOL 671 to the bioscience electives. Dr. Ruth Welti has been contacted.

FROM: TO:

~~**Communication Requirements**~~ ENGL 100 - Expository Writing I **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 COMM 105 - Public Speaking IA **Credits:** 2 Communication elective **Select 1 course** AGCOM 310, 400, 410, 590, 610 ASI 326, 420, 470, 495 COMM 311, 321, 322~~, 326~~ ENGL 417, 510, 516 MC 110, ~~111, 112,~~ 120 & 180 MKTG 542 Modern Languages - Any course **Business & Economics** ECON 110 - Principles of Macroeconomics **Credits:** 3 Business & Economics electives **Minimum 6 credit hours** ~~AGEC 202 to 799~~ ~~ACCTG 231 to 799~~ ~~ECON 300 to 799~~ ~~ENTRP - Any course~~ ~~FINAN - Any course~~ ~~GENBA - Any course~~ ~~MANGT - Any course~~ ~~MKTG - Any course~~ ~~PFP 105, 305~~ **Math/Statistics/Physics/Computer Science** **Math Requirement** MATH 100 - College Algebra **Credits:** 3 Statistics **Select 1 course** STAT 325 - Introduction to Statistics **Credits:** 3 STAT 340 - Biometrics I **Credits:** 3 STAT 350 - Business and Economic Statistics I **Credits:** 3	**GENERAL COURSES** **(20 hrs)** ASI 101 - Foundations in Animal Sciences & Industry Credits: 1 BIOL 198 - Principles of Biology Credits: 4 CHM 210 - Chemistry I Credits: 4 COMM 105 - Public Speaking IA Credits: 2 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 MATH 100 - College Algebra Credits: 3 **BIOSCIENCES/BIOTECHNOLOGY** **(19 hrs)** ASI 210 - Intro to Animal Biotechnology Credits: 3 BIOL 455 - General Microbiology Credits: 4 **Select 1 course** ASI 600 - Applied Animal Biotechnology Credits: 3 PLPTH 610 - Biotechnology Credits: 3 **Minimum 9 hours** ASI 561 - Undergraduate Research Credits: 0-3 ASI 598 - Bioscience Internship in Animal Science Credits: 1-6 ASI 600 - Applied Animal Biotechnology **Credits:** 3 ASI 601 – Endocrinology & Lactation Credits: 3 ASI 658 - Animal Growth and Development Credits: 3 ASI 695 - Equine Exercise Physiology Credits: 3 BIOL 330 - Public Health Biology Credits: 3 BIOL 410 - Biology of the Cancer Cell Credits: 2 BIOL 450 - Modern Genetics Credits: 4 BIOL 510 - Developmental Biology Credits: 3 BIOL 511 - Developmental Biology Laboratory Credits: 1 BIOL 530 - Pathogenic Microbiology Credits: 3 BIOL 541 - Cell Biology Credits: 3 BIOL 545 - Human Parasitology Credits: 3 BIOL 546 - Human Parasitology Laboratory Credits: 1 BIOL 625 - Animal Parasitology Credits: 4 BIOL 670 - Immunology Credits: 4 BIOL 671 Immunology Lab Credits: 2 ENTOM 305 - Animal Health Entomology Credits: 2 ENTOM 306 - Animal Health Entomology Laboratory Credits: 1

Math/Statistics/Physics/Computer Science Elective
Minimum 3 credit hours
AGEC 115
ASI 290
CIS ~~101, 102, 103, 104, 105~~
MATH ~~205, 210, 211, 220, 221, 222~~
PHYS 113, 114
~~STAT 341, 351~~

Science Requirements
BIOL 198 - Principles of Biology **Credits:** 4
BIOL 455 - General Microbiology **Credits:** 4
CHM 210 - Chemistry I **Credits:** 4
Chemistry and Biochemistry Electives
Minimum 9 credit hours
BIOCH 265 - Introductory Organic and Biochemistry **Credits:** 5
BIOCH 521 - General Biochemistry **Credits:** 3
BIOCH 522 - General Biochemistry Laboratory **Credits:** 3
CHM 230 - Chemistry II **Credits:** 4
CHM 350 - General Organic Chemistry **Credits:** 3
CHM 531 - Organic Chemistry I **Credits:** 3
CHM 532 - Organic Chemistry Laboratory **Credits:** 2
CHM 550 - Organic Chemistry II **Credits:** 3

Biosciences/Biotechnology
ASI 210 - Intro to Animal Biotechnology **Credits:** 3
~~ASI 200 - Introduction to Research in Animal Science **Credits:** 1~~
Select 1 course
ASI 600 - Applied Animal Biotechnology **Credits:** 3
PLPTH 610 - Biotechnology **Credits:** 3
~~Select 3 courses~~
ASI 598 - Bioscience Internship in Animal Science **Credits:** 1-6
ASI 600 - Applied Animal Biotechnology **Credits:** 3
ASI 658 - Animal Growth and Development **Credits:** 3
BIOL 330 - Public Health Biology **Credits:** 3
BIOL 410 - Biology of the Cancer Cell **Credits:** 2
BIOL 450 - Modern Genetics **Credits:** 4
BIOL 510 - Developmental Biology **Credits:** 3
BIOL 511 - Developmental Biology Laboratory **Credits:** 1
BIOL 530 - Pathogenic Microbiology **Credits:** 3
BIOL 541 - Cell Biology **Credits:** 3
BIOL 545 - Human Parasitology **Credits:** 3
BIOL 546 - Human Parasitology Laboratory **Credits:** 1
BIOL 625 - Animal Parasitology **Credits:** 4
BIOL 670 - Immunology **Credits:** 4
ENTOM 305 - Animal Health Entomology **Credits:** 2
ENTOM 306 - Animal Health Entomology Laboratory **Credits:** 1
PLPTH 610 - Biotechnology **Credits:** 3
PSYCH 470 - Psychobiology **Credits:** 3

Humanities/Social Science
FDSCI 600 Food Microbiology Credits: 2
FDSCI 601 Food Microbiology Lab Credits: 2
PLPTH 610 - Biotechnology **Credits:** 3
PSYCH 470 - Psychobiology Credits: 3

CHEMISTRY **(9 hrs)**
Minimum 9 hours
BIOCH 265 - Introductory Organic and Biochemistry Credits: 5
BIOCH 521 - General Biochemistry Credits: 3
BIOCH 522 - General Biochemistry Laboratory Credits: 3
CHM 230 - Chemistry II Credits: 4
CHM 350 - General Organic Chemistry Credits: 3
CHM 351 - General Organic Chemistry Lab Credits: 2
CHM 531 - Organic Chemistry I Credits: 3
CHM 532 - Organic Chemistry Laboratory Credits: 2
CHM 550 - Organic Chemistry II Credits: 3

COMMUNICATIONS ELECTIVE **(2-5 hrs)**
Select 1 course
See departmental list

BUSINESS & ECONOMICS **(6 hrs)**
Minimum 6 hours
See departmental list

AGRICULTURE ELECTIVES **(5 hrs)**
Select 2 courses from 2 other agriculture departments. 1 hour courses cannot be used.
Minimum 5 hours
See departmental list

STATISTICS/COMPUTERS/MATHEMATICS/PHYSICS (6 hrs)
Select 1 course
STAT 325 - Introduction to Statistics Credits: 3
STAT 340 - Biometrics I Credits: 3
STAT 350 - Business and Economic Statistics I Credits: 3
Minimum 3 hours
ASI 290
CIS – any course
MATH 150 – 799
PHYS 113, 114
AGEC 115 – Decision Tools for Ag Econ & AgBus **Credits: 2**

HUMANITIES/SOCIAL SCIENCES **(9 hrs)**
ECON 110 - Principles of Macroeconomics **Credits:** 3

Humanities/Social Sciences Electives
Maximum 3 hours from participatory courses. Courses must be taken from at least 2 different departments.
Minimum 6 hrs
See departmental list

ANIMAL SCIENCES CORE **(36 hrs)**
ASI 102 - Principles of Animal Science Credits: 3
ASI 318 - Fundamentals of Nutrition Credits: 3

Minimum 9 ~~credit~~ hours
~~Must be taken from more than one department.~~
~~Maximum 3 credit hours in performance courses.~~
- ~~AMETH 160 to 501~~
- ~~ANTH - Any course in ANTH~~
- ~~ARCH 301~~
- ~~ART - Any course in ART~~
- ~~DANCE 120 to 200, 225 to 420, 495 to 690~~
- ~~DEN 325, 450~~
- ~~ECON 120 to 799~~
- ~~ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799~~
- ~~ENVD 250, 251~~
- ~~FSHS - Any course in FSHS~~
- ~~GEOG 100, 200, 201, 300 to 799~~
- ~~GWSS - Any course in GWSS~~
- ~~HIST - Any course in HIST~~
- ~~Modern Languages - Any course in ARAB, CHINE, FREN, GRMN, ITAL, JAPAN, LATIN, RUSSN, SPAN~~
- ~~MUSIC - Any course in MUSIC~~
- ~~PHILO - Any course in PHILO~~
- ~~POLSC - Any course in POLSC~~
- ~~PSYCH - Any course in PSYCH~~
- ~~SOCIO - Any course in SOCIO~~
- ~~SOCWK - Any course in SOCWK~~
- ~~THTRE - Any course in THTRE~~

Animal Science ~~Core Requirements~~
ASI 101 - Foundations in Animal Sciences & Industry **Credits:** 1
ASI 102 - Principles of Animal Science **Credits:** 3
ASI 105 - Animal Sciences and Industry **Credits:** 1
ASI 106 - Dairy and Poultry Science **Credits:** 1
ASI 107 - Companion Animal and Horse Lab **Credits:** 1
ASI 318 - Fundamentals of Nutrition **Credits:** 3
ASI 400 - Farm Animal Reproduction **Credits:** 3
ASI 401 - Farm Animal Reproduction Laboratory **Credits:** 1
ASI 500 - Genetics **Credits:** 3
ASI 520 - Companion Animal Management **Credits:** 3
ASI 533 - Anatomy and Physiology **Credits:** 4
ASI 580 - Animal Sciences and Industry Career Preparation **Credits:** 1
Select 1 course
ASI 515 - Beef Science **Credits:** 3
ASI 521 - Horse Science **Credits:** 3
ASI 524 - Sheep and Meat Goat Science **Credits:** 3
ASI 535 - Swine Science **Credits:** 3
ASI 621 - Dairy Cattle Management **Credits:** 3
ASI 645 - Poultry Management **Credits:** 3
ASI 315 - Livestock and Meat Evaluation **Credits:** 3
Are you dropping 315? It isn't in the list to the right.
~~Minimum 6 credit hours~~
- ~~ASI 320 - Principles of Feeding **Credits:** 3~~
- ~~ASI 350 - Meat Science **Credits:** 3~~
- ~~ASI 361 - Meat Animal Processing **Credits:** 2~~

ASI 400 - Farm Animal Reproduction Credits: 3
ASI 401 - Farm Animal Reproduction Laboratory Credits: 1
ASI 500 - Genetics Credits: 3
ASI 520 - Companion Animal Management Credits: 3
ASI 533 - Anatomy and Physiology Credits: 4
ASI 580 - Animal Sciences & Industry Career Prep Credits: 1

Introductory Labs
ASI 105 - Animal Sciences and Industry Credits: 1
ASI 106 - Dairy and Poultry Science Credits: 1
ASI 107 - Companion Animal and Horse Lab Credits: 1

Animal Management
Select 1 courses
ASI 515 - Beef Science Credits: 3
ASI 521 - Horse Science Credits: 3
ASI 524 - Sheep and Meat Goat Science Credits: 3
ASI 535 - Swine Science Credits: 3
ASI 621 - Dairy Cattle Management Credits: 3
ASI 645 - Poultry Management Credits: 3

Animal Sciences Electives
Minimum of 9 hours
6 hours must be ≥500-level, no more than 3 hours combined from ASI 561, ASI 599 and ASI 661.

See departmental list

UNRESTRICTED ELECTIVES (5-8 hrs)

Total credit hours required for graduation: (120)

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45 hours must be at the 300-level or above

Must satisfy K-State 8 general education requirements.

~~ASI 405 - Fundamentals of Milk Processing~~ **~~Credits:~~** ~~3~~ ~~ASI 510 - Animal Breeding Principles~~ **~~Credits:~~** ~~3~~ ~~ASI 540 - Principles of Animal Disease Control~~ **~~Credits:~~** ~~3~~ ~~ASI 561 - Undergraduate Research in Animal Sciences & Industry~~ **~~Credits:~~** ~~0-3~~ ~~ASI 595 - Contemporary Issues in Animal Science and Agriculture~~ **~~Credits:~~** ~~3~~ ~~ASI 601 - Endocrinology and Lactation~~ **~~Credits:~~** ~~3~~ ~~ASI 608 - Dairy Foods Processing & Technology~~ **~~Credits:~~** ~~3~~ ~~ASI 640 - Poultry Products Technology~~ **~~Credits:~~** ~~3~~ ~~ASI 655 - Behavior of Domestic Animals~~ **~~Credits:~~** ~~3~~ ~~ASI 695 - Principles of Equine Exercise Physiology~~ **~~Credits:~~** ~~3~~ ~~FDSCI 600 - Food Microbiology~~ **~~Credits:~~** ~~2~~ ~~FDSCI 601 - Food Microbiology Lab~~ **~~Credits:~~** ~~2~~ **Agriculture Electives** **~~Minimum 5 credit hours~~** **~~Must be from 2 other Agriculture departments -)1 credit hour courses cannot be applied)~~** ~~AED - Any course~~ ~~AGCOM - Any course~~ ~~AGEC - 120, 200 to 799~~ ~~AGRON - Any course~~ ~~ASI 660~~ ~~ATM - Any course~~ ~~ENTOM - Any course~~ ~~FDSCI - Any course~~ ~~GENAG 210, 450, 505~~ ~~GRSC - Any course~~ ~~HORT - Any course~~ ~~PLPTH - Any course~~ ~~PMC - Any course~~ ~~WOEM - Any course~~ **Unrestricted Electives** ~~4-17 credit hours~~ **45 hours must be at the 300-level or above** Must satisfy K-State 8 general education requirements. **Total credit hours required for graduation: ~~(126)~~**	

Animal Sciences and Industry (B.S.) - Business Option

Contact person: David Nichols
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13919&returnto=7378

Rationale: This proposed curriculum change is due to the Kansas Board of Regents mandate of 120 credit hours to achieve a bachelor's degree. This was accomplished through a reduction of 3 credit hours in Humanities/Social Sciences and 3 credit hours from unrestricted electives.

Impact Statement: This proposal has potential impact on departments in the colleges of Arts and Sciences and Human Ecology due to the reduction of three hours of humanities/social sciences. Dr. Louise Benjamin from the College of Arts and Sciences and Dr. Bronwyn Fees from the College of Human Ecology have been contacted.

FROM:	TO:
General Courses ASI 101 - Found in Animal Sciences & Industry **Credits:** 1 ~~or~~ ~~GENAG 200 - Topics in Agriculture **Credits:** 0-3~~ ~~Topic - College Careers (0 credits)~~ BIOL 198 - Principles of Biology **Credits:** 4 CHM 110 - General Chemistry **Credits:** 3 CHM 111 - General Chemistry Laboratory **Credits:** 1 COMM 105 - Public Speaking IA **Credits:** 2 ECON 110 - Principles of Macroeconomics **Credits:** 3 ENGL 100 - Expository Writing I **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 MATH 100 - College Algebra **Credits:** 3 **Agriculture** AGEC 120 - Agricultural Economics and Agribusiness **Credits:** 3 **Plus 2 courses from 2 other Agriculture departments- minimum of 5 credit hours.** **(1 hour courses cannot be applied, cannot use courses from AGEC)** ~~AGCOM - Any course in AGCOM~~ ~~AGEC 460~~ ~~AGRON - Any course in AGRON~~ ~~ASI 660~~ ~~ATM - Any course in ATM~~ ~~ENTOM - Any course in ENTOM~~ ~~FDSCI - Any course in FDSCI~~ ~~GENAG 450, 505~~ ~~GRSC - Any course in GRSC~~ ~~HORT - Any course in HORT~~ ~~PLPTH - Any course in PLPTH~~ ~~PMC - Any course PMC 210 and above~~ **Biosciences** ASI 500 - Genetics **Credits:** 3 ASI 533 - Anatomy and Physiology **Credits:** 4 **Humanities/Social Science** (minimum of 9 credit hours) Must be taken from more than one department. Maximum 3 credit hours in performance courses. ~~AMETH 160 to 501~~ ~~ANTH - Any course in ANTH~~ ~~ARCH 301~~ ~~ART - Any course in ART~~ ~~DANCE 120 to 200, 225 to 420, 495 to 690~~ ~~DEN 325, 450~~ ~~ECON 120 to 799~~ ~~ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799~~	**GENERAL COURSES** **(20 hrs)** ASI 101 - Foundations in Animal Sciences &Industry **Credits:** 1 BIOL 198 - Principles of Biology **Credits:** 4 CHM 110 - General Chemistry **Credits:** 3 CHM 111 - General Chemistry Laboratory **Credits:** 1 COMM 105 - Public Speaking IA **Credits:** 2 ENGL 100 - Expository Writing I **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 MATH 100 - College Algebra **Credits:** 3 **COMMUNICATIONS ELECTIVE** **(2-5 hrs)** **Select 1 course** See departmental list **BUSINESS & ECONOMICS** **(24 hrs)** ACCTG 231 - Accounting for Business Operations **Credits:** 3 ACCTG 241 - Accounting for Investing & Financing **Credits:** 3 **Business & Economics Electives** **Minimum 18 hrs** See departmental list **AGRICULTURE ELECTIVES** **(8 hrs)** AGEC 120 – Agricultural Economics & Agribusiness **Credits:** 3 **Agriculture Electives** Select 2 courses from 2 other agriculture departments NOT from AGEC. (1 hour courses cannot be used) **Minimum 5 hours** See departmental list **COMPUTERS/MATHEMATICS/STATISTICS** **(3 hrs)** ASI 290 – Microcomputer Apps in Animal Science **Credits: 3** CIS – Any course MATH 150-799 STAT 325, 340, 350 AGEC 115 – Decision Tools for Ag Econ & AgBus **Credits: 2** **HUMANITIES/SOCIAL SCIENCES** **(9 hrs)** ECON 110 - Principles of Macroeconomics **Credits:** 3 **Humanities/Social Sciences Electives** Maximum 3 hours from participatory courses. Courses must be taken from at least 2 different departments.

~~ENVD 250, 251~~
~~FSHS - Any course in FSHS~~
~~GEOG 100, 200, 201, 300 to 799~~
~~GWSS - Any course in GWSS~~
~~HIST - Any course in HIST~~
~~Modern Languages - Any course in ARAB, CHINE, FREN, GRMN, ITAL, JAPAN, LATIN, RUSSN, SPAN~~
~~MUSIC - Any course in MUSIC~~
~~PHILO - Any course in PHILO~~
~~POLSC - Any course in POLSC~~
~~PSYCH - Any course in PSYCH~~
~~SOCIO - Any course in SOCIO~~
~~SOCWK - Any course in SOCWK~~
~~THTRE - Any course in THTRE~~

Business & Economics
ACCTG 231 - Accounting for Business Operations **Credits:** 3
ACCTG 241 - Accounting for Investing and Financing **Credits:** 3
Minimum of 18 credit hours
~~ACCTG - 331 to 799~~
~~AGEC - 202 to 420, 445 to 799~~
~~ECON - 500 to 799~~
~~FINAN - Any course in FINAN~~
~~ENTRP - Any course in ENTRP~~
~~MANGT - Any course in MANGT~~
~~MKTG - Any course in MKTG~~

Mathematics/Statistics/Computers (minimum 3 credit hours)
ASI ~~490~~
CIS ~~101, 102, 103, 104~~
MATH ~~150, 205, 210, 211, 220, 221, 222~~
STAT 325, 340, 350

Communications (minimum 3 credit hours)
AGCOM 310, 400, 410, 590, 610, 712
ASI 326, 420, 470 & 495
COMM 311, 321, 322, 326
ENGL 417, 510, 516
~~GENAG 450~~
MC 110, ~~111, 112,~~ 120, 180
Modern Languages - Any course ~~in ARAB, CHINE, FREN, GRMN, ITAL, JAPAN, LATIN, RUSSN, SPAN~~

Animal Science
ASI 102 - Principles of Animal Science **Credits:** 3
ASI 318 - Fundamentals of Nutrition **Credits:** 3
ASI 320 - Principles of Feeding **Credits:** 3
ASI 400 - Farm Animal Reproduction **Credits:** 3
ASI 580 - Animal Sciences and Industry Career Preparation **Credits:** 1
Select 2 courses
ASI 105 - Animal Sciences and Industry **Credits:** 1
ASI 106 - Dairy and Poultry Science **Credits:** 1

Minimum 6 hrs

See departmental list

ANIMAL SCIENCE CORE **(42-43 hrs)**
ASI 102 - Principles of Animal Science **Credits:** 3
ASI 318 - Fundamentals of Nutrition **Credits:** 3
ASI 320 – Principles of Feeding **Credits:** 3
ASI 400 - Farm Animal Reproduction **Credits:** 3
ASI 500 - Genetics **Credits:** 3
ASI 533 - Anatomy and Physiology **Credits:** 4
ASI 580 - Animal Sciences & Industry Career Prep **Credits:** 1

Introductory Labs
Select 2 courses
ASI 105 - Animal Sciences and Industry **Credits:** 1
ASI 106 - Dairy and Poultry Science **Credits:** 1
ASI 107 - Companion Animal and Horse Lab **Credits:** 1

Animal Products
Select 1 course
ASI 350 - Meat Science **Credits:** 3
ASI 361 - Meat Animal Processing **Credits:** 2
ASI 405 - Fundamentals of Milk Processing **Credits:** 3
ASI 640 - Poultry Products Technology **Credits:** 3
FDSCI 305 - Fundamentals of Food Processing **Credits:** 3

Animal Management
Select 2 courses
ASI 515 - Beef Science **Credits:** 3
ASI 520 - Companion Animal Management **Credits:** 3
ASI 521 - Horse Science **Credits:** 3
ASI 524 - Sheep and Meat Goat Science **Credits:** 3
ASI 535 - Swine Science **Credits:** 3
ASI 621 - Dairy Cattle Management **Credits:** 3
ASI 645 - Poultry Management **Credits:** 3

Animal Sciences Electives
Minimum of 12 hours
9 hours must be ≥500-level, no more than 6 hours combined from ASI 561, ASI 599 and ASI 661.

See departmental list

UNRESTRICTED ELECTIVES **(8-12 hrs)**

Total credit hours required for graduation: 120

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45 hours must be at the 300-level or above

Must satisfy K-State 8 general education requirements.

ASI 107 - Companion Animal and Horse Lab **Credits:** 1 **Select 1 course** ASI 350 - Meat Science **Credits:** 3 ASI 361 - Meat Animal Processing **Credits:** 2 ASI 405 - Fundamentals of Milk Processing **Credits:** 3 ASI 640 - Poultry Products Technology **Credits:** 3 FDSCI 305 - Fundamentals of Food Processing **Credits:** 3 **Select 2 courses** ASI 515 - Beef Science **Credits:** 3 ASI 520 - Companion Animal Management **Credits:** 3 ASI 521 - Horse Science **Credits:** 3 ASI 524 - Sheep and Meat Goat Science **Credits:** 3 ASI 535 - Swine Science **Credits:** 3 ASI 621 - Dairy Cattle Management **Credits:** 3 ASI 645 - Poultry Management **Credits:** 3 ~~**Minimum 9 credit hours**~~ ~~ASI 315 - Livestock and Meat Evaluation **Credits:** 3~~ ~~ASI 401 - Farm Animal Reproduction Laboratory **Credits:** 1~~ ~~ASI 504 - Equine Reproduction Management **Credits:** 3~~ ~~ASI 510 - Animal Breeding Principles **Credits:** 3~~ ~~ASI 512 - Bovine Reproductive Technologies **Credits:** 2~~ ~~ASI 540 - Principles of Animal Disease Control **Credits:** 3~~ ~~ASI 561 - Undergraduate Research in Animal Sciences & Industry **Credits:** 0-3~~ ~~ASI 595 - Contemporary Issues in Animal Science and Agriculture **Credits:** 3~~ ~~ASI 599 - Animal Science Internship **Credits:** 1-6 (maximum 3 credit hours)~~ ~~ASI 600 - Applied Animal Biotechnology **Credits:** 3~~ ~~ASI 601 - Endocrinology and Lactation **Credits:** 3~~ ~~ASI 602 - Equine Breeding and Genetics **Credits:** 2~~ ~~ASI 608 - Dairy Foods Processing & Technology **Credits:** 3~~ ~~ASI 610 - Processed Meat Operations **Credits:** 2~~ ~~ASI 620 - Beef Systems Management **Credits:** 2~~ ~~ASI 650 - Identification and Data Management of Food Animals **Credits:** 2~~ ~~ASI 655 - Behavior of Domestic Animals **Credits:** 3~~ ~~ASI 658 - Animal Growth and Development **Credits:** 3~~ ~~ASI 662 - Special Topics in Animal Science **Credits:** 0-6~~ ~~ASI 675-679 Non-Ruminant Nutrition Modules **Credits:** (1-5)~~ ~~ASI 680-685 Ruminant Nutrition Modules **Credits:** (1-6)~~ ~~ASI 695 - Principles of Equine Exercise Physiology **Credits:** 3~~ ~~ASI 710 - Physiology of Reproduction in Farm Animals **Credits:** 3~~ ~~ASI 777 - Meat Technology **Credits:** 3~~	

~~DMP 610 - Feedlot Health Systems~~ **~~Credits:~~** ~~3~~ ~~DMP 611 - Cow-Calf Health Systems~~ **~~Credits:~~** ~~2~~ **Total credit hours required for graduation:** **~~(126)~~** **45 hours must be at the 300-level or above** Must satisfy K-State 8 general education requirements.	

Animal Sciences and Industry (B.S.) - Communications & Marketing Option

Contact person: David Nichols
https://catalog.k-state.edu/preview_program.php?catoid=40&poid=13129&returnto=6982

Rationale: This proposed curriculum change is due to the Kansas Board of Regents mandate of 120 credit hours to achieve a bachelor's degree. This was accomplished through a reduction of 6 credit hours from unrestricted electives.

Impact Statement: No impact to other departments or colleges.

FROM:	TO:
General Courses ASI 101 - Foundations in Animal Sciences & Industry **Credits:** 1 ~~or~~ ~~GENAG 200 - Topics in Agriculture~~ **~~Credits:~~** ~~0-3~~ ~~Topic - College Careers (0 credits)~~ BIOL 198 - Principles of Biology **Credits:** 4 CHM 110 - General Chemistry **Credits:** 3 CHM 111 - General Chemistry Laboratory **Credits:** 1 COMM 105 - Public Speaking IA **Credits:** 2 ECON 110 - Principles of Macroeconomics **Credits:** 3 ENGL 100 - Expository Writing I **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 MATH 100 - College Algebra **Credits:** 3 **Agriculture** **Select 2 courses from 2 other Agriculture departments–minimum of 5 credit hours.**(1 hour courses cannot be applied, cannot use courses from AGCOM). ~~AGEC - Any course~~ ~~AGRON - Any course~~ ~~ASI 660~~ ~~ATM - Any course~~ ~~ENTOM - Any course~~ ~~FDSCI - Any course~~ ~~GENAG - 450, 505~~ ~~GRSC - Any course~~ ~~HORT - Any course~~ ~~PLPTH - Any course~~ ~~PMC - Any course~~	**GENERAL COURSES** **(20 hrs)** ASI 101 - Foundations in Animal Sciences &Industry **Credits:** 1 BIOL 198 - Principles of Biology **Credits:** 4 CHM 110 - General Chemistry **Credits:** 3 CHM 111 - General Chemistry Laboratory **Credits:** 1 COMM 105 - Public Speaking IA **Credits:** 2 ENGL 100 - Expository Writing I **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 MATH 100 - College Algebra **Credits:** 3 **COMMUNICATIONS CORE** **(27 hrs)** AGCOM 210 - Layout and Design Principles **Credits:** 3 MC 110 - Mass Communication in Society **Credits:** 3 MC 130 - Writing Conventions and Mechanics **Credits:** 1 MC 466 - Law of Mass Communications **Credits:** 3 **Select From** AGCOM 110 - Introduction to Ag Communications **Credits:** 2 OR MC 131 - Media Writing Styles and Platforms **Credits:** 1 AND MC 132 - Writing Perspectives **Credits:** 1 **Journalism and Mass Communication Thematic Sequence** Students choose a track from the following Advertising, Journalism, Photojournalism, Public Relations, and Strategic Communications **Select 1 course** MC 120 - Principles of Advertising **Credits:** 3 MC 160 - Principles of Journalism **Credits:** 3

Humanities/Social Science
~~**(minimum 6 credit hours)**~~
~~**(Must be taken from more than one department. Maximum 3 credit hours in performance courses.)**~~
~~- AMETH - AMETH 160 to 501~~
~~- ANTH - Any course~~
~~- ARCH 301~~
~~- ART - Any course~~
~~- DANCE - DANCE 120 to 200, 225 to 420, 495 to 690~~
~~- DEN 325, 450~~
~~- ECON - ECON 120-799~~
~~- ENGL - ENGL 210 to 299, 310, 325 to 399, 420 to 499, 525 to 599, 605 to 660, 670 to 695, 700 to 759, 790 to 799~~
~~- ENVD 250, 251~~
~~- FSHS - Any course~~
~~- GEOG - GEOG 100, 200, 201, 300 to 799~~
~~- GWSS - Any course~~
~~- HIST - Any course~~
~~- Modern Language - Any course in ARAB, CHINE, FREN, GRM, ITAL, JAPAN, LATIN, RUSSN, SPAN~~
~~- MUSIC - Any course~~
~~- PHILO - Any course~~
~~- POLSC - Any course~~
~~- PSYCH - Any course~~
~~- SOCIO - Any course~~
~~- SOCWK - Any course~~
~~- DANCE - Any course~~
~~- THTRE - Any course~~

Math/Statistics/Computers
(**Minimum of 3 credit hours**)
ASI ~~490~~
CIS ~~101,102, 103, 104~~
MATH ~~150, 205, 210, 211, 220, 221, 222~~
STAT 325, 340, 350

Marketing & Business
Required
MKTG 400 - Introduction to Marketing **Credits:** 3
Select 9 credit hours:
ACCTG 231 - Accounting for Business Operations **Credits:** 3
ACCTG 241 - Accounting for Investing and Financing **Credits:** 3
AGEC 515 - Food and Agribusiness Marketing **Credits:** 3
MKTG - Any course **Credits:** 3

Communications
AGCOM 210 - Layout and Design Principles **Credits:** 3
MC 110 - Mass Communication in Society **Credits:** 3
MC 130 - Writing Conventions and Mechanics **Credits:** 1
MC 466 - Law of Mass Communications **Credits:** 3
Select From
MC 131 - Media Writing Styles and Platforms **Credits:** 1
MC 180 - Principles of Public Relations **Credits:** 3

Minimum of 9 hours
Minimum 3 hours – 200 level MC course
Minimum 3 hours – 300 level MC course
Minimum 3 hours – 400 level or above MC course

Communications Elective
Minimum 3 hrs
AGCOM - 310 to 799
COMM - 311 to 799
ENGL - 417, 510, 516

MARKETING & BUSINESS
(12 hrs)
MKTG 400 - Introduction to Marketing **Credits:** 3

Marketing & Business Electives
Select 9 hrs
ACCTG 231 - Accounting for Business Operations **Credits:** 3
ACCTG 241 - Accounting for Investing & Financing **Credits:** 3
AGEC 515 - Food and Agribusiness Marketing **Credits:** 3
AGEC 535 – Agricultural Sales **Credits: 3**
MKTG – Any Course

AGRICULTURE ELECTIVES
(5 hrs)
Select 2 courses from 2 other Agriculture departments. (1 hour courses cannot be applied, cannot use courses from AGCOM).

Minimum of 5 hours

See departmental list

MATH/STATISTICS/COMPUTERS
(3 hrs)
Select 3 hrs
ASI 290 – Microcomputer Apps in Animal Science **Credits: 3**
CIS – Any course
MATH 150-799
STAT 325, 340, 350
AGEC 115 – Decision Tools for Ag Econ & AgBus **Credits: 2**

HUMANITIES/SOCIAL SCIENCES (9 hrs)
ECON 110 - Principles of Macroeconomics **Credits:** 3

Humanities/Social Sciences Electives
Maximum 3 hours from participatory courses. Courses must be taken from at least 2 different departments.

Minimum 6 hrs

See departmental list

ANIMAL SCIENCE CORE (35-36 hrs)
ASI 102 - Principles of Animal Science **Credits:** 3
ASI 318 - Fundamentals of Nutrition **Credits:** 3
ASI 400 - Farm Animal Reproduction **Credits:** 3
ASI 500 - Genetics **Credits:** 3
ASI 533 - Anatomy and Physiology **Credits:** 4

And
MC 132 - Writing Perspectives **Credits:** 1
Or
AGCOM 110 - Introduction to Agricultural Communications **Credits:** 3

Select 1 course

MC 120 - Principles of Advertising **Credits:** 3
MC 160 - Principles of Journalism **Credits:** 3
MC 180 - Principles of Public Relations **Credits:** 3

JMC Specialization-Minimum of 9 hours
Minimum 3 hours – 200 level MC course
Minimum 3 hours – 300 level MC course
Minimum 3 hours – 400 level MC course

Select 1 course

~~AGCOM 310 - Communicating in the Agricultural Industry **Credits:** 3~~
~~AGCOM 410 - Agricultural Student Magazine **Credits:** 1-5~~
~~AGCOM 435 - Video in Agriculture and Food **Credits:** 3~~
~~AGCOM 590 - New Media Technology **Credits:** 3~~
~~AGCOM 610 - Crisis Communication **Credits:** 3~~
~~AGCOM 712 - Environmental Communication **Credits:** 3~~
~~COMM 311 - Business and Professional Speaking **Credits:** 3~~
~~COMM 323 - Nonverbal Communication **Credits:** 3~~
~~COMM 325 - Argumentation and Debate **Credits:** 3~~
~~COMM 326 - Small Group Discussion Methods **Credits:** 3~~
~~COMM 328 - Professional Interviewing **Credits:** 3~~
~~COMM 330 - Rhetoric in Western Thought **Credits:** 3~~
~~COMM 430 - Freedom of Speech **Credits:** 3~~
~~COMM 431 - Criticism of Public Discourse **Credits:** 3~~
~~COMM 434 - Rhetoric and Social Movements **Credits:** 3~~
~~COMM 435 - Political Communication **Credits:** 3~~
~~COMM 440 - Collaborative Communication and Event Planning **Credits:** 3~~
~~COMM 465 - Communication and Confliet **Credits:** 3~~
~~COMM 475 - Legal Communication **Credits:** 3~~
~~COMM 480 - Intercultural Communication **Credits:** 3~~
~~COMM 526 - Persuasion **Credits:** 3~~
~~COMM 535 - Communication and Leadership **Credits:** 3~~
~~COMM 537 - Negotiation and Communication **Credits:** 3~~
~~COMM 545 - Communication and Democracy **Credits:** 3~~
~~ENGL 417 - Written Communication for the Workplace **Credits:** 3~~
~~ENGL 510 - Introduction to Professional Writing **Credits:** 3~~
~~ENGL 516 - Written Communication for the Sciences **Credits:** 3~~

Animal Science

ASI 580 - Animal Sciences & Industry Career Prep **Credits:** 1

Introductory Lab

Select 1 course

ASI 105 - Animal Sciences and Industry **Credits:** 1
ASI 106 - Dairy and Poultry Science **Credits:** 1
ASI 107 - Companion Animal and Horse Lab **Credits:** 1

Animal Products

Select 1 course

ASI 350 - Meat Science **Credits:** 3
ASI 361 - Meat Animal Processing **Credits:** 2
ASI 405 - Fundamentals of Milk Processing **Credits:** 3
ASI 640 - Poultry Products Technology **Credits:** 3
FDSCI 305 - Fundamentals of Food Processing **Credits:** 3

Animal Management

Select 2 courses

ASI 515 - Beef Science **Credits:** 3
ASI 520 - Companion Animal Management **Credits:** 3
ASI 521 - Horse Science **Credits:** 3
ASI 524 - Sheep and Meat Goat Science **Credits:** 3
ASI 535 - Swine Science **Credits:** 3
ASI 621 - Dairy Cattle Management **Credits:** 3
ASI 645 - Poultry Management **Credits:** 3

Animal Sciences Electives

Minimum of 9 hours

6 hours must be ≥500-level, no more than 3 hours combined from ASI 561, ASI 599 and ASI 661.

See departmental list

UNRESTRICTED ELECTIVES **(8-11 hrs)**

Total credit hours required for graduation: 120

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45 hours must be at the 300-level or above

Must satisfy K-State 8 general education requirements.

ASI 102 - Principles of Animal Science **Credits:** 3 ASI 318 - Fundamentals of Nutrition **Credits:** 3 ASI 400 - Farm Animal Reproduction **Credits:** 3 ASI 500 - Genetics **Credits:** 3 ASI 533 - Anatomy and Physiology **Credits:** 4 ASI 580 - Animal Sciences and Industry Career Preparation **Credits:** 1 **Select 1 course** ASI 105 - Animal Sciences and Industry **Credits:** 1 ASI 106 - Dairy and Poultry Science **Credits:** 1 ASI 107 - Companion Animal and Horse Lab **Credits:** 1 **Select 1 course** ASI 350 - Meat Science **Credits:** 3 ASI 361 - Meat Animal Processing **Credits:** 2 ASI 405 - Fundamentals of Milk Processing **Credits:** 3 ASI 640 - Poultry Products Technology **Credits:** 3 FDSCI 305 - Fundamentals of Food Processing **Credits:** 3 **Select 2 courses** ASI 515 - Beef Science **Credits:** 3 ASI 520 - Companion Animal Management **Credits:** 3 ASI 521 - Horse Science **Credits:** 3 ASI 524 - Sheep and Meat Goat Science **Credits:** 3 ASI 535 - Swine Science **Credits:** 3 ASI 621 - Dairy Cattle Management **Credits:** 3 ASI 645 - Poultry Management **Credits:** 3 **Minimum 9 credit hours** ~~ASI 315 - Livestock and Meat Evaluation **Credits:** 3~~ ~~ASI 320 - Principles of Feeding **Credits:** 3~~ ~~ASI 401 - Farm Animal Reproduction Laboratory **Credits:** 1~~ ~~ASI 504 - Equine Reproduction Management **Credits:** 3~~ ~~ASI 510 - Animal Breeding Principles **Credits:** 3~~ ~~ASI 512 - Bovine Reproductive Technologies **Credits:** 2~~ ~~ASI 540 - Principles of Animal Disease Control **Credits:** 3~~ ~~ASI 561 - Undergraduate Research in Animal Sciences & Industry **Credits:** 0-3~~ ~~ASI 595 - Contemporary Issues in Animal Science and Agriculture **Credits:** 3~~ ~~ASI 599 - Animal Science Internship **Credits:** 1-6 (enroll 1-3 credits)~~ ~~ASI 601 - Endocrinology and Lactation **Credits:** 3~~ ~~ASI 602 - Equine Breeding and Genetics **Credits:** 2~~ ~~ASI 608 - Dairy Foods Processing & Technology **Credits:** 3~~ ~~ASI 610 - Processed Meat Operations **Credits:** 2~~ ~~ASI 620 - Beef Systems Management **Credits:** 2~~ ~~ASI 650 - Identification and Data Management of Food Animals **Credits:** 2~~ ~~ASI 655 - Behavior of Domestic Animals **Credits:** 3~~ ~~ASI 658 - Animal Growth and Development **Credits:** 3~~ ~~ASI 662 - Special Topics in Animal Science **Credits:** 0-6~~	

~~ASI 695 - Principles of Equine Exercise Physiology **Credits:** 3~~ ~~ASI 675-679 Non-Ruminant Nutrition Modules **Credits:** 1-5~~ ~~ASI 680-685 Ruminant Nutrition Modules **Credits:** 1-6~~ ~~ASI 710 - Physiology of Reproduction in Farm Animals **Credits:** 3~~ ~~ASI 777 - Meat Technology **Credits:** 3~~ ~~DMP 610 - Feedlot Health Systems **Credits:** 3~~ ~~DMP 611 - Cow-Calf Health Systems **Credits:** 2~~ **Unrestricted Electives Credits: 14-15** **Total credit hours required for graduation: ~~(126)~~** **45 hours must be at the 300-level or above** Must satisfy K-State 8 general education requirements.	

Animal Sciences and Industry (B.S.) - Production/Management Option

Contact person: David Nichols
https://catalog.k-state.edu/preview_program.php?catoid=40&poid=13130&returnto=6982

Rationale: This proposed curriculum change is due to the Kansas Board of Regents mandate of 120 credit hours to achieve a bachelor's degree. This was accomplished through a reduction of 3 credit hours in Humanities/Social Sciences and 3 credit hours from unrestricted electives.

Impact Statement: This proposal has potential impact on departments in the colleges of Arts and Sciences and Human Ecology due to the reduction of three hours of humanities/social sciences. Dr. Louise Benjamin from the College of Arts and Sciences and Dr. Bronwyn Fees from the College of Human Ecology have been contacted.

FROM:	TO:
General Courses ASI 101 - Foundations in Animal Sciences & Industry **Credits:** 1 ~~or~~ ~~GENAG 200 - Topics in Agriculture **Credits:** 0-3~~ ~~• Topic - College Careers (0 credits)~~ BIOL 198 - Principles of Biology **Credits:** 4 CHM 110 - General Chemistry **Credits:** 3 CHM 111 - General Chemistry Laboratory **Credits:** 1 COMM 105 - Public Speaking IA **Credits:** 2 ECON 110 - Principles of Macroeconomics **Credits:** 3 ENGL 100 - Expository Writing I **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 MATH 100 - College Algebra **Credits:** 3 **Agriculture** AGEC 120 - Agricultural Economics and Agribusiness **Credits:** 3	**GENERAL COURSES** **(20 hrs)** ASI 101 - Foundations in Animal Sciences & Industry Credits: 1 BIOL 198 - Principles of Biology Credits: 4 CHM 110 - General Chemistry Credits: 3 CHM 111 - General Chemistry Laboratory Credits: 1 COMM 105 - Public Speaking IA Credits: 2 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 MATH 100 - College Algebra Credits: 3 **BIOSCIENCES** **(5 hrs)** BIOCH 265 - Introductory Organic and Biochemistry Credits: 5 **COMMUNICATIONS ELECTIVE (2-5 hrs)** **Select 1 course** See departmental list

Plus 3 courses from 2 other Agriculture departments- minimum of 8 credit hours (1 hour courses cannot be applied).

- ~~AGCOM - Any course in AGCOM~~
- ~~AGEC - Any course in AGEC~~
- ~~AGRON - Any course in AGRON~~
- ~~ASI 660~~
- ~~ATM - Any course in ATM~~
- ~~ENTOM - Any course in ENTOM~~
- ~~FDSCI - Any course in FDSCI~~
- ~~GENAG 450, 505~~
- ~~GRSC - Any course in GRSC~~
- ~~HORT - Any course in HORT~~
- ~~PLPTH - Any course in PLPTH~~
- ~~PMC - Any course 210 and above~~

Biosciences

BIOCH 265 - Introductory Organic and Biochemistry **Credits:** 5

Humanities/Social Science (minimum of 9 credit hours)

~~**Must be taken from more than one department. Maximum 3 credit hours in performance courses.**~~

- ~~AMETH 160 to 501~~
- ~~ANTH - Any course in ANTH~~
- ~~ARCH 301~~
- ~~ART - Any course in ART~~
- ~~DANCE 120 to 200, 225 to 420, 495 to 690~~
- ~~DEN 325, 450~~
- ~~ECON 120 to 799~~
- ~~ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790-799~~
- ~~ENVD 250, 251~~
- ~~FSHS - Any course in FSHS~~
- ~~GEOG - 100, 200, 201, 300 to 799~~
- ~~GWSS - Any course in GWSS~~
- ~~HIST - Any course in HIST~~
- ~~Modern Languages - Any course in ARAB, CHINE, FREN, GRMN, ITAL, JAPAN, LATIN, RUSSN, SPAN~~
- ~~MUSIC - Any course in MUSIC~~
- ~~PHILO - Any course in PHILO~~
- ~~POLSC - Any course in POLSC~~
- ~~PSYCH - Any course in PSYCH~~
- ~~SOCIO - Any course in SOCIO~~
- ~~SOCWK - Any course in SOCWK~~
- ~~THTRE - Any course in THTRE~~

BUSINESS & ECONOMICS **(15 hrs)**

Select 1 course

ACCTG 231 - Accounting for Business Operations Credits: 3

OR

AGEC 308 - Farm and Ranch Management Credits: 3

Business & Economics Electives

Minimum 12 hrs

See departmental list

AGRICULTURE ELECTIVES **(8 hrs)**

AGEC 120 - Agricultural Economics and Agribusiness Credits: 3

Select 2 courses from 2 other Agriculture departments. 1 hour courses cannot be applied.

Minimum 5 hrs

See departmental list

MATHEMATICS/STATISTICS/COMPUTERS (3 hrs)

ASI 290 – Microcomputer Apps in Animal Science **Credits: 3**

CIS – Any course

MATH 150-799

STAT 325, 340, 350

AGEC 115 – Decision Tools for Ag Econ & AgBus **Credits: 2**

HUMANITIES/SOCIAL SCIENCES (9 hrs)

ECON 110 - Principles of Macroeconomics **Credits:** 3

Humanities/Social Sciences Electives

Maximum 3 hours from participatory courses. Courses must be taken from at least 2 different departments.

Minimum 6 hrs

See departmental list

ANIMAL SCIENCE CORE **(45-46 hrs)**

ASI 102 - Principles of Animal Science Credits: 3
ASI 318 - Fundamentals of Nutrition Credits: 3
ASI 320 - Principles of Feeding Credits: 3
ASI 400 - Farm Animal Reproduction Credits: 3
ASI 500 - Genetics Credits: 3
ASI 510 - Animal Breeding Principles Credits: 3
ASI 533 - Anatomy and Physiology Credits: 4
ASI 580 - Animal Sciences & Industry Career Prep Credits: 1

Introductory Labs

Select 2 Courses

ASI 105 - Animal Sciences and Industry Credits: 1
ASI 106 - Dairy and Poultry Science Credits: 1
ASI 107 - Companion Animal and Horse Lab Credits: 1

Business and Economics
~~**Select 1 course**~~
ACCTG 231 - Accounting for Business Operations **Credits:** 3
AGEC 308 - Farm and Ranch Management **Credits:** 3
~~**Plus 4 courses,**~~ **mimimum 12 credit-hours**
~~- AGEC 202 to 420, 445 to 799~~
~~- ACCTG 241 to 799~~
~~- ECON 500 to 799~~
~~- FINAN - Any course in FINAN~~
~~- ENTRP - Any course in ENTRP~~
~~- MANGT - Any course in MANGT~~
~~- MKTG - Any course in MKTG~~

Mathematics/Statistics/Computers (minimum 3 credit hours)
ASI ~~490~~
CIS 101, 102, 103, 104
MATH 150~~, 205, 210, 211, 220, 221, 222~~
STAT 325, 340, 350

Communications ~~(minimum 3 credit hours)~~
AGCOM 310, 400, 410, 590, 610, 712
ASI 326, 420, 470 & 495
COMM 311, 321, 322, 326
ENGL 417, 510, 516
GENAG 450
MC 110, ~~111, 112,~~ 120, 180
Modern Languages - Any course in ARAB, CHINE, FREN, GRMN, ITAL, JAPAN, LATIN, RUSSN, SPAN

Animal Science
ASI 102 - Principles of Animal Science **Credits:** 3
ASI 318 - Fundamentals of Nutrition **Credits:** 3
ASI 320 - Principles of Feeding **Credits:** 3
ASI 400 - Farm Animal Reproduction **Credits:** 3
ASI 500 - Genetics **Credits:** 3
ASI 510 - Animal Breeding Principles **Credits:** 3
ASI 533 - Anatomy and Physiology **Credits:** 4
ASI 580 - Animal Sciences and Industry Career Preparation **Credits:** 1
Select 2 courses
ASI 105 - Animal Sciences and Industry **Credits:** 1
ASI 106 - Dairy and Poultry Science **Credits:** 1
ASI 107 - Companion Animal and Horse Lab **Credits:** 1
Select 1 course
ASI 350 - Meat Science **Credits:** 3
ASI 361 - Meat Animal Processing **Credits:** 2
ASI 405 - Fundamentals of Milk Processing **Credits:** 3
ASI 640 - Poultry Products Technology **Credits:** 3
FDSCI 305 - Fundamentals of Food Processing **Credits:** 3
Select 2 courses
ASI 515 - Beef Science **Credits:** 3
ASI 520 - Companion Animal Management **Credits:** 3
ASI 521 - Horse Science **Credits:** 3
ASI 524 - Sheep and Meat Goat Science **Credits:** 3
ASI 535 - Swine Science **Credits:** 3
ASI 621 - Dairy Cattle Management **Credits:** 3
ASI 645 - Poultry Management **Credits:** 3
Minimum ~~9~~ credit hours

Animal Products
Select 1 course
ASI 350 - Meat Science Credits: 3
ASI 361 - Meat Animal Processing Credits: 2
ASI 405 - Fundamentals of Milk Processing Credits: 3
ASI 640 - Poultry Products Technology Credits: 3
FDSCI 305 - Fundamentals of Food Processing Credits: 3

Animal Management
Select 2 courses
ASI 515 - Beef Science Credits: 3
ASI 520 - Companion Animal Management Credits: 3
ASI 521 - Horse Science Credits: 3
ASI 524 - Sheep and Meat Goat Science Credits: 3
ASI 535 - Swine Science Credits: 3
ASI 621 - Dairy Cattle Management Credits: 3
ASI 645 - Poultry Management Credits: 3

Animal Sciences Electives
Minimum of 12 hours
9 hours must be ≥500-level, no more than 6 hours combined from ASI 561, ASI 599 and ASI 661.

See departmental list

Unrestricted Electives **(12-16 hrs)**

Total credit hours required for graduation: (120)

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45 hours must be at the 300-level or above

Must satisfy K-State 8 general education requirements.

~~ASI 315 - Livestock and Meat Evaluation~~ **~~Credits:~~** ~~3~~ ~~ASI 401 - Farm Animal Reproduction Laboratory~~ **~~Credits:~~** ~~1~~ ~~ASI 504 - Equine Reproduction Management~~ **~~Credits:~~** ~~3~~ ~~ASI 512 - Bovine Reproductive Technologies~~ **~~Credits:~~** ~~2~~ ~~ASI 540 - Principles of Animal Disease Control~~ **~~Credits:~~** ~~3~~ ~~ASI 561 - Undergraduate Research in Animal Sciences & Industry~~ **~~Credits:~~** ~~0-3~~ ~~ASI 595 - Contemporary Issues in Animal Science and Agriculture~~ **~~Credits:~~** ~~3~~ ~~ASI 599 - Animal Science Internship~~ **~~Credits:~~** ~~1-6 (1-3 credits)~~ ~~ASI 600 - Applied Animal Biotechnology~~ **~~Credits:~~** ~~3~~ ~~ASI 601 - Endocrinology and Lactation~~ **~~Credits:~~** ~~3~~ ~~ASI 602 - Equine Breeding and Genetics~~ **~~Credits:~~** ~~2~~ ~~ASI 608 - Dairy Foods Processing & Technology~~ **~~Credits:~~** ~~3~~ ~~ASI 610 - Processed Meat Operations~~ **~~Credits:~~** ~~2~~ ~~ASI 620 - Beef Systems Management~~ **~~Credits:~~** ~~2~~ ~~ASI 650 - Identification and Data Management of Food Animals~~ **~~Credits:~~** ~~2~~ ~~ASI 655 - Behavior of Domestic Animals~~ **~~Credits:~~** ~~3~~ ~~ASI 658 - Animal Growth and Development~~ **~~Credits:~~** ~~3~~ ~~ASI 662 - Special Topics in Animal Science~~ **~~Credits:~~** ~~0-6~~ ~~ASI 675-679 Non-Ruminant Nutrition Modules~~ **~~Credits:~~** ~~1-5~~ ~~ASI 680-685 Ruminant Nutrition Modules~~ **~~Credits:~~** ~~1-6~~ ~~ASI 695 - Principles of Equine Exercise Physiology~~ **~~Credits:~~** ~~3~~ ~~ASI 710 - Physiology of Reproduction in Farm Animals~~ **~~Credits:~~** ~~3~~ ~~ASI 777 - Meat Technology~~ **~~Credits:~~** ~~3~~ ~~DMP 610 - Feedlot Health Systems~~ **~~Credits:~~** ~~3~~ ~~DMP 611 - Cow-Calf Health Systems~~ **~~Credits:~~** ~~2~~ **Total credit hours required for graduation: ~~(126)~~** **45 hours must be at the 300-level or above** Must satisfy K-State 8 general education requirements.	

Animal Sciences and Industry (B.S.) - Science/Pre-Vet Option

Contact person: David Nichols
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13922&returnto=7378

Rationale: This proposed curriculum change is due to the Kansas Board of Regents mandate of 120 credit hours to achieve a bachelor's degree. This was accomplished through a reduction of 3 credit hours in Humanities/Social Sciences and 3 credit hours from unrestricted electives.

Impact Statement: This proposal has potential impact on departments in the colleges of Arts and Sciences and Human Ecology due to the reduction of three hours of humanities/social sciences. Dr. Louise Benjamin from the College of Arts and Sciences and Dr. Bronwyn Fees from the College of Human Ecology have been contacted.

The Department of Chemistry may be potentially affected by the addition of CHEM 531, 532 and 550 to the chemistry choices in this option. A majority of the students in this option enroll in CHEM 350 and 351 which are part of the Pre-Veterinary Curriculum at KSU. A few students who are applying to other schools that require

more hours in organic chemistry choose to enroll in CHEM 531, 532, or 550. Dr. Chris Culbertson in the Department of Chemistry has been contacted.

FROM:	TO:
General Courses ASI 101 - Foundations in Animal Sciences & Industry **Credits:** 1 ~~or~~ ~~GENAG 200 - Topics in Agriculture **Credits:** 0-3~~ ~~- Topic - College Careers (0 credits)~~ BIOL 198 - Principles of Biology **Credits:** 4 CHM 210 - Chemistry I **Credits:** 4 COMM 105 - Public Speaking IA **Credits:** 2 ECON 110 - Principles of Macroeconomics **Credits:** 3 ENGL 100 - Expository Writing I **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 MATH 100 - College Algebra **Credits:** 3 **Agriculture** **Plus 2 courses from 2 other Agriculture departments- minimum of 5 credit hours (1 hour courses cannot be applied).** ~~AGCOM - Any course in AGCOM~~ ~~AGEC - Any course in AGEC~~ ~~AGRON - Any course in AGRON~~ ~~ASI 660~~ ~~ATM - Any course in ATM~~ ~~ENTOM - Any course in ENTOM~~ ~~FDSCI - Any course in FDSCI~~ ~~GENAG 450, 505~~ ~~GRSC - Any course in GRSC~~ ~~HORT - Any course in HORT~~ ~~PLPTH - Any course in PLPTH~~ ~~PMC - Any course in PMC 210 and above~~ **Biosciences** BIOL 455 - General Microbiology **Credits:** 4 ~~**(Minimum 12 credit hours)**~~ BIOCH 521 - General Biochemistry **Credits:** 3 ~~BIOCH 522 - General Biochemistry Laboratory **Credits:** 3~~ CHM 230 - Chemistry II **Credits:** 4 CHM 350 - General Organic Chemistry **Credits:** 3 CHM 351 - General Organic Chemistry Laboratory **Credits:** 2 **Humanities/Social Science (minimum of 9 credit hours) Must be taken from more than one department. Maximum 3 credit hours in performance courses.** ~~AMETH 160 to 501~~ ~~ANTH - Any course in ANTH~~ ~~ARCH 301~~ ~~ART - Any course in ART~~ ~~DANCE 120 to 200, 225 to 420, 495 to 690~~ ~~DEN 325, 450~~ ~~ECON 120 to 799~~ ~~ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799~~ ~~ENVD 250, 251~~	**GENERAL COURSES (20 hrs)** ASI 101 - Foundations in Animal Sciences & Industry Credits: 1 BIOL 198 - Principles of Biology Credits: 4 CHM 210 - Chemistry I Credits: 4 COMM 105 - Public Speaking IA Credits: 2 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 MATH 100 - College Algebra Credits: 3 **BIOSCIENCES (7 hrs)** BIOL 455 - General Microbiology Credits: 4 BIOCH 521 - General Biochemistry Credits: 3 **CHEMISTRY (9 hrs)** **Minimum 7 hours** CHM 230 - Chemistry II Credits: 4 CHM 350 - General Organic Chemistry Credits: 3 CHM 531 Organic Chemistry 1 Credit: 3 CHM 550 Organic Chemistry 2 Credit: 3 **Organic Chemistry Lab** **Select 1 course** CHM 351 - General Organic Chemistry Laboratory Credits: 2 CHM 532 Organic Chemistry Lab Credit: 2 **COMMUNICATIONS ELECTIVE (2-5 hrs)** **Select 1** See departmental list **BUSINESS & ECONOMICS (6 hrs)** **Minimum 6 hours** See departmental list **AGRICULTURE ELECTIVES (5 hrs)** Select 2 courses from 2 other agriculture departments. 1 hour courses cannot be used **Minimum 5 hours** See departmental list **MATHEMATICS/PHYSICS/STATISTICS(6 hrs)** **Minimum 6 hours** MATH 150 - 799 PHYS 113, 114 STAT 325, 340, 350 **HUMANITIES/SOCIAL SCIENCES (9 hrs)** ECON 110 - Principles of Macroeconomics **Credits:** 3 **Humanities/Social Sciences Electives**

~~FSHS - Any course in FSHS~~
~~GEOG - 100, 200, 201, 300-799~~
~~GWSS - Any course in GWSS~~
~~HIST - Any course in HIST~~
~~Modern Languages - Any course in ARAB, CHINE, FREN, GRMN, ITAL, JAPAN, LATIN, RUSSN, SPAN~~
~~MUSIC - Any course in MUSIC~~
~~PHILO - Any course in PHILO~~
~~POLSC - Any course in POLSC~~
~~PSYCH - Any course in PSYCH~~
~~SOCIO - Any course in SOCIO~~
~~SOCWK - Any course in SOCWK~~
~~THTRE - Any course in THTRE~~

Business and Economics
~~(2 courses,~~ total 6 credit hours)
~~AGEC 202 to 420, 445 to 7599~~
~~ACCTG 231 to 799~~
~~FINAN - Any course in FINAN~~
~~ENTRP - Any course in ENTRP~~
~~MANGT - Any course in MANGT~~
~~MKTG - Any course in MKTG~~

Physics/Mathematics/Statistics
(minimum 6 ~~credit~~ hours)
MATH ~~150, 205, 210, 211, 220, 221, 222~~
PHYS 113, 114
STAT 325, 340, 350

Communications
~~(minimum 3 credit hours)~~
~~AGCOM 310, 400, 410, 590, 610, 712~~
~~ASI 326, 420, 470 & 495~~
~~COMM 311, 321, 322, 326~~
~~ENGL 417, 510, 516~~
~~MC 110, 111, 112, 120 & 180~~
~~Modern Languages - Any course in ARAB, CHINE, FREN, GRMN, ITAL, JAPAN, LATIN, RUSSN, SPAN~~

Animal Science
ASI 102 - Principles of Animal Science **Credits:** 3
ASI 105 - Animal Sciences and Industry **Credits:** 1
ASI 106 - Dairy and Poultry Science **Credits:** 1
ASI 107 - Companion Animal and Horse Lab **Credits:** 1
ASI 318 - Fundamentals of Nutrition **Credits:** 3
ASI 320 - Principles of Feeding **Credits:** 3
ASI 400 - Farm Animal Reproduction **Credits:** 3
ASI 500 - Genetics **Credits:** 3
ASI 580 - Animal Sciences and Industry Career Preparation **Credits:** 1
Select 1 course
ASI 350 - Meat Science **Credits:** 3
ASI 361 - Meat Animal Processing **Credits:** 2
ASI 405 - Fundamentals of Milk Processing **Credits:** 3
ASI 601 - Endocrinology and Lactation **Credits:** 3
ASI 640 - Poultry Products Technology **Credits:** 3
ASI 695 - Principles of Equine Exercise Physiology **Credits:** 3
FDSCI 305 - Fundamentals of Food Processing **Credits:** 3

Maximum 3 hours from participatory courses. Courses must be taken from at least 2 different departments.
Minimum 6 hrs

See departmental list

ANIMAL SCIENCE CORE **(39-40)**
ASI 102 - Principles of Animal Science Credits: 3
ASI 318 - Fundamentals of Nutrition Credits: 3
ASI 320 - Principles of Feeding Credits: 3
ASI 400 - Farm Animal Reproduction Credits: 3
ASI 500 - Genetics Credits: 3
ASI 580 - Animal Sciences & Industry Career Prep Credits: 1

Introductory Labs
ASI 105 - Animal Sciences and Industry Credits: 1
ASI 106 - Dairy and Poultry Science Credits: 1
ASI 107 - Companion Animal and Horse Lab Credits: 1

Animal Products
Select 1 course
ASI 350 - Meat Science Credits: 3
ASI 361 - Meat Animal Processing Credits: 2
ASI 405 - Fundamentals of Milk Processing Credits: 3
ASI 601 - Endocrinology and Lactation Credits: 3
ASI 640 - Poultry Products Technology Credits: 3
ASI 695 - Principles of Equine Exercise Physiology Credits: 3
FDSCI 305 - Fundamentals of Food Processing Credits: 3

Animal Management
Select 2 courses
ASI 515 - Beef Science Credits: 3
ASI 520 - Companion Animal Management Credits: 3
ASI 521 - Horse Science Credits: 3
ASI 524 - Sheep and Meat Goat Science Credits: 3
ASI 535 - Swine Science Credits: 3
ASI 621 - Dairy Cattle Management Credits: 3
ASI 645 - Poultry Management Credits: 3

Animal Sciences Electives
Minimum of 12 hours
9 hours must be ≥500-level, no more than 6 hours combined from ASI 561, ASI 599 and ASI 661.

See departmental list

Unrestricted Electives **(13-17 hrs)**

Total credit hours required for graduation: (120)

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45 hours must be at the 300-level or above

Must satisfy K-State 8 general education requirements.

Select 2 courses ASI 515 - Beef Science **Credits:** 3 ASI 520 - Companion Animal Management **Credits:** 3 ASI 521 - Horse Science **Credits:** 3 ASI 524 - Sheep and Meat Goat Science **Credits:** 3 ASI 535 - Swine Science **Credits:** 3 ASI 621 - Dairy Cattle Management **Credits:** 3 ASI 645 - Poultry Management **Credits:** 3 **Minimum ~~9~~ credit hours** ~~ASI 315 - Livestock and Meat Evaluation **Credits:** 3~~ ~~ASI 401 - Farm Animal Reproduction Laboratory **Credits:** 1~~ ~~ASI 504 - Equine Reproduction Management **Credits:** 3~~ ~~ASI 510 - Animal Breeding Principles **Credits:** 3~~ ~~ASI 512 - Bovine Reproductive Technologies **Credits:** 2~~ ~~ASI 533 - Anatomy and Physiology **Credits:** 4~~ ~~ASI 540 - Principles of Animal Disease Control **Credits:** 3~~ ~~ASI 561 - Undergraduate Research in Animal Sciences & Industry **Credits:** 0-3~~ ~~ASI 595 - Contemporary Issues in Animal Science and Agriculture **Credits:** 3~~ ~~ASI 599 - Animal Science Internship **Credits:** 1-6 (enroll 1-3)~~ ~~ASI 600 - Applied Animal Biotechnology **Credits:** 3~~ ~~ASI 602 - Equine Breeding and Genetics **Credits:** 2~~ ~~ASI 608 - Dairy Foods Processing & Technology **Credits:** 3~~ ~~ASI 610 - Processed Meat Operations **Credits:** 2~~ ~~ASI 620 - Beef Systems Management **Credits:** 2~~ ~~ASI 650 - Identification and Data Management of Food Animals **Credits:** 2~~ ~~ASI 655 - Behavior of Domestic Animals **Credits:** 3~~ ~~ASI 658 - Animal Growth and Development **Credits:** 3~~ ~~ASI 662 - Special Topics in Animal Science **Credits:** 0-6~~ ~~ASI 675-679 Non-Ruminant Nutrition Modules **Credits:** 1-5~~ ~~ASI 680-685 Ruminant Nutrition Modules **Credits:** 1-6~~ ~~ASI 710 - Physiology of Reproduction in Farm Animals **Credits:** 3~~ ~~ASI 777 - Meat Technology **Credits:** 3~~ ~~DMP 610 - Feedlot Health Systems **Credits:** 3~~ ~~DMP 611 - Cow-Calf Health Systems **Credits:** 2~~ **Total credit hours required for graduation: ~~(126)~~** **45 hours must be at the 300-level or above** Must satisfy K-State 8 general education requirements.	

Bakery Science Minor

http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13961

Contact person for this proposal: Hulya Dogan, dogan@ksu.edu, 2-2628.
Changing the required total number of credits for completion of a program.

The proposed curriculum changes are due to the changes in two GRSC courses:
GRSC 101 - Title change
GRSC 625 - Credit hour change
(Concurrent course proposals have been submitted).

FROM	TO
Bakery Science Minor ~~In order to obtain a Minor in Bakery Science and Management, students must:~~ ~~Complete the required courses with a cumulative GPA of at least 2.0.~~ ~~Take a minimum of 11 credit hours from Kansas State plus a maximum of six transfer credits approved by the department for a total of 17 credit hours to complete the minor requirements.~~ ~~Requirements~~ ~~Grain science majors cannot use courses required in their major as part of a bakery science minor.~~ GRSC 101 ~~Introduction to Grain Science and Industry~~ (3) GRSC 602 Cereal Science (3) ~~*~~GRSC 625 Flour and Dough Testing (~~3~~) GRSC 635 Baking Science I (2) ~~*~~GRSC 636 Baking Science I Laboratory (2) GRSC 637 Baking Science II (3) ~~*~~GRSC 638 Baking Science II Laboratory (1) ~~*~~Note: Requirements for the Laboratory class taken by distance will require the student to complete the same work as on campus students. This work may be done on campus or at appropriate industry locations. **Total credit hours: ~~17~~**	**Bakery Science Minor** This minor is available to students working toward a bachelor's degree at Kansas State University, to graduates of Kansas State University or to non-K-State graduates who hold a baccalaureate or advanced degree. GRSC 101 Fundamentals of Grain Processing & Utilization (3) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (2) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 637 Baking Science II (3) GRSC 638 Baking Science II Laboratory (1) Note: Requirements for the Laboratory class taken by distance will require the student to complete the same work as on campus students. This work may be done on campus or at appropriate industry locations. **Total credit hours: 16**

Bakery Science and Management (B.S.)-Cereal Chemistry Option

Contact person: Hulya Dogan
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13967&returnto=7416

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours.

The reduction in credit hours was achieved by various adjustments listed below:

(1) Communications block.

More communications electives are listed. No effect on total credit hours.

(2) Business and Economics Block:

ACCTG 231 – Moved from "core requirements" to "electives"

ECON 110 – Moved from "core requirements" to "electives"

AGEC 120 / ECON 120 – Added as a core requirement create harmony across three GSI majors.

This block has been modified by changing the number of "mandatory" and "elective" hours. It used to be [6 + 3], now it is [3 + 6] hours, respectively. Also, more courses have been added to the "business elective" options.

(3) BSM Core Requirements Block: GRSC course changes.

GRSC 100 Freshman Orientation and GRSC 101 Introduction to Grain Science are now combined in 2 credit hours (instead of 1+3 = 4 credit hours).

GRSC 310 – Dropped. This course was newly developed in 2010 and added to all GSI majors as part of our "GSI core curriculum" exercise. However, over time this course has been observed to have little relevance to bakery industry practices.

GRSC 530 – Added back to the program. This course now has new owners who will convert the course to a capstone course for all graduating seniors.

GRSC 625 – Credit hours dropped from 3 to 2.

GRSC 651 – Credit hours dropped from 4 to 2.

GRSC 670 – Moved to the "specialization electives".

Please see relevant course proposals for specific rationales.

(4) BSM Cereal Chemistry Option Requirements Block:

BIOCH 522 – Moved to the "specialization electives".

GRSC 405 – Added as an alternative to FDSCI 727. These two courses have a very similar outline, also share the same textbook. This addition provides flexibility to the students for course scheduling.

(5) No change in **"Unrestricted Electives"**.

(6) No change in **"Social Science and Humanities Electives"**.

(7) Please note that most electives are now listed with a "subject prefix" instead of specific course numbers to make the curriculum less "prescribed" (no effect on the credit hours). This new format provides flexibility and more options to the students, and thus will minimize the number of "variance requests". The revision also aims to improve advising efficiency, create improved harmony across three GSI majors, simplify restricted elective lists, and update course titles.

Impact Statement: The following Department Heads / Directors were contacted regarding proposed GSI curriculum changes (for all majors, including specific options):

Accounting - Brett R. Wilkinson
Communications and Agricultural Education - Jason Ellis
Agricultural Economics - Allen M. Featherstone
Agronomy - M. D. Ransom
Animal Sciences and Industry - Evan C. Titgemeyer
Agricultural Technology Management - Joseph Harner
Biochemistry and Molecular Biophysics - Michal Zolkiewski
Biology - Brian Spooner
Chemistry - Daniel A. Higgins
Communication Studies - Greg Paul
Economics - Philp G. Gayle

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Food Science and Industry - Randall Phebus
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Food, Nutrition, Dietetics, and Health - Mark Haub
Industrial Engineering - Bradley Kramer
Leadership Studies - Mary Hale Tolar
Management - William Turnley
Mathematics - Andrew Bennett
Marketing - Esther Swilley
Modern Languages - Derek Hillard
Physics - Brett DePaola
Statistics - James Neill

FROM	TO
Bakery Science and Management (B.S.) **Cereal Chemistry Option**	**Bakery Science and Management (B.S.)** **Cereal Chemistry Option** A major in bakery science trains students for administrative, research, production, and executive positions in the baking industry. Bakery science offers students two options; production management or cereal chemistry. Students selecting the production management option will take classes to prepare them for jobs in sales, product development or production management. Those choosing the cereal chemistry option learn about quality control or research and development.
Natural Sciences (26 credit hours) BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) PHYS 213 Engineering Physics I (5) PHYS 214 Engineering Physics II (5)	**Natural Sciences (26 credit hours)** BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) PHYS 213 Engineering Physics I (5) PHYS 214 Engineering Physics II (5)
Quantitative Studies (11 credit hours) MATH 220 Analytic Geometry and Calculus I (4) MATH 221 Analytic Geometry and Calculus II (4) STAT 325 Introduction to Statistics (3)	**Quantitative Studies (11 credit hours)** MATH 220 Analytic Geometry and Calculus I (4) MATH 221 Analytic Geometry and Calculus II (4) STAT 325 Introduction to Statistics (3)
Communications (11 credit hours) COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication Elective (~~choose one~~): AGCOM 400 Agricultural Business Communications (3) COMM 311 Business and Professional Speaking (3) ENGL 516 Written Communication for the Sciences (3)	**Communications (11 credit hours)** COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication Elective (3 credit hours) List of Communication Electives: AGCOM 400, 610 COMM 311, 322, 326, 465, 480, 535 ENGL 302, 417, 510, 516 Modern languages
Business and Economics (9 credit hours) ~~ACCTG 231 Accounting for Business Operations (3)~~ ~~ECON 110 Principles of Macroeconomics (3)~~ Management Elective (~~choose one~~):	**Business and Economics (9 credit hours)** AGEC 120 Agricultural Economics and Agribusiness (3) or ECON 120 Principles of Microeconomics (3) Management Electives (6 credit hours) List of Management Electives:

~~GRSC 530 Management Applications in the Grain Processing Ind (3)~~ ~~MANGT 420 Principles of Management (3)~~ ~~MANGT 530 Industrial and Labor Relations (3)~~ ~~MANGT 531 Human Resources Management (3)~~	ACCTG 231 or above AGEC 115 or above ECON 110 or above ENTRP 340 FINAN 450 or above MANGT 300 or above MKTG 400 or above
BSM Core Requirements (~~38~~ credit hours) FDSCI 600 Food Microbiology (2) FDSCI 601 Food Microbiology Lab (2) FNDH 132 Basic Nutrition (3) GRSC 100 ~~Freshman Orientation~~ in Grain Science (1) ~~GRSC 101 Introduction to Grain Science and Industry (3)~~ GRSC 150 Principles of Milling (2) GRSC 151 Principles of Milling Laboratory (1) ~~GRSC 310 Materials Handling (3)~~ GRSC 591 Internship in Grain Science (1) GRSC 600 Practicum in Bakery Technology I (1) or GRSC 601 Practicum in Bakery Technology II (1) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (~~3~~) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 637 Baking Science II (3) GRSC 638 Baking Science II Laboratory (1) GRSC 651 Food and Feed Product Protection (~~4~~) GRSC 670 Bakery Layout (1)	**BSM Core Requirements (33 credit hours)** FDSCI 600 Food Microbiology (2) FDSCI 601 Food Microbiology Lab (2) FNDH 132 Basic Nutrition (3) GRSC 100 Foundations in Grain Science and Industry (2) GRSC 150 Principles of Milling (2) GRSC 151 Principles of Milling Laboratory (1) GRSC 530 Management Applications in the Grain Processing Ind. (3) GRSC 591 Internship in Grain Science (1) GRSC 600 Practicum in Bakery Technology I (1) or GRSC 601 Practicum in Bakery Technology II (1) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (2) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 637 Baking Science II (3) GRSC 638 Baking Science II Laboratory (1) GRSC 651 Food and Feed Product Protection (2) GRSC 670 Bakery Layout (1)
Cereal Chemistry Option Requirements (~~27~~ credit hours) BIOCH 521 General Biochemistry (3) ~~BIOCH 522 General Biochemistry Laboratory (2)~~ CHM 500 General Physical Chemistry (3) CHM 531 Organic Chemistry I (3) CHM 532 Organic Chemistry Laboratory (2) CHM 550 Organic Chemistry II (3) FDSCI 501 Food Chemistry (3) FDSCI 727 Chemical Methods of Food Analysis (2) Specialization Electives (~~6~~ credit hours) ~~Specialization Electives~~ ~~Choose from the following~~: ~~CHM 371 Chemical Analysis (4)~~ ~~FDSCI 690 Principles of HACCP and HARPC (3)~~ ~~FDSCI 710 Kosher and Halal Food Regulations (2)~~ ~~FDSCI 728 Physical Methods of Food Analysis (2)~~ ~~FDSCI 740 Research and Development of Food Products (4)~~ ~~FDSCI 751 Food Laws and the Regulatory Process (2)~~ ~~GRSC 201 Fundamental Baking Calculations (1)~~ ~~GRSC 491 Faculty-Led Study Abroad (1-3)~~ ~~GRSC 499 Undergraduate Research in Grain Science (0-3)~~ ~~GRSC 530 Management Applications in the Grain Processing Ind (3)~~ ~~GRSC 540 Process Calculations in Food Systems (3)~~ ~~GRSC 541 Process Calculations in Food Systems Laboratory (1)~~ ~~GRSC 560 Electricity and Industrial Power Distribution (3)~~ ~~GRSC 592 Extended Internship in Grain Science (1)~~ ~~GRSC 620 Extrusion Processing in the Food and Feed Industries (4)~~	**Cereal Chemistry Option Requirements (24 credit hours)** BIOCH 521 General Biochemistry (3) CHM 500 General Physical Chemistry (3) CHM 531 Organic Chemistry I (3) CHM 532 Organic Chemistry Laboratory (2) CHM 550 Organic Chemistry II (3) FDSCI 501 Food Chemistry (3) GRSC 405 Grain Analysis Techniques (2) or FDSCI 727 Chemical Methods of Food Analysis (2) Specialization Electives (5 credit hours) List of Specialization Electives: ACCTG 231 or above AGEC 115 or above BIOCH 522 CHM 371 FDSCI 305 or above, courses that are not listed in core requirements FINAN 450 or above GRSC 201 or above, courses that are not listed in core requirements LEAD 212 or above MANGT 300 or above MKTG 400 or above

~~GRSC 712 Vibrational Spectroscopic Analysis and Chemometrics (1-2)~~ ~~GRSC 713 Contemporary Chromatographic Analysis of Food (1)~~ ~~GRSC 745 Fundamentals of Bioprocessing (3)~~ ~~LEAD 212 Introduction to Leadership Concepts (2-3)~~ ~~LEAD 350 Culture and Context in Leadership (3)~~ ~~MANGT 530 Industrial and Labor Relations (3)~~ ~~MANGT 531 Human Resources Management (3)~~	
Social Sciences and Humanities (3 credit hours) AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course	**Social Sciences and Humanities (3 credit hours)** AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GENAG 210 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course
~~Free~~ Elective (3 credit hours)	**Unrestricted Elective (3 credit hours)**
Note - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above. - Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.	**Note** - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above. - Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.
Total credit hours required for graduation: ~~128~~	**Total credit hours required for graduation: 120**

Bakery Science and Management (B.S.)-Production Management Option

Contact person: Hulya Dogan
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13770&returnto=7416

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours.

The reduction in credit hours was achieved by various adjustments listed below:

(1) Natural Sciences Block:

PHYS 114 – Moved from "core requirements" to "electives".

After consulting with the industry representatives who serve on department's advisory board, we decided to remove this course from core requirements. General Physics I (mechanics) is critical to grain processing operations that are practiced in feed, baking and milling industry. Concepts covered in General Physics II (electricity and magnetism) are considered to be optional. In the CoA, FSM, BSM and MSM were the only majors requiring General Physics II. Only Agronomy and Food Science have PHYS 114 listed in their curriculum. In both programs PHYS 114 is not a core requirement, but a course option that is listed under "professional"/ "science" electives.

Students in the Pre-Vet option will be specifically directed by their advisors to take PHYS 114.

BSM Cereal Chemistry and MSM Chemistry options still require both PHYS 213 Engineering Physics I and PHYS 214 Engineering Physics II.

(2) Communications block.

COMM 106 – Replaced with COMM 105. Provides one-hour credit saving. This also creates harmony across three GSI majors, since currently only BSM-PM requires COMM 106.

Also, more communications electives are listed. No effect on total credit hours.

(3) Business and Economics Block:

ACCTG 231 – Moved from "core requirements" to "electives"

ECON 110 – Moved from "core requirements" to "electives"

BSM used to have 21 hours in this category. With the proposed changes, now all three majors (BSM, FSM and MSM) have 3 credit hours of core requirement and 12 credits hours of management electives, total of 15 credit hours in this block.

(4) BSM Core Requirements Block: GRSC course changes.

GRSC 100 Freshman Orientation and GRSC 101 Introduction to Grain Science are now combined in 2 credit hours (instead of 1+3 = 4 credit hours).

GRSC 310 – Dropped. This course was newly developed in 2010 and added to all GSI majors as part of our "GSI core curriculum" exercise. However, over time this course has been observed to have little relevance to bakery industry practices.

GRSC 530 – Added back to the program. This course now has new owners who will convert the course to a capstone course for all graduating seniors.

GRSC 625 – Credit hours dropped from 3 to 2.

GRSC 651 – Credit hours dropped from 4 to 2.

GRSC 670 – Moved to the "specialization electives".

Please see relevant course proposals for specific rationales.

(5) BSM Production Management Option Requirements Block:

Total credits hours in this block was increased from 16 to 22, which provided more flexibility for specialization electives.

(6) "Unrestricted Electives" increased from 3 to 6 credit hours.

(7) No change in **"Social Science and Humanities Electives"**.

(8) Please note that most electives are now listed with a "subject prefix" instead of specific course numbers to make the curriculum less "prescribed" (no effect on the credit hours). This new format provides flexibility and more options to the students, and thus will minimize the number of "variance requests". The revision also aims to improve advising efficiency, create improved harmony across three GSI majors, simplify restricted elective lists, and update course titles.

Impact Statement:
The following Department Heads / Directors were contacted regarding proposed GSI curriculum changes (for all majors, including specific options):
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Mathematics - Andrew Bennett
Marketing - Esther Swilley
Modern Languages - Derek Hillard
Physics - Brett DePaola
Statistics - James Neill

FROM	TO
Bakery Science and Management (B.S.) **Production Management Option**	**Bakery Science and Management (B.S.)** **Production Management Option**

	A major in bakery science trains students for administrative, research, production, and executive positions in the baking industry. Bakery science offers students two options; production management or cereal chemistry. Students selecting the production management option will take classes to prepare them for jobs in sales, product development or production management. Those choosing the cereal chemistry option learn about quality control or research and development.
Natural Sciences (~~29~~ credit hours) BIOCH 265 Introductory Organic and Biochemistry (5) or CHM 350 General Organic Chemistry (3) and CHM 351 General Organic Chemistry Laboratory (2) BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) PHYS 113 General Physics I (4) ~~PHYS 114 General Physics II (4)~~	**Natural Sciences (25 credit hours)** BIOCH 265 Introductory Organic and Biochemistry (5) or CHM 350 General Organic Chemistry (3) and CHM 351 General Organic Chemistry Laboratory (2) BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) PHYS 113 General Physics I (4)
Quantitative Studies (6 credit hours) MATH 205 General Calculus and Linear Algebra (3) STAT 325 Introduction to Statistics (3)	**Quantitative Studies (6 credit hours)** MATH 205 General Calculus and Linear Algebra (3) STAT 325 Introduction to Statistics (3)
Communications (~~12~~ credit hours) ~~COMM 106 Public Speaking I (3)~~ ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication Elective (~~choose one~~): AGCOM 400 Agricultural Business Communications (3) COMM 311 Business and Professional Speaking (3) ENGL 516 Written Communication for the Sciences (3)	**Communications (11 credit hours)** COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication Elective (3 credit hours) List of Communication Electives: AGCOM 400, 610 COMM 311, 322, 326, 465, 480, 535 ENGL 302, 417, 510, 516 Modern languages
Business and Economics (~~21~~ credit hours) ~~ACCTG 231 Accounting for Business Operations (3)~~ ~~ECON 110 Principles of Macroeconomics (3)~~ AGEC 120 Agricultural Economics and Agribusiness (3) or ECON 120 Principles of Microeconomics (3) ~~Business~~ Electives (12 credit hours) ~~ACCTG 241 Accounting for Investing and Financing (3)~~ ~~ACCTG 331 Intermediate Accounting Processes (3)~~ ~~AGEC 500 Production Economics (3)~~ ~~AGEC 515 Food and Agribusiness Marketing (3)~~ ~~FINAN 450 Principles of Finance (3)~~ ~~GRSC 530 Management Applications in the Grain Processing Ind. (3)~~ ~~IMSE 501 Industrial Management (3)~~ ~~MANGT 300 Introduction to Total Quality Management (1)~~ ~~MANGT 420 Principles of Management (3)~~ ~~MANGT 530 Industrial and Labor Relations (3)~~ ~~MANGT 531 Human Resources Management (3)~~	**Business and Economics (15 credit hours)** AGEC 120 Agricultural Economics and Agribusiness (3) or ECON 120 Principles of Microeconomics (3) Management Electives (12 credit hours) List of Management Electives: ACCTG 231 or above AGEC 115 or above ECON 110 or above ENTRP 340 FINAN 450 or above MANGT 300 or above MKTG 400 or above

~~MKTG 400 Introduction to Marketing (3)~~ ~~MKTG 542 Fundamentals of Professional Selling (3)~~ ~~**Note:**~~ ~~The following courses must be taken as business electives to complete requirements for a Business Minor while completing the Production Management Option:~~ ~~ACCTG 241 Accounting for Investing and Financing (3)~~ ~~FINAN 450 Principles of Finance (3)~~ ~~MKTG 400 Introduction to Marketing (3)~~	
BSM Core Requirements (~~38~~ credit hours) FDSCI 600 Food Microbiology (2) FDSCI 601 Food Microbiology Lab (2) FNDH 132 Basic Nutrition (3) GRSC 100 ~~Freshman Orientation~~ in Grain Science (1) ~~GRSC 101 Introduction to Grain Science and Industry (3)~~ GRSC 150 Principles of Milling (2) GRSC 151 Principles of Milling Laboratory (1) ~~GRSC 310 Materials Handling (3)~~ GRSC 591 Internship in Grain Science (1) GRSC 600 Practicum in Bakery Technology I (1) or GRSC 601 Practicum in Bakery Technology II (1) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (~~3~~) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 637 Baking Science II (3) GRSC 638 Baking Science II Laboratory (1) GRSC 651 Food and Feed Product Protection (~~4~~) GRSC 670 Bakery Layout (1)	**BSM Core Requirements (33 credit hours)** FDSCI 600 Food Microbiology (2) FDSCI 601 Food Microbiology Lab (2) FNDH 132 Basic Nutrition (3) GRSC 100 Foundations in Grain Science and Industry (2) GRSC 150 Principles of Milling (2) GRSC 151 Principles of Milling Laboratory (1) GRSC 530 Management Applications in the Grain Processing Ind. (3) GRSC 591 Internship in Grain Science (1) GRSC 600 Practicum in Bakery Technology I (1) or GRSC 601 Practicum in Bakery Technology II (1) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (2) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 637 Baking Science II (3) GRSC 638 Baking Science II Laboratory (1) GRSC 651 Food and Feed Product Protection (2) GRSC 670 Bakery Layout (1)
Production Management Option Requirements (~~16~~ credit hours) FDSCI 305 Fundamentals of Food Processing (3) GRSC 405 Grain Analysis Techniques (2) GRSC 540 Process Calculations in Food Systems (3) Specialization Electives (~~8~~ credit hours) ~~ACCTG 241 Accounting for Investing and Financing (3)~~ ~~ACCTG 331 Intermediate Accounting Processes (3)~~ ~~AGEC 500 Production Economics (3)~~ ~~AGEC 515 Food and Agribusiness Marketing (3)~~ ~~FDSCI 690 Principles of HACCP and HARPC (3)~~ ~~FDSCI 710 Kosher and Halal Food Regulations (2)~~ ~~FDSCI 728 Physical Methods of Food Analysis (2)~~ ~~FDSCI 740 Research and Development of Food Products (4)~~ ~~FDSCI 751 Food Laws and the Regulatory Process (2)~~ ~~FINAN 450 Principles of Finance (3)~~ ~~GRSC 201 Fundamental Baking Calculations (1)~~ ~~GRSC 491 Faculty-Led Study Abroad (1-3)~~ ~~GRSC 499 Undergraduate Research in Grain Science (0-3)~~ ~~GRSC 530 Management Applications in the Grain Processing Ind. (3)~~ ~~GRSC 560 Electricity and Industrial Power Distribution (3)~~ ~~GRSC 592 Extended Internship in Grain Science (1)~~ ~~GRSC 620 Extrusion Processing in the Food and Feed Industries (4)~~ ~~GRSC 712 Vibrational Spectroscopic Analysis and Chemometrics (1-2)~~ ~~GRSC 713 Contemporary Chromatographic Analysis of Food (1)~~ ~~GRSC 745 Fundamentals of Bioprocessing (3)~~ ~~IMSE 501 Industrial Management (3)~~ ~~LEAD 212 Introduction to Leadership Concepts (2-3)~~	**Production Management Option Requirements (21 credit hours)** FDSCI 305 Fundamentals of Food Processing (3) GRSC 405 Grain Analysis Techniques (2) GRSC 540 Process Calculations in Food Systems (3) Specialization Electives (13 credit hours) List of Specialization Electives: ACCTG 231 or above AGEC 115 or above ENTRP 340 FDSCI 307 or above, courses that are not listed in core requirements FINAN 450 or above GRSC 201 or above, courses that are not listed in core requirements LEAD 212 or above MANGT 300 or above MKTG 400 or above PHYS 114

~~LEAD 350 Culture and Context in Leadership (3)~~ ~~MANGT 300 Introduction to Total Quality Management (1)~~ ~~MANGT 420 Principles of Management (3)~~ ~~MANGT 530 Industrial and Labor Relations (3)~~ ~~MANGT 531 Human Resources Management (3)~~ ~~MKTG 400 Introduction to Marketing (3)~~ ~~MKTG 542 Fundamentals of Professional Selling (3)~~	
~~Free~~ Elective (~~3~~ credit hours)	**Unrestricted Elective (6 credit hours)**
Social Sciences and Humanities (3 credit hours) AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course	**Social Sciences and Humanities (3 credit hours)** AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GENAG 210 GEOG 100, 200, 201, 300 to 799 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course
Note - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above. - Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.	**Note** - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above. - Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.
Total credit hours required for graduation: ~~128~~	**Total credit hours required for graduation: 120**

Cereal Chemistry Minor

Contact person: Hulya Dogan
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13981&returnto=7416

Rationale: Updating the curriculum by reflecting the recent changes in some GRSC courses. Also adding three non-GSI courses to the elective list.

Impact Statement: CHM and FDSCI have been contacted.

FROM	TO
Cereal Chemistry Minor ~~In order to obtain a Minor in Bakery Science and Management, students must:~~ ~~- Complete the required courses with a cumulative GPA of at least 2.0.~~ ~~- Take a minimum of 11 credit hours from Kansas State plus a maximum of six transfer credits approved by the department for a total of 17 credit hours to complete the minor requirements.~~ ~~Requirements:~~ ~~Grain science majors cannot use courses required in their major as part of a cereal chemistry minor.~~ GRSC 150 Principles of Milling (2) GRSC 405 Grain Analysis Techniques (2) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (~~3~~) ~~Plus 7 credit hours from the following:~~ GRSC 620 Extrusion Processing in the Food and Feed Industries (4) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) ~~GRSC 712 Vibrational Spectroscopic Analysis & Chemometrics (1-2)~~ ~~GRSC 713 Contemporary Chromatographic Analysis of Food (1)~~ ~~GRSC 790 Grain Science Problem (1-18)~~ **Total credit hours: 17**	**Cereal Chemistry Minor** <u>Available for on-campus students only.</u> GRSC 150 Principles of Milling (2) GRSC 405 Grain Analysis Techniques (2) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (<u>2</u>) <u>Minimum 8 credit hours from the following list:</u> <u>CHM 531 Organic Chemistry I (3)</u> <u>CHM 532 Organic Chemistry Laboratory (2)</u> <u>FDSCI 501 Food Chemistry (3)</u> GRSC 620 Extrusion Processing in the Food and Feed Industries (4) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) **Total credit hours: 17**

Feed Science and Management (B.S.)-Biofuels Production Option - Discontinue

Contact person: Hulya Dogan
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13769&returnto=7416

Rationale: As explained in FSM curriculum proposal, we would like to combine all three paths offered under three options (Feed Production, Pet Food Production, and Biofuels Production) in one by using **"emphasis areas"** instead of separate **"options"**.

Impact Statement: No impact on other departments. There will be no changes in number of students and their course requirements no matter they pursue an "option" or an "emphasis area".

FROM	TO
~~**Feed Science and Management (B.S.)**~~ ~~**Biofuels Production Option**~~ ~~Two options are offered in the Feed Science and Management degree program: Feed Production and Biofuels Production. The Biofuels Production option focuses on preparation for supervisory and management positions in the biofuels industry including grain processing, fuel production, and the utilization of the co-products produced in biofuels production.~~	
~~**Bachelor's degree requirements**~~ ~~**General Requirements:**~~ ~~ACCTG 231 Accounting for Business Operations (3)~~ ~~AGEC 120 Agricultural Economics and Agribusiness (3)~~ ~~ASI 318 Fundamentals of Nutrition (3)~~ ~~BIOCH 265 Introductory Organic and Biochemistry (5)~~ ~~or~~ ~~CHM 350 General Organic Chemistry (3)~~ ~~and~~ ~~CHM 351 General Organic Chemistry Laboratory (2)~~ ~~BIOL 198 Principles of Biology (4)~~ ~~BIOL 455 General Microbiology (4)~~ ~~CHM 210 Chemistry I (4)~~ ~~CHM 230 Chemistry II (4)~~ ~~COMM 105 Public Speaking IA (2)~~ ~~ECON 110 Principles of Macroeconomics (3)~~ ~~ENGL 100 Expository Writing I (3)~~ ~~ENGL 200 Expository Writing II (3)~~ ~~ENGL 516 Written Communication for the Sciences (3)~~ ~~GRSC 100 Freshman Orientation in Grain Science (1)~~ ~~GRSC 101 Introduction to Grain Science and Industry (3)~~ ~~GRSC 150 Principles of Milling (2)~~ ~~GRSC 151 Principles of Milling Laboratory (1)~~ ~~GRSC 210 CAD Flow Sheets for Grain Processes (3)~~ ~~GRSC 310 Materials Handling (3)~~ ~~GRSC 510 Feed Technology I (3)~~ ~~GRSC 530 Management Applications in the Grain Processing Ind. (3)~~ ~~GRSC 555 Cereal Food Plant Design (3)~~ ~~GRSC 560 Electricity and Industrial Power Distribution (3)~~ ~~GRSC 561 Qualities of Feed Ingredients and Laboratory (4)~~ ~~GRSC 591 Internship in Grain Science (1)~~ ~~GRSC 612 Feed Technology II and Laboratory (4)~~ ~~GRSC 651 Food and Feed Product Protection (4)~~ ~~MATH 205 General Calculus and Linear Algebra (3)~~ ~~PHYS 113 General Physics I (4)~~ ~~PHYS 114 General Physics II (4)~~ ~~STAT 325 Introduction to Statistics (3)~~	
~~**Free Electives (6 credit hours)**~~	
~~**Social Sciences/Humanities (6 credit hours)**~~	

Must be taken from more than one department. American Ethnic Studies AMETH 160 to 501 Anthropology Any course Architecture ARCH 301 Appreciation of Architecture Art Any course Communications COMM 320 to 535 Dance Any course Dean of Engineering DEN 325, 450 Economics ECON 120 to 799 English ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 Environmental Design Studies ENVD 250, 251, 655, 670, 671 FSHS Any course Gender, Women, and Sexuality Studies Any course Geography GEOG 100, 200, 201, 300 to 799 History Any course Modern Language Any course 1 credit courses not accepted Music Any course Philosophy Any course Political Science Any course Psychology Any course Social Work Any course Sociology Any course Theatre Any course	
Biofuels Production Option Required Courses (19 credit hours) AGEC 420 Commodity Futures (3) ATM 545 Processing and Storage of Grains (3) GRSC 540 Process Calculations in Food Systems (3) GRSC 541 Process Calculations in Food Systems Laboratory (1) GRSC 745 Fundamentals of Bioprocessing (3) Specialization Electives (min 5 credit hours) ACCTG 241 Accounting for Investing and Financing (3) ACCTG 331 Intermediate Accounting Processes (3) AGEC 410 Agricultural Policy (3) AGEC 515 Food and Agribusiness Marketing (3) AGEC 632 Agribusiness Logistics (3) ASI 320 Principles of Feeding (3) ASI 500 Genetics (3) BIOCH 521 General Biochemistry (3) ECON 631 Principles of Transportation (3) FINAN 450 Principles of Finance (3) GRSC 491 Faculty-Led Study Abroad (1-3) GRSC 499 Undergraduate Research in Grain Science (0-3) GRSC 592 Extended Internship in Grain Science (1) IMSE 501 Industrial Management (3) MANGT 390 Business Law I (3) MANGT 420 Principles of Management (3) MANGT 530 Industrial and Labor Relations (3) MANGT 531 Human Resources Management (3)	
Note Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. A minimum of 45 hours must be taken at the course level of 300 or above. Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.	
Total credit hours required for graduation: (127)	

Feed Science and Management (B.S.)-Feed Production Option

Contact person: Hulya Dogan
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13941&returnto=7416

Rationale:

This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours.

The reduction in credit hours was achieved by various adjustments listed below:

(1) Natural Sciences Block:

PHYS 114 – Moved from "core requirements" to "electives".

After consulting with the industry representatives who serve on department's advisory board, we decided to remove this course from core requirements. General Physics I (mechanics) is critical to grain processing operations that are practiced in feed, baking and milling industry. Concepts covered in General Physics II (electricity and magnetism) are considered to be optional. In the CoA, FSM, BSM and MSM were the only majors requiring General Physics II. Only Agronomy and Food Science have PHYS 114 listed in their curriculum. In both programs PHYS 114 is not a core requirement, but a course option that is listed under "professional"/ "science" electives.

Students in the Pre-Vet option will be specifically directed by their advisors to take PHYS 114.

BSM Cereal Chemistry and MSM Chemistry options still require both PHYS 213 Engineering Physics I and PHYS 214 Engineering Physics II.

(2) Business and Economics Block:

ACCTG 231 – Moved from "core requirements" to "electives"

ECON 110 – Moved from "core requirements" to "electives"

This block has been modified by changing the number of "mandatory" and "elective" hours. It used to be [9 + 6], now it is [3 + 12] hours, respectively. Also, more courses have been added to the "business elective" options.

(3) FSM Core Requirements Block: GRSC course changes.

GRSC 100 Freshman Orientation and GRSC 101 Introduction to Grain Science are now combined in 2 credit hours (instead of 1+3 = 4 credit hours).

GRSC 150 – Added back to the core requirements (2 credit hours).

GRSC 310 – Credit hours dropped from 3 to 2.

GRSC 615 – Credit hours dropped from 3 to 2.

GRSC 651 – Credit hours dropped from 4 to 2.

Please see relevant course proposals for specific rationales.

(4) FSM Option Requirements Block:

FSM used to have three different options: Feed Production, Per Food Production, Biofuels Production. We propose to combine all three paths in one by using "emphasis areas" instead of separate options. Each emphasis block has 2-9 hours of "area-specific core requirements" and range of "specialization electives" that sum up to 16 hours.

(5) No change in **"Unrestricted Electives"** (still 6 credit hours).

(6) No change in **"Social Science and Humanities Electives"** (still 6 credit hours).

(7) Please note that most electives are now listed with a "subject prefix" instead of specific course numbers to make the curriculum less "prescribed" (no effect on the credit hours). This new format provides flexibility and more options to the students, and thus will minimize the number of "variance requests". The revision also aims to improve advising efficiency, create improved harmony across three GSI majors, simplify restricted elective lists, and update course titles.

Impact Statement

The following Department Heads / Directors were contacted regarding proposed **GSI curricula changes** (for all majors):

Accounting - Brett R. Wilkinson
Communications and Agricultural Education - Jason Ellis
Agricultural Economics - Allen M. Featherstone
Agronomy - M. D. Ransom
Animal Sciences and Industry - Evan C. Titgemeyer
Agricultural Technology Management - Joseph Harner
Biochemistry and Molecular Biophysics - Michal Zolkiewski
Biology - Brian Spooner
Chemistry - Daniel A. Higgins
Communication Studies - Greg Paul
Economics - Philp G. Gayle
English - Karin Westman
Entomology - John R. Ruberson
Food Science and Industry - Randall Phebus
Finance - Ansley Chua
Food, Nutrition, Dietetics, and Health - Mark Haub
Industrial Engineering - Bradley Kramer
Leadership Studies - Mary Hale Tolar
Management - William Turnley
Mathematics - Andrew Bennett
Marketing - Esther Swilley
Modern Languages - Derek Hillard
Physics - Brett DePaola
Statistics - James Neill

FROM	TO
Feed Science and Management (B.S.) **~~Feed Production Option~~** ~~Two options are offered in the~~ Feed Science and Management degree program~~: Feed Production and Biofuels Production. The program Feed Production option~~ is intended for those wishing to follow the conventional feed science program to prepare for careers in the feed manufacturing and animal nutrition fields including pet food manufacturing and other allied industries.	**Feed Science and Management (B.S.)** Feed Science and Management degree program, with feed production, pet food production or bioprocessing emphasis, is intended for those wishing to follow the conventional feed science program to prepare for careers in the feed manufacturing and animal nutrition fields including pet food manufacturing and other allied industries.
Natural Sciences (~~29~~ credit hours) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) BIOCH 265 Introductory Organic and Biochemistry (5) or CHM 350 General Organic Chemistry (3) and CHM 351 General Organic Chemistry Laboratory (2) BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) PHYS 113 General Physics I (4) ~~PHYS 114 General Physics II (4)~~	**Natural Sciences (25 credit hours)** CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) BIOCH 265 Introductory Organic and Biochemistry (5) or CHM 350 General Organic Chemistry (3) and CHM 351 General Organic Chemistry Laboratory (2) BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) PHYS 113 General Physics I (4)
Quantitative Studies (6 credit hours) MATH 205 General Calculus and Linear Algebra (3) STAT 325 Introduction to Statistics (3)	**Quantitative Studies (6 credit hours)** MATH 205 General Calculus and Linear Algebra (3) STAT 325 Introduction to Statistics (3)
Communications (11 credit hours) COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication Elective (~~choose one~~): AGCOM 400 Agricultural Business Communications (3) COMM 311 Business and Professional Speaking (3) ENGL 516 Written Communication for the Sciences (3)	**Communications (11 credit hours)** COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication Elective (3 credit hours) List of Communication Electives: AGCOM 400, 610 COMM 311, 322, 326, 465, 480, 535 ENGL 302, 417, 510, 516 Modern languages
Business and Economics (15 credit hours) ~~ECON 110 Principles of Macroeconomics (3)~~ ~~ACCTG 231 Accounting for Business Operations (3)~~ AGEC 120 Agricultural Economics and Agribusiness (3) or ECON 120 Principles of Microeconomics (3) Management Electives (~~6~~ credit hours) ACCTG ~~241~~ AGEC ~~202, 220, 300~~ or above ECON ~~500~~ or above ENTRP 340 FINAN 450 ~~LEAD 212, 350~~ MANGT 300 or above MKTG ~~390~~ or above	**Business and Economics (15 credit hours)** AGEC 120 Agricultural Economics and Agribusiness (3) or ECON 120 Principles of Microeconomics (3) Management Electives (12 credit hours) List of Management Electives: ACCTG 231 or above AGEC 115 or above ECON 110 or above ENTRP 340 FINAN 450 or above MANGT 300 or above MKTG 400 or above
FSM Core Requirements (~~39~~ credit hours) ASI 318 Fundamentals of Nutrition (3) GRSC 100 ~~Freshman Orientation~~ in Grain Science (~~1~~) ~~GRSC 101 Introduction to Grain Science and Industry (3)~~	**FSM Core Requirements (35 credit hours)** ASI 318 Fundamentals of Nutrition (3) GRSC 100 Foundations in Grain Science and Industry (2) GRSC 150 Principles of Milling (2)

GRSC 210 CAD Flow Sheets for Grain Processes (3) GRSC 310 Materials Handling (~~3~~) GRSC 510 Feed Technology I (3) GRSC 530 Management Applications in the Grain Processing Ind. (3) GRSC 561 Qualities of Feed Ingredients and Laboratory (4) GRSC 591 Internship in Grain Science (1) GRSC 612 Feed Technology II and Laboratory (4) GRSC 615 Animal Food Safety (~~3~~) GRSC 620 Extrusion Processing in the Food and Feed Industries (4) GRSC 651 Food and Feed Product Protection (~~4~~)	GRSC 210 CAD Flow Sheets for Grain Processes (3) GRSC 310 Materials Handling (2) GRSC 510 Feed Technology I (3) GRSC 530 Management Applications in the Grain Processing Ind. (3) GRSC 561 Qualities of Feed Ingredients and Laboratory (4) GRSC 591 Internship in Grain Science (1) GRSC 612 Feed Technology II and Laboratory (4) GRSC 615 Animal Food Safety (2) GRSC 620 Extrusion Processing in the Food and Feed Industries (4) GRSC 651 Food and Feed Product Protection (2)
Students must select an emphasis ~~in either Feed Production or Pet Food~~. **Feed Production Emphasis ~~(15 credit hours)~~** ~~Grain Science Electives (minimum 6 credit hours):~~ ~~GRSC 150 Principles of Milling (2)~~ ~~GRSC 151 Principles of Milling Laboratory (1)~~ ~~GRSC 491 Faculty-Led Study Abroad (1-3)~~ ~~GRSC 499 Undergraduate Research in Grain Science (0-3)~~ ~~GRSC 555 Cereal Food Plant Design (3)~~ ~~GRSC 560 Electricity and Industrial Power Distribution (3)~~ ~~GRSC 592 Extended Internship in Grain Science (1)~~ ~~GRSC 602 Cereal Science (3)~~ ~~GRSC 645 Pet Food Processing (4)~~ ~~Specialization Electives (minimum 9 credit hours):~~ ~~ASI 102, 300 or above~~ ~~BIOCH 521 General Biochemistry (3)~~ ~~BIOCH 522 General Biochemistry Laboratory (2)~~ ~~CHM 531 Organic Chemistry I (3)~~ ~~CHM 532 Organic Chemistry I Laboratory (2)~~ ~~ENTOM 300 or above~~ ~~FDSCI 300 or above~~ ~~FNDH 711 Pet Food Sensory Analysis (2)~~ **Pet Food Emphasis ~~(15 credit hours)~~** ASI 520 Companion Animal Management (3) ASI 677 Companion Animal Nutrition (1) GRSC 645 Pet Food Processing (4) ~~Grain Science Electives (minimum 3 credit hours):~~ ~~GRSC 150 Principles of Milling (2)~~ ~~GRSC 151 Principles of Milling Laboratory (1)~~ ~~GRSC 491 Faculty-Led Study Abroad (1-3)~~ ~~GRSC 499 Undergraduate Research in Grain Science (0-3)~~ ~~GRSC 555 Cereal Food Plant Design (3)~~ ~~GRSC 560 Electricity and Industrial Power Distribution (3)~~ ~~GRSC 592 Extended Internship in Grain Science (1)~~ ~~GRSC 602 Cereal Science (3)~~ ~~GRSC 645 Pet Food Processing (4)~~ ~~Specialization Electives (minimum 4 credit hours):~~ ~~ASI 102, 300 or above~~ ~~BIOCH 521 General Biochemistry (3)~~ ~~BIOCH 522 General Biochemistry Laboratory (2)~~ ~~CHM 531 Organic Chemistry I (3)~~ ~~CHM 532 Organic Chemistry Laboratory (2)~~ ~~ENTOM 300 or above~~ ~~FDSCI 300 or above~~ ~~FNDH 711 Pet Food Sensory Analysis (2)~~	**Students must select an emphasis area (16 credit hours):** **Feed Production Emphasis:** GRSC 655 Feed Plant Layout and Design (2) Specialization Electives (14 credit hours) **Pet Food Emphasis:** ASI 520 Companion Animal Management (3) ASI 677 Companion Animal Nutrition (1) GRSC 645 Pet Food Processing (4) Specialization Electives (8 credit hours) **Bioprocessing Emphasis:** ATM 545 Processing and Storage of Grains (3) GRSC 540 Process Calculations in Food Systems (3) GRSC 745 Fundamentals of Bioprocessing (3) Specialization Electives (7 credit hours) List of Specialization Electives: AGRON 220, 340 or above ASI 102, 300 or above ATM 300 or above BIOCH 521, 522 CHM 531, 532 ENTOM 300 or above FDSCI 305 or above FNDH 711 GRSC 151 or above, courses that are not listed in core requirements LEAD 212 or above PHYS 114

Social Sciences and Humanities (6 credit hours) AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course	**Social Sciences and Humanities (6 credit hours)** AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GENAG 210 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course
~~Free~~ electives (6 credit hours)	**Unrestricted Electives (6 credit hours)**
	Note - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above. - Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.
Total credit hours required for graduation: ~~127~~	**Total credit hours required for graduation: 120**

Food Science and Industry (B.S.) - Business and Operations Management Option

Contact person: Karen Schmidt
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13959&returnto=7408

Rationale

This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. Processing electives were "tightened" to reflect the desire to endorse the emphasis of "industry" in our degree name and program. The professional electives category (e.g., restricted) will no longer list approved courses in the catalog, but rather an approved list will be maintained within the Food Science and Industry Undergraduate Teaching Coordinator, to allow for more nimble responses towards

change (e.g., modification of a course, removal of a course, etc.) In response to assessment, improvements in communication skills are addressed by requiring choices of specific oral and written communication courses.

Impact Statement

These changes could potentially influence the Communications and English departments, as all of our students are required to take one of five classes. Both departments were contacted and are aware of this proposed change. See attached communication.

FROM:	TO:
This curriculum deals with all aspects of the food industry—both theoretical and practical—from producing raw materials through processing and packaging to marketing finished foods. The curriculum balances fundamental principles and practical applications of food science within a flexible program that permits students to tailor education to personal career goals. Students choose between three options, science, food business and operations management, or technology for their degree. ~~Scholarships are available through the Institute of Food Technologists and the College of Agriculture. Incoming freshmen ***should contact the food science chair in November–December for IFT scholarship forms.***~~	This curriculum deals with all aspects of the food industry—both theoretical and practical—from producing raw materials through processing and packaging to marketing finished foods. The curriculum balances fundamental principles and practical applications of food science within a flexible program that permits students to tailor education to personal career goals. Students choose between three options, science, food business and operations management or technology for their degree.
Graduates are needed to manage and supervise sophisticated food manufacturing industries that produce poultry, fresh and processed meat, dairy products, bakery goods, frozen and canned fruits and vegetables, confections, and snack foods. Job placement and starting salaries have been excellent.	Graduates are needed to manage and supervise sophisticated food manufacturing industries that produce poultry, fresh and processed meat, dairy products, bakery goods, frozen and canned fruits and vegetables, confections, and snack foods. Job placement and starting salaries have been excellent.
Imaginative and well-trained people are needed in research and product development to create new and innovative products and processes. Some graduates work with producers to improve the quality of raw materials. Persons trained in HACCP and food safety, microbiology, quality assurance, and evaluation are needed to help food processors meet more stringent consumer and government requirements. Others are involved in selling, merchandising, advertising, or managing food operations. Government regulatory agencies also hire food scientists to assure public health, nutrition, and food labeling. If students have foreign language capabilities, international food industry jobs are available.	Imaginative and well-trained people are needed in research and product development to create new and innovative products and processes. Some graduates work with producers to improve the quality of raw materials. Persons trained in HACCP and food safety, microbiology, quality assurance, and evaluation are needed to help food processors meet more stringent consumer and government requirements. Others are involved in selling, merchandising, advertising, or managing food operations. Government regulatory agencies also hire food scientists to assure public health, nutrition, and food labeling. If students have foreign language capabilities, international food industry jobs are available.
Very important to the student's course of study is the flexibility of professional electives that the student selects by consultation with their academic advisor. This gives the student an opportunity to design a personalized, well-rounded curriculum. Often students can obtain a minor in such areas as business, cereal chemistry, economics, agribusiness, and leadership by careful selection of required minor courses.	Very important to the student's course of study is the flexibility of professional electives that the student selects by consultation with their academic advisor. This gives the student an opportunity to design a personalized, well-rounded curriculum. Often students can obtain a minor in such areas as business, cereal chemistry, economics, agribusiness, agricultural technology management, and leadership just by careful selection of required minor courses.

Communications	11-12 credit hours	**Communications**	11 to 12 credit hours
ENGL 100 Expository Writing I	3	ENGL 100 Expository Writing I	3
ENGL 200 Expository Writing II	3	ENGL 200 Expository Writing II	3
Select one:		**Select one:**	
COMM 105 Public Speaking IA	2	COMM 105 Public Speaking IA	2
COMM 106 Public Speaking I	3	COMM 106 Public Speaking I	3

~~One additional course in communications~~	~~2- 3~~	**Select one:**	
~~AGCOM 400 Agricultural Business Comm.~~	~~3~~	COMM 311 Business and Professional Speaking	3
~~ACGOM 590 New Media Technology~~	~~3~~	COMM 321 Public Speaking II	3
~~AGCOM 610 Crisis Comm.~~	~~3~~	ENGL 417 Written Communications for the Workplace	3
~~ASI 495Adv. Meat Evaluation~~	~~2~~	ENGL 510 Introduction to Professional Writing	3
COMM 311 Business and Professional Speaking	3	ENGL 516 Written Communications for Sciences	3
COMM 321 Public Speaking II	3		
~~COMM 322 Interpersonal Communications~~	~~3~~		
~~COMM 326 Small Group Discussions~~	~~3~~		
~~COMM 535 Communications and Leadership~~	~~3~~		
ENGL 417 Written Communications for the Workplace	3		
ENGL 510 Introduction to Professional Writing	3		
ENGL 516 Written Communications for Sciences	3		
~~FNDH 643 Food Writing~~	~~3~~		
~~MKTG 542 Fund. Professional Sales~~	~~3~~		
Humanities and Social Sciences	12 credit hours	**Humanities and Social Sciences**	12 credit hours
ECON 110 Prin. of Macroeconomics	3	ECON 110 Prin. of Macroeconomics	3
Humanities and Soc. Sci. electives Select 9 credit hours (Suggested courses must be taken from more than one department) • American Ethnic Studies – Any course • Anthropology – Any course • Architecture – ARCH 301 – Appreciation of Architecture • Art – Any course • Communications Studies – Any course • Dance – Any course • Economics – Any course between ECON 120 to ECON 735 • English – Any course numbered 220 or higher • Family Studies and Human Services – Any course • Geography – Any course **excluding** GEOG 221 – Introductory Physical Geography • Gender, Women and Sexuality Studies – Any course • History – Any course • Modern Language – Any course • Philosophy – Any course • Political Science – Any course • Psychology – Any course • Social Work – Any course • Sociology – Any course • Theatre – Any course	9	Humanities and Soc. Sci. electives Select 9 credit hours (Suggested courses must be taken from more than one department) • American Ethnic Studies – Any course • Anthropology – Any course • Architecture – ARCH 301 – Appreciation of Architecture • Art – Any course • Communications Studies – Any course • Dance – Any course • Economics – Any course between ECON 120 to ECON 735 • English – Any course numbered 220 or higher • Family Studies and Human Services – Any course • Geography – Any course **excluding** GEOG 221 – Introductory Physical Geography • Gender, Women and Sexuality Studies – Any course • History – Any course • Modern Language – Any course • Philosophy – Any course • Political Science – Any course • Psychology – Any course • Social Work – Any course • Sociology – Any course • Theatre – Any course	9
Quantitative Studies	6 credit hours	**Quantitative Studies**	6 credit hours
MATH 205 General Calculus and Linear Algebra	3	MATH 205 General Calculus and Linear Algebra	3

Select one:		**Select one:**	
STAT 325 Introduction to Statistics	3	STAT 325 Introduction to Statistics	3
STAT 340 Biometrics 1	3	STAT 340 Biometrics 1	3
STAT 350 Business & Economic Statistics	3	STAT 350 Business & Economic Statistics	3
Biological Sciences	8 credit hours	**Biological Sciences**	8 credit hours
BIOL 198 Principles of Biology	4	BIOL 198 Principles of Biology	4
BIOL 455 General Microbiology	4	BIOL 455 General Microbiology	4
Physical Sciences	13 credit hours	**Physical Sciences**	13 credit hours
BIOCH 265 Introduction Organic and Biochemistry	5	BIOCH 265 Introduction Organic and Biochemistry	5
CHM 210 Chemistry I	4	CHM 210 Chemistry I	4
CHM 230 Chemistry II	4	CHM 230 Chemistry II	4
Core Classes (Must have a 2.0 GPA average in core food science classes)	~~24~~ to 27 credit hours	**Core Classes (Must have a 2.0 GPA average in core food science classes)**	25 to 27 credit hours
FDSCI 101 Orientation to Food Science	1	FDSCI 101 Orientation to Food Science	1
FDSCI 302 Introduction to Food Science	3	FDSCI 302 Introduction to Food Science	3
FDSCI 305 Fundamentals of Food Processing	3	FDSCI 305 Fundamentals of Food Processing	3
FDSCI 310 Food Science Professional Preparation	1	FDSCI 310 Food Science Professional Preparation	1
FDSCI 500 Food Science Seminar	1	FDSCI 500 Food Science Seminar	1
FDSCI 600 Food Microbiology	2	FDSCI 600 Food Microbiology	2
FDSCI 601 Food Microbiology Lab	2	FDSCI 601 Food Microbiology Lab	2
FDSCI 690 Principles of HACCP & HARPC	3	FDSCI 690 Principles of HACCP & HARPC	3
Select one:		**Select one:**	
FDSCI 501 Food Chemistry	3	FDSCI 501 Food Chemistry	3
FNDH 413 Science of Food	4	FNDH 413 Science of Food	4
Select one:		**Select one:**	
ASI 318 Fundamentals of Nutrition	3	ASI 318 Fundamentals of Nutrition	3
FNDH 132 Basic Nutrition	3	FNDH 132 Basic Nutrition	3
Select one:		**Select 10 credit hours:**	
FDSCI 695 Quality Assurance of Food Products	3	FDSCI 695 Quality Assurance of Food Products	3
FDSCI 740 Research and Development of Food Products	4	FDSCI 740 Research and Development of Food Products	4
Processing Electives (Must have 8 hrs processing electives from at least 2 commodity areas – Dairy, Grain, Meat, or Fruit/Vegetable~~)~~	8 credit hours	**Processing Electives (Must have 8 hrs processing electives from at least 2 commodity areas – Dairy, Grain, Meat, or Fruit/Vegetable. <u>If choosing a lecture class only, then the accompanying lab class must be taken too.)</u>**	8 credit hours
ASI 310 Poultry Products Evaluation	2	ASI 310 Poultry Products Evaluation	2
ASI 350 Meat Science	3	ASI 350 Meat Science	3
ASI 361 Meat Animal Processing	2	ASI 361 Meat Animal Processing	2
ASI 371 Fundamentals of Meat Evaluation	2	ASI 371 Fundamentals of Meat Evaluation	2
ASI 405 Fundamentals of Milk Processing	3	ASI 405 Fundamentals of Milk Processing	3
ASI 495 Advanced Meat Evaluation	2	ASI 495 Advanced Meat Evaluation	2
ASI 608 Dairy Foods Processing and Technology	3	ASI 608 Dairy Foods Processing and Technology	3
ASI 610 Processed Meat Operations	3	ASI 610 Processed Meat Operations	3
ASI 640 Poultry Product Technology	3	ASI 640 Poultry Product Technology	3
~~ASI 671 Meat Selection and Utilization~~	~~2~~	ASI 777 Meat Technology	3
~~ASI 776 Meat Industry Technology~~	~~3~~	GRSC 150 Principles of Milling	2
		<u>-AND-</u>	
ASI 777 Meat Technology	3	GRSC 151 Principles of Milling Lab	1

~~FDSCI 660 International Study Experience Food Sci~~	~~3~~	GRSC 602 Cereal Science	3
~~GRSC 101 Introduction to Grain Science~~	~~3~~	-AND-	
GRSC 150 Principles of Milling	2	GRSC 636 Baking Science I Lab	2
GRSC 151 Principles of Milling Lab	1	GRSC 637 Baking Science II	2
~~GRSC 405 Grain Analysis Technique~~	~~2~~	-AND-	
GRSC 602 Cereal Science	3	GRSC 638 Baking Science II Lab	2
~~GRSC 625 Flour and Dough Testing~~	~~3~~	GRSC 645 Pet Food Processing	4
GRSC 635 Baking Science I	2	HORT 325 Introduction to Organic Farming	2
GRSC 636 Baking Science I Lab	2		
GRSC 637 Baking Science II	2		
GRSC 638 Baking Science II Lab	2		
GRSC 645 Pet Food Processing	4		
HORT 325 Introduction to Organic Farming	2		
Business, Management & Economics Electives	18 credit hours	**Business, Management & Economics Electives**	18 credit hours
Students are strongly encouraged to complete a minor in either Business Administration, Agricultural Economics or Agricultural Business.		Students are strongly encouraged to complete a minor in either Business Administration, Agricultural Economics or Agricultural Business.	
ACCTG 231 Accounting Business Operations	3	ACCTG 231 Accounting Business Operations	3
ACCTG 241 Accounting Investing and Financing	3	ACCTG 241 Accounting Investing and Financing	3
AGEC 120 Agricultural Economics and Agribusiness	3	AGEC 120 Agricultural Economics and Agribusiness	3
-OR-		-OR-	
ECON 120 Microeconomics	3	ECON 120 Microeconomics	3
ECON 510 Intermediate Macroeconomics	3	ECON 510 Intermediate Macroeconomics	3
ECON 520 Intermediate Macroeconomics	3	ECON 520 Intermediate Macroeconomics	3
FINAN 450 Principles of Finance	3	FINAN 450 Principles of Finance	3
AGEC Any course 200 level or above		AGEC Any course 200 level or above	
MAGNT Any course 300 level or above		MAGNT Any course 300 level or above	
MRKTG Any course 400 level or above		MRKTG Any course 400 level or above	
~~**Professional** **Electives**~~	~~14~~ credit hours	**Restricted Electives**	11 credit hours
~~ACCTG 231 Accounting Business Operations~~	~~3~~		
~~ACCTG 241 Accounting Investing and Financing~~	~~3~~		
~~AGCOM 400 Agricultural Business Communications~~	~~3~~		
~~AGCOM 590 New Media Technology~~	~~3~~		
~~AGCOM 610 Crisis Communication~~	~~3~~		
~~AGEC Any course 200 level or above~~	~~3~~		
~~AGRON 335 Environmental Quality~~	~~3~~		
~~ASI Any course between ASI 290 and ASI 777~~			
~~ATM 160 Engineered Systems and Technology in Agriculture~~	~~3~~		
~~ATM 450 Sensors/Control Agricultural and Biological Systems~~	~~3~~		
~~BIOL 330 Public Health Biology~~			
~~CIS Any course between CIS 101 and CIS 105~~			
~~ECON 510 Intermediate Macroeconomics~~	~~3~~		
~~ECON 520 Intermediate Microeconomics~~	~~3~~		
~~ENGL 417 Written Communications for the Workplace~~	~~3~~		
~~ENGL 510 Introduction to Professional Writing~~	~~3~~		
~~FINAN 450 Principles of Finance~~	~~3~~		

~~FDSCI Any course 400 or above~~			
~~FNDH 643 Food Writing~~			
~~GENAG 210 Human and Cultural Diversity in Ag Sciences~~	~~3~~		
~~GENAG 505 Comparative Agriculture~~	~~1-4~~		
~~GENAG 711 Occupational and Agricultural Health~~	~~3~~		
~~GENAG 721 Occupational and Ag Safety and Health~~	~~3~~		
~~GNHE 310 Human Needs~~	~~3~~		
~~GRSC Any course~~			
~~HM 220 Environmental Issues in Hospitality~~	~~3~~		
~~HM 341 Principles of Food Production Management~~	~~3~~		
~~HM 442 Introduction to Wines~~	~~1~~		
~~HN Any course 300 level or higher~~			
~~HORT 780 Health Promoting Phytochemicals~~	~~2~~		
~~LEAD 212 Introduction to Leadership Concepts~~	~~2-3~~		
~~MANGT Any course 300 level or above~~			
~~MKTG Any course 400 level or above~~			
~~Modern Language Any course, 1 credit courses not accepted~~			
~~PHYS 113 General Physics I~~	~~4~~		
~~PHYS 114 General Physics II~~	~~4~~		
~~STAT 341 Biometrics II~~	~~3~~		
~~OR~~			
~~STAT 351 Business and Economics Statistics II~~	~~3~~		
Unrestricted Electives	~~8 to 13~~ credit hours	**Unrestricted Electives**	5 to 8 credit hours
Total hours required for graduation: (~~126~~ credit hours)		**Total hours required for graduation: (120 credit hours)**	
Must satisfy K-State 8 general education requirements.		Must satisfy K-State 8 general education requirements.	

Food Science and Industry (B.S.) - Science Option

Contact person: Karen Schmidt
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13960&returnto=7408

Rationale

This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. Processing electives were "tightened" to reflect the desire to endorse the emphasis of "industry" in our degree name and program. The professional electives category (e.g., restricted) will no longer list approved courses in the catalog, but rather an approved list will be maintained Food Science Undergraduate Teaching Coordinator, to allow for more nimble responses towards change (e.g., modification of a course, removal of a course, etc.) In response to assessment, improvements in communication skills are addressed by requiring choices of specific oral and written communication courses.

Impact Statement

These changes could potentially influence the Communications and English departments, as all of our students are required to take one of five classes. Both departments were contacted and are aware of this proposed change. See attached communication.

This curriculum deals with all aspects of the food industry—both theoretical and practical—from producing raw materials through processing and packaging to marketing finished foods. The curriculum balances fundamental principles and practical applications of food science within a flexible program that permits students to tailor education to personal career goals. Students choose between three options, science, food business and operations management or technology for their degree. The program is approved by the Institute of Food Technologists. ~~Scholarships are available through the Institute of Food Technologists and the College of Agriculture. Incoming freshmen ***should contact the food science chair in November - December for IFT scholarship forms.***~~ Graduates are needed to manage and supervise sophisticated food manufacturing industries that produce poultry, fresh and processed meat, dairy products, bakery goods, frozen and canned fruits and vegetables, confections, and snack foods. Job placement and starting salaries have been excellent. Imaginative and well-trained people are needed in research and product development to create new and innovative products and processes. Some graduates work with producers to improve the quality of raw materials. Persons trained in HACCP and food safety, microbiology, quality assurance, and evaluation are needed to help food processors meet more stringent consumer and government requirements. Others are involved in selling, merchandising, advertising, or managing food operations. Government regulatory agencies also hire food scientists to assure public health, nutrition, and food labeling. If students have foreign language capabilities, international food industry jobs are available. Very important to the student's course of study is the flexibility of professional electives that the student selects by consultation with their academic advisor. This gives the student an opportunity to design a personalized, well-rounded curriculum. Often students can obtain a minor in such areas as business, cereal chemistry, economics, agribusiness, agricultural technology management, and leadership by careful selection of required minor courses. The nature of the courses required in this curriculum is very compatible with course requirements of ***students interested in pre-veterinary medicine and other pre-professional curriculums such as dentistry, pharmacy, and nursing***. A BS in food science provides excellent training for these students and offers them other job opportunities if needed.	This curriculum deals with all aspects of the food industry—both theoretical and practical—from producing raw materials through processing and packaging to marketing finished foods. The curriculum balances fundamental principles and practical applications of food science within a flexible program that permits students to tailor education to personal career goals. Students choose between three options, science, food business and operations management or technology for their degree. The program is approved by the Institute of Food Technologists. Graduates are needed to manage and supervise sophisticated food manufacturing industries that produce poultry, fresh and processed meat, dairy products, bakery goods, frozen and canned fruits and vegetables, confections, and snack foods. Job placement and starting salaries have been excellent. Imaginative and well-trained people are needed in research and product development to create new and innovative products and processes. Some graduates work with producers to improve the quality of raw materials. Persons trained in HACCP and food safety, microbiology, quality assurance, and evaluation are needed to help food processors meet more stringent consumer and government requirements. Others are involved in selling, merchandising, advertising, or managing food operations. Government regulatory agencies also hire food scientists to assure public health, nutrition, and food labeling. If students have foreign language capabilities, international food industry jobs are available. Very important to the student's course of study is the flexibility of professional electives that the student selects by consultation with their academic advisor. This gives the student an opportunity to design a personalized, well-rounded curriculum. Often students can obtain a minor in such areas as business, cereal chemistry, economics, agribusiness, agricultural technology management, and leadership by careful selection of required minor courses. The nature of the courses required in this curriculum is very compatible with course requirements of ***students interested in pre-veterinary medicine and other pre-professional curriculums such as dentistry, pharmacy, and nursing***. A BS in food science provides excellent training for these students and offers them other job opportunities if needed.
Communications 11-12 hours ENGL 100 Expository Writing I 3 ENGL 200 Expository Writing II 3 **Select one:**	**Communications** 11 to 12 credit hours ENGL 100 Expository Writing I 3 ENGL 200 Expository Writing II 3 **Select one:**

COMM 105 Public Speaking IA	2	COMM 105 Public Speaking IA	2
COMM 106 – Public Speaking	3	COMM 106 Public Speaking I	3
~~One additional course in communications~~	~~2- 3~~	**Select one:**	
~~AGCOM 400 Agricultural Business Comm.~~	~~3~~	COMM 311 Business and Professional Speaking	3
~~ACGOM 590 New Media Technology~~	~~3~~	COMM 321 Public Speaking II	3
~~AGCOM 610 Crisis Comm.~~	~~3~~	ENGL 417 Written Communications for the Workplace	3
~~ASI 495Advanced Meat Evaluation~~	~~2~~	ENGL 510 Introduction to Professional Writing	3
COMM 311 Business and Professional Speaking	3	ENGL 516 Written Communications for Sciences	3
COMM 321 Public Speaking II	3		
~~COMM 322 Interpersonal Communications~~	~~3~~		
~~COMM 326 Small Group Discussions~~	~~3~~		
~~COMM 535 Communications and Leadership~~	~~3~~		
ENGL 417 Written Communications for the Workplace	3		
ENGL 510 Introduction to Professional Writing	3		
ENGL 516 Written Communications for Sciences	3		
~~FNDH 643 Food Writing~~	~~3~~		
~~MKTG 542 Fund. Professional Sales~~	~~3~~		
Humanities and Social Sciences	12 hours	**Humanities and Social Sciences**	12 <u>credit</u> hours
ECON 110 Prin. of Macroeconomics	3	ECON 110 Prin. of Macroeconomics	3
Humanities and Soc. Sci. electives Select 9 credit hours (Suggested courses must be taken from more than one department). • American Ethnic Studies – Any course • Anthropology – Any course • Architecture – ARCH 301 – Appreciation of Architecture • Art – Any course • Communications Studies – Any course • Dance – Any course • Economics – Any course between ECON 120 to ECON 735 • English – Any course numbered 220 or higher • Family Studies and Human Services – Any course • Geography – Any course **excluding** GEOG 221 – Introductory Physical Geography • Gender, Women and Sexuality Studies – Any course • History – Any course • Modern Language – Any course • Philosophy – Any course • Political Science – Any course • Psychology – Any course • Social Work – Any course • Sociology – Any course • Theatre – Any course	9	Humanities and Soc. Sci. electives Select 9 credit hours (Suggested courses must be taken from more than one department). • American Ethnic Studies – Any course • Anthropology – Any course • Architecture – ARCH 301 – Appreciation of Architecture • Art – Any course • Communications Studies – Any course • Dance – Any course • Economics – Any course between ECON 120 to ECON 735 • English – Any course numbered 220 or higher • Family Studies and Human Services – Any course • Geography – Any course **excluding** GEOG 221 – Introductory Physical Geography • Gender, Women and Sexuality Studies – Any course • History – Any course • Modern Language – Any course • Philosophy – Any course • Political Science – Any course • Psychology – Any course • Social Work – Any course • Sociology – Any course • Theatre – Any course	9

Quantitative Studies	10 hours	**Quantitative Studies**	10 credit hours
MATH 220 Analytical Geometry & Calculus I	4	MATH 220 Analytical Geometry & Calculus I	4
Select one:		**Select one:**	
STAT 325 Introduction to Statistics	3	STAT 325 Introduction to Statistics	3
STAT 340 Biometrics 1	3	STAT 340 Biometrics 1	3
STAT 350 Business & Economic Statistics	3	STAT 350 Business & Economic Statistics	3
Select one:		**Select one:**	
STAT 341 Biometrics II	3	STAT 341 Biometrics II	3
STAT 351 Business & Economic Statistics II	3	STAT 351 Business and Economic Statistics II	3
Biological Sciences	8 hours	**Biological Sciences**	8 credit hours
BIOL 198 Principles of Biology	4	BIOL 198 Principles of Biology	4
BIOL 455 General Microbiology	4	BIOL 455 General Microbiology	4
Physical Sciences	~~22~~ ~~23~~ hours	**Physical Sciences**	23 to 24 credit hours
BIOCH 521 General Biochemistry	3	BIOCH 521 General Biochemistry	3
BIOCH 522 General Biochemistry Lab	3	BIOCH 522 General Biochemistry Lab	3
CHM 210 Chemistry I	4	CHM 210 Chemistry I	4
CHM 230 Chemistry II	4	CHM 230 Chemistry II	4
CHM 350 General Organic Chemistry	3	CHM 350 General Organic Chemistry	3
CHM 351 General Organic Chemistry Lab	2	-OR-	
		CHM 531 Organic Chemistry I	3
		CHM 351 General Organic Chemistry Lab	2
		-OR-	
		CHM 532 Organic Chemistry Lab I	2
Select one:		**Select one:**	
PHYS 113 General Physics I	4	PHYS 113 General Physics I	4
PHYS 115 Descriptive Physics	5	PHYS 115 Descriptive Physics	5
Core Classes (Must have a 2.0 GPA average in core food science classes)	~~30~~ ~~32~~ hours	**Core Classes (Must have a 2.0 GPA average in core food science classes)**	33 to 34 credit hours
FDSCI 101 Orientation to Food Science	1	FDSCI 101 Orientation to Food Science	1
FDSCI 302 Introduction to Food Science	3	FDSCI 302 Introduction to Food Science	3
FDSCI 305 Fundamentals of Food Processing	3	FDSCI 305 Fundamentals of Food Processing	3
FDSCI 310 Food Science Professional Preparation	1	FDSCI 310 Food Science Professional Preparation	1
FDSCI 500 Food Science Seminar	1	FDSCI 500 Food Science Seminar	1
FDSCI 501 Food Chemistry	3	FDSCI 501 Food Chemistry	3
FDSCI 600 Food Microbiology	2	FDSCI 600 Food Microbiology	2
FDSCI 601 Food Microbiology Lab	2	FDSCI 601 Food Microbiology Lab	2
FDSCI 690 Principles of HACCP & HARPC	3	FDSCI 690 Principles of HACCP & HARPC	3
FDSCI 727 Chemical Methods of Food Analysis	2	FDSCI 727 Chemical Methods of Food Analysis	2
FDSCI 728 Physical Methods of Food Analysis	2	FDSCI 728 Physical Methods of Food Analysis	2
GRSC 540 Process Calculations in Food Systems	3	GRSC 540 Process Calculations in Food Systems	3
GRSC 541 Process Calculations in Food Systems Lab	1	GRSC 541 Process Calculations in Food Systems Lab	1
Select one:		**Select one:**	
ASI 318 Fundamentals of Nutrition	3	ASI 318 Fundamentals of Nutrition	3
FNDH 132 Basic Nutrition	3	FNDH 132 Basic Nutrition	3
Select one:		**Select one:**	
FDSCI 695 Quality Assurance of Food Products	3	FDSCI 695 Quality Assurance of Food Products	3

FDSCI 740 Research and Development of Food Products	4	FDSCI 740 Research and Development of Food Products	4
Processing Electives **(Must have 8 hrs processing electives from at least 2 commodity areas – Dairy, Grain, Meat, or Fruit/Vegetable)**	8 hours	**Processing Electives** **(Must have 8 hrs processing electives from at least 2 commodity areas – Dairy, Grain, Meat, or Fruit/Vegetable. <u>If choosing a lecture class only, then the accompanying lab class must be taken too.)</u>**	8 <u>credit</u> hours
ASI 310 Poultry Products Evaluation	2	ASI 310 Poultry Products Evaluation	2
ASI 350 Meat Science	3	ASI 350 Meat Science	3
ASI 361 Meat Animal Processing	2	ASI 361 Meat Animal Processing	2
ASI 371 Fundamentals of Meat Evaluation	2	ASI 371 Fundamentals of Meat Evaluation	2
ASI 405 Fundamentals of Milk Processing	3	ASI 405 Fundamentals of Milk Processing	3
ASI 495 Advanced Meat Evaluation	2	ASI 495 Advanced Meat Evaluation	2
ASI 608 Dairy Foods Processing and Technology	3	ASI 608 Dairy Foods Processing and Technology	3
ASI 610 Processed Meat Operations	3	ASI 610 Processed Meat Operations	3
ASI 640 Poultry Product Technology	3	ASI 640 Poultry Product Technology	3
~~ASI 671 Meat Selection and Utilization~~	~~2~~	ASI 777 Meat Technology	3
ASI 777 Meat Technology	3	GRSC 150 Principles of Milling	2
		<u>-AND-</u>	
~~FDSCI 660 International Study Experience Food Sci~~	~~3~~	GRSC 151 Principles of Milling Lab	1
~~GRSC 101 Introduction to Grain Science~~	~~3~~	GRSC 602 Cereal Science	3
~~GRSC 150 Principles of Milling~~	~~2~~	GRSC 635 Baking Science I	2
~~GRSC 151 Principles of Milling Lab~~	~~1~~	<u>-AND-</u>	
~~GRSC 405 Grain Analysis Technique~~	~~2~~	GRSC 636 Baking Science I Lab	2
		GRSC 637 Baking Science II	2
GRSC 602 Cereal Science	3	<u>-AND-</u>	
~~GRSC 625 Flour and Dough Testing~~	~~3~~	GRSC 638 Baking Science II Lab	2
		GRSC 645 Pet Food Processing	4
GRSC 635 Baking Science I	2	HORT 325 Introduction to Organic Farming	2
GRSC 636 Baking Science I Lab	2		
GRSC 637 Baking Science II	2		
GRSC 638 Baking Science II Lab	2		
GRSC 645 Pet Food Processing	4		
HORT 325 Introduction to Organic Farming	2		
~~**Professional**~~ **Electives**	~~12~~ hours	**<u>Restricted</u> Electives**	<u>9 credit</u> hours
~~Communications Electives~~			
~~ACCTG 231 Accounting Business Operations~~	~~3~~		
~~ACCTG 241 Accounting Investing and Financing~~	~~3~~		
~~AGCOM 400 Agricultural Business Communications~~	~~3~~		
~~AGCOM 590 New Media Technology~~	~~3~~		
~~AGCOM 610 Crisis Communication~~	~~3~~		
~~AGEC 120 Agricultural Economics and Agribusiness~~ ~~or~~ ~~ECON 120 Principles of Microeconomics~~	~~3~~ ~~3~~		
~~AGEC – Any course 200 level or above~~			
~~AGRON 335 Environmental Quality~~	~~3~~		
~~ASI – Any course 200 level or higher~~			
~~ATM 160 Introduction to Ag Systems and Technology~~	~~3~~		
~~ATM 450 Sensors/Control Ag/Biological Systems~~	~~3~~		
~~BIOL – Any course 300 level or above~~			
~~CHM – Any course 300 level or above~~			

~~CIS - Any course between CIS 101 and CIS 105~~			
~~COMM 311 Business and Professional Speaking~~	~~3~~		
~~COMM 321 Public Speaking II~~	~~3~~		
~~COMM 322 Interpersonal Communications~~	~~3~~		
~~COMM 326 Small Group Discussions~~	~~3~~		
~~COMM 535 Communication and Leadership~~	~~3~~		
~~ECON 510 Intermediate Macroeconomics~~	~~3~~		
~~ECON 520 Intermediate Microeconomics~~	~~3~~		
~~ENGL 417 Written Communications for the Workplace~~	~~3~~		
~~ENGL 510 Introduction to Professional Writing~~	~~3~~		
~~FINAN 450 Principles of Finance~~	~~3~~		
~~FDSCI - Any course 400 or above~~			
~~FNDH - Any course 300 or above~~			
~~GENAG 210 Human and Cultural Diversity in Ag Sciences~~	~~3~~		
~~GENAG 505 Comparative Agriculture~~	~~1-4~~		
~~GENAG 711 Occupational and Agricultural Health~~	~~3~~		
~~GENAG 721 Occupational and Ag Safety and Health~~	~~3~~		
~~GNHE 310 Human Needs~~	~~3~~		
~~GRSC - Any course~~			
~~HM 220 Environmental Issues in Hospitality~~	~~3~~		
~~HM 341 Principles of Food Production Management~~	~~3~~		
~~HM 442 Introduction to Wines~~	~~1~~		
~~HORT 780 Health Promoting Phytochemicals~~	~~2~~		
~~KIN 360 Anatomy and Physiology~~	~~8~~		
~~LEAD 212 Introduction to Leadership Concepts~~	~~2-3~~		
~~MANGT Any course 300 level or above~~			
~~MKTG Any course 400 level or above~~			
~~Modern Language - Any course~~			
~~PHYS 114 General Physics II~~	~~4~~		
Unrestricted Electives	~~7-12~~ hours	**Unrestricted Electives**	3 to 6 credit hours
Total hours required for graduation: (~~126~~ credit hours)		**Total hours required for graduation: (120 credit hours)**	
Must satisfy K-State 8 general education requirements.		Must satisfy K-State 8 general education requirements.	

Food Science and Industry (B.S.) - Technology Option

Contact person: Karen Schmidt
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=14003&returnto=7408

Rationale

This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours. Processing electives were "tightened" to reflect the desire to endorse the emphasis of "industry" in our degree name and program. The professional electives category (e.g., restricted) will no longer list approved courses in the catalog, but rather an approved list will be maintained Food Science Undergraduate Teaching Coordinator, to allow for more nimble responses towards change (e.g., modification of a course, removal of a course, etc.) In response to assessment, improvements in communication skills are addressed by requiring choices of specific oral and written communication courses.

Impact Statement

These changes could potentially influence the Communications and English departments, as all of our students are required to take one of five classes. Both departments were contacted and are aware of this proposed change. See attached communication.

This curriculum deals with all aspects of the food industry—both theoretical and practical—from producing raw materials through processing and packaging to marketing finished foods. The curriculum balances fundamental principles and practical applications of food science within a flexible program that permits students to tailor education to personal career goals. Students choose between three options, science, food business and operations management or technology for their degree. ~~Scholarships are available through the Institute of Food Technologists and the College of Agriculture. Incoming freshmen ***should contact the food science chair in November - December for IFT scholarship forms.***~~ Graduates are needed to manage and supervise sophisticated food manufacturing industries that produce poultry, fresh and processed meat, dairy products, bakery goods, frozen and canned fruits and vegetables, confections, and snack foods. Job placement and starting salaries have been excellent. Imaginative and well-trained people are needed in research and product development to create new and innovative products and processes. Some graduates work with producers to improve the quality of raw materials. Persons trained in HACCP and food safety, microbiology, quality assurance, and evaluation are needed to help food processors meet more stringent consumer and government requirements. Others are involved in selling, merchandising, advertising, or managing food operations. Government regulatory agencies also hire food scientists to assure public health, nutrition, and food labeling. If students have foreign language capabilities, international food industry jobs are available. Very important to the student's course of study is the flexibility of professional electives that the student selects by consultation with their academic advisor. This gives the student an opportunity to design a personalized, well-rounded curriculum. Often students can obtain a minor in such areas as business, cereal chemistry, economics, agribusiness, agricultural technology management, and leadership just by careful selection of required minor courses.		This curriculum deals with all aspects of the food industry—both theoretical and practical—from producing raw materials through processing and packaging to marketing finished foods. The curriculum balances fundamental principles and practical applications of food science within a flexible program that permits students to tailor education to personal career goals. Students choose between three options, science, food business and operations management or technology for their degree. Graduates are needed to manage and supervise sophisticated food manufacturing industries that produce poultry, fresh and processed meat, dairy products, bakery goods, frozen and canned fruits and vegetables, confections, and snack foods. Job placement and starting salaries have been excellent. Imaginative and well-trained people are needed in research and product development to create new and innovative products and processes. Some graduates work with producers to improve the quality of raw materials. Persons trained in HACCP and food safety, microbiology, quality assurance, and evaluation are needed to help food processors meet more stringent consumer and government requirements. Others are involved in selling, merchandising, advertising, or managing food operations. Government regulatory agencies also hire food scientists to assure public health, nutrition, and food labeling. If students have foreign language capabilities, international food industry jobs are available. Very important to the student's course of study is the flexibility of professional electives that the student selects by consultation with their academic advisor. This gives the student an opportunity to design a personalized, well-rounded curriculum. Often students can obtain a minor in such areas as business, cereal chemistry, economics, agribusiness, agricultural technology management, and leadership just by careful selection of required minor courses.	
Communications	11-12 hours	**Communications**	11 to 12 <u>credit</u> hours

ENGL 100 Expository Writing I	3	ENGL 100 Expository Writing I	3
ENGL 200 Expository Writing II	3	ENGL 200 Expository Writing II	3
Select one:		**Select one:**	
COMM 105 Public Speaking IA	2	COMM 105 Public Speaking IA	2
COMM 106 Public Speaking	3	COMM 106 Public Speaking I	3
~~One additional course in communications~~	~~2 3~~	**Select one:**	
~~AGCOM 400 Agricultural Business Comm.~~	~~3~~	COMM 311 Business and Professional Speaking	3
~~ACGOM 590 New Media Technology~~	~~3~~	COMM 321 Public Speaking II	3
~~AGCOM 610 Crisis Comm.~~	~~3~~	ENGL 417 Written Communications for the Workplace	3
~~ASI 495Advanced Meat Evaluation~~	~~2~~	ENGL 510 Introduction to Professional Writing	3
COMM 311 Business and Professional Speaking	3	ENGL 516 Written Communications for Sciences	3
COMM 321 Public Speaking II	3		
~~COMM 322 Interpersonal Communications~~	~~3~~		
~~COMM 326 Small Group Discussions~~	~~3~~		
~~COMM 535 Communications and Leadership~~	~~3~~		
ENGL 417 Written Communications for the Workplace	3		
ENGL 510 Introduction to Professional Writing	3		
ENGL 516 Written Communications for Sciences	3		
~~FNDH 643 Food Writing~~	~~3~~		
~~MKTG 542 Fund. Professional Sales~~	~~3~~		
Humanities and Social Sciences	12 hours	**Humanities and Social Sciences**	12 credit hours
ECON 110 Prin. of Macroeconomics	3	ECON 110 Prin. of Macroeconomics	3
Humanities and Soc. Sci. electives Select 9 credit hours (Suggested courses must be taken from more than one department)	9	Humanities and Soc. Sci. electives Select 9 credit hours (Suggested courses must be taken from more than one department)	9
• American Ethnic Studies – Any course • Anthropology – Any course • Architecture – ARCH 301 – Appreciation of Architecture • Art – Any course • Communications Studies – Any course • Dance – Any course • Economics – Any course between ECON 120 to ECON 735 • English – Any course numbered 220 or higher • Family Studies and Human Services – Any course • Geography – Any course **excluding** GEOG 221 – Introductory Physical Geography • Gender, Women and Sexuality Studies – Any course • History – Any course • Modern Language – Any course • Philosophy – Any course • Political Science – Any course • Psychology – Any course		• American Ethnic Studies – Any course • Anthropology – Any course • Architecture – ARCH 301 – Appreciation of Architecture • Art – Any course • Communications Studies – Any course • Dance – Any course • Economics – Any course between ECON 120 to ECON 735 • English – Any course numbered 220 or higher • Family Studies and Human Services – Any course • Geography – Any course **excluding** GEOG 221 – Introductory Physical Geography • Gender, Women and Sexuality Studies – Any course • History – Any course • Modern Language – Any course • Philosophy – Any course • Political Science – Any course • Psychology – Any course	

• Social Work – Any course • Sociology – Any course • Theatre – Any course		• Social Work – Any course • Sociology – Any course • Theatre – Any course	
Quantitative Studies **Select one:** MATH 205 General Calculus and Linear Algebra MATH 220 Analytical Geometry & Calculus I **Select one:** STAT 325 Introduction to Statistics STAT 340 Biometrics 1 STAT 350 Business & Economic Statistics **Select one:** STAT 341 Biometrics II STAT 351 Business & Economic Statistics II	9 to 10 hours 3 4 3 3 3 3 3	**Quantitative Studies** **Select one:** MATH 205 General Calculus and Linear Algebra MATH 220 Analytical Geometry & Calculus I **Select one:** STAT 325 Introduction to Statistics STAT 340 Biometrics 1 STAT 350 Business & Economic Statistics **Select one:** STAT 341 Biometrics II STAT 351 Business and Economic Statistics II	9 to 10 credit hours 3 4 3 3 3 3 3
Biological Sciences BIOL 198 Principles of Biology BIOL 455 General Microbiology	8 hours 4 4	**Biological Sciences** BIOL 198 Principles of Biology BIOL 455 General Microbiology	8 credit hours 4 4
Physical Sciences BIOCH 521 General Biochemistry CHM 210 Chemistry I CHM 230 Chemistry II CHM 350 General Organic Chemistry CHM 351 General Organic Chemistry Lab **Select one:** PHYS 113 General Physics I PHYS 115 Descriptive Physics	~~22 to 23~~ hours 3 4 4 3 2 4 5	**Physical Sciences** BIOCH 521 General Biochemistry CHM 210 Chemistry I CHM 230 Chemistry II CHM 350 General Organic Chemistry -OR- CHM 531 Organic Chemistry I CHM 351 General Organic Chemistry Lab -OR- CHM 532 Organic Chemistry Lab I **Select one:** PHYS 113 General Physics I PHYS 115 Descriptive Physics	20 to 21 credit hours 3 4 4 3 3 2 2 4 5
Core Classes (Must have a 2.0 GPA average in core food science classes) FDSCI 302 Introduction to Food Science FDSCI 305 Fundamentals of Food Processing FDSCI 500 Food Science Seminar FDSCI 501 Food Chemistry FDSCI 600 Food Microbiology FDSCI 690 Principles of HACCP & HARPC **Select one:** FDSCI 307 Applied Microbiology for Meat and Poultry Processors FDSCI 601 Food Microbiology Lab **Select one:** ASI 318 Fundamentals of Nutrition FNDH 132 Basic Nutrition **Select 10 credit hours:** FDSCI 695 Quality Assurance of Food Products FDSCI 725 Food Analysis	~~28 to 29~~ hours 3 3 1 3 2 3 3 2 3 3 3 3	**Core Classes (Must have a 2.0 GPA average in core food science classes)** FDSCI 302 Introduction to Food Science FDSCI 305 Fundamentals of Food Processing FDSCI 500 Food Science Seminar FDSCI 501 Food Chemistry FDSCI 600 Food Microbiology FDSCI 690 Principles of HACCP & HARPC **Select one:** FDSCI 307 Applied Microbiology for Meat and Poultry Processors FDSCI 601 Food Microbiology Lab **Select one:** ASI 318 Fundamentals of Nutrition FNDH 132 Basic Nutrition **Select 10 credit hours:** FDSCI 695 Quality Assurance of Food Products FDSCI 725 Food Analysis	30 to 31 credit hours 3 3 1 3 2 3 3 2 3 3 3 3

-OR-		-OR-	
FDSCI 727 Chemical Methods of Food Analysis	2	FDSCI 727 Chemical Methods of Food Analysis	2
-AND-		-AND-	
FDSCI 728 Physical Methods of Food Analysis	2	FDSCI 728 Physical Methods of Food Analysis	2
FDSCI 740 Research and Development of Food Products	4	FDSCI 740 Research and Development of Food Products	4
GRSC 540 Process Calculations in Food Systems	3	GRSC 540 Process Calculations in Food Systems	3
GRSC 541 Process Calculations in Food Systems Lab	1	GRSC 541 Process Calculations in Food Systems Lab	1
Processing Electives **(Must have 8 hrs processing electives from at least 2 commodity areas – Dairy, Grain, Meat, or Fruit/Vegetable)**	8 hours	**Processing Electives** **(Must have 8 hrs processing electives from at least 2 commodity areas – Dairy, Grain, Meat, or Fruit/Vegetable. <u>If choosing a lecture class only, then the accompanying lab class must be taken too.</u>)**	8 <u>credit</u> hours
~~Meat~~			
ASI 310 Poultry Products Evaluation	2	ASI 310 Poultry Products Evaluation	2
ASI 350 Meat Science	3	ASI 350 Meat Science	3
ASI 361 Meat Animal Processing	2	ASI 361 Meat Animal Processing	2
ASI 371 Fundamentals of Meat Evaluation	2	ASI 371 Fundamentals of Meat Evaluation	2
ASI 495 Advanced Meat Evaluation	2	ASI 405 Fundamentals of Milk Processing	3
ASI 610 Processed Meat Operations	3	ASI 495 Advanced Meat Evaluation	2
ASI 640 Poultry Product Technology	3	ASI 608 Dairy Foods Processing and Technology	3
~~ASI 671 Meat Selection and Utilization~~	~~2~~	ASI 610 Processed Meat Operations	3
~~ASI 776 Meat Industry Technology~~	~~3~~	ASI 640 Poultry Product Technology	3
ASI 777 Meat Technology	3	ASI 777 Meat Technology	3
~~Dairy~~		GRSC 150 Principles of Milling	2
		-AND-	
ASI 405 Fundamentals of Milk Processing	3	GRSC 151 Principles of Milling Lab	1
ASI 608 Dairy Foods Processing and Technology	3	GRSC 602 Cereal Science	3
~~FDSCI 660 International Study Experience Food Sci~~	~~3~~	GRSC 635 Baking Science I	2
~~Grain~~			
~~GRSC 101 Introduction to Grain Science~~	~~3~~	-AND-	
GRSC 150 Principles of Milling	2	GRSC 636 Baking Science I Lab	2
GRSC 151 Principles of Milling Lab	1	GRSC 637 Baking Science II	2
~~GRSC 405 Grain Analysis Technique~~	~~2~~	-AND-	
		GRSC 638 Baking Science II Lab	2
GRSC 602 Cereal Science	3	GRSC 645 Pet Food Processing	4
GRSC 625 Flour and Dough Testing	3	HORT 325 Introduction to Organic Farming	2
GRSC 635 Baking Science I	2		
GRSC 636 Baking Science I Lab	2		
GRSC 637 Baking Science II	2		
GRSC 638 Baking Science II Lab	2		
GRSC 645 Pet Food Processing	4		
Fruit/Vegetables			
HORT 325 Introduction to Organic Farming	2		
~~**Professional Electives**~~	~~18 hours~~	**<u>Restricted</u> Electives**	<u>15 credit hours</u>
~~**Communications Electives**~~			
~~ACCTG 231 Accounting Business Operations~~	~~3~~		
~~ACCTG 241 Accounting Investing and Financing~~	~~3~~		
~~AGCOM 400 Agricultural Business Communications~~	~~3~~		
~~AGCOM 590 New Media Technology~~	~~3~~		

~~AGCOM 610 Crisis Communication~~	~~3~~		
~~AGEC 120 Agricultural Economics and Agribusiness~~ ~~or~~	~~3~~		
~~ECON 120 Principles of Microeconomics~~	~~3~~		
~~AGEC - Any course 202 and AGEC 680~~			
~~AGRON 335 Environmental Quality~~	~~3~~		
~~ASI - Any course between ASI 290 and ASI 777~~			
~~ATM 160 Engineered Systems and Technology in Agriculture~~	~~3~~		
~~ATM 450 Sensors/Control Agricultural and Biological Systems~~	~~3~~		
~~BIOL - Any course 300 level or above~~			
~~CHM - Any course between 371 and 752~~			
~~CIS - Any course between CIS 101 and CIS 105~~			
~~ECON 510 Intermediate Macroeconomics~~	~~3~~		
~~ECON 520 Intermediate Microeconomics~~	~~3~~		
~~ENGL 417 Written Communications for the Workplace~~	~~3~~		
~~ENGL 510 Introduction to Professional Writing~~	~~3~~		
~~FDSCI - Any course between 430 and 790~~			
~~FINAN 450 Principles of Finance~~	~~3~~		
~~FNDH - Any course between 301 and FNDH 735~~			
~~GENAG 210 Human and Cultural Diversity in Ag Sciences~~	~~3~~		
~~GENAG 505 Comparative Agriculture~~	~~1-4~~		
~~GENAG 711 Occupational and Agricultural Health~~	~~3~~		
~~GENAG 721 Occupational and Ag Safety and Health~~	~~3~~		
~~GNHE 310 Human Needs~~	~~3~~		
~~GRSC - Any course between GRSC 101 and 745~~			
~~HM 220 Environmental Issues in Hospitality~~	~~3~~		
~~HM 341 Principles of Food Production Management~~	~~3~~		
~~HM 442 Introduction to Wines~~	~~1~~		
~~HORT 780 Health Promoting Phytochemicals~~	~~2~~		
~~KIN 360 Anatomy and Physiology~~	~~8~~		
~~LEAD 212 Introduction to Leadership Concepts~~	~~2-3~~		
~~MANGT Any course 300 level or above~~			
~~MKTG Any course 400 level or above~~			
~~Modern Language - Any course, 1 credit courses not accepted~~			
~~PHYS 114 General Physics II~~	~~4~~		
Unrestricted Electives	~~8 to 12~~ hours	**Unrestricted Electives**	3 to 7 credit hours
Total hours required for graduation: (~~126~~ credit hours)		**Total hours required for graduation: (120 credit hours)**	
Must satisfy K-State 8 general education requirements.		Must satisfy K-State 8 general education requirements.	

Grain Handling Operations Minor - Discontinue

Contact person: Hulya Dogan
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13963&returnto=7416

Rationale

We do not have the capability to offer this program. The faculty who created and managed this program have left the Department of Grain Science.

Impact Statement: None.

FROM
~~**Grain Handling Operations Minor**~~ ~~In order to obtain a Minor in Grain Handling Operations, students must:~~ ~~- Complete the required courses with a cumulative GPA of at least 2.0.~~ ~~- Take at least 9 credit hours from Kansas State plus a maximum of six transfer credits approved by the department for a total of 15 credit hours to complete the minor requirements.~~ ~~Requirements~~ ~~Grain science majors cannot use courses required in their major as part of a grain handling operations minor.~~ ~~GENAG 712 Occupational and Agricultural Injury Prevention (3)~~ ~~GRSC 101 Introduction to Grain Science and Industry (3)~~ ~~GRSC 310 Materials Handling (3)~~ ~~ATM 545 Processing and Storage of Grains (3)~~ ~~or~~ ~~GRSC 545 Grain Drying, Storage, Aeration and Pest Management (3)~~ ~~GRSC 555 Cereal Food Plant Design (3)~~ ~~**Total credit hours: (15)**~~

Milling Science and Management (B.S.)-Chemistry Option

Contact person: Hulya Dogan
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13968&returnto=7416

Rationale:

This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours.

The reduction in credit hours was achieved by various adjustments listed below:

(1) Communications block.

More communications electives are listed. No effect on total credit hours.

(2) Business and Economics Block:

ACCTG 231 – Moved from “core requirements” to “electives”

ECON 110 – Moved from “core requirements” to “electives”

This block has been modified by changing the number of “mandatory” and “elective” hours. It used to be [9 + 3], now it is [3 + 6] hours, respectively. Also, more courses have been added to the “business elective” options.

(3) BSM Core Requirements Block: GRSC course changes.

GRSC 100 Freshman Orientation and GRSC 101 Introduction to Grain Science are now combined in 2 credit hours (instead of 1+3 = 4 credit hours).

GRSC 310 – Credit hours dropped from 3 to 2.

GRSC 530 – Added back to the program. This course now has new owners who will convert the course to a capstone course for all graduating seniors.

GRSC 625 – Credit hours dropped from 3 to 2.

GRSC 651 – Credit hours dropped from 4 to 2.

Please see relevant course proposals for specific rationales.

(4) MSM Chemistry Option Requirements Block:

BIOCH 522 – Moved to the “specialization electives”.

GRSC 405 – Added as an alternative to FDSCI 727. These two courses have a very similar outline, also share the same textbook. This addition provides flexibility to the students for course scheduling.

(5) “Unrestricted Electives” increased from 3 to 6 credit hours.

(6) “Social Science and Humanities Electives” decreased from 3 to 6 credit hours.

(7) Please note that most electives are now listed with a “subject prefix” instead of specific course numbers to make the curriculum less “prescribed” (no effect on the credit hours). This new format provides flexibility and more options to the students, and thus will minimize the number of “variance requests”. The revision also aims to improve advising efficiency, create improved harmony across three GSI majors, simplify restricted elective lists, and update course titles.

Impact Statement:

The following Department Heads / Directors were contacted regarding proposed GSI curriculum changes (for all majors, including specific options):
Accounting - Brett R. Wilkinson
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Agronomy - M. D. Ransom
Animal Sciences and Industry - Evan C. Titgemeyer
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Biology - Brian Spooner
Chemistry - Daniel A. Higgins
Communication Studies - Greg Paul
Economics - Philp G. Gayle
English - Karin Westman
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Food Science and Industry - Randall Phebus
Finance - Ansley Chua
Food, Nutrition, Dietetics, and Health - Mark Haub
Industrial Engineering - Bradley Kramer
Leadership Studies - Mary Hale Tolar
Management - William Turnley
Mathematics - Andrew Bennett
Marketing - Esther Swilley
Modern Languages - Derek Hillard
Physics - Brett DePaola
Statistics - James Neill

FROM	TO
Milling Science and Management (B.S.) **Chemistry Option**	**Milling Science and Management (B.S.)** **Chemistry Option** Students in milling science and management study all aspects of the grain processing industry, from grain origination to specialty milling with an emphasis on the science and technology of flour milling. There are two options: chemistry and operations. Graduates may choose positions in production areas such as plant managers, plant engineers, and plant superintendents. Others enter fields like research and development, quality control, and technical sales.
Natural Sciences (26 credit hours) BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) PHYS 213 Engineering Physics I (5) PHYS 214 Engineering Physics II (5)	**Natural Sciences (26 credit hours)** BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) PHYS 213 Engineering Physics I (5) PHYS 214 Engineering Physics II (5)
Quantitative Studies (11 credit hours) MATH 220 Analytic Geometry and Calculus I (4) MATH 221 Analytic Geometry and Calculus II (4) STAT 325 Introduction to Statistics (3)	**Quantitative Studies (11 credit hours)** MATH 220 Analytic Geometry and Calculus I (4) MATH 221 Analytic Geometry and Calculus II (4) STAT 325 Introduction to Statistics (3)
Communications (11 credit hours) COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication elective (~~choose one~~): AGCOM 400 Agricultural Business Communications (3) COMM 311 Business and Professional Speaking (3) ENGL 516 Written Communication for the Sciences (3)	**Communications (11 credit hours)** COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication Elective (3 credit hours): List of Communication Electives: AGCOM 400, 610 COMM 311, 322, 326, 465, 480, 535 ENGL 302, 417, 510, 516 Modern languages
Business and Economics (~~12~~ credit hours) ~~ACCTG 231 Accounting for Business Operations (3)~~ ~~ECON 110 Principles of Macroeconomics (3)~~ AGEC 120 Agricultural Economics and Agribusiness (3)	**Business and Economics (9 credit hours)** AGEC 120 Agricultural Economics and Agribusiness (3)

or ECON 120 Principles of Microeconomics (3) Management Electives (~~choose one~~): ~~GRSC 530 Management Applications in the Grain Processing Ind. (3)~~ ~~MANGT 420 Principles of Management (3)~~ ~~MANGT 530 Industrial and Labor Relations (3)~~ ~~MANGT 531 Human Resources Management (3)~~	or ECON 120 Principles of Microeconomics (3) Management Electives (6 credit hours): List of Management Electives: ACCTG 231 or above AGEC 115 or above ECON 110 or above ENTRP 340 FINAN 450 or above LEAD 212 or above MANGT 300 or above MKTG 400 or above
MSM Core Requirements (~~35-36~~ credit hours) GRSC 100 Freshman Orientation ~~in~~ Grain Science (~~1~~) GRSC 150 Principles of Milling (2) GRSC 151 Principles of Milling Laboratory (1) GRSC 210 CAD Flow Sheets for Grain Processes (3) GRSC 310 Materials Handling (~~3~~) GRSC 500 Milling Science I (2) GRSC 501 Milling Science I Laboratory (2) GRSC 502 Milling Science II (2) GRSC 503 Milling Science II Laboratory (2) GRSC 591 Internship in Grain Science (1) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (~~3~~) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 651 Food and Feed Product Protection (~~4~~) ~~Choose one:~~ ~~GRSC 555 Cereal Food Plant Design (3)~~ ~~GRSC 556 Pneumatic Conveying of Dry Solids (2)~~ ~~GRSC 580 Advanced Flow Sheets (2)~~ ~~GRSC 584 Milling Processing Technology Management (3)~~	**MSM Core Requirements (33 credit hours)** GRSC 100 Freshman Orientation and Intro to Grain Science (2) GRSC 150 Principles of Milling (2) GRSC 151 Principles of Milling Laboratory (1) GRSC 210 CAD Flow Sheets for Grain Processes (3) GRSC 310 Materials Handling (2) GRSC 500 Milling Science I (2) GRSC 501 Milling Science I Laboratory (2) GRSC 502 Milling Science II (2) GRSC 503 Milling Science II Laboratory (2) GRSC 530 Management Applications in the Grain Processing Ind. (3) GRSC 591 Internship in Grain Science (1) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (2) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 651 Food and Feed Product Protection (2)
Chemistry Option Requirements (~~24-25~~ credits) BIOCH 521 General Biochemistry (3) ~~BIOCH 522 General Biochemistry Laboratory (2)~~ CHM 500 General Physical Chemistry (3) CHM 531 Organic Chemistry I (3) CHM 532 Organic Chemistry Laboratory (2) CHM 550 Organic Chemistry II (3) FDSCI 727 Chemical Methods of Food Analysis (2) Specialization Electives (~~6-7~~ credit hours) ~~ACCTG 231 Accounting for Business Operations (3)~~ ~~ACCTG 241 Accounting for Investing and Financing (3)~~ ~~AGEC 318 Food and Agribusiness Management (3)~~ ~~AGEC 420 Commodity Futures (3)~~ ~~AGEC 500 Production Economics (3)~~ ~~AGEC 513 Agricultural Finance (3)~~ ~~AGEC 515 Food and Agribusiness Marketing (3)~~ ~~AGEC 520 Market Fundamentals and Futures/Options Trading (3)~~	**Chemistry Option Requirements (21 credits)** BIOCH 521 General Biochemistry (3) CHM 500 General Physical Chemistry (3) CHM 531 Organic Chemistry I (3) CHM 532 Organic Chemistry Laboratory (2) CHM 550 Organic Chemistry II (3) GRSC 405 Grain Analysis Techniques (2) or FDSCI 727 Chemical Methods of Food Analysis (2) Choose one: GRSC 555 Process Flow and Mill Design (3) GRSC 556 Pneumatic Conveying of Dry Solids (2) GRSC 580 Milling of Specially Grains (2) Specialization Electives (2-3 credit hours) List of Specialization Electives: ACCTG 231 or above AGEC 115 or above AGRON 340 CHM 371 FDSCI 305 or above FINAN 450 or above GRSC 201 or above, courses that are not listed in core requirements LEAD 212 or above

~~AGEC 632 Agribusiness Logistics (3)~~ ~~AGRON 340 Grain Grading (2)~~ ~~GRSC 491 Faculty-Led Study Abroad (1-3)~~ ~~GRSC 499 Undergraduate Research in Grain Science (0-3)~~ ~~GRSC 530 Management Applications in the Grain Processing Ind. (3)~~ ~~GRSC 540 Process Calculations in Food Systems (3)~~ ~~GRSC 541 Process Calculations in Food Systems Laboratory (1)~~ ~~GRSC 555 Cereal Food Plant Design (3)~~ ~~GRSC 556 Pneumatic Conveying of Dry Solids (2)~~ ~~GRSC 560 Electricity and Industrial Power Distribution (3)~~ ~~GRSC 580 Advanced Flow Sheets (2)~~ ~~GRSC 584 Milling Processing Technology Management (3)~~ ~~GRSC 592 Extended Internship in Grain Science (1)~~ ~~GRSC 615 Animal Food Safety (3)~~ ~~GRSC 712 Vibrational Spectroscopic Analysis and Chemometrics (1-2)~~ ~~GRSC 713 Contemporary Chromatographic Analysis of Food (1)~~ ~~GRSC 745 Fundamentals of Bioprocessing (3)~~ ~~LEAD 212 Introduction to Leadership Concepts (2-3)~~ ~~LEAD 350 Culture and Context in Leadership (3)~~ ~~MANGT 420 Principles of Management (3)~~ ~~MANGT 530 Industrial and Labor Relations (3)~~ ~~MANGT 531 Human Resources Management (3)~~	MANGT 300 or above MKTG 400 or above
~~Free~~ Electives (~~3~~ credit hours)	**Unrestricted Electives (6 credit hours)**
Social Sciences and Humanities (~~6~~ credit hours) AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course	**Social Sciences and Humanities (3 credit hours)** AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GENAG 210 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course
Note - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above.	**Note** - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above.

- Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.	- Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.
Total credit hours required for graduation: 128	**Total credit hours required for graduation: 120**

Milling Science and Management (B.S.)-Operations Option

Contact person: Hulya Dogan
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13909&returnto=7416

Rationale: This proposed curriculum change responds to the Kansas Board of Regents' mandate to reduce graduation requirements to 120 credit hours.

The reduction in credit hours was achieved by various adjustments listed below:

(1) Natural Sciences Block:

PHYS 114 – Moved from "core requirements" to "electives".

After consulting with the industry representatives who serve on department's advisory board, we decided to remove this course from core requirements. General Physics I (mechanics) is critical to grain processing operations that are practiced in feed, baking and milling industry. Concepts covered in General Physics II (electricity and magnetism) are considered to be optional. In the CoA, FSM, BSM and MSM were the only majors requiring General Physics II. Only Agronomy and Food Science have PHYS 114 listed in their curriculum. In both programs PHYS 114 is not a core requirement, but a course option that is listed under "professional"/ "science" electives.

Students in the Pre-Vet option will be specifically directed by their advisors to take PHYS 114.

BSM Cereal Chemistry and MSM Chemistry options still require both PHYS 213 Engineering Physics I and PHYS 214 Engineering Physics II.

(2) Quantitative Studies block.

MATH 220 – Replaced with MATH 205.

MSM was on the only grain science major requiring MATH 220. This creates harmony across three GSI majors.

BSM Cereal Chemistry and MSM Chemistry options still require both MATH 220 and MATH 221.

(3) Communications block.

More communications electives are listed. No effect on total credit hours.

(4) Business and Economics Block:

ACCTG 231 – Moved from "core requirements" to "electives"

ECON 110 – Moved from “core requirements” to “electives”

This block has been modified by changing the number of “mandatory” and “elective” hours. It used to be [9 + 6], now it is [3 + 12] hours, respectively. Also, more courses have been added to the “business elective” options.

(5) MSM Core Requirements Block: GRSC course changes.

GRSC 100 Freshman Orientation and GRSC 101 Introduction to Grain Science are now combined in 2 credit hours (instead of 1+3 = 4 credit hours).

GRSC 310 – Credit hours dropped from 3 to 2.

GRSC 530 – Added back to the program. This course now has new owners who will convert the course to a capstone course for all graduating seniors.

GRSC 625 – Credit hours dropped from 3 to 2.

GRSC 651 – Credit hours dropped from 4 to 2.

Please see relevant course proposals for specific rationales.

(6) MSM Operations Option Requirements Block:

AGRON 340 – Moved from “core requirements” to “electives”

GRSC 555 – Course name change.

GRSC 580 – Course name change.

GRSC 584 – Will be discontinued.

Total credit hours decreased from 25 to 21.

(7) “Unrestricted Electives” increased from 3 to 6 credit hours.

(8) “Social Science and Humanities Electives” decreased from 9 to 3 credit hours.

(9) Please note that most electives are now listed with a “subject prefix” instead of specific course numbers to make the curriculum less “prescribed” (no effect on the credit hours). This new format provides flexibility and more options to the students, and thus will minimize the number of “variance requests”. The revision also aims to improve advising efficiency, create improved harmony across three GSI majors, simplify restricted elective lists, and update course titles.

Impact Statement:
The following Department Heads / Directors were contacted regarding proposed GSI curriculum changes (for all majors, including specific options):

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FROM	TO
Milling Science and Management (B.S.) **Operations Option**	**Milling Science and Management (B.S.)** **Operations Option** Students in milling science and management study all aspects of the grain processing industry, from grain origination to specialty milling with an emphasis on the science and technology of flour milling. There are two options: chemistry and operations. Graduates may choose positions in production areas such as plant managers, plant engineers, and plant superintendents. Others enter fields like research and development, quality control, and technical sales.
Natural Sciences (~~29~~ credit hours) BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) BIOCH 265 Introductory Organic and Biochemistry (5) or CHM 350 General Organic Chemistry (3) and CHM 351 General Organic Chemistry Laboratory (2) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) PHYS 113 General Physics I (4) ~~PHYS 114 General Physics II (4)~~	**Natural Sciences (25 credit hours)** BIOL 198 Principles of Biology (4) BIOL 455 General Microbiology (4) BIOCH 265 Introductory Organic and Biochemistry (5) or CHM 350 General Organic Chemistry (3) and CHM 351 General Organic Chemistry Laboratory (2) CHM 210 Chemistry I (4) CHM 230 Chemistry II (4) PHYS 113 General Physics I (4)
Quantitative Studies (~~7~~ credit hours) ~~MATH 220 Analytic Geometry and Calculus I (4)~~ STAT 325 Introduction to Statistics (3)	**Quantitative Studies (6 credit hours)** MATH 205 General Calculus and Linear Algebra (3) STAT 325 Introduction to Statistics (3)
Communications (11 credit hours) COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication elective (~~choose one~~) AGCOM 400 Agricultural Business Communications (3) COMM 311 Business and Professional Speaking (3) ENGL 516 Written Communication for the Sciences (3)	**Communications (11 credit hours)** COMM 105 Public Speaking IA (2) ENGL 100 Expository Writing I (3) ENGL 200 Expository Writing II (3) Communication Elective (3 credit hours) List of Communication Electives: AGCOM 400, 610 COMM 311, 322, 326, 465, 480, 535 ENGL 302, 417, 510, 516

	Modern languages
Business and Economics (~~12~~ credit hours) ~~ACCTG 231 Accounting for Business Operations (3)~~ ~~ECON 110 Principles of Macroeconomics (3)~~ AGEC 120 Agricultural Economics and Agribusiness (3) or ECON 120 Principles of Microeconomics (3) Management Electives (~~choose one~~): ~~GRSC 530 Management Applications in the Grain Processing Ind. (3)~~ ~~MANGT 420 Principles of Management (3)~~ ~~MANGT 530 Industrial and Labor Relations (3)~~ ~~MANGT 531 Human Resources Management (3)~~	**Business and Economics (15 credit hours)** AGEC 120 Agricultural Economics and Agribusiness (3) or ECON 120 Principles of Microeconomics (3) Management Electives (12 credit hours) List of Management Electives: ACCTG 231 or above AGEC 115 or above ECON 110 or above ENTRP 340 FINAN 450 or above LEAD 212 or above MANGT 300 or above MKTG 400 or above
MSM Core Requirements (33 credit hours) GRSC 100 Freshman Orientation ~~in~~ Grain Science (~~1~~) GRSC 150 Principles of Milling (2) GRSC 151 Principles of Milling Laboratory (1) GRSC 210 CAD Flow Sheets for Grain Processes (3) GRSC 310 Materials Handling (~~3~~) GRSC 500 Milling Science I (2) GRSC 501 Milling Science I Laboratory (2) GRSC 502 Milling Science II (2) GRSC 503 Milling Science II Laboratory (2) GRSC 591 Internship in Grain Science (1) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (~~3~~) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 651 Food and Feed Product Protection (~~4~~)	**MSM Core Requirements (33 credit hours)** GRSC 100 Freshman Orientation and Intro to Grain Science (2) GRSC 150 Principles of Milling (2) GRSC 151 Principles of Milling Laboratory (1) GRSC 210 CAD Flow Sheets for Grain Processes (3) GRSC 310 Materials Handling (2) GRSC 500 Milling Science I (2) GRSC 501 Milling Science I Laboratory (2) GRSC 502 Milling Science II (2) GRSC 503 Milling Science II Laboratory (2) GRSC 530 Management Applications in the Grain Processing Ind. (3) GRSC 591 Internship in Grain Science (1) GRSC 602 Cereal Science (3) GRSC 625 Flour and Dough Testing (2) GRSC 635 Baking Science I (2) GRSC 636 Baking Science I Laboratory (2) GRSC 651 Food and Feed Product Protection (2)
Operations Option Requirements (~~25~~ credit hours) ~~AGRON 340 Grain Grading (2)~~ GRSC 405 Grain Analysis Techniques (2) GRSC 540 Process Calculations in Food Systems (3) GRSC 555 ~~Cereal Food Plant~~ Design (3) GRSC 556 Pneumatic Conveying of Dry Solids (2) GRSC 560 Electricity and Industrial Power Distribution (3) GRSC 580 ~~Advanced Flow Sheets~~ (2) ~~GRSC 584 Milling Processing Technology Management (3)~~ Specialization Electives (~~5~~ credit hours) ~~ACCTG 241 Accounting for Investing and Financing (3)~~ ~~ACCTG 331 Intermediate Accounting Processes (3)~~ ~~AGEC 318 Food and Agribusiness Management (3)~~ ~~AGEC 420 Commodity Futures (3)~~ ~~AGEC 513 Agricultural Finance (3)~~ ~~AGEC 515 Food and Agribusiness Marketing (3)~~ ~~AGEC 520 Market Fundamentals and Futures/Options Trading (3)~~ ~~AGEC 632 Agribusiness Logistics (3)~~ ~~CHM 371 Chemical Analysis (4)~~ ~~GRSC 491 Faculty-Led Study Abroad (1-3)~~ ~~GRSC 499 Undergraduate Research in Grain Science (0-3)~~	**Operations Option Requirements (21 credit hours)** GRSC 405 Grain Analysis Techniques (2) GRSC 540 Process Calculations in Food Systems (3) GRSC 555 Process Flow and Mill Design (3) GRSC 556 Pneumatic Conveying of Dry Solids (2) GRSC 560 Electricity and Industrial Power Distribution (3) GRSC 580 Milling of Specially Grains (2) Specialization Electives (6 credit hours) List of Specialization Electives: ACCTG 231 or above AGEC 115 or above AGRON 340 FDSCI 305 or above FINAN 450 or above GRSC 201 or above, courses that are not listed in core requirements LEAD 212 or above MANGT 300 or above MKTG 400 or above PHYS 114

~~GRSC 530 Management Applications in the Grain Processing Ind. (3)~~ ~~GRSC 541 Process Calculations in Food Systems Laboratory (1)~~ ~~GRSC 592 Extended Internship in Grain Science (1)~~ ~~GRSC 615 Animal Food Safety (3)~~ ~~GRSC 620 Extrusion Processing in the Food and Feed Industries (4)~~ ~~GRSC 712 Vibrational Spectroscopic Analysis and Chemometrics (1-2)~~ ~~GRSC 713 Contemporary Chromatographic Analysis of Food (1)~~ ~~GRSC 745 Fundamentals of Bioprocessing (3)~~ ~~LEAD 212 Introduction to Leadership Concepts (2-3)~~ ~~LEAD 350 Culture and Context in Leadership (3)~~ ~~MANGT 390 Business Law I (3)~~ ~~MANGT 420 Principles of Management (3)~~ ~~MANGT 530 Industrial and Labor Relations (3)~~ ~~MANGT 531 Human Resources Management (3)~~	
~~Free~~ Electives (3 credit hours)	**Unrestricted Electives (6 credit hours)**
Social Sciences and Humanities (9 credit hours) Must be taken from more than one department. AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course	**Social Sciences and Humanities (3 credit hours)** Must be taken from more than one department. AMETH 160 to 501 ANTH any course ARCH 301 ART any course COMM 320 to 535 DANCE any course DEN 325, DEN 450 ECON 120 to 799 ENGL 150, 210 to 299, 310, 320 to 399, 420 to 499, 536 to 599, 605 to 660, 670 to 695, 700 to 760, 790 to 799 ENVD 2590, 251, 655, 670, 671 FSHS any course GEOG 100, 200, 201, 300 to 799 GENAG 210 GWSS any course HIST any course Modern Language any course MUSIC any course PHILO any course POLSC any course PSYCH any course SOCIO any course SOCWK any course THTRE any course
Note - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above. - Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.	**Note** - Up to half of the credits required for a four-year degree may be completed at an accredited two-year institution. - Each student must complete at least 30 K-State resident credits to be considered for a degree from K-State. A student must complete 20 of the last 30 hours of resident credits through K-State. In other words, no more than 10 hours of transfer credit hours may be applied toward the last 30 hours you take for your degree. - A minimum of 45 hours must be taken at the course level of 300 or above. - Each student must satisfy K-State 8 general education requirements. K-State 8 can be met by both K-State and transfer courses.
Total credit hours required for graduation: ~~129~~	**Total credit hours required for graduation: 120**

Architecture, Planning and Design

Environmental Design Studies Program:
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13621&hl=%22environmental+design%22&returnto=search
Contact person: Lisa Last

Rationale: A specific course number, ENVD 204, was created and approved in 2016, and the studio seminar course has now been offered for 3 years. We have found the course to be an effective way to deliver information to all first-year students consistently and would now like to permanently add the course to the curriculum.

Impacts inside APDesign:

Undergraduate Catalog

- M. ARCH (Non-Baccalaureate Track) https://catalog.k-state.edu/preview_program.php?catoid=40&poid=12847&returnto=6985
- M. IAPD (Non-Baccalaureate Track) https://catalog.k-state.edu/preview_program.php?catoid=40&poid=12848&returnto=7027
- M. LA (Non-Baccalaureate Master's Report Track) https://catalog.k-state.edu/preview_program.php?catoid=40&poid=12850
- M. LA (Non-Baccalaureate Master's Thesis Track) https://catalog.k-state.edu/preview_program.php?catoid=40&poid=13592
- M. RCP (Non-Baccalaureate Track) https://catalog.k-state.edu/preview_program.php?catoid=40&poid=12849

Graduate Catalog

- M. ARCH (Non-Baccalaureate Track) https://catalog.k-state.edu/preview_program.php?catoid=41&poid=13542&returnto=7239
- M. IAPD (Non-Baccalaureate Track) https://catalog.k-state.edu/preview_program.php?catoid=41&poid=13382&returnto=7270
- M. LA (Non-Baccalaureate Track) https://catalog.k-state.edu/preview_program.php?catoid=41&poid=13380&returnto=7272

ENVIRONMENTAL DESIGN STUDIES		
FIRST SEMESTER		
COMM 105	Public Speaking IA	2
ENVD 201	Environmental Design Studio I	4
ENVD 203	Survey of the Design Professions	1
ENVD 250	History of the Designed Environment I	3
MATH 100	College Algebra	3
	K-State 8 General Education Elective	3
		~~16~~
SECOND SEMESTER		
ENGL 100	Expository Writing I	3
ENVD 202	Environmental Design Studio II	4
ENVD 251	History of the Designed Environment II	3
PHYS 115	Descriptive Physics	5
		15
Total Curriculum Credit Hours		~~31~~

ENVIRONMENTAL DESIGN STUDIES		
FIRST SEMESTER		
COMM 105	Public Speaking IA	2
ENVD 201	Environmental Design Studio I	4
ENVD 203	Survey of the Design Professions	1
ENVD 204	Studio Seminar	1
ENVD 250	History of the Designed Environment I	3
MATH 100	College Algebra	3
	K-State 8 General Education Elective	3
		17
SECOND SEMESTER		
ENGL 100	Expository Writing I	3
ENVD 202	Environmental Design Studio II	4
ENVD 251	History of the Designed Environment II	3
PHYS 115	Descriptive Physics	5
		15
Total Curriculum Credit Hours		32

Master of Landscape Architecture (M.L.A.) (post-baccalaureate track)

Contact person: Rachel Robillard
http://catalog.k-state.edu/preview_program.php?catoid=43&poid=14348&hl=%22master+of+landscape+architecture%22&returnto=search

Rationale: LAR 353 was left off the previous curriculum changes in error.
Impact Statement: This change does not impact any other unit.

(Master of Landscape Architecture, Post-Baccalaureate Track)
Master's Report Option

FROM: (Current list of course for the curriculum, curriculum description, and admission criteria.)			**TO:** (Proposed list of courses for the curriculum, curriculum description, and admission criteria.)		
FIRST Semester			FIRST Semester		
LAR 220	Drawing Landscapes Studio	5	LAR 220	Drawing Landscapes Studio	5
LAR 230	Modeling Landscapes Studio	5	LAR 230	Modeling Landscapes Studio	5
LAR 101	Introduction to Landscape Arch	3	LAR 101	Introduction to Landscape Arch	3
LAR 433	Introduction to Plants	1	LAR 433	Introduction to Plants	1
LAR 010	Travel: Regional 1	0	LAR 010	Travel: Regional 1	0
		14			14
SECOND Semester			SECOND Semester		
LAR 433	Landscape History & Design Studio	5	LAR 433	Landscape History & Design Studio	5
LAR 420	Socio-Ecological Systems Studio	5	LAR 420	Socio-Ecological Systems Studio	5
LAR 351	Plant Patterns and Use	1	LAR 351	Plant Patterns and Use	1
LAR 020	Travel: Regional 2	0	LAR 020	Travel: Regional 2	0
	*****Professional Elective**	**3**		*****Professional Elective**	**3**
		14			14
SUMMER Study			SUMMER Study		
LAR 430	Narratives and Placemaking Studio	4	LAR 430	Narratives and Placemaking Studio	4
LAR 425	Narratives and Placemaking Seminar	2	LAR 425	Narratives and Placemaking Seminar	2
LAR 352	Landscape Performance Lab	3	LAR 352	Landscape Performance Lab	3
LAR 030	Travel: Narratives and Placemaking	0	LAR 030	Travel: Narratives and Placemaking	0
		9			9
THIRD Semester			THIRD Semester		
LAR 442	Site Research & Design Studio	5	LAR 442	Site Research & Design Studio	5
LAR 438	Site Design Implementation	5	LAR 438	Site Design Implementation	5
			LAR 353	Plant Selection	1
LAR 040	Travel: Major City 1	0	LAR 040	Travel: Major City 1	0
	*****Professional Elective**	**3**		*****Professional Elective**	**3**
		~~13~~			14
FOURTH Semester			FOURTH Semester		
LAR 439	Master Plan Design & Implementation	5	LAR 439	Master Plan Design & Implementation	5
LAR 648	**Advanced Studio**	**5**	**LAR 648**	**Advanced Studio**	**5**
LAR 750	**Advanced Studio Seminar**	**2**	**LAR 750**	**Advanced Studio Seminar**	**2**
LAR 354	Landscape Restoration	1	LAR 354	Landscape Restoration	1
LAR 725	**Research Methods**	**3**	**LAR 725**	**Research Methods**	**3**
		16			16
FIFTH Semester			FIFTH Semester		
LAR 705	**Master's Project Studio 1**	**5**	**LAR 705**	**Master's Project Studio 1**	**5**
LAR 897	**Proposal Writing**	**2**	**LAR 897**	**Proposal Writing**	**2**
LAR 753	Professional Practices: Professional Responsibilities	1	LAR 753	Professional Practices: Professional Responsibilities	1
LAR 754	Professional Practice: Office Practices	1	LAR 754	Professional Practice: Office Practices	1
		9			9
SIXTH Semester			SIXTH Semester		
LAR 710	**Master's Project Studio 2**	**3**	**LAR 710**	**Master's Project Studio 2**	**3**
LAR 898	**Master's Report**	**2**	**LAR 898**	**Master's Report**	**2**
	*****Professional Electives**	**6**		*****Professional Electives**	**6**
		11			11

Undergraduate Hours	~~52~~	Undergraduate Hours	53
Graduate Hours	34	Graduate Hours	34
Total (MLA) Degree Requirement	~~86~~	Total (MLA) Degree Requirement	87
Total credit hours required for graduate school program of study=34. All required courses taught in the landscape architecture and regional & community planning programs that are counted toward the degree must be passed with a grade of C or better. ***Six (6) credit hours of the required graduate level professional electives must be LAR courses. Students may petition for an exception to this policy if there is a demonstrated academic benefit.		Total credit hours required for graduate school program of study=34. All required courses taught in the landscape architecture and regional & community planning programs that are counted toward the degree must be passed with a grade of C or better. ***Six (6) credit hours of the required graduate level professional electives must be LAR courses. Students may petition for an exception to this policy if there is a demonstrated academic benefit.	

(Master of Landscape Architecture, Post-Baccalaureate Track)
Master's Thesis Option

FROM: (Current list of course for the curriculum, curriculum description, and admission criteria.)			**TO:** (Proposed list of courses for the curriculum, curriculum description, and admission criteria.)		
FIRST Semester			FIRST Semester		
LAR 220	Drawing Landscapes Studio	5	LAR 220	Drawing Landscapes Studio	5
LAR 230	Modeling Landscapes Studio	5	LAR 230	Modeling Landscapes Studio	5
LAR 101	Introduction to Landscape Arch	3	LAR 101	Introduction to Landscape Arch	3
LAR 433	Introduction to Plants	1	LAR 433	Introduction to Plants	1
LAR 010	Travel: Regional 1	0	LAR 010	Travel: Regional 1	0
		14			14
SECOND Semester			SECOND Semester		
LAR 433	Landscape History & Design Studio	5	LAR 433	Landscape History & Design Studio	5
LAR 420	Socio-Ecological Systems Studio	5	LAR 420	Socio-Ecological Systems Studio	5
LAR 351	Plant Patterns and Use	1	LAR 351	Plant Patterns and Use	1
LAR 020	Travel: Regional 2	0	LAR 020	Travel: Regional 2	0
	*****Professional Elective**	**3**		*****Professional Elective**	**3**
		14			14
SUMMER Study			SUMMER Study		
LAR 430	Narratives and Placemaking Studio	4	LAR 430	Narratives and Placemaking Studio	4
LAR 425	Narratives and Placemaking Seminar	2	LAR 425	Narratives and Placemaking Seminar	2
LAR 352	Landscape Performance Lab	3	LAR 352	Landscape Performance Lab	3
LAR 030	Travel: Narratives and Placemaking	0	LAR 030	Travel: Narratives and Placemaking	0
		9			9
THIRD Semester			THIRD Semester		
LAR 442	Site Research & Design Studio	5	LAR 442	Site Research & Design Studio	5
LAR 438	Site Design Implementation	5	LAR 438	Site Design Implementation	5
			LAR 353	Plant Selection	1
LAR 040	Travel: Major City 1	0	LAR 040	Travel: Major City 1	0
LAR 725	**Research Methods**	**3**	**LAR 725**	**Research Methods**	**3**
		13			13
FOURTH Semester			FOURTH Semester		
LAR 439	Master Plan Design & Implementation	5	LAR 439	Master Plan Design & Implementation	5
LAR 648	**Advanced Studio**	**5**	**LAR 648**	**Advanced Studio**	**5**
LAR 750	**Advanced Studio Seminar**	**2**	**LAR 750**	**Advanced Studio Seminar**	**2**
LAR 354	Landscape Restoration	1	LAR 354	Landscape Restoration	1
LAR 897	**Proposal Writing**	**2**	**LAR 897**	**Proposal Writing**	**2**
		15			15
FIFTH Semester			FIFTH Semester		
LAR 899	**Research in Landscape Arch**	**3**	**LAR 899**	**Research in Landscape Arch**	**3**
LAR 753	Professional Practices: Professional Responsibilities	1	LAR 753	Professional Practices: Professional Responsibilities	1
LAR 754	Professional Practice: Office Practices	1	LAR 754	Professional Practice: Office Practices	1
	*****Professional Electives**	**6**		*****Professional Electives**	**6**
		11			11
SIXTH Semester			SIXTH Semester		
LAR 899	**Research in Landscape Arch**	**4**	**LAR 899**	**Research in Landscape Arch**	**4**
	*****Professional Electives**	**6**		*****Professional Electives**	**6**
		10			10
Undergraduate Hours		~~52~~	Undergraduate Hours		53

Graduate Hours	34	Graduate Hours	34
Total (MLA) Degree Requirement	~~86~~	Total (MLA) Degree Requirement	87
Total credit hours required for graduate school program of study=34. All required courses taught in the landscape architecture and regional & community planning programs that are counted toward the degree must be passed with a grade of C or better. ***Six (6) credit hours of the required graduate level professional electives must be LAR courses. Students may petition for an exception to this policy if there is a demonstrated academic benefit.		Total credit hours required for graduate school program of study=34. All required courses taught in the landscape architecture and regional & community planning programs that are counted toward the degree must be passed with a grade of C or better. ***Six (6) credit hours of the required graduate level professional electives must be LAR courses. Students may petition for an exception to this policy if there is a demonstrated academic benefit.	

Arts and Sciences/Business Administration

New - Concurrent B.S Economics./ M.B.A. (https://kstate.curriculog.com/proposal:2547/form)

Contact person: Daniel Kuester, dkuester@ksu.edu; 532-6341

A student that successfully completes this program will receive both a B.S. in Economics and an M.B.A. in the same semester.

Admission Requirements: A student must petition Kansas State University's Graduate School to be admitted into this program. The following requirements must be met before an individual can be admitted into this program.

- The student must be seeking a B.S. in Economics from K-State.
- The student must have completed at least 80 credit hours of his/her undergraduate degree.
- The student's cumulative undergraduate GPA must be at least 3.0.
- The student must have a member of KSU's Graduate Faculty in the Business School agree to be his/her major professor (this professor can be changed in accordance to K-State's policies.)
- The student must apply for this program before receiving his/her B.S. in Economics.

Program Formats and Guidelines:

The student must complete all B.S. in economics undergraduate requirements with the exception that up to 9 credit hours of 600 or 700 level professional electives taken for graduate credit can also count toward his/her undergraduate degree requirements.

The student must complete all the requirements of the M.B.A. program.

Once an individual is admitted to the concurrent B.S. Economics/M.B.A. degree program, the student should consult the graduate handbook for policies and procedures for graduate degrees, which include: supervisory committee, final examination, thesis defense, etc. The student's

supervisory committee must approve the program of study, which is that student's graduation requirements for the M.B.A.

Once a student has completed all of the graduation requirements, he/she will graduate with both a B.S. in Economics and an M.B.A. degree in the same semester. Note: These are two separate degrees and it is not one degree.

In the event that a student begins this program, but does not wish to finish it, he/she must change the nine credit hours of his/her graduate classes to undergraduate credit and then he/she will receive a B.S. in economics degree.

The degree requires continuous enrollment. If a student fails to enroll in classes for over a year, then student has lost the ability to count courses toward both his/her undergraduate and graduate degree requirements unless granted permission by the respective departments.

New: Intercultural Competence Certificate (Undergraduate)

https://kstate.curriculog.com/proposal:2540/form

Contact Person: Yolanda Broyles-Gonzalez

Rationale: The Cultural Competence Certificate for undergraduates will provide participants with multicultural competencies: strong multicultural socio-historical knowledge and behavioral foundations enabling them to effectively connect with, and interact productively with multiple sectors of *difference* in the workforce. The certificate will not only expand individuals' understandings about difference (racial/ethnic, economic class, gender, ability, sexuality) but also enable participants to design and implement cultural competence training for varied social institutions.

Intercultural Competence Certificate

The Intercultural Competence Certificate for undergraduates will provide participants with multicultural competencies such as strong multicultural socio-historical knowledge and behavioral foundations enabling them to effectively connect with, and interact productively with multiple sectors of *difference* in the workforce. The certificate will not only expand individuals' understandings about difference (racial/ethnic, economic class, gender, ability, sexuality) but also enable participants to design and implement cultural competence training within varied social institutions.

Upon completion of a certificate in Intercultural Competence participants will have acquired:
a. an increased sensitivity to diverse multicultural U.S. histories
b. an ability to interact respectfully and productively with diverse populations
c. a self-understanding through transformative self-reflection
d. the skills necessary to design and institutionalize cultural competent policies and practices within organizations such as businesses, schools, health services, social services, and more

The Intercultural Competence Certificate requires the completion of four courses (12 units) in American Ethnic Studies: AMETH 300; one AMETH course selected from this list, AMETH 351, AMETH 352, AMETH 353, or AMETH 354; and two other AMETH courses at any level. Certificate participants must take AMETH 300 but may substitute one of the following courses for one of the three other AMETH courses. Certificate courses can count

towards the fulfillment of other College or University general education requirements, and can also count toward the major or minor in a variety of departments.

ANTH 513: Immigrant America
EDEL: Teaching Linguistically and Culturally Diverse Learners
DAS 475: Nonviolence Studies: Women and Peace Movements
ENGL 384: Multicultural Children's Literature
GENAG 210: Human and Cultural Diversity in the Food and Agricultural Sciences
HIST 311: Race & US Foreign Relations
HIST 537: History of the Indians of North America
LEAD 350: Culture and Context in Leadership
MUSIC 424: Jazz in Kansas City and the Southwest
PHILO 380: Philosophy and Race
PSYCH 556: Multicultural Psychology
SOCIO 570: Race and Ethnic Relations in the USA

Students who wish to enroll in the Intercultural Competence Certificate should consult with the Head of the American Ethnic Studies Department. The Head will assist with enrollment in the certificate.

Appendix M: Cultural Competence Certificate Proposal
American Ethnic Studies Department
Kansas State University
Undergraduate Credit Certificate

"Developing intercultural competence is a core capability in the 21st century and involves cultural self-awareness, understanding the experiences of people from diverse communities, and the capability to adapt one's mindset and behavior to bridge across differences." Mitchell R. Hammer, 2011

1) Purpose

The Cultural Competence Certificate will provide participants with multicultural competencies: strong multicultural socio-historical knowledge and behavioral foundations enabling them to effectively connect with, and interact productively with multiple sectors of *difference* in the workforce. Multicultural competence means productive human connection across differences: racial/ethnic, gender, ability, sexualities, economic class, etc. The certificate will not only expand individuals' cultural understandings about difference and multiple heritages; it will also enable participants to implement cultural competence training within varied institutions.

The ethnic studies discipline has long been on the forefront of cultural competency education and research. At K-State, the American Ethnic Studies Department expands students' understanding about five major ethnic groups: African American, Mexican American/Latin@, Native American, Asian American, and Euro-American. The Cultural Competence Certificate is indispensible to fostering an inclusive and productive multicultural vision *and* institutional praxis urgently needed by students, education workers, business people, health workers, social workers, legal workers, government workers, service workers, and within international affairs in an ever more globalizing society.

2) Evidence of demonstrated need or demand for proposed certificate

The need and/or demand for this proposed certificate manifests in various ways:

a) BUILDING BRIDGES ACROSS DIFFERENCE TO COMBAT RACISM. The world in general and our campus climate specifically will very directly benefit from the Cultural Competence Certificate. Students from this campus come from a variety of histories and life experiences. Educated students, regardless of major, need to expand their socio-cultural horizons in order to understand the experiences of people from diverse communities. The steep national rise in racism and overt racist incidents make it incumbent upon us to offer the Cultural Competence Certificate in order to help create a more harmonious and just society.

b) BOOST EMPLOYMENT OPPORTUNITY. Students from across campus who take one of our American ethnic studies courses typically express a need and desire to build upon the one course they usually take. This certificate will incentivize our students to expand their multicultural competencies, not only because of their inherent value, but also because it will boost employment opportunity for our graduates from all fields.

c) RESPOND TO U.S. MULTICULTURAL DEMOGRAPHICS. The United States' multicultural demographics—such as the fact that the k-12 student population is majority people of color—makes it increasingly imperative that everyone develop multicultural competence in order to function in all fields of employment.

d) EXPAND ORGANIZATIONAL CULTURAL COMPETENCE. On an almost daily basis our American Ethnic Studies Department receives inquiries concerning Cultural Competence training and courses. There is a high demand for courses which boost cultural competence within varied types of organizations. Although all our American Ethnic Studies courses address that need in indirect ways, the Cultural Competence Certificate offers direct practical training in developing cultural competency within institutional decision-making and in varied other practical applications of cultural competency.

3) Requirements:

Four courses are required (12 units): AMETH 300 (a new course) and three other AMETH courses at any level.

4) Desired outcomes

The desired overarching outcome is the creation a more multiculturally competent populace that will impact *institutions*, and thus create a more harmonious and productive society. A multiculturally competent citizenry has positive and productive interactions free from systemic cultural misunderstandings, prejudice, false

assumptions, and/or cultural/racial conflict. The chief outcomes for participants who complete the Cultural Competence Certificate are:

a. INCREASED SENSITIVITY TO DIVERSE MULTICULTURAL U.S. HISTORIES: Participants will learn the histories and varied worldviews of America's major cultural groups—Native American, Mexican American/Latin@/x, African-American, Asian American, Euro-American-and the implications of those histories for contemporary social institutions. In addition, participants will study the intersectional aspects of "culture" and identity such as gender, age, ability, sexuality, economic class, and bio-region. (cognitive: knowledge)

b. RESPECTFUL MULTICULTURAL INTERACTION: Participants will demonstrate an ability to interact respectfully and productively with diverse populations. The multicultural competence certificate holder will demonstrate competent communication in varied domains and of cultural interaction: material, verbal, and non-verbal cultural expression. (behavioral: skills & personal attributes)

c. TRANSFORMATIVE SELF-REFLECTION: The certificate holders will explore their own values, beliefs, cultures, assumptions, and behaviors, making them aware of their own conscious and unconscious biases and preparing them for productive communication in today's multicultural social environments. (affective: personal attributes)

d. DESIGN INCLUSIVE SYSTEMS OF POWER: The certificate holders will be trained to examine existing social institutions, to understand the documented need for policies and practices that affect institutional cultural competence, and they will be able to institutionalize practical applications of cultural competence within organizations such as businesses, health services, educational institutions, and social services. Each participant will produce a cultural competency training presentation tailored to a specific type of institutional context.

5) Assessment procedures

The four desired outcomes will be discussed and assessed in AMETH 300 and within the three other required courses. As with courses required for the AMETH major, the cumulative effect and not the sequence of those courses is significant. The four desired outcomes will develop and deepen in varied ways as students take each American Ethnic Studies course.

We will assess the four desired outcomes in a variety of ways including **behavioral, cognitive, and affective**.

a. SLO 1: COGNITIVE SKILLS: *Identify and critically analyze cultural relations of race and ethnicity.* Participants will demonstrate their understandings of race and ethnic relations, as well as other intersectional aspects of culture, through the mid-term and final exams of our courses.

b. SLO 2: BEHAVIORAL SKILLS AND PERSONAL ATTRIBUTES: *Demonstrate your ability to interact respectfully with diverse populations.*
Participants will demonstrate their interactive cultural abilities through role-playing, real world participant observation, analysis of situational interactions; communication exercises, and diary-keeping in order to measure changes in behavior and attitudes. These assessment procedures are applied in different degrees in all our courses.

c. SLO 3: TRANSFORMATIVE SELF-REFLECTION. *Demonstrate your ability to apply diverse cultural knowledge in interpersonal communication and within institutional delivery of services*
Each student will undergo a personal participant assessment at the beginning of AMETH 300, and another assessment at the end. Participants will keep a diary of personal multicultural behavioral reflection, along with setting personal diversity behavior goals.

d. SLO 4: DESIGN INCLUSIVE SYSTEMS OF POWER: *Create a cultural competency training presentation tailored to a specific type of institutional context*. Term project in AMETH 300. The certificate holders will be trained to examine existing social institutions, to understand the documented need for policies and practices that affect institutional cultural competence, and they will demonstrate an ability to institutionalize practical applications of cultural competence policies within organizations such as businesses, health services, educational institutions, and social services.

6) Estimated budget and staff required:

The Cultural Competence Certificate requires no additional staff or budget. The American Ethnic Studies Department currently teaches the necessary courses, both face-to-face and online. If we advertise the certificate through Global Campus and it finds an online audience, it might create a new revenue stream. Also, if successful, it will bring increased positive national visibility for K-State. Our Cultural Competence Certificate is more inclusive and encompassing than programs for specific workers. We have examined cultural competence training for medical workers, the field where the vast need for multicultural training was first developed because of the dire need for medical workers and communities to communicate or face devastating health consequences. We feel that our certificate is more encompassing. We can offer it to businesses, law offices, clinics, schools, university students, office workers.

7) Evidence of approval of their certificate program through internal academic channels.

The Cultural Competence Certificate has been discussed at length in our American Ethnic Studies Curriculum Committee. After that, it was brought to the Department faculty as a whole, and was approved on February 7, 2018

New: Travel and Tourism Promotion Certificate (Undergraduate)

Contact person: J Steven Smethers

https://kstate.curriculog.com/proposal:2761/form

Rationale: As covered in the enclosed document, a need exists in the Kansas Travel and Tourism industry for hospitality management professionals who have also been trained in strategic communications in order to make them better at written and mediated communications. This certificate proposal unites the two units on campus that can best provide that grounding, Hospitality Management in the College of Human Ecology, and Strategic Communications in the A.Q. Miller School of Journalism and Mass Communications.

Impact (i.e. if this impacts another unit) – Statement should include the date when the head of a unit was contacted, and the response or lack of: This action is the result of a collaborative process between Hospitality Management and Strategic Communications faculty members, which began last year. The endorsement of the Hospitality Management faculty is contained in this document.

The certificate in Travel and Tourism Promotion combines specialized skills from the hospitality management and strategic communications curricula that directly relate to providing media and communications skills for travel and tourism professionals. The certificate will be awarded to students who achieve a superior level of expertise in the communication relationship-building and management aspects of travel and tourism.

Promotion Certificate Structure and Requirements:
This certificate totals 18 hours, with 12 required credit hours (6 in Journalism and Mass Communications and 6 in Hospitality Management) and 6 elective hours (2 classes from either program's elective hours as suggested below).

Required Classes:
Journalism and Mass Communications

MC 180 Principles of Public Relations	Credits: 3
MC 577 Travel and Tourism Strategic Communications	Credits: 3

Hospitality Management

MC 120 Intro to the Hospitality Industry	Credits: 3

MC 230 Issues in Tourism	Credits: 3

Suggested Electives:

Journalism and Mass Communications

MC 280 Public Relations Writing	Credits: 3
MC 370 Social Media Strategy	Credits: 3
MC 380 Public Relations Strategy and Planning	Credits: 3
MC 456 Media Relations	Credits: 3
MC 491 Mass Communications Internship	Credits: 1-3
MC 683 Reputation Management	Credits: 3

Hospitality Management

HM 361 Intro to Hotel Operations	Credits: 3
MC 363 Intro to Business Events	Credits: 3
MC 426 Fundraising and Nonprofit Events	Credits: 3
MC 475 Internship	Credits: 3
MC 621 Hospitality Law	Credits: 3

TRAVEL & TOURISM PROMOTION CERTIFICATE PROPOSAL

Partnership between
College of Human Ecology's Hospitality Management Program &
College of Arts & Sciences Journalism & Mass Communication Program
August 27, 2018

Certificate Purpose

The certificate in Travel & Tourism combines specialized skills from the hospitality management and public relations curricula that directly relate to careers and study in travel and tourism, one of the leading global industries. The certificate will be awarded to students who achieve a superior level of expertise in the communication relationship-building and management aspects of travel and tourism.

Benefits to the state of Kansas include:

(1) Providing educated tourism practitioners to lead Kansas in developing its potential as a tourism destination, including promoting a strong brand for the state and engaging its tourism partners in developing their unique types of tourism through storytelling and public relations promotions.
(2) Encouraging tourists to spend their travel dollars in Kansas, which adds to economic growth without major infrastructure investments.
(3) Creating jobs and careers for Kansas urban and rural residents through the growth of the tourism industry.

Demonstrated Need & Demand for the Travel & Tourism Certificate

Industry Need:
The World Travel & Tourism Council's latest annual research, in conjunction with Oxford Economics, shows Travel & Tourism's contribution to world GDP outpaced the global economy for the sixth consecutive year in 2016, rising to a total of 10.2% of world GDP (US$7.6 trillion). The sector now supports 292 million people in employment – that's 1 in 10 jobs on the planet. The outlook for the Travel & Tourism sector in 2017 remains robust and will continue to be at the forefront of wealth and employment creation in the global economy, despite the emergence of a number of challenging headwinds. Travel & Tourism forecasts over the next ten years also look extremely favorable with predicted growth rates of 3.9% annually.
https://www.wttc.org/research/economic-research/economic-impact-analysis (Retrieved 6.28.17).
The largest professional association of public relations practitioners in the world, he Public Relations Society of America's (PRSA) Travel & Tourism Section more than 500 members includes practitioners from the wide variety of tourism entities from state and national tourism offices, convention and visitors bureaus, resorts, airlines, to public relations agencies.
Student Demand:
MC 577 Travel & Tourism Public Relations was introduced in the Journalism & Mass Communications public relations sequence as an elective course five years ago and enrollment has grown from 24 students in the first course to more than 40 students in the past two years.

Promotion Certificate Structure and Requirements:
This certificate totals 18 hours, with 12 required credit hours (6 in Journalism & Mass Communications and 6 in Hospitality Management) and 6 elective hours (2 classes from either program's elective hours).

Certificate Required Courses (12 Hours):

JMC-Strategic Communication	Credits	Hospitality Management	Credits
MC 180 Principles of Public Relations	3	HM 120 Intro to the Hospitality Industry	3
MC 577 Travel & Tourism Public Relations	3	HM 230 Issues in Tourism	3
TOTAL	**06**	**TOTAL**	**06**

Certificate Elective Courses (6 Hours):

JMC-Strategic Communication	Credits	Hospitality Management	Credits
MC 280 Public Relations Writing	3		
MC 370 Social Media Strategy	3	HM 361 Intro to Hotel Operations	3
MC 380 Public Relations Strategy & Planning	3	HM 363 Intro to Business Events	3
MC 456 Media Relations	3	HM 426 Fundraising & Nonprofit Events	3
MC 491 Internship	3	HM 475 Internship	3
MC 683 Reputation Management	3	HM 621 Hospitality Law	3

Desired Outcomes:
(1) Students will demonstrate proficiency in understanding and applying the combined hospitality management and public relations knowledge and skills through the capstone MC 577 Travel & Tourism Public Relations course as well as knowledge, skills, and experience acquired through an internship.
(2) Students will find employment in tourism-related jobs & careers.

Certificate Assessment Document:

The final examination in MC 577 provides a comprehensive assessment of each student's ability to display the elements of the Kansas State University's Creative Thinking Value Rubric that encompasses all of the student learning objectives in each of the four required courses. The examination consists of a case study scenario written from a current real-world situation; students are required to devise a strategic tourism plan to address the situation, including researching the current situation, developing plan goals and objectives, devising a timeline for implementation of the plan, and developing a realistic plan evaluation document. Students also include logistical elements, including an estimated budget and required personnel to carry out the plan.
The most recent 2018 MC 577 Travel & Tourism Public Relations comprehensive course examination is included at the end of this proposal.

Budget & Staff

All of the required and elective courses listed above are currently offered in each department on a regular basis. This proposal does not require any additional staff or budget.

Course	Offered	JMC Staff	Course	Offered	HM Staff
MC 180	F, Sp, Su	Zhang & Myers	HM 120	F	King
MC 280	F, Sp	Skidmore, Borden, DeSanto	HM 230	Sp	King
MC 370	Sp	Borden & Tefertiller	GEOG 300	Sp	TBA
MC 380	F, Sp	Skidmore & DeSanto	HM 361	F	King
MC 456	F	Skidmore	HM 363	F	King
MC 491	F, Sp, Su	Freeland	HM 426	F	Horton
MC 577	Sp	DeSanto	HM 475		
MC 683	F	Zhang	HM 621		

Faculty Load & Compensation

Because all classes are currently offered on a regular basis in both programs, no additional faculty load considerations nor compensation is required.

Tuition & Fees

Because all classes are currently offered on a regular basis in both programs, no additional tuition or fees is required.

Support Services Provided by Each Partner

(1) Academic Advising

Each program will maintain its own advising for its majors, as this certificate will be available to both programs as a minor and/or concentration. Dr. Barbara DeSanto, JMC, visiting professor, will provide career advising for students in both programs.

(2) Financial Aid

Because all classes are currently offered on a regular basis in both programs, no additional financial aid requirements are necessary.

(3) Access to Facilities

Because all classes are currently offered on a regular basis in both programs, no additional facilities are needed.

(4) Transcript Procedures

With the formal establishment of this certificate, it will be necessary to add the certification to the student transcripts of all participants who successfully completed the certificate requirements.

Plans for Joint Use and/or Maintenance of Facilities

Because all classes are currently offered on a regular basis in both programs, no additional facilities are required nor is any joint use or maintenance required. In addition, the JMC Strategic Communication sequence will have a designated student production lab available for students enrolled in the certificate program.

ADDENDUM
2018 MC 589 TRAVEL & TOURISM PUBLIC RELATIONS FINAL EXAMINATION ESSAY

DUE: Monday, May 7, 2018 @ 10 P.M.

SUBMIT TO: Assignment Drop Box titled "Final Essay Examination"

POINTS: 90

E-MAIL LETTER/ESSAY OVERVIEW:

In 2011, Governor Sam Brownback moved the Kansas Department of Tourism from its position under the Department of Commerce to a combined department of Wildlife, Parks, and Tourism. The rationale was that hunting, fishing and other outdoor activities would increase the number of tourists visiting Kansas; particularly in the rural areas of the state. Here are some highlights from the 2015 Kansas Tourism Economic Impact Report (a copy of the complete report is included in the Canvas module titled "2017 MC 589 ZA Travel & Tourism Resources").

Some of the interesting points about Kansas tourism in general:

- Only 1% of travelers to Kansas were international visitors, while the U.S. overall attracts 7% of its visitors from international locations.
- The majority of tourists in Kansas are Kansans who spend one or two nights in lodging outside of their homes, while many of the tourists are day-trippers who return to their own homes at night. One survey showed that Kansas is regarded as a "pass-through state" with 56% of the state's visitors overnight guests on their way to other destinations.
- About 38% of Kansas overnight trips measured by number of hotel rooms occupied each night are business travelers, leaving 62% described as other types of visitors.
- Kansas spends about 50% less on tourism than the average of all U.S. states & the budget funding has been flat for the past five years, with the majority of the tourism dollars are spent on salaries of state tourism employees.

STOP HERE and review the Kansas Tourism Website: https://www.travelks.com/ (Links to an external site.)

Here's my professional "bottom line summary" of the state's strategic tourism efforts:

Kansas has chosen to emphasize its wildlife and nature resources as its main tourism focus. It has not expanded its efforts to target and/or develop additional types of tourists from locations outside the state of Kansas. As of right now, there appears to be NO legislation in the Kansas House or Senate addressing tourism. Your aim is to make your selected legislator aware of the opportunities that Kansas is missing by not taking an expanded view of tourism by planning and supporting new efforts to develop tourism in the state.

One of the key characteristics of a public relations/strategic communicator is to be able to think creatively yet realistically, and then to share those insights with others. This

assignment is designed to have you express how some of things you learned about travel and tourism in this course could benefit Kansas.

E-MAIL LETTER/ESSAY CONTENT:

Using all of the things you have learned about tourism strategic communication in this course, write a 750- to 1000-word essay to your SELECTED local legislator with your suggestions on increasing visitors to the State of Kansas. Your essay must contain the following elements:

- Your original suggestions with reasons why each suggestion could work.
- References supporting each of your suggestions. These references may come from readings in this course, from tourism sources you have found on your own, or a combination of the two. I do not care what type of reference format you use for citing your sources, just back up when you use them. For example, if you quote some statistic off the Kansas tourism website, say "The current Kansas tourism website says…" or if you quote something from a national tourism source, write "The American Hotel Motel Association points out…" It's important that your legislator knows where you got the specific information you include, because he/she may just go check it out.

LEGISLATOR LETTER/ESSAY FORMAT:

The League of Women Voters of Kansas has the recommended format for this e-mail correspondence on its website: http://lwvk.org/issues-and-advocacy/communication-tips (Links to an external site.)Links to an external site.

Title your e-mail letter/essay this way: YOURLASTNAMEYOURFIRSTNAMEFINALESSAY, save it, and submit to the Assignment Dropbox titled "Final Essay Examination".

E-mail Letter/Essay Examination Grading Rubric:

Assessment Criteria	Points	Earned
Your letter is addressed to a real-world Kansas legislator	10	
Your tourism suggestions are creative (Creative Thinking Value Rubric Taking Risks, Solving Problems, Innovative Thinking, Connecting, Synthesizing, Transforming)	15	
Your tourism suggestions are realistic (Creative Thinking Value Rubric Acquiring Competencies; Taking Risks; Solving Problems; Embracing Contradictions; Connecting, Synthesizing, Transforming)	15	

Your suggestions contain enough detail to help your legislator understand why you are proposing these suggestions (Creative Thinking Value Rubric Acquiring Competencies; Innovative Thinking)	15
Your tourism suggestions are supported with credible, relevant sources	10
Your tourism e-mail letter/essay is follows the League of Women Voters' format (Creative Thinking Value Rubric Acquiring Competencies)	10
Your tourism e-mail letter/essay is between 750 & 1500 words (Creative Thinking Value Rubric Acquiring Competencies)	05
Your tourism suggestions reflect the concepts of tourism that you learned in this class (e.g. tourism as a business; tourism issues that involve government entities) (Creative Thinking Value Rubric Taking Risks; Solving Problems; Embracing Contradictions; Innovative Thinking; Connecting, Synthesizing, Transforming)	10
Your tourism essay is free of writing errors, including grammar, spelling, and punctuation errors; one point deducted for each error, including repeated errors (Creative Thinking VALUE rubric Acquiring Competencies)	
Total Final Examination Points	**90**

Impact:
Kevin Roberts

Reply all|
Today, 9:03 AM
Steven Smethers;
Michael Ottenbacher
Inbox
Dr. Smethers,

On behalf of our department head, Dr. Michael Ottenbacher, we wanted to let you know that the faculty in the department of hospitality management have reviewed your proposal for the Travel and Tourism Promotion Certificate at our faculty meeting on August 31, 2018. After careful discussion and consideration, the faculty voted unanimously to support the certificate.

If you have any questions or need any additional information, please don't hesitate to contact me or Dr. Ottenbacher, who is copied on my email.

Cordially,

Kevin

****
KEVIN R. ROBERTS, PHD
ASSOCIATE PROFESSOR
DIRECTOR, UNDERGRADUATE PROGRAM IN HOSPITALITY MANAGEMENT
CO-DIRECTOR, THE CENTER FOR FOOD SAFETY IN CHILD NUTRITION PROGRAMS
DEPT. OF HOSPITALITY MANAGEMENT | KANSAS STATE UNIVERSITY
104 JUSTIN HALL | 1324 LOVERS LANE | MANHATTAN, KS 66506
OFFICE: (785) 532-2399 | FAX: (785) 532-5522
****
JOIN US FEBRUARY 29, 2019 FOR THE HOSPITALITY CAREER MEET-UP!

Geology BA/BS – New tracks: Petroleum Geosciences and Environmental Geosciences

Contact person(s) for this proposal: Pamela Kempton
https://kstate.curriculog.com/proposal:2482/form

Rationale: Recent research suggests that few students are offered the opportunity to study geology at the high school level. As a result, they have limited knowledge of the geosciences as a discipline and career, and are less likely to consider it for their major at college. Some subdisciplines of geology, however, such as environmental and petroleum geosciences, have greater "name recognition". They are also areas of anticipated job growth over the next decade. The curriculum change we are proposing here is to introduce three tracks within the geology program that provide the opportunity for great concentration of study in priority subdisciplines. We will retain the current general Geology program as one track, while introducing new tracks for Petroleum Geosciences and Environmental Geosciences. Our purpose in affecting this curriculum change is to (a) provide a more attractive program for prospective students to aid in recruitment and (b) better prepare our graduates for potential careers in these vital sectors of today's economy.

Impact (i.e. if this impacts another unit) – Statement should include the date when the head of a unit was contacted, and the response or lack of: The proposed changes should have limited, if any, impact on other departments. The repackaging of courses for the curriculum is at a higher level with the Geology program, so should only affect geology majors. Justifications for changes to existing courses or addition of new courses are provided in the course add / course change forms submitted for those courses.

Geology majors should consult their advisors about elective courses to meet their career and educational needs. ~~Computer literacy is essential for all geologists. Departmental advisors can recommend electives for students desiring concentrations in energy and minerals resources, engineering geology, exploration seismic and near-surface geophysics, environmental geology and geochemistry, hydrogeology, igneous petrology, geochronology, sedimentary geology, biomineralization and biogeochemistry. Students intending to earn advanced degrees should visit with the departmental graduate advisor concerning entrance requirements of graduate programs.~~	Geology majors should consult their advisors about elective courses to meet their career and educational needs. A wide range of geoscience subdisciplines exist that provide exciting and viable career options, e.g. hydrology, energy and minerals resources, engineering geology, exploration seismic and near-surface geophysics, environmental geology and geochemistry, igneous and metamorphic petrology, structural geology, geochronology, sedimentary geology, biomineralization and biogeochemistry – just to name a few. Geology majors should consult their advisors about elective courses to meet their career and educational needs. Quantitative skills and computer literacy are essential for all geologists and are strongly encouraged. Students intending to earn advanced degrees should visit with the departmental graduate advisor concerning entrance requirements of graduate programs.
Bachelor's degree requirements ~~Geology option~~	Bachelor's degree requirements The department offers three tracks within the geology degree: Geology, Petroleum Geosciences, and Environmental Geosciences.
In addition to the general requirements for the BA or BS degree, the following must be completed: CHM 210 - Chemistry I Credits: 4 CHM 230 - Chemistry II Credits: 4 GEOL 100 - Earth in Action Credits: 3 GEOL 102 - Earth Through Time Credits: 3 GEOL 103 - Geology Laboratory Credits: 1 GEOL 502 - Mineralogy Credits: 3 GEOL 503 - Petrology Credits: 3 GEOL 530 - Structural Geology Credits: 3 GEOL 560 - Field Methods Credits: 3 GEOL 630 - Sedimentology and Stratigraphy Credits: 3 GEOL 680 - Field Geology Credits: 3 MATH 220 - Analytic Geometry and Calculus I Credits: 4 MATH 221 - Analytic Geometry and Calculus II Credits: 4 PHYS 113 - General Physics I Credits: 4 or PHYS 213 - Engineering Physics I Credits: 5 PHYS 114 - General Physics II Credits: 4 or PHYS 214 - Engineering Physics II Credits: 5	In addition to the general requirements for the BA or BS degree, the following must be completed: CHM 210 - Chemistry I Credits: 4 CHM 230 - Chemistry II Credits: 4 GEOL 100 - Earth in Action Credits: 3 GEOL 102 - Earth Through Time Credits: 3 GEOL 103 - Geology Laboratory Credits: 1 GEOL 502 - Mineralogy Credits: 3 GEOL 503 - Petrology Credits: 3 GEOL 530 - Structural Geology Credits: 3 GEOL 560 - Field Methods Credits: 3 GEOL 630 - Sedimentology and Stratigraphy Credits: 3 GEOL 680 - Field Geology Credits: 3 MATH 220 - Analytic Geometry and Calculus I Credits: 4 MATH 221 - Analytic Geometry and Calculus II Credits: 4 Or GEOL 360 – Quantitative Methods in Geoscience Credits: 3 PHYS 113 - General Physics I Credits: 4 or PHYS 213 - Engineering Physics I Credits: 5 PHYS 114 - General Physics II Credits: 4 or PHYS 214 - Engineering Physics II Credits: 5 Electives- Geology track

Electives ~~Plus at least one each from Groups I, II and III below and one additional elective from Groups I, II, III, or IV.~~ Group I GEOL 605 - Introduction to Geochemistry Credits: 3 GEOL 640 - Introduction to Geophysics Credits: 3 Group II (Energy and Natural Resources) GEOL 702 - Economic Geology Credits: 3 GEOL 730 - Petroleum Geology Credits: 3 GEOL 742 - Seismic Data Interpretation Credits: 3 Group III (Surficial Processes and the Environment) GEOL 520 - Geomorphology Credits: 3 GEOL 611 - Hydrogeology Credits: 3 GEOL 650 - Geomicrobiology Credits: 3 Group IV (Other Electives) ~~GEOL 540 - Geologic Record of Climate Change Credits: 3~~ ~~* GEOL 581 - Principles of Paleontology Credits: 3~~ ~~GEOL 599 - Senior Thesis Credits: 1-3~~ ~~GEOL 642 - Field Geophysics Credits: 3~~ ~~* GEOL 650 - Geomicrobiology Credits: 3~~ ~~GEOL 704 - Carbonate Paleoenvironments Credits: 3~~ ~~GEOL 708 - Sedimentary Geochemistry Credits: 3~~ ~~GEOL 711 - Water Resources Geochemistry Credits: 3~~ ~~GEOL 735 - Fossil Fuel Sedimentology Credits: 3~~ ~~GEOL 738 - Formation Evaluation Credits: 3~~ ~~GEOL 740 - Regional Geology Credits: 3~~ ~~GEOL 741 - Seismic Data Processing Credits: 3~~ ~~GEOL 760 - Geochemical and Biogeochemical Modeling Credits: 3~~ ~~GEOL 770 - Subsurface Methods Credits: 3~~ ~~GEOL 806 - Sedimentary Petrology Credits: 4~~ ~~GEOL 810 - Isotope Geology Credits: 3~~ ~~GEOL 830 - Geotectonics Credits: 3~~ ~~GEOL 880 - Clay Mineralogy Credits: 3~~ *NOTE: GEOL 581 and GEOL 650 simultaneously satisfy CAS Life Sciences requirement Total Geology Credit Hours: 37	Plus at least four electives described below: Choose one from Group I Group I GEOL 605 - Introduction to Geochemistry Credits: 3 GEOL 640 - Introduction to Geophysics Credits: 3 Choose one from Group II Group II (Energy and Natural Resources) GEOL 702 - Economic Geology Credits: 3 GEOL 730 - Petroleum Geology Credits: 3 GEOL 742 - Seismic Data Interpretation Credits: 3 Choose one from Group III Group III (Surficial Processes and the Environment) GEOL 520 - Geomorphology Credits: 3 GEOL 611 - Hydrogeology Credits: 3 GEOL 650 - Geomicrobiology Credits: 3 Choose one additional elective from any of Groups I, II, II (above or IV (below) Group IV (Other Electives) Any remaining Geology course 500-level or above. *NOTE: GEOL 581 and GEOL 650 simultaneously satisfy CAS Life Sciences requirement Total Geology Credit Hours: 37 Electives – Petroleum Geosciences Track Plus at least four electives as described below.

	Choose one from Group I Group I GEOL 605 – Introduction to Geochemistry Credits: 3 GEOL 640 – Introduction to Geophysics Credits: 3 Choose two from Group II Group II (Energy and Natural Resources) GEOL 702 – Economic Geology Credits: 3 GEOL 730 – Petroleum Geology Credits: 3 GEOL 742 – Seismic Data Interpretation Credits: 3 Choose two additional electives from any of Groups I, II, III, or IV Group III (Surficial Processes and the Environment) GEOL 520 - Geomorphology Credits: 3 GEOL 611 – Hydrogeology Credits: 3 GEOL 650 – Geomicrobiology Credits: 3 Group IV (Other Electives) Any remaining Geology course 500-level or above *NOTE: GEOL 581 and GEOL 650 simultaneously satisfy CAS Life Sciences requirement. Total Geology Credit Hours: 37 Electives – Environmental Geosciences Track Plus at least four electives as described below. Choose one from Group I Group I GEOL 605 – Introduction to Geochemistry Credits: 3 GEOL 640 – Introduction to Geophysics Credits: 3 Choose two from Group III Group III (Surficial Processes and the Environment) GEOL 520 – Geomorphology Credits: 3 GEOL 611 – Hydrology Credits: 3 GEOL 650 - Geomicrobiology Credits: 3 Choose two additional electives from any of Groups I, II, III, or IV Group II (Energy and Natural Resources) GEOL 702 – Economic Geology Credits: 3 GEOL 730 – Petroleum Geology Credits: 3 GEOL 742 – Seismic Data Interpretation Credits: 3 Group IV (Other Electives) Any remaining Geology course 500-level or above

Transfer students In addition to the general instructions to transfer students, students planning to pursue a degree in geology should complete as many of the following courses or their equivalents as possible, then follow the course requirements for the geology option described above: CHM 210 - Chemistry I Credits: 4 CHM 230 - Chemistry II Credits: 4 COMM 105 - Public Speaking IA Credits: 2 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 GEOL 100 - Earth in Action Credits: 3 GEOL 103 - Geology Laboratory Credits: 1 MATH 100 - College Algebra Credits: 3 MATH 150 - Plane Trigonometry Credits: 3 MATH 220 - Analytic Geometry and Calculus I Credits: 4 MATH 221 - Analytic Geometry and Calculus II Credits: 4 PHYS 213 - Engineering Physics I Credits: 5 or PHYS 113 - General Physics I Credits: 4 PHYS 214 - Engineering Physics II Credits: 5 or PHYS 114 - General Physics II Credits: 4 Total credit hours required for graduation: (120)	*Note: GEOL 581 and GEOL 650 simultaneously satisfy the CAS Life Sciences requirement. Total Geology Credit Hours: 37 Transfer students In addition to the general instructions to transfer students, students planning to pursue a degree in geology should complete as many of the following courses or their equivalents as possible, then follow the course requirements for the geology option described above: CHM 210 - Chemistry I Credits: 4 CHM 230 - Chemistry II Credits: 4 COMM 105 - Public Speaking IA Credits: 2 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 GEOL 100 - Earth in Action Credits: 3 GEOL 103 - Geology Laboratory Credits: 1 MATH 100 - College Algebra Credits: 3 MATH 150 - Plane Trigonometry Credits: 3 MATH 220 - Analytic Geometry and Calculus I Credits: 4 MATH 221 - Analytic Geometry and Calculus II Credits: 4 Or GEOL 360 – Quantitative Methods in Geoscience Credits: 3 PHYS 213 - Engineering Physics I Credits: 5 or PHYS 113 - General Physics I Credits: 4 PHYS 214 - Engineering Physics II Credits: 5 or PHYS 114 - General Physics II Credits: 4 Total credit hours required for graduation: (120)

Music Education (B.M.E)

https://kstate.curriculog.com/proposal:2729/form

Rationale: The rationale for this change is to align the current general education requirements with other music degrees as well as lower the total hours for degree completion to get closer to the KBOR requirement of 120 credits. Currently, the degree is at 141-142 depending upon the track. This requested change would eliminate the variation and make the Bachelor of Music Education 132 hours for both vocal and instrumental students.

Impact (i.e. if this impacts another unit) – Statement should include the date when the head of a unit was contacted, and the response or lack of: The department head was contacted in the summer of 2017 to begin revising the curriculum to meet the KBOR requirements. Upon a detailed analysis, it was revealed that there was a larger task at hand and restructuring of the courses and an examination of all courses involved. The following proposal would eliminate some general education courses and prescribe specific courses to meet current requirements in more than one area while maintaining the integrity of the degree with respect to our current accreditation. Department heads (history and philosophy) were contacted.

Music Education (B.M.E.) The program of study leading to this degree is a nine-semester curriculum designed to prepare music teachers for grades pre K–12. With careful planning and enrollment during summer session(s) all requirements may be completed in four years. Within this curriculum there are two emphases–vocal/choral music, and instrumental music. Bachelor's degree requirements Professional educational requirements DED 075 - Orientation to Teacher Education at KSU Credits: 0 EDCI 318 - Educational Technology for Teaching and Learning Credits: 1 EDCEP 315 - Educational Psychology Credits: 3 EDCEP 525 - Interpersonal Relations in the Schools Credits: 1 EDSEC 200 - Teaching as a Career Credits: 1 EDSEC 230 - Early Field Experience Credits: 1 EDSEC 310 - Foundations of Education Credits: 3 EDSEC 376 - Core Teaching Skills: Secondary/Middle Credits: 3 EDSEC 455 - Teaching in a Multicultural Society Credits: 1 EDSEC 477 - Content Area Literacies and Diverse Learners Credits: 2 EDSEC 582 - Teaching Internship in Music Credits: 6-12 EDSP 323 - Exceptional Students in the Secondary School Credits: 2 HDFS 110 - Introduction to Human Development Credits: 3 For the College of Education licensure: For admission to the teacher education program and licensure in the state of Kansas, please visit the College of Education website. Music requirements for all options:	Music Education (B.M.E.) The program of study leading to this degree is a nine-semester curriculum designed to prepare music teachers for grades pre K–12. With careful planning and enrollment during summer session(s) all requirements may be completed in four years. Within this curriculum there are two emphases–vocal/choral music, and instrumental music. Bachelor's degree requirements Professional educational requirements DED 075 - Orientation to Teacher Education at KSU Credits: 0 EDCI 318 - Educational Technology for Teaching and Learning Credits: 1 EDCEP 315 - Educational Psychology Credits: 3 EDCEP 525 - Interpersonal Relations in the Schools Credits: 1 EDSEC 200 - Teaching as a Career Credits: 1 EDSEC 230 - Early Field Experience Credits: 1 EDSEC 310 - Foundations of Education Credits: 3 EDSEC 376 - Core Teaching Skills: Secondary/Middle Credits: 3 EDSEC 455 - Teaching in a Multicultural Society Credits: 1 EDSEC 477 - Content Area Literacies and Diverse Learners Credits: 2 EDSEC 582 - Teaching Internship in Music Credits: 6-12 EDSP 323 - Exceptional Students in the Secondary School Credits: 2 HDFS 110 - Introduction to Human Development Credits: 3 For the College of Education licensure: For admission to the teacher education program and licensure in the state of Kansas, please visit the College of Education website. Music requirements for all options:

Major performing organization each semester except the professional semester MUSIC 050 - Recital Attendance Credits: 0 (7 semesters) MUSIC 060 - Piano Proficiency Credits: 0 MUSIC 210 - Music Theory I Credits: 3 MUSIC 230 - Music Theory II Credits: 3 MUSIC 231 - Aural Skills I Credits: 1 MUSIC 232 - Fundamentals of Teaching Music Credits: 2 MUSIC 249 - Introduction to Music of the World Credits: 3 MUSIC 320 - Music Theory III Credits: 3 MUSIC 321 - Aural Skills II Credits: 1 MUSIC 322 - Aural Skills Proficiency Credits: 0 MUSIC 360 - Music Theory IV Credits: 3 MUSIC 361 - Aural Skills III Credits: 1 MUSIC 417 - Conducting Credits: 2 MUSIC 501 - Half Recital Credits: 0 MUSIC 502 - Full Recital Credits: 0 MUSIC 511 - Music in the Schools K-6 Credits: 3 MUSIC 512 - Music Program in Junior/Senior High Schools Credits: 3 MUSIC 525 - Instrumentation and Arranging Credits: 2 MUSIC 530 - Music History I: Ancient Greece through 1700 Credits: 3 MUSIC 531 - Music History II: 1700 to 1850 Credits: 3 MUSIC 532 - Music History III: 1850 to the Present Credits: 3 MUSIC 670 - Advanced Studies in Music Education Credits: 2 Applied lessons each semester except the professional semester MUSIC 255 - Lower-Division Performance Credits: 1-4 and/or MUSIC 455 - Upper-Division Performance Credits: 0-4 Note: A half recital or an extended “jury” recital is required before graduation. Divisional recommendation determines the methods of satisfying this requirement. Piano proficiency requirements must be met one semester before scheduling student teaching. Additional music requirements for instrumental emphasis	Major performing organization each semester except the professional semester MUSIC 050 - Recital Attendance Credits: 0 (7 semesters) MUSIC 060 - Piano Proficiency Credits: 0 MUSIC 210 - Music Theory I Credits: 3 MUSIC 230 - Music Theory II Credits: 3 MUSIC 231 - Aural Skills I Credits: 1 MUSIC 232 - Fundamentals of Teaching Music Credits: 2 MUSIC 249 - Introduction to Music of the World Credits: 3 MUSIC 320 - Music Theory III Credits: 3 MUSIC 321 - Aural Skills II Credits: 1 MUSIC 322 - Aural Skills Proficiency Credits: 0 MUSIC 360 - Music Theory IV Credits: 3 MUSIC 361 - Aural Skills III Credits: 1 MUSIC 417 - Conducting Credits: 2 MUSIC 501 - Half Recital Credits: 0 or MUSIC 502 - Full Recital Credits: 0 MUSIC 511 - Music in the Schools K-6 Credits: 3 MUSIC 512 - Music Program in Junior/Senior High Schools Credits: 3 MUSIC 525 - Instrumentation and Arranging Credits: 2 MUSIC 530 - Music History I: Ancient Greece through 1700 Credits: 3 MUSIC 531 - Music History II: 1700 to 1850 Credits: 3 MUSIC 532 - Music History III: 1850 to the Present Credits: 3 MUSIC 670 - Advanced Studies in Music Education Credits: 2 Applied lessons each semester except the professional semester MUSIC 255 - Lower-Division Performance Credits: 8-10 and/or MUSIC 455 - Upper-Division Performance Credits: 4-6 Note: A half recital or an extended “jury” recital is required before graduation. Divisional recommendation determines the methods of satisfying this requirement. Piano proficiency requirements must be met one semester before scheduling student teaching. Additional music requirements for instrumental emphasis Instrumental majors (Winds and percussion only) are required to participate in marching band for at least two semesters (preferably during the freshman and sophomore years.

Instrumental majors (Winds and percussion only) are required to participate in marching band for at least two semesters (preferably during the freshman and sophomore years. MUSIC 112 - University Choir Credits: 0-1 (Enroll for 1 credit) or a large vocal organization MUSIC 113 - University Band Credits: 0-1 (as the lab for MUSIC 518 - Instrumental Conducting) MUSIC 203 - Vocal Techniques I Credits: 1 ~~MUSIC 204 - Vocal Techniques II Credits: 1~~ MUSIC 211, 212, 213, and 214 - Piano Class I, II, III, IV Credits: 4 or MUSIC 254, 255 - Piano Lessons Credits: 4 MUSIC 060 - Piano Proficiency (Co-requisite with MUSIC 214, but can be enrolled in separately if taking piano lessons) All MUSIC 280/480 can be taken for Credits: 0 MUSIC 513 - Teaching Beginning Band and Jazz Techniques Credits: 1 MUSIC 518 - Instrumental Conducting Credits: 2 ~~Select an additional 8 semester credit hours according to the major instrument~~ MUSIC 234 - String Techniques and Materials Credits: 1 MUSIC 235 - Percussion Techniques and Materials Credits: 2 MUSIC 236 - Clarinet & Saxophone Woodwind Techniques and Materials Credits: 1 MUSIC 237 - Double Reed and Flute Woodwind Techniques and Materials Credits: 1 MUSIC 238 - High Brass Techniques and Materials Credits: 1 MUSIC 239 - Low Brass Techniques and Materials Credits: 1 MUSIC 427 - Advanced String Techniques and Materials Credits: 1-2 (1 credit) Additional requirements for vocal/choral emphasis If voice is the major performance area MUSIC 211, 212, 213, and 214 - Piano Class I, II, III, IV Credits: 4 or MUSIC 254, 255 - Piano Lessons Credits: 4	MUSIC 112 - University Choir Credits: 0-1 (Enroll for 1 credit) or a large vocal organization MUSIC 113 - University Band Credits: 0-1 (as the lab for MUSIC 518 - Instrumental Conducting) MUSIC 203 - Vocal Techniques I Credits: 1 MUSIC 211, 212, 213, and 214 - Piano Class I, II, III, IV Credits: 4 or MUSIC 254, 255 - Piano Lessons Credits: 4 MUSIC 060 - Piano Proficiency (Co-requisite with MUSIC 214, but can be enrolled in separately if taking piano lessons) All MUSIC 280/480 can be taken for Credits: 0 MUSIC 513 - Teaching Beginning Band and Jazz Techniques Credits: 1 MUSIC 518 - Instrumental Conducting Credits: 2 MUSIC 234 - String Techniques and Materials Credits: 1 MUSIC 235 - Percussion Techniques and Materials Credits: 2 MUSIC 236 - Clarinet & Saxophone Woodwind Techniques and Materials Credits: 1 MUSIC 237 - Double Reed and Flute Woodwind Techniques and Materials Credits: 1 MUSIC 238 - High Brass Techniques and Materials Credits: 1 MUSIC 239 - Low Brass Techniques and Materials Credits: 1 MUSIC 427 Advanced String Techniques and Materials Credit: 1 Additional requirements for vocal/choral emphasis If voice is the major performance area MUSIC 211, 212, 213, and 214 - Piano Class I, II, III, IV Credits: 4 or MUSIC 254, 255 - Piano Lessons Credits: 4 MUSIC 060 - Piano Proficiency (Co-requisite with MUSIC 214, but can be enrolled in separately if taking piano lessons) MUSIC 285 Italian Diction Credits: 1 MUSIC 287 German Diction Credits: 1

MUSIC 060 - Piano Proficiency (Co-requisite with MUSIC 214, but can be enrolled in separately if taking piano lesosns)	or MUSIC 465 French Diction Credits: 1
MUSIC 513 - Beginning Band and Jazz Techniques Credits: 1 Woodwind Techniques, Brass Techniques,Ensemble MUSIC 112 - University Choir Credits: 0-1 (0 credit) as the lab for MUSIC 517 - Choral Conducting MUSIC 234 - String Techniques and Materials Credits: 1 MUSIC 235 - Percussion Techniques and Materials Credits: 2 MUSIC 236 - Clarinet & Saxophone Woodwind Techniques and Materials Credits: 1 or MUSIC 237 - Double Reed and Flute Woodwind Techniques and Materials Credits: 1 MUSIC 238 - High Brass Techniques and Materials Credits: 1 or MUSIC 239 - Low Brass Techniques and Materials Credits: 1 MUSIC 475 - Opera Workshop Credits: 1-18 (Enroll for 1 credit) or MUSIC 490 - Collegium Musicum Credits: 1 MUSIC 517 - Choral Conducting Credits: 2	MUSIC 513 - Beginning Band and Jazz Techniques Credits: 1 Woodwind Techniques, Brass Techniques, Ensemble MUSIC 112 - University Choir Credits: 0-1 (0 credit) as the lab for MUSIC 517 - Choral Conducting MUSIC 234 - String Techniques and Materials Credits: 1 MUSIC 235 - Percussion Techniques and Materials Credits: 2 MUSIC 236 - Clarinet & Saxophone Woodwind Techniques and Materials Credits: 1 or MUSIC 237 - Double Reed and Flute Woodwind Techniques and Materials Credits: 1 MUSIC 238 - High Brass Techniques and Materials Credits: 1 or MUSIC 239 - Low Brass Techniques and Materials Credits: 1 MUSIC 475 - Opera Workshop Credits: 1-18 (Enroll for 1 credit) or MUSIC 490 - Collegium Musicum Credits: 1 MUSIC 517 - Choral Conducting Credits: 2 MUSIC 491 Vocal Music Pedagogy Credits: 2
Basic requirements Course Credit hours ENGL 100 - Expository Writing I 3 ENGL 200 - Expository Writing II 3 ~~COMM 106 - Public Speaking I 3~~ Any Department of English literature course or Department of Modern Languages literature course 3 ~~Any course offered in the Department of Philosophy (except PHILO 105, 110, 320, or 510) or COMM 300 or higher or~~ ~~Any two courses in a modern language 3-10~~ Fine arts elective (fulfilled by courses in the major) 3 ~~PSYCH 110 - General Psychology 3~~ Any course from the Department of History 3	Basic requirements Course Credit hours ENGL 100 - Expository Writing I - 3 ENGL 200 - Expository Writing II - 3 COMM 105 - Public Speaking I - 2 Any Department of English literature course or Department of Modern Languages literature course - 3 Fine arts elective (fulfilled by courses in the major) Any course from the Department of History - 3 (Fulfilled by MUSIC 530) Any additional social science course that addresses cultures outside the Western tradition (excludes those dealing primarily with the Greek, Roman, Western European, or North American experiences) 3 Any Science Course - 3

Any additional social science course that addresses cultures outside the Western tradition (excludes those dealing primarily with the Greek, Roman, Western European, or North American experiences) 3 ~~Two courses from the natural sciences (one course must include a lab) 7~~ MATH 100 - College Algebra (or higher level math course or grade of C or better on Algebra CLEP test) 3 STAT 325 - Introduction to Statistics (or higher level statistics course) 3 FSHS 110 - Introduction to Human Development 3 Electives (not more than 3 hours of music may be counted) ~~46~~ ~~Total credit hours required for graduation, depending on emphasis: (141–142)~~	MATH 100 - College Algebra (or higher level math course or grade of C or better on Algebra CLEP test) 3 STAT 325 - Introduction to Statistics (or higher level statistics course) 3 FSHS 110 - Introduction to Human Development 3 Electives (not more than 3 hours of music may be counted) Total hours requited for graduation: 132

Business Administration

Contact person: Chwen Sheu

Concurrent B.S / Master of Science in Data Analytics - NEW

The concurrent BS in BA / MS-Data Analytics (MSDA) provides high-performing CBA undergraduates the opportunity to earn a master's degree in data analytics with early admission to the graduate program as well as the ability to count nine credit hours of coursework in their graduate program toward their undergraduate unrestricted electives.

ADMISSION REQUIREMENTS. The following requirements must be met before an individual can be admitted into this program.

- The student must be seeking a BS degree from the College of Business Administration
- The student must have a GPA of 3.0 or above in all courses completed at Kansas State University and an overall GPA of 3.0 or above.
- The student must have a grade of B or above in STAT courses and MANGT366.

APPLICATION PROCESS: The application process is the same as for the stand-alone MSDA degree except that completion of the B.S.B.A. degree is not required. Students may begin the application process in the semester they are completing the final course requirement for admission, but formal admission will not be granted until all admission requirements are completed. The student must submit all of the following documents to be considered. Typically, application is made in the second semester of the student's Junior year, with acceptance following posting of final grades.

- KSU graduate application form completed on-line before semester of enrollment.
- Student's statement of academic objective(s).

- Two letters of recommendation.
- Official transcript(s) of all undergraduate work.

Admission to the MSDA program is provisional, subject to completion of the B.S.B.A. degree and maintaining a 3.0 GPA in the final 60 credit hours of coursework. Once admitted, the requirements for the graduate degree are the same as for the regular MSDA program. Students may count up to 9 credit hours of courses taken for graduate credit toward the unrestricted electives in the B.S.B.A. The B.S. degree may be awarded at any time following the completion of the undergraduate degree requirements. Alternatively, the B.S. and MSDA degrees may be awarded concurrently.

PROGRAM STRUCTURE: The concurrent program allows students to being taking graduate classes during the student's senior year at K-State.

JUNIOR	SPRING	A student may apply to the concurrent program. Admission determined.
SENIOR	FALL	Student may take 1 or 2 graduate classes
	SPRING	Student may take 1 or 2 graduate classes
GRADUATE	FALL	Student may take 4 graduate classes
	SPRING	Student may take 3 graduate classes

Education

Social Studies (EDSST) Teacher Licensure Program

http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13827&returnto=7401
This proposal was sent back to Academic Affairs from Faculty Senate for further discussion of changes and possible edits.

Rationale: To meet the KBOR requirement of 120 credit hours, the following change to teaching field is proposed.

Comment in Curriculog (1-9-19): The original submission was based on a communication with the Dept. of SASW that took place prior to number changes occurring in that department. It has provided the opportunity to expand courses to be selected. A file of the email communication between parties updating the courses has been attached. Dr. Burenheide apologizes for the errors and the resubmission has been uploaded (also see below).

Social Studies (EDSST) Teacher Licensure Program **Bachelor degree requirements** Students seeking this teacher licensure program must complete the bachelor degree requirements for secondary education, including the general education requirements, teacher education courses, and the teaching field requirements listed here. **Licensure requirements (64 credit hours)** **Core courses required:** ANTH 204 - A General Education Introduction to Cultural Anthropology Credits: 3 ECON 110 - Principles of Macroeconomics Credits: 3 ECON 120 - Principles of Microeconomics Credits: 3 ~~EDSEC 528 - Social Studies Colloquium Credits: 3~~	**Social Studies (EDSST) Teacher Licensure Program** **Bachelor degree requirements** Students seeking this teacher licensure program must complete the bachelor degree requirements for secondary education, including the general education requirements, teacher education courses, and the teaching field requirements listed here. **Licensure requirements (57 credit hours)** **Core courses required: 46** ANTH 204 - A General Education Introduction to Cultural Anthropology Credits: 3 ECON 110 - Principles of Macroeconomics Credits: 3 ECON 120 - Principles of Microeconomics Credits: 3 GEOG 100 - World Geography & Globalization Credits: 3

~~(Must be taken concurrently with Block II)~~

GEOG 100 - World Geography & Globalization Credits: 3
GEOG 200 - Human Geography Credits: 3
GEOG 221 - Introductory Physical Geography Credits: 4
HIST 111 - World History to 1450 Credits: 3
HIST 112 - World History From 1450 Credits: 3
HIST 251 - History of the United States to 1877 Credits: 3
HIST 252 - History of the United States Since 1877 Credits: 3
HIST 558 - History of Kansas Credits: 3
POLSC 115 - U.S. Politics Credits: 3
POLSC 135 - Introduction to Comparative Politics Credits: 3
or
POLSC 333 - World Politics Credits: 3
POLSC 301 - Introduction to Political Thought Credits: 3
SOCIO 211 - Introduction to Sociology Credits: 3

~~**History courses**~~

~~(Must be 500-level courses)~~

~~U.S. history (at least 3 credits) Credits: 3~~
~~Non-U.S. history (at least 3 credits) Credits: 3~~

Upper-level social studies
(Must include ~~9~~ credits:, ~~one listed course from three~~ of the following departments)
Political science:

~~POLSC 301 - Introduction to Political Thought Credits: 3~~
POLSC 321 - Kansas Politics and Government Credits: 3
POLSC 333 - World Politics Credits: 3
POLSC 525 - U.S. National Government and Politics Credits: 3
POLSC 543 - American Foreign Policy Credits: 3
POLSC 603 - Political Parties and Elections Credits: 3
POLSC 605 - The American Presidency Credits: 3
POLSC 614 - Constitutional Law Credits: 3
POLSC 615 - The Constitution, Civil Rights and Civil Liberties Credits: 3
POLSC 667 - American Political Thought Credits: 3

Geography:

GEOG 302 - Cartography and Thematic Mapping Credits: 3
GEOG 310 - Geography of Kansas Credits: 3
GEOG 340 - Natural Resources Credits: 3
GEOG 460 - Human Dimensions of Global Change Credits: 3
GEOG 500 - Geography of the United States Credits: 3
GEOG 508 - Geographic Information Systems I Credits: 4
GEOG 535 - Fundamentals of Climatology Credits: 4
GEOG 620 - Mexico, Central America, and Caribbean Credits: 3
GEOG 640 - Geography of Europe Credits: 3
GEOG 690 - Historical Geography of the United States Credits: 3

Economics:

ECON 510 - Intermediate Macroeconomics Credits: 3
ECON 520 - Intermediate Microeconomics Credits: 3
ECON 523 - Human Resource Economics Credits: 3
ECON 530 - Money and Banking Credits: 3
ECON 536 - Comparative Economics Credits: 3
ECON 555 - Urban and Regional Economics Credits: 3
ECON 681 - International Trade Credits: 3

Sociology:

SOCIO 360 - Social Problems Credits: 3
SOCIO 440 - Social Organization Credits: 3
SOCIO 450 - Introduction to Social Interaction Credits: 3

GEOG 200 - Human Geography Credits: 3
GEOG 221 - Introductory Physical Geography Credits: 4
HIST 111 - World History to 1450 Credits: 3
HIST 112 - World History From 1450 Credits: 3
HIST 251 - History of the United States to 1877 Credits: 3
HIST 252 - History of the United States Since 1877 Credits: 3
HIST 558 - History of Kansas Credits: 3
POLSC 115 - U.S. Politics Credits: 3
POLSC 135 - Introduction to Comparative Politics Credits: 3
or
POLSC 333 - World Politics Credits: 3
POLSC 301 - Introduction to Political Thought Credits: 3
SOCIO 211 - Introduction to Sociology Credits: 3

Upper-level social studies - 6
(Must select 6 hours from any of the following departments)

A. U.S. History: Any 500 –level US HIST Course

B. Non-U.S. History: Any 500-level Non-US HIST Course

C. Political science:
POLSC 321 - Kansas Politics and Government Credits: 3
POLSC 333 - World Politics Credits: 3
POLSC 525 - U.S. National Government and Politics Credits: 3
POLSC 543 - American Foreign Policy Credits: 3
POLSC 603 - Political Parties and Elections Credits: 3
POLSC 605 - The American Presidency Credits: 3
POLSC 614 - Constitutional Law Credits: 3
POLSC 615 - The Constitution, Civil Rights and Civil Liberties Credits: 3
POLSC 667 - American Political Thought Credits: 3

D. Geography:

GEOG 302 - Cartography and Thematic Mapping Credits: 3
GEOG 310 - Geography of Kansas Credits: 3
GEOG 340 - Natural Resources Credits: 3
GEOG 460 - Human Dimensions of Global Change Credits: 3
GEOG 500 - Geography of the United States Credits: 3
GEOG 508 - Geographic Information Systems I Credits: 4
GEOG 535 - Fundamentals of Climatology Credits: 4
GEOG 620 - Mexico, Central America, and Caribbean Credits: 3
GEOG 640 - Geography of Europe Credits: 3
GEOG 690 - Historical Geography of the United States Credits: 3

E. Economics:

ECON 510 - Intermediate Macroeconomics Credits: 3
ECON 520 - Intermediate Microeconomics Credits: 3
ECON 523 - Human Resource Economics Credits: 3
ECON 530 - Money and Banking Credits: 3
ECON 536 - Comparative Economics Credits: 3
ECON 555 - Urban and Regional Economics Credits: 3
ECON 681 - International Trade Credits: 3

F. Sociology:

SOCIO 360 - Social Problems Credits: 3
SOCIO 440 - Social Organization Credits: 3
SOCIO 450 - Introduction to Social Interaction Credits: 3
SOCIO 504 - Political Sociology Credits: 3
SOCIO 507 - International Development and Social Change Credits: 3
SOCIO 511 – Urban Sociology Credits: 3
SOCIO 533 - Society, Food, and Agriculture Credits: 3
SOCIO 535 - Population Dynamics Credits: 3
SOCIO 541 - Wealth, Power, and Privilege Credits: 3
SOCIO 545 - The Sociology of Women Credits: 3

SOCIO 507 - International Development and Social Change Credits: 3 ~~SOCIO 431 - Comparative Social Theories Credits: 3~~ SOCIO 533 - Society, Food, and Agriculture Credits: 3 SOCIO 535 - Population Dynamics Credits: 3 SOCIO 541 - Wealth, Power, and Privilege Credits: 3 SOCIO 545 - The Sociology of Women Credits: 3 SOCIO 570 - Race and Ethnic Relations in the USA Credits: 3 SOCIO 618 - Religion in Culture Credits: 3 **Anthropology:** ANTH 260 - Introduction to Archeology Credits: 3 ANTH 350 - Topics for Educators Credits: 1-4 ~~ANTH 560 - Archaeological Fact or Fiction Credits: 3~~ ANTH 505 - South Asian Civilizations Credits: 3 ~~ANTH 512 - Political Anthropology Credits: 3~~ ~~ANTH 515 - Creativity and Culture Credits: 3~~ ANTH 568 - Topics in Archaeology Credits: 1-4 ~~ANTH 513 - Immigrant America Credits: 3~~ ANTH 365 - Exploring Kansas Archaeology Credits: 3 ANTH 618 - Religion in Culture Credits: 3 ~~ANTH 605 - North American Indians Credits: 3~~	SOCIO 570 - Race and Ethnic Relations in the USA Credits: 3 SOCIO 643 – Sociology of Religion Credits: 3 SOCIO 618 - Religion in Culture Credits: 3 **G. Anthropology:** ANTH 210 - Introduction to Cultural Anthropology-HONORS Credits: 3 ANTH 260 - Introduction to Archeology Credits: 3 ANTH 301 – Initiation to Anthropology Credits: 3 ANTH 305 Culture of South Asia – Credits: 3 ANTH 310 Environmental Anthropology Credits: 3 ANTH 314 - Introduction to the World's Religion ANTH 315 – Medical Anthropology Credits 3 ANTH 318 – Topics in Cultural Anthropology Credits: 3 ANTH 350 - Topics for Educators Credits: 1-4 ANTH 365 - Exploring Kansas Archaeology Credits: 3 ANTH 505 - South Asian Civilizations Credits: 3 ANTH 568 Topics in Archaeology Credits 3 ANTH 608 Asian Religions Credits 3 ANTH 612 Ethnohistory Credits 3 ANTH 618 - Religion in Culture Credits: 3 **Additional Teacher Education Course: 5** EDSEC 328 Social Studies Colloquium I (1) EDSEC 428 Social Studies Colloquium II (1) EDSEC 528 Social Studies Colloquium III (Must be taken concurrently with Block II) (3)

From: Jessica Falcone <jfalcone@ksu.edu>
Subject: Re: Social Studies Education Program of Study
Date: January 8, 2019 at 1:53:49 PM CST
To: Lauren Ritterbush <lritterb@ksu.edu>, Bradley Burenheide <bburen@ksu.edu>, socansw <socansw@ksu.edu>

Hi Brad,

Thank you for contacting us. I appreciate your willingness to work with us.

Just FYI, if you add 210 it would be listed under "Required Program of Study ANTH200 OR 204 OR OR 210 OR 260."

In addition to the upper-level courses Lauren mentioned, I think that your students could benefit from suggest adding one or both of these: 1) Environmental ANTH (310) looks at climate change, pollution and nature from various cultural perspectives; 2) Medical Anthropology (Anth 315) explores illness and health from a cultural anth perspective. Both of these could be very useful options for your young educators too.

Many of our classes are only offered every other year, so it's good to have several relevant options for them; that way that can find an ANTH class when they are looking for one.

Thanks so much!

Sincerely,

Jess

Dr. Jessica Marie Falcone
Associate Professor of Anthropology

Kansas State University
From: Lauren Ritterbush
Sent: Tuesday, January 8, 2019 1:34:16 PM
To: Bradley Burenheide; socansw
Cc: Jessica Falcone
Subject: Re: Social Studies Education Program of Study

Brad B.,
Laszlo Kulcsar is no longer at K-State. Our present department head is Gerad Middendorf. I can confirm the ANTH courses. If you need any confirmation of the sociology courses, Gerad may be able to help.

I confirm all the ANTH courses you have listed. I also recommend the following as appropriate for social studies education majors.
- ANTH 210 Introduction to Cultural Anthropology-HONORS
- ANTH 568 Topics in Archaeology
- ANTH 608 Asian Religions
- ANTH 612 Ethnohistory

In the future, your students, especially those who are pursuing distant education, will be interested in an Archaeological Fact or Fiction course that I am developing as an online course specifically for non-majors. The course has not been formally added, but hopefully will be offered next academic year as a new course online (probably ANTH 360 or, until the course number is approved, probably as ANTH 368).

If you have any students who hope to be teaching history in the future and who are looking for another course this spring semester, you might encourage them to take ANTH 612 Ethnohistory. The prerequisite is an introductory cultural anthropology course (which many of your students have already taken). This course is a methods course that gives students first-hand experience with various kinds of primary historical documents, understanding of culture change, and in-depth knowledge of Native American societies of the historic period.

I hope this helps.

Lauren

From: Bradley Burenheide
Sent: Tuesday, January 8, 2019 1:10 PM
To: socansw
Cc: Lauren Ritterbush
Subject: Social Studies Education Program of Study

Dr. Kulcsar,

We previously had a communications snafu in rewriting the proposed courses from Anthropology for the Secondary Social Studies program.

In order to set it right, I would like for either you or Dr. Ritterbush to confirm that the below list is what is suggested from the SASW department.

Please inform of additions, deletions, or recommendations.

Required Program of Study
ANTH200 OR 204 OR 260
SOC211

UPPER LEVEL OPTIONS
ANTH301
ANTH305
ANTH314
ANTH318
ANTH365
ANTH368
ANTH515
ANTH560
ANTH565
ANTH665
SOCIO440
SOCIO450
SOCIO504
SOCIO507
SOCIO535
SOCIO545
SOCIO570
SOCIO643

Thanks,
Brad

Engineering

Biomedical Engineering (BME) (B.S.)

Contact person: William Kuhn
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=14016&hl=%22biomedical+engineering%22&returnto=search

Rationale: In addition, this curriculum change form corrects an error in the current catalog. The current catalog showed this course and its companion (Fall and Spring semester, senior year) as ECE 590 and ECE 591. The approved BME curriculum shows them as BME 590 and BME 591. So this correction is made as well.

There are therefore a total of 5 items edited below. No other changes are intended.

Impact: No impact outside department.

From:	To:
Planned to be Accredited by the Engineering Accreditation Commission of ABET. **Bachelor's degree requirements**	Planned to be Accredited by the Engineering Accreditation Commission of ABET. **Bachelor's degree requirements**
Freshman year	**Freshman year**
Fall semester (17 credit hours)	**Fall semester (17 credit hours)**

BME 001 - New Student Assembly **Credits:** 0 BME 200 - Introduction to Biomedical Engineering **Credits:** 3 CHM 210 - Chemistry I **Credits:** 4 * ENGL 100 - Expository Writing I **Credits:** 3 MATH 220 - Analytic Geometry and Calculus I **Credits:** 4 KIN 110 - Introduction to Public Health **Credits:** 3 or ECON 110 - Principles of Macroeconomics **Credits:** 3 **Spring semester (16 credit hours)**	BME 001 - New Student Assembly **Credits:** 0 BME 200 - Introduction to Biomedical Engineering **Credits:** 3 CHM 210 - Chemistry I **Credits:** 4 * ENGL 100 - Expository Writing I **Credits:** 3 MATH 220 - Analytic Geometry and Calculus I **Credits:** 4 KIN 110 - Introduction to Public Health **Credits:** 3 or ECON 110 - Principles of Macroeconomics **Credits:** 3 **Spring semester (16 credit hours)**
CHM 230 - Chemistry II **Credits:** 4 MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 PHYS 213 - Engineering Physics I **Credits:** 5 Technical Electives **Credits:** 3 **Sophomore year**	CHM 230 - Chemistry II **Credits:** 4 MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 PHYS 213 - Engineering Physics I **Credits:** 5 Technical Electives **Credits:** 3 **Sophomore year**
Fall semester (17 credit hours)	**Fall semester (17 credit hours)**
COMM 105 - Public Speaking IA **Credits:** 2 MATH 340 - Elementary Differential Equations **Credits:** 4 PHYS 214 - Engineering Physics II **Credits:** 5 Technical Electives **Credits:** 6 **Spring semester (18 credit hours)**	COMM 105 - Public Speaking IA **Credits:** 2 MATH 340 - Elementary Differential Equations **Credits:** 4 PHYS 214 - Engineering Physics II **Credits:** 5 Technical Electives **Credits:** 6 **Spring semester (18 credit hours)**
BIOL 198 - Principles of Biology **Credits:** 4 MATH 222 - Analytic Geometry and Calculus III **Credits:** 4 CIS 200 - Programming Fundamentals **Credits:** 4 STAT 510 - Introductory Probability and Statistics I **Credits:** 3 Technical Electives **Credits:** 3 **Junior year**	BIOL 198 - Principles of Biology **Credits:** 4 MATH 222 - Analytic Geometry and Calculus III **Credits:** 4 CIS 200 - Programming Fundamentals **Credits:** 4 STAT 510 - Introductory Probability and Statistics I **Credits:** 3 Technical Electives **Credits:** 3 **Junior year**
Fall semester (15 credit hours)	**Fall semester (15 credit hours)**
BIOL 341 - Human Body I **Credits:** 4 BIOL 342 - Human Body II **Credits:** 4 BME 430 - Biomaterials **Credits:** 3 ECE 540 - Applied Scientific Computing for Engineers **Credits:** 3 BME 490 - Undergraduate BME Design Experience I **Credits:** 1 **Spring semester (17 credit hours)**	BIOL 341 - Human Body I **Credits:** 4 BIOL 342 - Human Body II **Credits:** 4 BME 430 - Biomaterials **Credits:** 3 ECE 540 - Applied Scientific Computing for Engineers **Credits:** 3 BME 490 - Undergraduate BME Design Experience I **Credits:** 1 **Spring semester (17 credit hours)**
CHM 531 - Organic Chemistry I **Credits:** 3 ECE 512 - Linear Systems **Credits:** 3 BME 451 - Biomechanical Engineering **Credits:** 3 ENGL 415 - Written Communication for Engineers **Credits:** 3 BME 491 - Undergraduate BME Design Experience II **Credits:** 2 Technical Electives **Credits:** 3 **Senior year**	CHM 531 - Organic Chemistry I **Credits:** 3 ECE 512 - Linear Systems **Credits:** 3 BME 451 - Biomechanical Engineering **Credits:** 3 ENGL 415 - Written Communication for Engineers **Credits:** 3 BME 491 - Undergraduate BME Design Experience II **Credits:** 2 Technical Electives **Credits:** 3 **Senior year**
Fall semester (15 credit hours)	**Fall semester (15 credit hours)**
ECE 772 - Theory and Techniques of Bioinstrumentation **Credits:** 2	ECE 772 - Theory and Techniques of Bioinstrumentation **Credits:** 2

ECE 773 - Bioinstrumentation Design Laboratory **Credits:** 1 ~~ECE~~ 590 - Senior Design Experience I **Credits:** 3 ***Technical Electives **Credits:** 9 **Spring semester (~~14~~ credit hours)** BME 575 - Clinical Systems Engineering **Credits:** 3 BME 674 - Medical Imaging **Credits:** 3 ~~ECE~~ 591 - Senior Design Experience II **Credits:** ~~3~~ ***Technical Electives **Credits:** 2 **Humanities/Social Science Electives **Credits:** 3 **Notes** *Students must complete the appropriate prerequisite credits for ENGL 415 , but may apply only 3 hours of ENGL 415 prerequisite credits towards degree requirements. **Humanities and Social Science electives are to be selected from the approved College of Engineering H&SS list. Students should select these courses as needed to complete the requirements of the K-State 8 General Education program. ***Technical Electives must come from the list of accepted courses. ***** No more than twelve (12) credit hours of courses in electrical engineering, computer engineering, or biomedical engineering may be transferred to Kansas State University for credit toward a bachelor's degree in biomedical engineering. Further, those courses selected for transfer credit must be equivalent to courses in the list below and must be such that the prerequisites for the listed course are also satisfied. Any courses transferred must be taken from ABET accredited programs: ECE 210, ECE 241, ECE 410, ECE 511, ECE 512, ECE 519, ECE 590/591, ECE 772, BME 200, BME 430, BME 490/491, BME 551, BME 575, and BME 674. Students participating in exchange programs or transferring in from outside the United States may request waivers of this policy. Waivers must be obtained in advance of the exchange semester. **K-State 8 General Education Requirements** IMPORTANT: Students must meet the requirements of the K-State 8 General Education Program. **Total credit hours required for graduation (~~129~~)**	ECE 773 - Bioinstrumentation Design Laboratory **Credits:** 1 BME 590 - Senior Design Experience I **Credits:** 3 ***Technical Electives **Credits:** 9 **Spring semester (13 credit hours)** BME 575 - Clinical Systems Engineering **Credits:** 3 BME 674 - Medical Imaging **Credits:** 3 BME 591 - Senior Design Experience II **Credits:** 2 ***Technical Electives **Credits:** 2 **Humanities/Social Science Electives **Credits:** 3 **Notes** *Students must complete the appropriate prerequisite credits for ENGL 415 , but may apply only 3 hours of ENGL 415 prerequisite credits towards degree requirements. **Humanities and Social Science electives are to be selected from the approved College of Engineering H&SS list. Students should select these courses as needed to complete the requirements of the K-State 8 General Education program. ***Technical Electives must come from the list of accepted courses. ***** No more than twelve (12) credit hours of courses in electrical engineering, computer engineering, or biomedical engineering may be transferred to Kansas State University for credit toward a bachelor's degree in biomedical engineering. Further, those courses selected for transfer credit must be equivalent to courses in the list below and must be such that the prerequisites for the listed course are also satisfied. Any courses transferred must be taken from ABET accredited programs: ECE 210, ECE 241, ECE 410, ECE 511, ECE 512, ECE 519, ECE 590/591, ECE 772, BME 200, BME 430, BME 490/491, BME 551, BME 575, and BME 674. Students participating in exchange programs or transferring in from outside the United States may request waivers of this policy. Waivers must be obtained in advance of the exchange semester. **K-State 8 General Education Requirements** IMPORTANT: Students must meet the requirements of the K-State 8 General Education Program. **Total credit hours required for graduation (128)**

Computer Engineering (CMPEN) (B.S.)

Contact person: William Kuhn
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13867&hl=%22computer+engineering%22&returnto=search

Rationale: The Board of Regents has determined that our programs must have their hours decreased to 128 or below. The Computer Engineering program is currently 129 hours. The faculty has determined that a one hour decrease in ECE 591 (senior design ii) from 3 to 2 credits

is feasible since this is the second semester in a 2-semester sequence, and students are primarily working on project implementation. Therefore, the senior year is modified to show Spring semester as 14 credit hours, ECE 591 as 2 credits, and the total credits are modified to show 128.

Additionally, the CIS department is changing their CIS 501 course, requiring a new course (CIS 400) as a pre-requisite. CIS 400 has been determined to be an acceptable replacement for CIS 501 in the CmpEn curriculum and CIS 501 is therefore replaced with CIS 400 in the Fall Semester of Junior Year.

No other changes are intended.

Impact Statement: No impact outside department.

The Computer Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.	The Computer Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
Bachelor's degree requirements	**Bachelor's degree requirements**
Freshman year	**Freshman year**
Fall semester (16 credit hours)	**Fall semester (16 credit hours)**
CHM 210 - Chemistry I **Credits:** 4	CHM 210 - Chemistry I **Credits:** 4
COMM 105 - Public Speaking IA **Credits:** 2	COMM 105 - Public Speaking IA **Credits:** 2
DEN 015 - Engineering Student Success Seminar **Credits:** 0	DEN 015 - Engineering Student Success Seminar **Credits:** 0
ECE 015 - New Student Assembly **Credits:** 0	ECE 015 - New Student Assembly **Credits:** 0
ECE 241 - Introduction to Computer Engineering **Credits:** 3	ECE 241 - Introduction to Computer Engineering **Credits:** 3
* ENGL 100 - Expository Writing I **Credits:** 3	* ENGL 100 - Expository Writing I **Credits:** 3
MATH 220 - Analytic Geometry and Calculus I **Credits:** 4	MATH 220 - Analytic Geometry and Calculus I **Credits:** 4
Spring semester (17 credit hours)	**Spring semester (17 credit hours)**
CIS 200 - Programming Fundamentals **Credits:** 4	CIS 200 - Programming Fundamentals **Credits:** 4
ECE 115 - New Student Design Project **Credits:** 1	ECE 115 - New Student Design Project **Credits:** 1
ECE 210 - Introduction to Electrical Engineering **Credits:** 3	ECE 210 - Introduction to Electrical Engineering **Credits:** 3
MATH 221 - Analytic Geometry and Calculus II **Credits:** 4	MATH 221 - Analytic Geometry and Calculus II **Credits:** 4
PHYS 213 - Engineering Physics I **Credits:** 5	PHYS 213 - Engineering Physics I **Credits:** 5
Sophomore year	**Sophomore year**
Fall semester (15 credit hours)	**Fall semester (15 credit hours)**
CIS 300 - Data and Program Structures **Credits:** 3	CIS 300 - Data and Program Structures **Credits:** 3
ECE 441 - Design of Digital Systems **Credits:** 3	ECE 441 - Design of Digital Systems **Credits:** 3
MATH 340 - Elementary Differential Equations **Credits:** 4	MATH 340 - Elementary Differential Equations **Credits:** 4
PHYS 214 - Engineering Physics II **Credits:** 5	PHYS 214 - Engineering Physics II **Credits:** 5
Spring semester (17 credit hours)	**Spring semester (17 credit hours)**
CIS 308 - C Language Laboratory **Credits:** 1	CIS 308 - C Language Laboratory **Credits:** 1
ECON 110 - Principles of Macroeconomics **Credits:** 3	ECON 110 - Principles of Macroeconomics **Credits:** 3

ECE 410 - Circuit Theory I **Credits:** 3 ECE 431 - Microcontrollers **Credits:** 3 MATH 222 - Analytic Geometry and Calculus III **Credits:** 4 STAT 510 - Introductory Probability and Statistics I **Credits:** 3 **Junior year**	ECE 410 - Circuit Theory I **Credits:** 3 ECE 431 - Microcontrollers **Credits:** 3 MATH 222 - Analytic Geometry and Calculus III **Credits:** 4 STAT 510 - Introductory Probability and Statistics I **Credits:** 3 **Junior year**
Fall semester (18 credit hours)	**Fall semester (18 credit hours)**
Humanities/Social Science Elective **Credits: 3 CIS ~~501~~ - ~~Software Architecture and Design~~ **Credits:** 3 ECE 511 - Circuit Theory II **Credits:** 3 ECE 525 - Electronics I **Credits:** 3 ECE 540 - Applied Scientific Computing for Engineers **Credits:** 3 MATH 510 - Discrete Mathematics **Credits:** 3 **Spring semester (16 credit hours)**	**Humanities/Social Science Elective **Credits:** 3 CIS 400 – Object-Oriented Design, Implementation, and Testing **Credits:** 3 ECE 511 - Circuit Theory II **Credits:** 3 ECE 525 - Electronics I **Credits:** 3 ECE 540 - Applied Scientific Computing for Engineers **Credits:** 3 MATH 510 - Discrete Mathematics **Credits:** 3 **Spring semester (16 credit hours)**
Humanities/Social Science Elective **Credits: 3 ECE 512 - Linear Systems **Credits:** 3 ECE 557 - Electromagnetic Theory I **Credits:** 4 ECE 649 - Computer Design I **Credits:** 3 ENGL 415 - Written Communication for Engineers **Credits:** 3 **Senior year**	**Humanities/Social Science Elective **Credits:** 3 ECE 512 - Linear Systems **Credits:** 3 ECE 557 - Electromagnetic Theory I **Credits:** 4 ECE 649 - Computer Design I **Credits:** 3 ENGL 415 - Written Communication for Engineers **Credits:** 3 **Senior year**
Fall semester (15 credit hours)	**Fall semester (15 credit hours)**
Technical Electives **Credits:** 3 * CIS 520 - Operating Systems I **Credits:** 3 **** ECE 542 - Computer Networking **Credits:** 3 ECE 590 - Senior Design Experience I **Credits:** 3 **** ECE 643 - Computer Engineering Design Lab **Credits:** 3 **Spring semester (~~15~~ credit hours)**	***Technical Electives **Credits:** 3 **** CIS 520 - Operating Systems I **Credits:** 3 **** ECE 542 - Computer Networking **Credits:** 3 ECE 590 - Senior Design Experience I **Credits:** 3 **** ECE 643 - Computer Engineering Design Lab **Credits:** 3 **Spring semester (14 credit hours)**
Technical electives **Credits**: 3 **Humanities/Social Science Elective **Credits:** 3 ECE 591 - Senior Design Experience II **Credits:** ~~3~~ * ECE 631 - Microcomputer Systems Design **Credits:** 3 **** ECE 645 - Digital Electronics **Credits:** 3 **Notes**	***Technical electives **Credits**: 3 **Humanities/Social Science Elective **Credits:** 3 ECE 591 - Senior Design Experience II **Credits:** 2 **** ECE 631 - Microcomputer Systems Design **Credits:** 3 **** ECE 645 - Digital Electronics **Credits:** 3 **Notes**
*Students must complete the appropriate prerequisite credits for ENGL 415, but may apply only 3 credit hours of ENGL 415 prerequisite credits towards degree requirements. For the good and benefit of the student and their future employer, the ECE department enforces a C-prerequisite policy for all courses listed by number in the curriculum and for any in-major technical elective course applied toward the degree. A grade of C or better must be earned in all prerequisites to such a course before enrolling in that course. **Humanities and Social Science electives are to be selected from the list of courses approved by the College of Engineering. Students should select these courses as needed to complete the requirements of the K-State 8 General Education program.	*Students must complete the appropriate prerequisite credits for ENGL 415, but may apply only 3 credit hours of ENGL 415 prerequisite credits towards degree requirements. For the good and benefit of the student and their future employer, the ECE department enforces a C-prerequisite policy for all courses listed by number in the curriculum and for any in-major technical elective course applied toward the degree. A grade of C or better must be earned in all prerequisites to such a course before enrolling in that course. **Humanities and Social Science electives are to be selected from the list of courses approved by the College of Engineering. Students should select these courses as needed to complete the requirements of the K-State 8 General Education program.

***Technical electives must be selected from the list of accepted courses. ****Offered only in semester shown in curriculum. *****No more than twelve (12) credit hours of courses in electrical and computer engineering may be transferred to Kansas State University for credit toward a bachelor degree in either electrical engineering or computer engineering. Further, those courses selected for transfer credit must be equivalent to courses in the list below and must be such that the prerequisites for the listed course are also satisfied. Any courses transferred must be taken from ABET accredited programs: ECE 210, ECE 241, ECE 410, ECE 525, ECE 557, ECE 581. Students participating in exchange programs or transferring in from outside the United States may request waivers of this policy. Waivers must be obtained in advance of the exchange semester. **K-State 8 General Education Requirements** IMPORTANT: Students must meet the requirements of the K-State 8 General Education Program. **Total credit hours required for graduation (~~129~~)**	***Technical electives must be selected from the list of accepted courses. ****Offered only in semester shown in curriculum. *****No more than twelve (12) credit hours of courses in electrical and computer engineering may be transferred to Kansas State University for credit toward a bachelor degree in either electrical engineering or computer engineering. Further, those courses selected for transfer credit must be equivalent to courses in the list below and must be such that the prerequisites for the listed course are also satisfied. Any courses transferred must be taken from ABET accredited programs: ECE 210, ECE 241, ECE 410, ECE 525, ECE 557, ECE 581. Students participating in exchange programs or transferring in from outside the United States may request waivers of this policy. Waivers must be obtained in advance of the exchange semester. **K-State 8 General Education Requirements** IMPORTANT: Students must meet the requirements of the K-State 8 General Education Program. **Total credit hours required for graduation (128)**

Computer Science (B.S.)

Contact person: Rod Howell
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13859&hl=%22computer+engineering%22&returnto=search
Addition of an academic sub-plan (option, specialization, etc.)

Rationale: The proposed changes include:

- replacing 3 hours of unrestricted electives with CIS 400 Object-Oriented Design, Implementation, and Testing;
- adding COMM 323 Nonverbal Communication to the list of Communication Electives;
- adding 2 new options – an Entrepreneurship Option and a Cybersecurity Option; and
- updating the description of the professional program (on our departmental page in the University Catalog) as follows:
    - list CIS 015 Undergraduate Seminar as a prerequisite;
    - replace CIS 640 Software Testing Techniques with CIS 400 and two alternative capstone courses used by the two new options; and
    - correct a typographical error.

The creation of CIS 400 was motivated by differing ideas among our faculty on the most appropriate course material for CIS 501 Software Architecture. We ultimately decided that our students need exposure to more material than would fit into one course. We therefore have proposed CIS 400 as a new course and wish to require it for all of our students. The two courses,

CIS 400 and CIS 501 will together cover the spectrum of software design topics from low level to high level.

COMM 323 covers an important aspect of interpersonal communication, namely, nonverbal communication. We believe that understanding nonverbal communication can help our students to improve their interpersonal communication skills.

Many of our graduates have participated in entrepreneurial activities after graduation. The Entrepreneurship Option will equip students interested in pursuing entrepreneurial activities within the computing profession. We believe this option will also attract students, as we are unaware of any US degree program combining Computer Science with Entrepreneurship. To support this option, we are replacing two tech elective computing courses with entrepreneurship courses. With the addition of CIS 400, our degree program contains enough computing material to meet our accreditation criteria without these two tech electives; hence, we believe this is a fair tradeoff. We are also using a new project course, CIS 596 Entrepreneurial Computer Science Project, as the capstone project for this option. This course will be similar to CIS 598 Computer Science Project but will involve a team software-development project that will be the basis of an entrepreneurial plan developed in ENTRP 350 the following semester. These two courses will be coordinated so that students working on the software project in CIS 596 will continue to work together with students from other disciplines in ENTRP 350. The remaining 9 credits of this option will be taken from unrestricted electives.

The Cybersecurity Option is motivated by a growing interest among our students and faculty in cybersecurity, as well as our department's membership in the CyberCorps® Scholarship for Service Community. As with the Entrepreneurship Option, it will include its own capstone course, CIS 599 Cybersecurity Project, which will focus on cybersecurity. The courses needed for this option will come from tech electives and unrestricted electives, as well as two sociology courses as humanities and social science electives.

CIS 015 is currently required for graduation, and a note in curriculum states, "All students new to the CS department must complete CIS 015." However, some students avoid taking this course until late in their programs of study, where it is much less useful. By requiring it for admission to the professional program, we can ensure that students take it early in their programs.

The modifications to the list of professional program courses are mainly due to the additions of CIS 400, CIS 596, and CIS 598 described above. We are also removing CIS 640 Software Testing Techniques from this list. When we had originally included this course, either CIS 640 or CIS 505 Introduction to Programming Languages had been required as a tech elective. Recently, however, we changed this requirement by requiring CIS 505 for all students. As a result, we no longer need to restrict enrollment in CIS 640.

Impact Statement: The addition of COMM 323 to the list of Communication Electives was done in consultation with Prof. Darren Epping, Director of Public Speaking. He was emailed a copy of this proposal on Aug. 28, 2018, and responded in support of the proposal on Sept. 5.

The Entrepreneurship Option was designed with input from Prof. William Turnley, Head of the Dept. of Management, and Prof. Chad Jackson, Director of the Center for the Advancement of Entrepreneurship. They were each emailed a copy of this proposal on Aug. 28, 2018, and both had responded positively by the next day. In addition, Prof. Ansley Chua, Head of the Dept. of Finance, was emailed a copy on the same day. He responded positively on Aug. 30.

Prof. Gerad Middendorf, Interim Head of the Department of Sociology, Anthropology, and Social Work, was sent a copy of this proposal on Aug. 29, 2018. He responded positively that same day.

Freshman year **Fall semester (15-16 credit hours)** • Humanities/social science elective (first of five) **Credits:** 3 • CIS 015 - Undergraduate Seminar **Credits:** 0 • CIS 115 - Introduction to Computing Science **Credits:** 3 • COMM 105 - Public Speaking IA **Credits:** 2 or • COMM 106 - Public Speaking I **Credits:** 3 • ENGL 100 - Expository Writing I **Credits:** 3 • MATH 220 - Analytic Geometry and Calculus I **Credits:** 4 **Spring semester (15 credit hours)** • Math/Science elective with laboratory (first of five) **Credits:** 4 • CIS 200 - Programming Fundamentals **Credits:** 4 • ECE 241 - Introduction to Computer Engineering **Credits:** 3 • MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 **Sophomore year** **Fall semester (15 credit hours)** • Humanities/social science elective (second of five) **Credits:** 3 • CIS 300 - Data and Program Structures **Credits:** 3 • CIS 301 - Logical Foundations of Programming **Credits:** 3	**Freshman year** **Fall semester (15-16 credit hours)** • Humanities/social science elective (first of five) **Credits:** 3 • CIS 015 - Undergraduate Seminar **Credits:** 0 • CIS 115 - Introduction to Computing Science **Credits:** 3 • COMM 105 - Public Speaking IA **Credits:** 2 or • COMM 106 - Public Speaking I **Credits:** 3 • ENGL 100 - Expository Writing I **Credits:** 3 • MATH 220 - Analytic Geometry and Calculus I **Credits:** 4 **Spring semester (15 credit hours)** • Math/Science elective with laboratory (first of five) **Credits:** 4 • CIS 200 - Programming Fundamentals **Credits:** 4 • ECE 241 - Introduction to Computer Engineering **Credits:** 3 • MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 **Sophomore year** **Fall semester (15 credit hours)** • Humanities/social science elective (second of five) **Credits:** 3 • CIS 300 - Data and Program Structures **Credits:** 3 • CIS 301 - Logical Foundations of Programming **Credits:** 3

- ECON 110 - Principles of Macroeconomics **Credits:** 3
- ENGL 200 - Expository Writing II **Credits:** 3

Spring semester (15 credit hours)

- Humanities/social science elective (third of five) **Credits:** 3
- Math/Science elective (second of five) **Credits:** 3
- *Communication elective **Credits:** 3
- ~~CIS 501 - Software Architecture and Design~~ **Credits:** 3
- MATH 510 - Discrete Mathematics **Credits:** 3

Junior year

Fall semester (15 credit hours)

- Humanities/social science elective (fourth of five) **Credits:** 3
- Math/Science elective with laboratory (third of five) **Credits:** 4
- ~~Unrestricted elective~~ **Credits:** 3
- CIS 308 - C Language Laboratory **Credits:** 1
- CIS 415 - Ethics and Computing Technology **Credits:** 1
- CIS 560 - Database System Concepts **Credits:** 3

Spring semester (15 credit hours)

- Unrestricted elective **Credits:** 3
- CIS 450 - Computer Architecture and Operations **Credits:** 3
- CIS 575 - Introduction to Algorithm Analysis **Credits:** 3
- ENGL 415 - Written Communication for Engineers **Credits:** 3
- or
- ENGL 516 - Written Communication for the Sciences **Credits:** 3
- STAT 510 - Introductory Probability and Statistics I **Credits:** 3

Senior year

Fall semester (14-15 credit hours)

- Technical elective (first and second of four) **Credits:** 6
- CIS 505 - Introduction to Programming Languages **Credits:** 3
- Unrestricted elective **Credits:** 2-3

- ECON 110 - Principles of Macroeconomics **Credits:** 3
- ENGL 200 - Expository Writing II **Credits:** 3

Spring semester (15 credit hours)

- Humanities/social science elective (third of five) **Credits:** 3
- Math/Science elective (second of five) **Credits:** 3
- *Communication elective **Credits:** 3
- CIS 400 Object-Oriented Design, Implementation, and Testing **Credits:** 3
- MATH 510 - Discrete Mathematics **Credits:** 3

Junior year

Fall semester (15 credit hours)

- Humanities/social science elective (fourth of five) **Credits:** 3
- Math/Science elective with laboratory (third of five) **Credits:** 4
- CIS 501 Software Architecture and Design **Credits:** 3
- CIS 308 - C Language Laboratory **Credits:** 1
- CIS 415 - Ethics and Computing Technology **Credits:** 1
- CIS 560 - Database System Concepts **Credits:** 3

Spring semester (15 credit hours)

- Unrestricted elective **Credits:** 3
- CIS 450 - Computer Architecture and Operations **Credits:** 3
- CIS 575 - Introduction to Algorithm Analysis **Credits:** 3
- ENGL 415 - Written Communication for Engineers **Credits:** 3
- or
- ENGL 516 - Written Communication for the Sciences **Credits:** 3
- STAT 510 - Introductory Probability and Statistics I **Credits:** 3

Senior year

Fall semester (14-15 credit hours)

- Technical elective (first and second of four) **Credits:** 6
- CIS 505 - Introduction to Programming Languages **Credits:** 3

- Math/Science elective (fourth of five) **Credits:** 3

Spring semester (15 credit hours)

- Technical elective (third and fourth of four) **Credits:** 6
- Math/Science elective (fifth of five) **Credits:** 3
- Unrestricted elective **Credits:** 3
- Humanities/social science elective (fifth of five) **Credits:** 3

Notes

A grade of C or better is required for all graded courses listed by specific course number above.

All students new to the CS department must complete CIS 015.

Math/Science electives must have departmental approval.

Humanities/social science electives must be taken from the list approved by the College of Engineering.

*Communications Elective **Credits:** (3) The Communications Elective must be chosen from:

- COMM 322 - Interpersonal Communication **Credits:** 3
- COMM 326 - Small Group Discussion Methods **Credits:** 3
- MANGT 420 - Principles of Management **Credits:** 3
- THTRE 261 - Fundamentals of Acting **Credits:** 3
- THTRE 265 - Fundamentals of Improvisation I, II **Credits:** 3

Technical electives must be comprised of the following:

- C or better in either CIS 520-Operating Systems I or CIS 625-Concurrent Software Systems.
- A capstone experience consisting of a C or better in either CIS 598-Computer Science Project or the two-semester course consisting of CIS 642-Software Engineering Project I and CIS 643-Software Engineering Project II.
- Additional 500-level or higher CIS courses or other approved computing-related courses to bring the total number of technical elective credits to 12.

- Unrestricted elective **Credits:** 2-3
- Math/Science elective (fourth of five) **Credits:** 3

Spring semester (15 credit hours)

- Technical elective (third and fourth of four) **Credits:** 6
- Math/Science elective (fifth of five) **Credits:** 3
- Unrestricted elective **Credits:** 3
- Humanities/social science elective (fifth of five) **Credits:** 3

Notes

A grade of C or better is required for all graded courses listed by specific course number above.

All students new to the CS department must complete CIS 015.

Math/Science electives must have departmental approval.

Humanities/social science electives must be taken from the list approved by the College of Engineering.

*Communications Elective **Credits:** (3) The Communications Elective must be chosen from:

- COMM 322 - Interpersonal Communication **Credits:** 3
- COMM 323 – Nonverbal Communication **Credits:** 3
- COMM 326 - Small Group Discussion Methods **Credits:** 3
- MANGT 420 - Principles of Management **Credits:** 3
- THTRE 261 - Fundamentals of Acting **Credits:** 3
- THTRE 265 - Fundamentals of Improvisation I, II **Credits:** 3

Technical electives must be comprised of the following:

- C or better in either CIS 520-Operating Systems I or CIS 625-Concurrent Software Systems.
- A capstone experience consisting of a C or better in either CIS 598-Computer Science Project or the two-semester course consisting of CIS 642-Software Engineering Project I and CIS 643-Software Engineering Project II.
- Additional 500-level or higher CIS courses or other approved computing-related

NOTE: K-State 8 General Education Requirements

For additional information about the University General Education program, check the requirements specified by the College of Engineering.

Total hours required for graduation (120 credit hours)

courses to bring the total number of technical elective credits to 12.

Entrepreneurship Option:

For this option, the 12 credits of technical electives must be comprised of the following:

- C or better in either CIS 520-Operating Systems I or CIS 625-Concurrent Software Systems.
- C or better in CIS 596-Entrepreneurial Computer Science Project.
- ENTRP 340-Introduction to Entrepreneurship
- ENTRP 350-Technology and Innovation Management (to be taken the semester immediately following CIS 598)

In addition, the unrestricted electives must be satisfied by 9 credits taken from the following:

- ENTRP 466 Digital Business
- ENTRP 520 Social Entrepreneurship
- ENTRP 540 Entrepreneurial Consulting
- ENTRP 497 Topics in Entrepreneurship
- FINAN 561 Finance for Entrepreneurs
- MANGT 390 Business Law
- MANGT 520 Organization Behavior
- MANGT 531 Human Resources Management

Cybersecurity Option:

For this option, the 12 credits of technical electives must be comprised of the following:

- C or better in either CIS 520-Operating Systems I or CIS 625-Concurrent Software Systems.
- C or better in CIS 599-Cybersecurity Project.
- CIS 551 Fundamentals of Computer and Information Security.
- CIS 553 Fundamentals of Cryptography.

In addition, 6 of the 15 hours of Humanities and Social Science electives must be:

- SOCIO 211-Introduction to Sociology.
- SOCIO 550-Technocrime, Security, and Society.

Finally, the unrestricted electives must include 2 of the following:

- CIS 525 Introduction to Computer Networks.
- CIS 655 Security and Reliability of Computing Systems.
- CIS 755 Systems Security.

NOTE: K-State 8 General Education Requirements

Admission to the Pre-Professional Program

New students, including transfer students, should submit the standard application form directly to the Office of Admissions. The admission criteria are the same as those for the university and the College of Engineering.

Any student who has completed more than 15 credit hours at Kansas State University in any major outside the College of Engineering may change majors into the pre-professional program provided that the student meets the admission requirements for the College of Engineering. A resident cumulative GPA of 2.3 or better is required for a change of major from any Engineering program to the pre-professional program Computer Science.

Course Requirements (24 total credits)

The course requirements and semester-by-semester curriculum for a BS in Computer Science remain in effect. However, certain courses from the first three semesters of the curriculum must be completed with a C or better for advancement beyond the pre-professional program. These courses are:

Course	Course Title
MATH 220	Analytic Geometry and Calculu I
MATH 221	Analytic Geometry and Calculu II
CIS 115	Introduction to Computing Science
CIS 200	Programming Fundamentals
CIS 300	Data and Program Structures
CIS 301	Logical Foundations of Programming
ECE 241	Introduction to Computer Engineering

For additional information about the University General Education program, check the requirements specified by the College of Engineering.

Total hours required for graduation (120 credit hours)

Admission to the Pre-Professional Program

New students, including transfer students, should submit the standard application form directly to the Office of Admissions. The admission criteria are the same as those for the university and the College of Engineering.

Any student who has completed more than 15 credit hours at Kansas State University in any major outside the College of Engineering may change majors into the pre-professional program provided that the student meets the admission requirements for the College of Engineering. A resident cumulative GPA of 2.3 or better is required for a change of major from any Engineering program to the pre-professional program Computer Science.

Course Requirements (24 total credits)

The course requirements and semester-by-semester curriculum for a BS in Computer Science remain in effect. However, certain courses from the first three semesters of the curriculum must be completed with a C or better for advancement beyond the pre-professional program. These courses are:

Course	Course Title
MATH 220	Analytic Geometry and Calculus I
MATH 221	Analytic Geometry and Calculus II
CIS 115	Introduction to Computing Science
CIS 200	Programming Fundamentals
CIS 300	Data and Program Structures
CIS 301	Logical Foundations of Programmir
ECE 241	Introduction to Computer Engineering

Admission to the Professional Program

Students must complete the pre-professional program and be accepted to the professional program prior to taking any of the following courses, which we will refer to as professional program courses:

Course	Course Title
CIS 308	C/C++Language Laboratory
CIS 415	Ethics and Computing Technology
CIS 450	Computer Architecture and Organization
CIS 501	Software Architecture and Design
CIS 505	Introduction to Programming Languages
CIS 520	Operating Systems I
CIS 560	Database System Concepts
CIS 575	Introduction to Algorithm Analysis
CIS 598	Computer Science Project
CIS 625	Concurrent Software Systems
~~CIS 640~~	~~Software Testing Techniques~~
CIS 642	Software Engineering Project I

The only other students who will be allowed to enroll in any of the above courses are non-CS majors who need these specific courses to satisfy the degree requirements of their majors. Non-CS majors wishing to use any of these courses to satisfy elective requirements for their majors will also be considered on a case-by-case basis.

In order to be considered for admission to the professional program, a student must have:

Passed all pre-professional program courses with a C or better.
Achieved at least a 2.3 GPA on all pre-professional courses (including transfer courses).

Additionally, an application to the professional program must be submitted to the Department of Computer Science by

In addition, credit must be received for CIS 015 Undergraduate Seminar.

Admission to the Professional Program

Students must complete the pre-professional program and be accepted to the professional program prior to taking any of the following courses, which we will refer to as professional program courses:

Course	Course Title
CIS 308	C/C++Language Laboratory
CIS 400	Object-Oriented Design, Implementation, and Testing
CIS 415	Ethics and Computing Technology
CIS 450	Computer Architecture and Organization
CIS 501	Software Architecture and Design
CIS 505	Introduction to Programming Languages
CIS 520	Operating Systems I
CIS 560	Database System Concepts
CIS 575	Introduction to Algorithm Analysis
CIS 596	Entrepreneurial Computer Science Project
CIS 598	Computer Science Project
CIS 599	Cybersecurity Project
CIS 625	Concurrent Software Systems
CIS 642	Software Engineering Project I

The only other students who will be allowed to enroll in any of the above courses are non-CS majors who need these specific courses to satisfy the degree requirements of their majors. Non-CS majors wishing to use any of these courses to satisfy elective requirements for their majors will also be considered on a case-by-case basis.

In order to be considered for admission to the professional program, a student must have:

Passed all pre-professional program courses with a C or better.
Achieved at least a 2.3 GPA on all pre-professional courses (including transfer courses).
Received credit in CIS 015 Undergraduate Seminar.

the end of the eighth week of either the Spring or Fall semester. This submission will be immediately prior to the student's pre-enrollment into any of the professional program courses. All courses in the pre-professional program must be completed and all grade criteria must be met by the end of the semester that the application is submitted. An exception to this rule is the student who expects to complete these criteria during the summer term. Those students should also make application in the Spring semester prior to pre-enrollment. All eligible applicants will be allowed to pre-enroll into professional program courses with the understanding that they will be dropped if they are not accepted for admission to the professional program prior to the beginning of the subsequent semester. Applications will be reviewed by the Curriculum Committee of the Department and accepted or rejected as soon as possible after semester grades are issued. The number of students admitted in any given semester will be limited by the number of seats available. If the number of applicants who meet the grade requirements listed above exceeds the number of seats available, then in addition to the minimum grade requirements listed above, the admission will be determined a holistic evaluation of the following factors: Grades in college-level courses, particularly computing courses; Communication skills; Activities and service; Socioeconomic disadvantage; Status as first-generation college student; and History of overcoming personal hardship. Students who have completed the pre-professional program with the required grades, but are denied admission, may re-apply in a later semester. **Academic Standards** After admission to the professional program, students are expected to attain	Additionally, an application to the professional program must be submitted to the Department of Computer Science by the end of the eighth week of either the Spring or Fall semester. This submission will be immediately prior to the student's pre-enrollment into any of the professional program courses. All courses in the pre-professional program must be completed and all grade criteria must be met by the end of the semester that the application is submitted. An exception to this rule is the student who expects to complete these criteria during the summer term. Those students should also make application in the Spring semester prior to pre-enrollment. All eligible applicants will be allowed to pre-enroll into professional program courses with the understanding that they will be dropped if they are not accepted for admission to the professional program prior to the beginning of the subsequent semester. Applications will be reviewed by the Curriculum Committee of the Department and accepted or rejected as soon as possible after semester grades are issued. The number of students admitted in any given semester will be limited by the number of seats available. If the number of applicants who meet the grade requirements listed above exceeds the number of seats available, then in addition to the minimum grade requirements listed above, the admission will be determined a holistic evaluation of the following factors: Grades in college-level courses, particularly computing courses; Communication skills; Activities and service; Socioeconomic disadvantage; Status as first-generation college student; and History of overcoming personal hardship. Students who have completed the pre-professional program with the required grades, but are denied admission, may re-apply in a later semester.

"C" or better grades in each of the professional program courses taken, and to receive a "Cr" grade in CIS 018 each Fall and Spring semester they remain in the program. Specifically, students will be subject to the following academic standards that are more stringent than those for the University.

Warning of unsatisfactory progress
Regardless of the overall GPA, a student with any "D" or "F" grade in any professional program course will receive a "**Warning of Unsatisfactory Progress**." Additionally, any student who fails to receive a grade of "Cr" in CIS 018 in any Fall or Spring semester will receive a "**Warning of Unsatisfactory Progress**." This warning will remain in effect for the remainder of their stay in the professional program.

Dismissal from the Program
If a student has received a warning of unsatisfactory progress, then subsequently receives a "D" or "F" grade in any professional program course, or fails to receive a ~~greade~~ of "Cr" in CIS 018 in any Fall or Spring semester, that student will be dismissed from the professional program, and will be ineligible to enroll in any professional program courses (though students who transfer to either Computer Engineering or Biomedical Engineering will be allowed to enroll in certain courses, as outlined above).

Readmission
A student who has been dismissed from the professional program may petition to be readmitted to the program, provided at least one year has elapsed from the conclusion of the last semester that the student was in the program to the beginning of the semester for which the student is seeking admission. The petition must include a justification of the student's preparedness to complete the program. This petition must be submitted to the Computer Science Department by the eighth week of the Fall or Spring semester preceding the semester for which the student seeks readmission. The student will be interviewed by the Curriculum Committee, who will then make a decision in time for the student to pre-enroll. All readmitted students will remain on warning of unsatisfactory progress for the remainder of their stay in the professional program.

**The warning and dismissal actions referenced above are departmental actions

Academic Standards

After admission to the professional program, students are expected to attain "C" or better grades in each of the professional program courses taken, and to receive a "Cr" grade in CIS 018 each Fall and Spring semester they remain in the program. Specifically, students will be subject to the following academic standards that are more stringent than those for the University.

Warning of unsatisfactory progress
Regardless of the overall GPA, a student with any "D" or "F" grade in any professional program course will receive a "**Warning of Unsatisfactory Progress**." Additionally, any student who fails to receive a grade of "Cr" in CIS 018 in any Fall or Spring semester will receive a "**Warning of Unsatisfactory Progress**." This warning will remain in effect for the remainder of their stay in the professional program.

Dismissal from the Program
If a student has received a warning of unsatisfactory progress, then subsequently receives a "D" or "F" grade in any professional program course, or fails to receive a grade of "Cr" in CIS 018 in any Fall or Spring semester, that student will be dismissed from the professional program, and will be ineligible to enroll in any professional program courses (though students who transfer to either Computer Engineering or Biomedical Engineering will be allowed to enroll in certain courses, as outlined above).

Readmission
A student who has been dismissed from the professional program may petition to be readmitted to the program, provided at least one year has elapsed from the conclusion of the last semester that the student was in the program to the beginning of the semester for which the student is seeking admission. The petition must include a justification of the student's preparedness to complete the program. This petition must be submitted to the Computer Science Department by the eighth week of the Fall or Spring semester preceding the semester for which the student seeks readmission. The student will be interviewed by the Curriculum Committee, who will then make a decision in time for the student to pre-enroll. All readmitted students will remain on warning of

that are separate and distinct from Academic Warning and Academic Dismissal as defined by the University Catalog. Grades earned during an intersession will not be considered by the Department in the determination of unsatisfactory academic progress by the department.	unsatisfactory progress for the remainder of their stay in the professional program. **The warning and dismissal actions referenced above are departmental actions that are separate and distinct from Academic Warning and Academic Dismissal as defined by the University Catalog. Grades earned during an intersession will not be considered by the Department in the determination of unsatisfactory academic progress by the department.

Concurrent B.S. in Computer Science and Master of Business Administration

Contact person: Rod Howell
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=14030&hl=%22computer+engineering%22&returnto=search

Rationale: The proposed changes include replacing 3 hours of unrestricted electives with CIS 400 Object-Oriented Design, Implementation, and Testing and adding COMM 323 Nonverbal Communication to the list of Communication Electives.

The creation of CIS 400 was motivated by differing ideas among our faculty on the most appropriate course material for CIS 501 Software Architecture. We ultimately decided that our students need exposure to more material than would fit into one course. We therefore have proposed CIS 400 as a new course and wish to require it for all of our students. The two courses, CIS 400 and CIS 501 will together cover the spectrum of software design topics from low level to high level.

COMM 323 covers an important aspect of interpersonal communication, namely, nonverbal communication. We believe that understanding nonverbal communication can help our students to improve their interpersonal communication skills.

Impact Statement: Prof. Chwen Sheu, Dean of Business Administration, was emailed a copy of this proposal on Aug. 28, 2018. He responded the same day, agreeing with the changes.

Freshman Fall Semester (15-16 credit hours)	**Freshman Fall Semester (15-16 credit hours)**
Humanities/social science elective (first of four) **Credits:** 3	Humanities/social science elective (first of four) **Credits:** 3

CIS 115 - Introduction to Computing Science **Credits:** 3 CIS 015 - Undergraduate Seminar **Credits:** 0 COMM 105 - Public Speaking IA **Credits:** 2 COMM 106 - Public Speaking I **Credits:** 3 ENGL 100 - Expository Writing I **Credits:** 3 MATH 220 - Analytic Geometry and Calculus I **Credits:** 4 **Freshman Spring semester (15 credit~~h~~ hours)**	CIS 115 - Introduction to Computing Science **Credits:** 3 CIS 015 - Undergraduate Seminar **Credits:** 0 COMM 105 - Public Speaking IA **Credits:** 2 COMM 106 - Public Speaking I **Credits:** 3 ENGL 100 - Expository Writing I **Credits:** 3 MATH 220 - Analytic Geometry and Calculus I **Credits:** 4 **Freshman Spring semester (15 credit~~h~~ hours)**
Math/science elective with laboratory (first of five) **Credits:** 4 CIS 200 - Programming Fundamentals **Credits:** 4 ECE 241 - Introduction to Computer Engineering **Credits:** 3 MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 **Sophomore Fall semester (15 credit hours)**	Math/science elective with laboratory (first of five) **Credits:** 4 CIS 200 - Programming Fundamentals **Credits:** 4 ECE 241 - Introduction to Computer Engineering **Credits:** 3 MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 **Sophomore Fall semester (15 credit hours)**
Humanities/social science electives (second of four) **Credits:** 3 CIS 300 - Data and Program Structures **Credits:** 3 CIS 301 - Logical Foundations of Programming **Credits:** 3 ECON 110 - Principles of Macroeconomics **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 **Sophomore Spring semester (15 credit hours)**	Humanities/social science electives (second of four) **Credits:** 3 CIS 300 - Data and Program Structures **Credits:** 3 CIS 301 - Logical Foundations of Programming **Credits:** 3 ECON 110 - Principles of Macroeconomics **Credits:** 3 ENGL 200 - Expository Writing II **Credits:** 3 **Sophomore Spring semester (15 credit hours)**
Math/science elective (second of five) **Credits:** 3 Communication elective **Credits:** 3 ECON 120 - Principles of Microeconomics **Credits:** 3 ~~CIS 501 - Software Architecture and Design~~ **Credits:** 3 MATH 510 - Discrete Mathematics **Credits:** 3 **Junior Fall semester (15 credit hours)**	Math/science elective (second of five) **Credits:** 3 Communication elective **Credits:** 3 ECON 120 - Principles of Microeconomics **Credits:** 3 CIS 400 – Object-Oriented Design, Implementation, and Testing **Credits:** 3 MATH 510 - Discrete Mathematics **Credits:** 3 **Junior Fall semester (15 credit hours)**
Humanities/social science elective (third of four) **Credits:** 3 ~~Unrestricted electives~~ **Credits:** 3 CIS 308 - C Language Laboratory **Credits:** 1 CIS 415 - Ethics and Computing Technology **Credits:** 1 CIS 560 - Database System Concepts **Credits:** 3	Humanities/social science elective (third of four) **Credits:** 3 CIS 501 – Software Architecture and Design **Credits:** 3 CIS 308 - C Language Laboratory **Credits:** 1 CIS 415 - Ethics and Computing Technology **Credits:** 1 CIS 560 - Database System Concepts **Credits:** 3

Math/science elective with laboratory (third of five) **Credits:** 4

Junior Spring semester (15 credit hours)

Technical elective (first of five) **Credits:** 3
CIS 575 - Introduction to Algorithm Analysis **Credits:** 3
CIS 450 - Computer Architecture and Operations **Credits:** 3
ENGL 516 - Written Communication for the Sciences **Credits:** 3
Or
ENGL 415 - Written Communication for Engineers **Credits:** 3
STAT 510 - Introductory Probability and Statistics I **Credits:** 3

Senior Fall semester (14-15 credit hours)

Technical electives (second of five) **Credits:** 3
MANGT 820 Managing Organizational Behavior **Credits:** 3
ACCTG 810 Foundations of Accounting **Credits:** 3
Math/science elective (fourth of five) **Credits:** 3
Unrestricted elective **Credits:** 2-3

Senior Spring semester (12 credit hours)

MANGT 810 Operations and Supply Chain Management **Credits:** 3
MKTG 810 Marketing Concepts and Research **Credits:** 3
FINAN 815 Foundations of Finance **Credits:** 3
ECON 815 Economic Analysis for Business **Credits:** 3

Fifth Fall semester (15 credit hours)

CIS 505 - Introduction to Programming Languages **Credits:** 3
Humanities/social science elective (fourth of four) **Credits:** 3
MANGT 880 Business Strategy **Credits:** 3
Technical electives (third and fourth of five) **Credits:** 6

Fifth Spring semester (15 credit hours)

Technical elective (fifth of five) **Credits:** 3
MANGT 860 Managing the Triple Bottom Line Business **Credits:** 3
GENBA 890 Business Capstone or
GENBA 897 MBA Internship **Credits:** 3
Unrestricted elective **Credits:** 3

Math/science elective with laboratory (third of five) **Credits:** 4

Junior Spring semester (15 credit hours)

Technical elective (first of five) **Credits:** 3
CIS 575 - Introduction to Algorithm Analysis **Credits:** 3
CIS 450 - Computer Architecture and Operations **Credits:** 3
ENGL 516 - Written Communication for the Sciences **Credits:** 3
Or
ENGL 415 - Written Communication for Engineers **Credits:** 3
STAT 510 - Introductory Probability and Statistics I **Credits:** 3

Senior Fall semester (14-15 credit hours)

Technical electives (second of five) **Credits:** 3
MANGT 820 Managing Organizational Behavior **Credits:** 3
ACCTG 810 Foundations of Accounting **Credits:** 3
Math/science elective (fourth of five) **Credits:** 3
Unrestricted elective **Credits:** 2-3

Senior Spring semester (12 credit hours)

MANGT 810 Operations and Supply Chain Management **Credits:** 3
MKTG 810 Marketing Concepts and Research **Credits:** 3
FINAN 815 Foundations of Finance **Credits:** 3
ECON 815 Economic Analysis for Business **Credits:** 3

Fifth Fall semester (15 credit hours)

CIS 505 - Introduction to Programming Languages **Credits:** 3
Humanities/social science elective (fourth of four) **Credits:** 3
MANGT 880 Business Strategy **Credits:** 3
Technical electives (third and fourth of five) **Credits:** 6

Fifth Spring semester (15 credit hours)

Technical elective (fifth of five) **Credits:** 3
MANGT 860 Managing the Triple Bottom Line Business **Credits:** 3
GENBA 890 Business Capstone or
GENBA 897 MBA Internship **Credits:** 3
Unrestricted elective **Credits:** 3

Math/science elective (fifth of five) **Credits:** 3 **Notes:** A grade of C or better is required for all graded courses listed by specific course number above. All students new to the CS department must complete CIS 015. Math/science electives must be taken for undergraduate credit and have departmental approval. Humanities/social science electives must be taken for undergraduate credit from the list approved by the College of Engineering. Communications Elective Credits: (3) The Communications Elective must be chosen from: COMM 322 – Interpersonal Communication **Credits:** 3 COMM 326 – Small Group Discussion Methods **Credits:** 3 MANGT 420 – Principles of Management **Credits:** 3 THTRE 261 – Fundamentals of Acting **Credits:** 3 THTRE 265 – Fundamentals of Improvisation I, II **Credits:** 3 **Technical electives must be comprised of the following:** C or better in either CIS 520-Operating Systems I or CIS 625-Concurrent Software Systems. C or better in either CIS 598-Computer Science Project or CIS 642-Software Engineering Project I. Students taking CIS 642 must take it for undergraduate credit and take CIS 643-Software Engineering Project II the following semester as an unrestricted elective. Three courses taken for graduate credit from the following list: 1. CIS 732 Machine Learning and Pattern Recognition 2. MIS 670 Social Media Analytics and Web Mining	Math/science elective (fifth of five) **Credits:** 3 **Notes:** A grade of C or better is required for all graded courses listed by specific course number above. All students new to the CS department must complete CIS 015. Math/science electives must be taken for undergraduate credit and have departmental approval. Humanities/social science electives must be taken for undergraduate credit from the list approved by the College of Engineering. Communications Elective Credits: (3) The Communications Elective must be chosen from: COMM 322 – Interpersonal Communication **Credits:** 3 COMM 323 – Nonverbal Communication **Credits:** 3 COMM 326 – Small Group Discussion Methods **Credits:** 3 MANGT 420 – Principles of Management **Credits:** 3 THTRE 261 – Fundamentals of Acting **Credits:** 3 THTRE 265 – Fundamentals of Improvisation I, II **Credits:** 3 **Admission to MBA program** A student can apply to the graduate school and be admitted to the MBA program upon earning a >= 3.000 GPA in at least 80 credit hours of their undergraduate degree. **Technical electives must be comprised of the following:** C or better in either CIS 520-Operating Systems I or CIS 625-Concurrent Software Systems. C or better in either CIS 598-Computer Science Project or CIS 642-Software Engineering Project I. Students taking CIS 642 must take it for undergraduate credit and take CIS 643-Software Engineering Project II the following semester as an unrestricted elective. Three courses taken for graduate credit from the following list: 1. CIS 732 Machine Learning and Pattern Recognition

3. At most one of: • MIS 665 Business Analytics and Data Mining • MKTG 880 Applied Marketing Analytics • MKTG 881 Advanced Marketing Analytics 4. Other Data Analytics courses, including special topics courses, approved by both the Department of Computer Science and the College of Business Administration. **NOTE: K-State 8 General Education Requirements** For additional information about the University General Education program, check the requirements specified by the College of Engineering. **Total hours required for graduation (147 credit hours)**	2. MIS 670 Social Media Analytics and Web Mining 3. At most one of: • MIS 665 Business Analytics and Data Mining • MKTG 880 Applied Marketing Analytics • MKTG 881 Advanced Marketing Analytics 4. Other Data Analytics courses, including special topics courses, approved by both the Department of Computer Science and the College of Business Administration. **NOTE: K-State 8 General Education Requirements** For additional information about the University General Education program, check the requirements specified by the College of Engineering. **Total hours required for graduation (147 credit hours)**

Concurrent Bachelors in Mechanical Engineering and Masters of Business Administration Curriculum - NEW

Contact Person: Kevin Wanklyn

Freshman year

Fall semester (16 credit hours)

ECON 110 – Principles of Macroeconomics **Credits:** 3
CHM 210 - Chemistry I **Credits:** 4
ENGL 100 - Expository Writing I **Credits:** 3
MATH 220 - Analytic Geometry and Calculus I **Credits:** 4
ME 101 - Introduction to Mechanical Engineering **Credits:** 2

Spring semester (16 credit hours)

COMM 105 - Public Speaking IA **Credits:** 2
ECON 120 - Principles of Microeconomics **Credits:** 3
MATH 221 - Analytic Geometry and Calculus II **Credits:** 4
ME 212 - Engineering Graphics **Credits:** 2
PHYS 213 - Engineering Physics I **Credits:** 5

Sophomore year

Fall semester (16 credit hours)

CE 333 - Statics **Credits:** 3
CHE 354 - Basic Concepts in Materials Science and Engineering **Credits:** 1
CHE 355 - Fundamentals of Mechanical Properties **Credits:** 1
IMSE 250 - Introduction to Manufacturing Processes and Systems **Credits:** 2
MATH 222 - Analytic Geometry and Calculus III **Credits:** 4
PHYS 214 - Engineering Physics II **Credits:** 5

Spring semester (16 credit hours)

MATH 551 – Applied Matrix Theory **Credits: 3**
MATH 340 - Elementary Differential Equations **Credits:** 4
ME 512 - Dynamics **Credits:** 3
ME 513 - Thermodynamics I **Credits:** 3
CE 533 - Mechanics of Materials **Credits:** 3

Junior year

Fall semester (16 credit hours)

NE 495 - Elements of Nuclear Engineering **Credits:** 3
ME 533 - Machine Design I **Credits:** 3
ECE 519 - Electric Circuits and Control **Credits:** 4
ME 571 - Fluid Mechanics **Credits:** 3
ME 400 - Computer Applications in Mechanical Engineering **Credits:** 3

Spring semester (16 credit hours)

*b - Technical elective **Credits:** 3
ME 535 - Measurement and Instrumentation Laboratory **Credits:** 3
or
NE 612 - Principles of Radiation Detection **Credits:** 3
ME 570 - Control of Mechanical Systems I **Credits:** 4
ENGL 415 - Written Communication for Engineers **Credits:** 3
ECON 815 – Economic Analysis for Businesses **Credits:** 3

Senior year

Fall semester (15 credit hours)

*b - Technical elective **Credits:** 3
*b - Technical elective **Credits:** 3
ME 573 - Heat Transfer **Credits:** 3
MANGT 830 – Information Technology Strategy and Application **Credits:** 3
ACCTG 810 – Foundations of Accounting **Credits:** 3

Spring semester (15 credit hours)

*a - Humanities/social science elective **Credits:** 3
ME 574 - Interdisciplinary Industrial Design Projects I **Credits:** 3
MANGT 820 – Managing Organizational Behavior **Credits:** 3
FINAN 815 – Foundations of Finance **Credits:** 3
MANGT 810 – Operations and Supply Chain Management **Credits: 3**

Fifth Year

Fall semester (15 credit hours)

*a - Humanities/social science elective **Credits:** 3
ME 575 - Interdisciplinary Industrial Design Projects II **Credits:** 3
MKTG 810 – Marketing Concepts and Research **Credits:** 3
MANGT 880 – Business Strategy **Credits:** 3
*h – MBA Concentration Elective **Credits:** 3

Spring semester (12 credit hours)

*b - Technical elective **Credits:** 3
MANGT 860 – Managing Triple Bottom Business **Credit:** 3
*h – MBA Concentration Elective **Credits:** 3
*i – Culminating Experience **Credits:** 3

Notes

*a - A total of 6 credits of humanities and social science electives are required. Three of these credits can come from 300-level or above AERO or MSCI courses for students who successfully complete the ROTC program. These are to be selected from the College of Engineering Humanities and Social Science Electives Course List. Students should select these courses such that the requirements of the K-State 8 general education program also are met, thus one of these courses must cover 2 K-State 8 tags not covered by required courses.

*b - Technical Electives: Three technical electives are to be chosen from MNE courses with at least one course 600-level or above. Another technical elective is to be chosen from 200-level or above College of Engineering (including MNE) classes. The remaining technical electives credits are to be chosen from 200-level or above College of Engineering, Math, Chemistry, Physics, Biology, or Business Administration classes, 400-level or above Statistics classes, or a maximum of 3 credit hours from 300-level or above AERO or MSCI courses for students who successfully complete the ROTC program. Other classes that strengthen a student's program of study will be considered and require advisor and department head approval.

*c - Nuclear Engineering Option: NE 612 will replace ME 535 in the curriculum. The three remaining Nuclear Engineering option courses fulfill the requirement of the three MNE technical electives.

*d - ME 535 and NE 612 may both be taken and one of them applied as a Tech Elective. NE 612 must be taken for the NE Option.

*e - Currently admitted students will only be allowed to transfer in one ME/NE numbered course as required by the curriculum; however, ME 533, ME 574, ME 575 and ME 573 must be taken within the MNE department.

*f - Currently admitted students will be allowed to transfer one of the three required MNE technical electives with the exception of the >=600 level MNE technical elective.

*g - To graduate with a Bachelors in Mechanical Engineering, students must have a >= 2.200 GPA in all ME/NE classes >= 400 level taken for undergraduate credit at Kansas State University. Course grades that have been removed by the K-State Retake policy will not apply to this GPA calculation.

*h – Classes from within the students chosen MBA Concentration Area, must be taken for graduate credit.

*i – Either GNBA 897 or 890 (Internship or Capstone Class)

Admission to MBA program

A student can apply to the graduate school and be admitted to the MBA program upon earning a >= 3.000 GPA in at least 80 credit hours of their undergraduate degree.

Total credit hours required for graduation (153)

Electrical Engineering (EE) (B.S.)

Contact Person: William Kuhn
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13866&hl=%22computer+engineering%22&returnto=search

Rationale: The Board of Regents has determined that our programs must have their hours decreased to 128 or below. The Electrical Engineering program is currently 129 hours. The faculty has determined that a one hour decrease in ECE 591 (senior design ii) from 3 to 2 credits is feasible since this is the second semester in a 2-semester sequence, and students are primarily working on project implementation. Therefore, the senior year is modified to show Spring semester as 14 credit hours, ECE 591 as 2 credits, and the total credits are modified to show 128. No other changes are intended.

Impact Statement: None outside department.

The Electrical Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.	The Electrical Engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
Bachelor's degree requirements	**Bachelor's degree requirements**
Freshman year	**Freshman year**
Fall semester (16 credit hours)	**Fall semester (16 credit hours)**
CHM 210 - Chemistry I **Credits:** 4 COMM 105 - Public Speaking IA **Credits:** 2 ECE 015 - New Student Assembly **Credits:** 0 ECE 210 - Introduction to Electrical Engineering **Credits:** 3 ENGL 100 - Expository Writing I **Credits:** 3 MATH 220 - Analytic Geometry and Calculus I **Credits:** 4	CHM 210 - Chemistry I **Credits:** 4 COMM 105 - Public Speaking IA **Credits:** 2 ECE 015 - New Student Assembly **Credits:** 0 ECE 210 - Introduction to Electrical Engineering **Credits:** 3 ENGL 100 - Expository Writing I **Credits:** 3 MATH 220 - Analytic Geometry and Calculus I **Credits:** 4
Spring semester (17 credit hours)	**Spring semester (17 credit hours)**
BIOL 198 - Principles of Biology **Credits:** 4 or CHM 230 - Chemistry II **Credits:** 4 ECE 115 - New Student Design Project **Credits:** 1 ECON 110 - Principles of Macroeconomics **Credits:** 3 MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 PHYS 213 - Engineering Physics I **Credits:** 5	BIOL 198 - Principles of Biology **Credits:** 4 or CHM 230 - Chemistry II **Credits:** 4 ECE 115 - New Student Design Project **Credits:** 1 ECON 110 - Principles of Macroeconomics **Credits:** 3 MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 PHYS 213 - Engineering Physics I **Credits:** 5
Sophomore year	**Sophomore year**
Fall semester (17 credit hours)	**Fall semester (17 credit hours)**
CHE 354 - Basic Concepts in Materials Science and Engineering **Credits:** 1	CHE 354 - Basic Concepts in Materials Science and Engineering **Credits:** 1

CHE 356 - Fundamentals of Electrical Properties **Credits:** 1 ECE 241 - Introduction to Computer Engineering **Credits:** 3 ECE 410 - Circuit Theory I **Credits:** 3 MATH 340 - Elementary Differential Equations **Credits:** 4 PHYS 214 - Engineering Physics II **Credits:** 5 **Spring semester (16 credit hours)**	CHE 356 - Fundamentals of Electrical Properties **Credits:** 1 ECE 241 - Introduction to Computer Engineering **Credits:** 3 ECE 410 - Circuit Theory I **Credits:** 3 MATH 340 - Elementary Differential Equations **Credits:** 4 PHYS 214 - Engineering Physics II **Credits:** 5 **Spring semester (16 credit hours)**
CIS 209 - C Programming for Engineers **Credits:** 3 ECE 511 - Circuit Theory II **Credits:** 3 ECE 525 - Electronics I **Credits:** 3 MATH 222 - Analytic Geometry and Calculus III **Credits:** 4 STAT 510 - Introductory Probability and Statistics I **Credits:** 3 **Junior year**	CIS 209 - C Programming for Engineers **Credits:** 3 ECE 511 - Circuit Theory II **Credits:** 3 ECE 525 - Electronics I **Credits:** 3 MATH 222 - Analytic Geometry and Calculus III **Credits:** 4 STAT 510 - Introductory Probability and Statistics I **Credits:** 3 **Junior year**
Fall semester (16 credit hours)	**Fall semester (16 credit hours)**
Humanities/Social Science Elective **Credits: 3 ECE 431 - Microcontrollers **Credits:** 3 ECE 526 - Electronics II **Credits:** 3 ECE 540 - Applied Scientific Computing for Engineers **Credits:** 3 ECE 557 - Electromagnetic Theory I **Credits:** 4 **Spring semester (17 credit hours)**	**Humanities/Social Science Elective **Credits:** 3 ECE 431 - Microcontrollers **Credits:** 3 ECE 526 - Electronics II **Credits:** 3 ECE 540 - Applied Scientific Computing for Engineers **Credits:** 3 ECE 557 - Electromagnetic Theory I **Credits:** 4 **Spring semester (17 credit hours)**
Humanities/Social Science Elective **Credits: 3 ECE Technical Electives **Credits:** 3 ECE 502 - Electronics Laboratory **Credits:** 2 ECE 512 - Linear Systems **Credits:** 3 ECE 581 - Energy Conversion I **Credits:** 3 ENGL 415 - Written Communication for Engineers **Credits:** 3 **Senior year**	**Humanities/Social Science Elective **Credits:** 3 ECE Technical Electives **Credits:** 3 ECE 502 - Electronics Laboratory **Credits:** 2 ECE 512 - Linear Systems **Credits:** 3 ECE 581 - Energy Conversion I **Credits:** 3 ENGL 415 - Written Communication for Engineers **Credits:** 3 **Senior year**
Fall semester (15 credit hours)	**Fall semester (15 credit hours)**
***Technical electives **Credits:** 6 CE 530 - Statics and Dynamics **Credits:** 3 ECE 530 - Control Systems Design **Credits:** 3 ECE 590 - Senior Design Experience I **Credits:** 3 **Spring semester (~~15~~ credit hours)**	***Technical electives **Credits:** 6 CE 530 - Statics and Dynamics **Credits:** 3 ECE 530 - Control Systems Design **Credits:** 3 ECE 590 - Senior Design Experience I **Credits:** 3 **Spring semester (14 credit hours)**
***Technical electives **Credits:** 6 **Humanities/Social Science Elective **Credits:** 3 ECE 591 - Senior Design Experience II **Credits:** ~~3~~ ME 513 - Thermodynamics I **Credits:** 3 **Electrical engineering options**	***Technical electives **Credits:** 6 **Humanities/Social Science Elective **Credits:** 3 ECE 591 - Senior Design Experience II **Credits:** 2 ME 513 - Thermodynamics I **Credits:** 3 **Electrical engineering options**
General option	**General option**
In the general option an area of emphasis must be chosen. Students are expected to select a set of interrelated courses that fulfills an engineering design	In the general option an area of emphasis must be chosen. Students are expected to select a set of interrelated courses that fulfills an engineering design

experience. These areas include bioengineering, electronics and communications, and power systems.

Bioengineering option

Bioengineering is the application of engineering principles to measurement, analysis, and design issues faced by the medical and life science communities. The health care industry is one of the fastest-growing business sectors in the United States. Through the bioengineering option, undergraduate students can obtain a BS degree in electrical engineering while acquiring a highly marketable biotechnology skill set. Areas of emphasis within this option are medical instrumentation (biosensors and data acquisition tools), biosignal analysis, and biomedical product design. Candidates for this option include undergraduate electrical engineering and pre-medicine students who seek a multidisciplinary environment focused upon using technology to increase quality of life. Instructors from various colleges at K-State contribute to this curriculum.

The curriculum accommodates pre-medicine students through the acceptance of core premedicine courses as complementary electives. Students pursuing a pre-medicine program should contact the dean's office in the College of Arts and Sciences for additional information.

Notes

*Students must complete the appropriate prerequisite credits for ENGL 415, but may apply only three hours of ENGL 415 prerequisite credits towards degree requirements.

For the good and benefit of the student and their future employer, the ECE department enforces a C-prerequisite policy for all courses listed by number in the curriculum and for any in-major technical elective course applied toward the degree. A grade of C or better must be earned in all prerequisites to such a course before enrolling in that course.

**Humanities and Social Science electives are to be selected from the list of courses approved by the College of Engineering. Students should select these courses as needed to complete the requirements of the K-State 8 General Education program.

***Technical electives must be selected to complete one of the areas of emphasis.

*****No more than twelve (12) credit hours of courses in electrical and computer engineering may be transferred to Kansas State University for credit toward a bachelor degree in either electrical engineering or computer engineering. Further, those courses selected for transfer credit must be equivalent to courses in the list below and must be such that the prerequisites for the listed course are also satisfied. Any courses transferred must be taken from ABET accredited programs: ECE 210, ECE 241, ECE 410, ECE 525, ECE 557, ECE 581.

experience. These areas include bioengineering, electronics and communications, and power systems.

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Students participating in exchange programs or transferring in from outside the United States may request waivers of this policy. Waivers must be obtained in advance of the exchange semester. **K-State 8 General Education Requirements** IMPORTANT: Students must meet the requirements of the K-State 8 General Education Program. **Total hours required for graduation (~~129~~)**	Students participating in exchange programs or transferring in from outside the United States may request waivers of this policy. Waivers must be obtained in advance of the exchange semester. **K-State 8 General Education Requirements** IMPORTANT: Students must meet the requirements of the K-State 8 General Education Program. **Total hours required for graduation (128)**

Leadership Technical Studies Certificate Program - DISCONTINUE

Contact person: Andy Fund

http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13851&hl=%22leadership+technical+studies%22&returnto=search

Rationale: This program has not been offered for sometime due to faculty retirements.
Impact Statement: No impact.

Leadership Technical Studies Certificate Program

Return to: Catalog Search

The leadership in undergraduate technical studies certificate program provides a structured learning experience for undergraduate students interested in exploring leadership abilities, participating in personal and professional development activities, and developing lifelong learning skills. The certificate program combines academic course work, involvement in campus organizations, and a professional experience in industry or an international educational experience. The program requires 15 semester credit hours and is offered through the dean's office in the College of Engineering.

Course Requirements

Six credit hours
Four required courses-focus on:
personal/interpersonal skills, continuous quality improvement, creative problem solving/basic leadership skills, and economics

Personal/Interpersonal Skills

DEN 325 - Engineering Professionalism and Decision Making **Credits:** 1
or
LEAD 350 - Culture and Context in Leadership **Credits:** 3

Continuous Quality Improvement

IMSE 541 - Statistical Quality Control **Credits:** 3
or
IMSE 641 - Quality Engineering **Credits:** 3
or
MANGT 300 - Introduction to Total Quality Management **Credits:** 1
or
MANGT 541 - Management of Quality **Credits:** 3

Creative Problem Solving/Basic Leadership Skills

DEN 398 - Problems in Engineering and Technology **Credits:** 1-18
or
LEAD 212 - Introduction to Leadership Concepts **Credits:** 2-3

Economics

CE 680 - Economics of Design and Construction **Credits:** 3
or
IMSE 530 - Engineering Economic Analysis **Credits:** 2

Additional Course Requirements

Select one course from Ethics
Select one course from Foundations & Applications of Leadership
Select one course from Theories of Leadership & Organizational Behavior

Mechanical Engineering (ME) (B.S.)

Contact person: Kevin Wanklyn
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13869&hl=%22mechanical+engineering%22&returnto=search

Rationale:

Removal of 2 Credit Hours of H&SS requirements
MNE students require 3 K-State 8 tags that are not provided from required classes. The current curriculum has 4 H&SS courses, one of those 2 credit hours. The 2-credit hour requirement is unnecessary to fulfill K-State 8. Additionally, it represents a "hidden" hour in the curriculum as most H&SS courses are 3 credit hours.

Movement of courses
Movement of courses was designed to allow ME 573 - Heat Transfer to taken before the Fall semester of the Senior Year. This was desired because many Industrial Design Projects offered require knowledge of Heat Transfer for successful completion. The removal of the 2 Hour H&SS allowed MATH 551 – Applied Matrix Theory, ME 571 – Fluid Mechanics and ENGL 415 – Written Communication for Engineers to move one semester earlier as well. The result is Heat Transfer in the Senior Year – Fall Semester and a more balanced schedule with 16 credit hours in every semester Freshman – Junior, and the last two semesters having 14 and 15 credit hours respectively.

Removal of >=300 Level requirement for 6 hours of H&SS courses
Removal of this requirement will allow transfer students from other institutions (particularly Junior Colleges) to apply more hours to a K-State Degree. Additionally, the department believes that opening all H&SS courses up for the fulfillment of the 9 required hours will result in a broader array of courses being taken instead of the focused few in which students currently enroll.

Adding specific language on MSCI and AERO courses into H&SS and Technical Elective notes
MNE wishes to formalize "understandings" between the Engineering Student Services office and the department so that undergraduates participating in ROTC are clear on what is accepted.

Cleaning up statements in *b and *c
Some language in *b was duplicated in *e. A statement in *c was incorrect.

Addition of an MNE GPA policy
After an analysis of graduating students, the MNE department found that 6.6% of Bachelor of Mechanical Engineering Students have graduated with < 2.000 in ME/NE courses since the Spring of 2012. After consideration of many ways to combat this issue the MNE faculty have unanimously agreed on to require a GPA of 2.200 or greater on >= 400 level courses in the department. The GPA was chosen at 2.200 because of the desire to have better than a C performance on average and also allow for a student to pass with a D. The >= 400 level considers all MNE courses downstream from the second semester sophomore year. This requirement only excludes 2 courses and will put transfer and 4-year K-State students to the same standard.

Impact Statement: This curriculum change will impact all incoming first year and transfer students to Mechanical Engineering.

Departments that teach H&SS courses will be indirectly impacted by the removal of 2 credit hours and the >=300 level requirement. MNE has sent an email to Arts and Sciences informing them of the change. A copy of the email is attached in the files.

Bachelor's degree requirements	Bachelor's degree requirements
Freshman year **Fall semester (16 credit hours)** *a - Humanities/social science elective **Credits:** 3 CHM 210 - Chemistry I **Credits:** 4 ENGL 100 - Expository Writing I **Credits:** 3 MATH 220 - Analytic Geometry and Calculus I **Credits:** 4 ME 101 - Introduction to Mechanical Engineering **Credits:** 2 **Spring semester (16 credit hours)** COMM 105 - Public Speaking IA **Credits:** 2 ECON 110 - Principles of Macroeconomics **Credits:** 3 MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 ME 212 - Engineering Graphics **Credits:** 2 PHYS 213 - Engineering Physics I **Credits:** 5 **Sophomore year** **Fall semester (16 credit hours)** CE 333 - Statics **Credits:** 3	**Freshman year** **Fall semester (16 credit hours)** *a - Humanities/social science elective **Credits:** 3 CHM 210 - Chemistry I **Credits:** 4 ENGL 100 - Expository Writing I **Credits:** 3 MATH 220 - Analytic Geometry and Calculus I **Credits:** 4 ME 101 - Introduction to Mechanical Engineering **Credits:** 2 **Spring semester (16 credit hours)** COMM 105 - Public Speaking IA **Credits:** 2 ECON 110 - Principles of Macroeconomics **Credits:** 3 MATH 221 - Analytic Geometry and Calculus II **Credits:** 4 ME 212 - Engineering Graphics **Credits:** 2 PHYS 213 - Engineering Physics I **Credits:** 5 **Sophomore year** **Fall semester (16 credit hours)** CE 333 - Statics **Credits:** 3

CHE 354 - Basic Concepts in Materials Science and Engineering **Credits:** 1 CHE 355 - Fundamentals of Mechanical Properties **Credits:** 1 IMSE 250 - Introduction to Manufacturing Processes and Systems **Credits:** 2 MATH 222 - Analytic Geometry and Calculus III **Credits:** 4 PHYS 214 - Engineering Physics II **Credits:** 5	CHE 354 - Basic Concepts in Materials Science and Engineering **Credits:** 1 CHE 355 - Fundamentals of Mechanical Properties **Credits:** 1 IMSE 250 - Introduction to Manufacturing Processes and Systems **Credits:** 2 MATH 222 - Analytic Geometry and Calculus III **Credits:** 4 PHYS 214 - Engineering Physics II **Credits:** 5
Spring semester (~~15 credit hours~~)	**Spring semester (16 credit hours)**
~~*a - Humanities/social science elective **Credits:** 2~~ MATH 340 - Elementary Differential Equations **Credits:** 4 ME 512 - Dynamics **Credits:** 3 ME 513 - Thermodynamics I **Credits:** 3 NE 495 - Elements of Nuclear Engineering **Credits:** 3	MATH 551 – Applied Matrix Theory **Credits: 3** MATH 340 - Elementary Differential Equations **Credits:** 4 ME 512 - Dynamics **Credits:** 3 ME 513 - Thermodynamics I **Credits:** 3 NE 495 - Elements of Nuclear Engineering **Credits:** 3
Junior year **Fall semester (16 credit hours)**	**Junior year** **Fall semester (16 credit hours)**
*b - Technical elective **Credits:** 3 CE 533 - Mechanics of Materials **Credits:** 3 ECE 519 - Electric Circuits and Control **Credits:** 4 ~~MATH 551 - Applied Matrix Theory **Credits:** 3~~ ME 400 - Computer Applications in Mechanical Engineering **Credits:** 3	*b - Technical elective **Credits:** 3 CE 533 - Mechanics of Materials **Credits:** 3 ECE 519 - Electric Circuits and Control **Credits:** 4 ME 571 - Fluid Mechanics **Credits:** 3 ME 400 - Computer Applications in Mechanical Engineering **Credits:** 3
Spring semester (16 credit hours)	**Spring semester (16 credit hours)**
*b - Technical elective **Credits:** 3 ME 533 - Machine Design I **Credits:** 3 ME 535 - Measurement and Instrumentation Laboratory **Credits:** 3 or NE 612 - Principles of Radiation Detection **Credits:** 3 ME 570 - Control of Mechanical Systems I **Credits:** 4 ~~ME 571 - Fluid Mechanics **Credits:** 3~~	*b - Technical elective **Credits:** 3 ME 533 - Machine Design I **Credits:** 3 ME 535 - Measurement and Instrumentation Laboratory **Credits:** 3 or NE 612 - Principles of Radiation Detection **Credits:** 3 ME 570 - Control of Mechanical Systems I **Credits:** 4 ENGL 415 - Written Communication for Engineers **Credits:** 3
Senior year **Fall semester (~~17 credit hours~~)**	**Senior year** **Fall semester (14 credit hours)**
~~*a - Humanities/social science elective (300-level or above) **Credits:** 3~~	*b - Technical elective **Credits:** 3 *b - Technical elective **Credits:** 3

Technical elective **Credits:** 3 Technical elective **Credits:** 3 ~~ENGL 415 - Written Communication for Engineers **Credits:** 3~~ IMSE 530 - Engineering Economic Analysis **Credits:** 2 ME 574 - Interdisciplinary Industrial Design Projects I **Credits:** 3	IMSE 530 - Engineering Economic Analysis **Credits:** 2 ME 574 - Interdisciplinary Industrial Design Projects I **Credits:** 3 ME 573 - Heat Transfer **Credits:** 3
Spring semester (15 credit hours)	**Spring semester (15 credit hours)**
Humanities/social science elective ~~(300-level or above)~~ **Credits:** 3 *b - Technical elective **Credits:** 3 *b - Technical elective **Credits:** 3 ~~ME 573 - Heat Transfer **Credits:** 3~~ ME 575 - Interdisciplinary Industrial Design Projects II **Credits:** 3	*a - Humanities/social science elective **Credits:** 3 *a - Humanities/social science elective **Credits:** 3 *b - Technical elective **Credits:** 3 *b - Technical elective **Credits:** 3 ME 575 - Interdisciplinary Industrial Design Projects II **Credits:** 3
Notes	**Notes**
*a - A total of ~~11~~ credits of humanities and social science electives are required, ~~six of which must be 300-level or higher~~. These are to be selected from the College of Engineering Humanities and Social Science Electives Course List. Students should select these courses such that the requirements of the K-State 8 general education program also are met.	*a - A total of 9 credits of humanities and social science electives are required. Three of these credits can come from 300-level or above AERO or MSCI courses for students who successfully complete the ROTC program. These are to be selected from the College of Engineering Humanities and Social Science Electives Course List. Students should select these courses such that the requirements of the K-State 8 general education program also are met.
*b - Technical Electives: Three technical electives are to be chosen from MNE courses with at least one course 600-level or above. ~~Currently admitted students will only be allowed to transfer in one of their three required MNE technical electives; however, the >=600 level MNE technical elective must be taken within the MNE Department.~~ Another technical elective is to be chosen from 200-level or above College of Engineering (including MNE) classes. The remaining technical electives credits are to be chosen from 200-level or above College of Engineering, Math, Chemistry, Physics, Biology, or Business Administration classes or 400-level or above Statistics classes. Other classes that strengthen a student's program of study will be considered and require advisor and department head approval.	*b - Technical Electives: Three technical electives are to be chosen from MNE courses with at least one course 600-level or above. Another technical elective is to be chosen from 200-level or above College of Engineering (including MNE) classes. The remaining technical electives credits are to be chosen from 200-level or above College of Engineering, Math, Chemistry, Physics, Biology, or Business Administration classes, 400-level or above Statistics classes, or a maximum of 3 credit hours of 300-level or above AERO or MSCI courses for students who successfully complete the ROTC program. Other classes that strengthen a student's program of study will be considered and require advisor and department head approval.
*c - Nuclear Engineering Option: ~~The four Nuclear Engineering options courses fulfill the requirement of the three MNE and one College of Engineering technical elective courses.~~	*c - Nuclear Engineering Option: NE 612 will replace ME 535 in the curriculum. The three remaining Nuclear Engineering option courses fulfill the requirement of the three MNE technical electives.

*d - ME 535 and NE 612 may both be taken and one of them applied as a Tech Elective. NE 612 must be taken for the NE Option. *e - Currently admitted students will only be allowed to transfer in one ME/NE numbered course as required by the curriculum; however, ME 533, ME 574, ME 575 and ME 573 must be taken within the MNE department. *f - Currently admitted students will be allowed to transfer one of ~~their~~ three required MNE technical electives with the exception of the >=600 level MNE technical elective. For additional information about the K-State 8 General Education program, check the requirements specified by the College of Engineering. **Total credit hours required for graduation (~~127~~)**	*d - ME 535 and NE 612 may both be taken and one of them applied as a Tech Elective. NE 612 must be taken for the NE Option. *e - Currently admitted students will only be allowed to transfer in one ME/NE numbered course as required by the curriculum; however, ME 533, ME 574, ME 575 and ME 573 must be taken within the MNE department. *f - Currently admitted students will be allowed to transfer one of the three required MNE technical electives with the exception of the >=600 level MNE technical elective. *g - To graduate with a Bachelors in Mechanical Engineering, students must have a >= 2.200 GPA in all ME/NE classes >= 400 level taken for undergraduate credit at Kansas State University. Course grades that have been removed by the K-State Retake policy will not apply to this GPA calculation. For additional information about the K-State 8 General Education program, check the requirements specified by the College of Engineering. **Total credit hours required for graduation (125)**

Human Ecology

New: Community Health Certificate (Undergraduate)

Contact Person: Mark Haub

https://kstate.curriculog.com/proposal:1745/form

COMMUNITY HEALTH CERTIFICATE
Proposed: Fall 2018

Collaborative Effort between:
Department of Food, Nutrition, Dietetics, and Health
Department of Kinesiology

School of Family Studies and Human Services

Purpose:

The purpose for the Community Health certificate is to provide specific training to individuals seeking knowledge and experiences pertaining to Community Health. Based on information and dialogue with the Kansas Community Health Worker Coalition, this certificate program was designed to meet their expressed needs of training Community Health Workers. A Community Health Worker is someone who works with and educates small groups and communities to improve the health of their constituents. This academic certificate program is not a licensing or credentialing certification.

This certificate program will provide a community and public health-focused vocational direction for our students, and those currently working in public health seeking enhanced training. The courses are designed to complement several degree programs within Kansas State University. The content will require specific training in: public health and social determinants of heath for small groups and community assessments/outcomes; and, lifestyle behaviors highly related to health risks.

The flexible and health-focused curriculum creates a very feasible and professionally aligned program that will allow students the opportunity to earn this certificate, while completing their degree on time. Hence, it will not require additional hours, thereby allowing students to graduate in their expected time frame; and, to do so within the Kansas Board of Regents mandate to keep undergraduate degree programs under 120 credit hours.

- **Evidence of demonstrated need or demand for proposed certificate**: Based on data from the Bureau of Labor Statistics, there is expected to be a 16% increase in employment of Community Health employees from 2016-2026.

Course Requirements (15 credit hours total)

Core Courses (8 cr hrs.)

- FNDH 115 (2) Intro to Health and Nutrition Professions
- FNDH 352 (3) Personal Wellness
- HDFS 301 (3) Helping Relationships

Supportive Courses (two of the following, 6-7 cr hr)

- FNDH 132 (3) Basic Nutrition
- GERON 315 (3) Introduction to Gerontology
- GNHE 310 (3) Human Needs
- HDFS 552 (3) Families and Diversity
- KIN 220 (4) Biobehavorial Aspects of Phys Activity
- PFP 105 (3) Introduction to Personal Financial Planning

Practical Requirement (1-2 cr hr)

- FNDH 650 (1-2 cr hr) Practicum in Human Nutrition

OR

- HDFS 411 (1-2 cr hr) HDFS Practicum

- **Desired outcomes**

The primary desired outcomes are: increased employment opportunities for those seeking to work in healthcare immediately upon completing their bachelor's degree; and, increased enrollment into Kansa State University for those interested in supplementing their education with Community Health learning opportunities. Many students will seek acceptance into pre-Physician Assistance programs, pre-Physical Therapy, pre-Nursing, pre-Medicine, etc. However, some of our students will want to enter the healthcare work force upon completion of their B.S. degree, with or without acceptance into an accredited graduate health care program.

One unique aspect, and a significant strength of this certificate, will be the incorporation of Extension professionals within the training process. The practica will be with Extension Specialists or Agents, with specific selection depending on topic interest. Thus, students will be required to observe the Extension system and apply Community Health concepts to specific health concerns in the area/region of their assigned practica. Based on the information from the Kansas Community Health Worker Coalition, this exposure to communities is necessary for students to understand how communities function and thrive.

- **Assessment procedures**

The director of the certificate program will assess the capstone project to assess whether the primary learning outcome was met for each student.

After three years of data, faculty will analyze assignment and professional data to determine assessment markers that better predict professional success (employment in community health, and exam scores for those who may take a certification exam). This will enable us to make decisions about our certificate program and to provide data back to students about which aspects might be better to focus their attention when preparing for national certification exams.

- **Estimated budget and staff required**:

Since the required courses are already available and there is commitment from the departments involved, there will not be a need for new courses at this time. We will use our Global Campus revenue form this program to support needed instruction as faculty changes occur due to natural personnel turnover.

- **Evidence of approval** of their certificate program through internal academic channels.

This was supported by faculty vote of 0-0-0 (in favor – oppose – abstain). Statements of support from the other units (*and the KCCHW?*) are provided.

Assessment of Student Learning Plan
Community Health

Complete the following for each student learning outcomes (*copy as many times as needed*)

Student Learning Outcome:

Develop competent knowledge and skills for health professional

Assessment Measure(s): (*must include at least one direct measure)*
Reflection assignment from FNDH 650 or FSHS 411.

Assessment timeline: *(when, where, and how often the outcome will be measured)*
The assignment will be submitted after their capstone internship/practicum experience at the end of their certificate program (once per student).

Complete the following for the overall assessment plan
Plan for annual faculty review of outcome data:
As a collaborative effort, faculty from each unit will meet each semester to review the progress and effectiveness of the certificate program. These meetings will include Extension faculty, as Extension faculty will be the external professionals coordinating the practical experiences in communities.

Attach a Curricular/Assessment Matrix

	Intended Student Learning Outcomes		
Courses	Public Health	Community Relations	Awareness of strategies to improve health
FNDH 115	I		I
FNDH 352			I
HDFS 301		I	
FNDH 650	M	M	M
FSHS 411	M	M	M

Dietetics - http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13816

Rationale: A committee was appointed by the FNDH department to assess coverage of food production within the dietetics curriculum. The committee has determined that the subject matter is adequately addressed with existing FNDH courses. Therefore, we are requesting the removal of the required HM 341 course from the DT curriculum for both coordinated and didactic programs.

Impact Statement: May impact enrollment in HM 341. Mark Haub emailed Michael Ottenbacher on October 11, 2018 about this change of removing HM 341 from curriculum in FNDH. (Please see attached) Mark Haub and Michael Ottenbacher met face to face on October 12, 2018 to discuss (Please see attached) department and class enrollment impact in HM.

Dietetics (B.S.) Two programs are available in dietetics. Program I is the coordinated program in dietetics, and Program II is the didactic program in dietetics. Coordinated Program in Dietetics (CPD) Program I (Effective Fall 2012) The coordinated program prepares students for dietetics practice by integrating the 1200 hours supervised practice experience (internship) required by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) with the bachelor's degree program. Graduates of this program immediately may sit for the national credentialing examination to become a registered dietitian (RD) and are eligible for active membership in the Academy of Nutrition and Dietetics. The program is currently granted continuing accreditation by the Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606–6995, 312-899-5400. The supervised practice phase of the program consists of community nutrition, clinical nutrition, and food service management practicum experiences and didactic coursework. Students apply to the coordinated program three semesters prior to their anticipated date of graduation. The program accepts a new class of students each semester. Students selected into the coordinated program are expected to	Dietetics (B.S.) Two programs are available in dietetics. Program I is the coordinated program in dietetics, and Program II is the didactic program in dietetics. Coordinated Program in Dietetics (CPD) Program I (Effective Fall 2012) The coordinated program prepares students for dietetics practice by integrating the 1200 hours supervised practice experience (internship) required by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) with the bachelor's degree program. Graduates of this program immediately may sit for the national credentialing examination to become a registered dietitian (RD) and are eligible for active membership in the Academy of Nutrition and Dietetics. The program is currently granted continuing accreditation by the Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606–6995, 312-899-5400. The supervised practice phase of the program consists of community nutrition, clinical nutrition, and food service management practicum experiences and didactic coursework. Students apply to the coordinated program three semesters prior to their anticipated date of graduation. The program accepts a new class of students each semester. Students selected into the coordinated program are expected to

complete the program in two semesters and one summer session. Academic Progression: Admission to KSU and selection of the dietetics major. Completion of foundational coursework and introductory professional courses. Completion of advanced professional courses. Application and selective admission to the coordinated program. Completion of coordinated program supervised practice and didactic courses. Graduation with a Bachelor of Science degree in dietetics and verification of 1200 hours of supervised practice. Admission to KSU and Selection of Dietetics Major Kansas State University students wishing to pursue dietetics as a career select dietetics as a major. Completion of Foundational Coursework and Introductory Professional Courses Foundational coursework includes communications, social sciences, natural sciences, quantitative studies, humanities, and introductory professional courses. Students must achieve an A or B grade in natural science and introductory professional courses for consideration for the coordinated program. Students must achieve no grade lower than a C in communications, social sciences, quantitative studies and humanities courses for consideration for the coordinated program. Completion of Advanced Professional Courses Advanced professional coursework includes upper level professional courses. Student must achieve an A or B grade in all professional courses to be considered for the coordinated program. It is suggested that students obtain employment and/or volunteer experience related to the field of dietetics to strengthen their application resume.	complete the program in two semesters and one summer session. Academic Progression: Admission to KSU and selection of the dietetics major. Completion of foundational coursework and introductory professional courses. Completion of advanced professional courses. Application and selective admission to the coordinated program. Completion of coordinated program supervised practice and didactic courses. Graduation with a Bachelor of Science degree in dietetics and verification of 1200 hours of supervised practice. Admission to KSU and Selection of Dietetics Major Kansas State University students wishing to pursue dietetics as a career select dietetics as a major. Completion of Foundational Coursework and Introductory Professional Courses Foundational coursework includes communications, social sciences, natural sciences, quantitative studies, humanities, and introductory professional courses. Students must achieve an A or B grade in natural science and introductory professional courses for consideration for the coordinated program. Students must achieve no grade lower than a C in communications, social sciences, quantitative studies and humanities courses for consideration for the coordinated program. Completion of Advanced Professional Courses Advanced professional coursework includes upper level professional courses. Student must achieve an A or B grade in all professional courses to be considered for the coordinated program. It is suggested that students obtain employment and/or volunteer experience related to the field of dietetics to strengthen their application resume. Students unable to meet grade expectations in the dietetics required curriculum will be not be

Students unable to meet grade expectations in the dietetics required curriculum will be not be allowed to continue in the major unless coursework is retaken to meet expectations. Application to the Coordinated Program The coordinated program in dietetics is selective and limited. The application packet and instructions are available in the Dietetics Advising Course in K-State Online. Effective Fall 2012 admission to the coordinated program is based upon grade requirements and additional selection requirements. The new grade requirements apply to students who are incoming freshman or transfer students fall 2012 and after. Grade requirements: No grade lower than a B in natural science and professional courses. No grade lower than a C in all other required dietetics curriculum foundation courses. Applications from students not meeting grade requirements will not be accepted for review. Additional selection requirements: Evidence of employment/volunteer experience applicable to the practice of dietetics as assessed by the coordinated program admissions committee. Evidence of skill, traits and leadership abilities indicative of the level of professionalism required for successful completion of the coordinated program as assessed by the coordinated program admissions committee. Recommendation forms specified in the application packet. These additional selection requirements apply to students who apply to the coordinated program fall 2012 and after. Completion of the Coordinated Program Coordinated program students complete a combination of didactic courses and supervised practice courses during this ten-month program. Ongoing evaluation of the student's academic and supervised practice performance is an	allowed to continue in the major unless coursework is retaken to meet expectations. Application to the Coordinated Program The coordinated program in dietetics is selective and limited. The application packet and instructions are available in the Dietetics Advising Course in K-State Online. Effective Fall 2012 admission to the coordinated program is based upon grade requirements and additional selection requirements. The new grade requirements apply to students who are incoming freshman or transfer students fall 2012 and after. Grade requirements: No grade lower than a B in natural science and professional courses. No grade lower than a C in all other required dietetics curriculum foundation courses. Applications from students not meeting grade requirements will not be accepted for review. Additional selection requirements: Evidence of employment/volunteer experience applicable to the practice of dietetics as assessed by the coordinated program admissions committee. Evidence of skill, traits and leadership abilities indicative of the level of professionalism required for successful completion of the coordinated program as assessed by the coordinated program admissions committee. Recommendation forms specified in the application packet. These additional selection requirements apply to students who apply to the coordinated program fall 2012 and after. Completion of the Coordinated Program Coordinated program students complete a combination of didactic courses and supervised practice courses during this ten-month program. Ongoing evaluation of the student's academic and supervised practice performance is an important

important component in the coordinated program in dietetics. Evaluation of student performance is conducted by K-State faculty and preceptors in the supervised practice facilities. Students must meet program requirements and supervised practice requirements to complete the coordinated program. Coordinated program expectations are described in the Coordinated Program Student Handbook. At the conclusion of the program, students receive their Bachelor of Science degree in dietetics and an ACEND Verification Statement, attesting to their successful completion of both academic and supervised practice experience requirements to sit for the national dietetics registration examination. Didactic Program in Dietetics (DPD) Program II (Effective Summer 2015) The didactic program in dietetics meets the academic requirements of the Accreditation Council for Education in Nutrition and Dietetics (ACEND). After completion of this program, the graduate must obtain the 1200 hours of supervised practice experience required for eligibility to take the national Registration Examination for Dietitians. This experience must be completed through an accredited, post-baccalaureate internships in the United States. Check the ACEND accredited program listings on the Academy of Nutrition and Dietetics website. The DPD program is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics, 120 South Riverside Plaza, Suite 2190, Chicago, IL 60606–6995, 312-899-0400 ext. 5400. ACEND website. Academic Progression Admission to KSU and selection of the dietetics major. Completion of foundational coursework and introductory professional courses. Application and selective admission to the didactic program in dietetics (DPD).	component in the coordinated program in dietetics. Evaluation of student performance is conducted by K-State faculty and preceptors in the supervised practice facilities. Students must meet program requirements and supervised practice requirements to complete the coordinated program. Coordinated program expectations are described in the Coordinated Program Student Handbook. At the conclusion of the program, students receive their Bachelor of Science degree in dietetics and an ACEND Verification Statement, attesting to their successful completion of both academic and supervised practice experience requirements to sit for the national dietetics registration examination. Didactic Program in Dietetics (DPD) Program II (Effective Summer 2015) The didactic program in dietetics meets the academic requirements of the Accreditation Council for Education in Nutrition and Dietetics (ACEND). After completion of this program, the graduate must obtain the 1200 hours of supervised practice experience required for eligibility to take the national Registration Examination for Dietitians. This experience must be completed through an accredited, post-baccalaureate internships in the United States. Check the ACEND accredited program listings on the Academy of Nutrition and Dietetics website. The DPD program is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics, 120 South Riverside Plaza, Suite 2190, Chicago, IL 60606–6995, 312-899-0400 ext. 5400. ACEND website. Academic Progression Admission to KSU and selection of the dietetics major. Completion of foundational coursework and introductory professional courses. Application and selective admission to the didactic program in dietetics (DPD). Completion of the didactic program advanced professional courses.

Completion of the didactic program advanced professional courses. Graduation with a Bachelor of Science degree in dietetics and Accreditation Council for Education in Nutrition and Dietetics Verification Statement of program completion. Apply for dietetic internship or other post-baccalaureate program. Admission to KSU and Selection of Dietetics Major Kansas State University students wishing to pursue dietetics as a career select dietetics as a major. Completion of Foundational Coursework and Selected Professional Courses Foundational coursework includes communications, social sciences, natural and physical sciences, quantitative studies, humanities, an integrative human ecology course, and selected introductory professional courses. Students must achieve an A or B grade in natural and physical sciences and in the selected introductory professional courses for consideration for the didactic program. Students must achieve no grade lower than a C in communications, social sciences, quantitative studies, humanities courses, and the integrative human ecology course for consideration for the didactic program. Completion of Advanced Professional Courses Advanced professional coursework includes upper level professional courses. Students must achieve an A or B grade in all professional courses to be considered for the didactic program. Students unable to meet grade expectations in the dietetics required curriculum will be not be allowed to continue in the major unless coursework is retaken to meet expectations. Application and Selective Admission to the Didactic Program Students must apply to the didactic program the semester immediately following completion of the following courses (for full admission) or	Graduation with a Bachelor of Science degree in dietetics and Accreditation Council for Education in Nutrition and Dietetics Verification Statement of program completion. Apply for dietetic internship or other post-baccalaureate program. Admission to KSU and Selection of Dietetics Major Kansas State University students wishing to pursue dietetics as a career select dietetics as a major. Completion of Foundational Coursework and Selected Professional Courses Foundational coursework includes communications, social sciences, natural and physical sciences, quantitative studies, humanities, an integrative human ecology course, and selected introductory professional courses. Students must achieve an A or B grade in natural and physical sciences and in the selected introductory professional courses for consideration for the didactic program. Students must achieve no grade lower than a C in communications, social sciences, quantitative studies, humanities courses, and the integrative human ecology course for consideration for the didactic program. Completion of Advanced Professional Courses Advanced professional coursework includes upper level professional courses. Students must achieve an A or B grade in all professional courses to be considered for the didactic program. Students unable to meet grade expectations in the dietetics required curriculum will be not be allowed to continue in the major unless coursework is retaken to meet expectations. Application and Selective Admission to the Didactic Program Students must apply to the didactic program the semester immediately following completion of the following courses (for full admission) or during the semester they are finishing up the last of these courses (for conditional admission)

during the semester they are finishing up the last of these courses (for conditional admission) BIOL 198 - Principles of Biology BIOL 341 - Human Body I and BIOL 342 Human Body II or KIN 360 - Anatomy and Physiology FNDH 340 - Food and Health: Safety Allergies and Intolerances or BIOL 455 - General Microbiology CHM 210 - Chemistry I CHM 230 - Chemistry II BIOCH 265 - Introduction to Organic and Biochemistry or CHM 350 - General Organic Chemistry FNDH 132 - Basic Nutrition FNDH 400 - Human Nutrition ~~HM 341 - Principles of Food Production Management~~ Grade requirements: Students must have an overall GPA of 3.0 or above. This includes all coursework taken at any time in the individual's undergraduate or graduate educational career prior to applying for DPD admission. No grade lower than a B in natural science and professional courses. No grade lower than a C in all other required dietetics curriculum foundation courses. Applications from students not meeting grade requirements will not be accepted for review. To apply to the DPD program, students must submit the following to the DPD director: DPD application form. Current DARS report generated through KSIS. Academic plan showing when remaining courses will be completed. Grade calculation spreadsheets showing calculations for overall GPA, science course GPA, and professional course GPA. Current 1-page resume which includes: Education with location and inclusive dates. Paid work experience (dietetics or non-dietetics related) with locations and inclusive dates.	BIOL 198 - Principles of Biology BIOL 341 - Human Body I and BIOL 342 Human Body II or KIN 360 - Anatomy and Physiology FNDH 340 - Food and Health: Safety Allergies and Intolerances or BIOL 455 - General Microbiology CHM 210 - Chemistry I CHM 230 - Chemistry II BIOCH 265 - Introduction to Organic and Biochemistry or CHM 350 - General Organic Chemistry FNDH 132 - Basic Nutrition FNDH 400 - Human Nutrition Grade requirements: Students must have an overall GPA of 3.0 or above. This includes all coursework taken at any time in the individual's undergraduate or graduate educational career prior to applying for DPD admission. No grade lower than a B in natural science and professional courses. No grade lower than a C in all other required dietetics curriculum foundation courses. Applications from students not meeting grade requirements will not be accepted for review. To apply to the DPD program, students must submit the following to the DPD director: DPD application form. Current DARS report generated through KSIS. Academic plan showing when remaining courses will be completed. Grade calculation spreadsheets showing calculations for overall GPA, science course GPA, and professional course GPA. Current 1-page resume which includes: Education with location and inclusive dates. Paid work experience (dietetics or non-dietetics related) with locations and inclusive dates. Volunteer experience (dietetics or non-dietetics related) with locations and inclusive dates.

Volunteer experience (dietetics or non-dietetics related) with locations and inclusive dates. Significant honors/awards. A personal statement (maximum of 1000 words) outlining interest in dietetics, professional goals, strengths, and weaknesses. Applicants will also participate in an interview, conducted via videoconferencing, with the admissions committee. A scoring matrix for evaluation of the application and interview performance will be made available to applicants in the DPD Student Handbook. Progression in the program will require continued maintenance of at least a 3.0 GPA with no grade less than a B in the sciences or professional courses. A required course may be repeated only once in order to raise a grade to B or better. The course to be repeated must be retaken the next time that course is offered. If a B or better is not obtained in the repeated course, the student will be dismissed from the DPD and must seek a different major. Bachelor's degree requirements General Requirements (55-58 credit hours) Communications (8–9 credit hours) (Grades of C or higher required) COMM 105 - Public Speaking IA Credits: 2 or COMM 106 - Public Speaking I Credits: 3 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 Social Science (6 credit hours) (Grades of C or higher required) ECON 110 - Principles of Macroeconomics Credits: 3 PSYCH 110 - General Psychology Credits: 3 or SOCIO 211 - Introduction to Sociology Credits: 3 Natural Sciences (28–30 credit hours) (Grades of B or higher required) BIOCH 521 - General Biochemistry Credits: 3	Significant honors/awards. A personal statement (maximum of 1000 words) outlining interest in dietetics, professional goals, strengths, and weaknesses. Applicants will also participate in an interview, conducted via videoconferencing, with the admissions committee. A scoring matrix for evaluation of the application and interview performance will be made available to applicants in the DPD Student Handbook. Progression in the program will require continued maintenance of at least a 3.0 GPA with no grade less than a B in the sciences or professional courses. A required course may be repeated only once in order to raise a grade to B or better. The course to be repeated must be retaken the next time that course is offered. If a B or better is not obtained in the repeated course, the student will be dismissed from the DPD and must seek a different major. Bachelor's degree requirements General Requirements (55-58 credit hours) Communications (8–9 credit hours) (Grades of C or higher required) COMM 105 - Public Speaking IA Credits: 2 or COMM 106 - Public Speaking I Credits: 3 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 Social Science (6 credit hours) (Grades of C or higher required) ECON 110 - Principles of Macroeconomics Credits: 3 PSYCH 110 - General Psychology Credits: 3 or SOCIO 211 - Introduction to Sociology Credits: 3 Natural Sciences (28–30 credit hours) (Grades of B or higher required) BIOCH 521 - General Biochemistry Credits: 3 and

and CHM 350 - General Organic Chemistry Credits: 3 or BIOCH 265 - Introductory Organic and Biochemistry Credits: 5 BIOL 198 - Principles of Biology Credits: 4 KIN 360 - Anatomy and Physiology Credits: 8 or ~~BIOL 340-Structure and Function of Human Body:8~~ CHM 210 - Chemistry I Credits: 4 CHM 230 - Chemistry II Credits: 4 Choose from the following: BIOL 455 - General Microbiology Credits: 4 or FNDH 340 - Food and Health: Safety, Allergies and Intolerances Credits: 3 Quantitative Studies (6 credit hours) (Grades of C or higher required) Complete 3 credit hours in Math MATH 100 - College Algebra Credits: 3 or a College-level calculus course Credits: 3 Complete 3 credit hours in statistics STAT 325 - Introduction to Statistics Credits: 3 STAT 340 - Biometrics I Credits: 3 STAT 350 - Business and Economic Statistics I Credits: 3 Humanities electives (6 credit hours) (Grades of C or higher required) Integrative studies (1 credit hour) (Grades of C or higher required) GNHE 210 - Foundations of Human Ecology Credits: 1 Choose one of the professional programs: I, II. Program I: Coordinated program in dietetics (CP)	CHM 350 - General Organic Chemistry Credits: 3 or BIOCH 265 - Introductory Organic and Biochemistry Credits: 5 BIOL 198 - Principles of Biology Credits: 4 KIN 360 - Anatomy and Physiology Credits: 8 or BIOL 341-Human Body I: 4 BIOL 342-Human Body II: 4 CHM 210 - Chemistry I Credits: 4 CHM 230 - Chemistry II Credits: 4 Choose from the following: BIOL 455 - General Microbiology Credits: 4 or FNDH 340 - Food and Health: Safety, Allergies and Intolerances Credits: 3 Quantitative Studies (6 credit hours) (Grades of C or higher required) Complete 3 credit hours in Math MATH 100 - College Algebra Credits: 3 or a College-level calculus course Credits: 3 Complete 3 credit hours in statistics STAT 325 - Introduction to Statistics Credits: 3 STAT 340 - Biometrics I Credits: 3 STAT 350 - Business and Economic Statistics I Credits: 3 Humanities electives (6 credit hours) (Grades of C or higher required) Integrative studies (1 credit hour) (Grades of C or higher required) GNHE 210 - Foundations of Human Ecology Credits: 1 Choose one of the professional programs: I, II. Program I: Coordinated program in dietetics (CP) Professional Studies (67 credit hours) (Grades of B or higher required)

Professional Studies (~~69 credit hours~~) (Grades of B or higher required) ACCTG 231 - Accounting for Business Operations Credits: 3 FNDH 130 - Careers in Nutrition and Dietetics Credits: 1 ~~HM 341 - Principles of Food Production Management Credits: 3~~ FNDH 342 - Food Production Management Credits: 4 FNDH 426 - Financial Management in Dietetics Credits: 3 FNDH 515 - Counseling Strategies in Dietetic Practice Credits: 3 FNDH 132 - Basic Nutrition Credits: 3 FNDH 400 - Human Nutrition Credits: 3 FNDH 413 - Science of Food Credits: 4 FNDH 450 - Nutritional Assessment Credits: 2 FNDH 510 - Life Span Nutrition Credits: 2 FNDH 600 - Public Health Nutrition Credits: 3 FNDH 620 - Nutrient Metabolism Credits: 3 FNDH 631 - Clinical Nutrition I Credits: 3 FNDH 632 - Clinical Nutrition II Credits: 3 Management semester (Grades of B or higher required) FNDH 560 - Management in Dietetics Credits: 3 * FNDH 561 - Management in Dietetics Practicum Credits: 8 * FNDH 562 - Management in Dietetics Practicum Recitation Credits: 1 Summer semester FNDH 516 - Communication Competencies in Dietetics Practice Credits: 1 * FNDH 517 - Communication Competencies in Dietetics Practicum Credits: 1 FNDH 570 - Introduction to Research in Dietetics Practice Credits: 1 Clinical semester (Grades of B or higher required) * FNDH 519 - Introduction to Clinical Dietetics Credits: 1 * FNDH 520 - Applied Clinical Dietetics Credits: 3 * FNDH 521 - Clinical Dietetic Practicum Credits: 8 *Must be admitted to the Coordinated Program in Dietetics during semester of completion of professional studies courses to enroll in HMD 510,	ACCTG 231 - Accounting for Business Operations Credits: 3 FNDH 130 - Careers in Nutrition and Dietetics Credits: 1 FNDH 342 - Food Production Management Credits: 4 FNDH 426 - Financial Management in Dietetics Credits: 3 FNDH 515 - Counseling Strategies in Dietetic Practice Credits: 3 FNDH 132 - Basic Nutrition Credits: 3 FNDH 400 - Human Nutrition Credits: 3 FNDH 413 - Science of Food Credits: 4 FNDH 450 - Nutritional Assessment Credits: 2 FNDH 510 - Life Span Nutrition Credits: 2 FNDH 600 - Public Health Nutrition Credits: 3 FNDH 620 - Nutrient Metabolism Credits: 3 FNDH 631 - Clinical Nutrition I Credits: 3 FNDH 632 - Clinical Nutrition II Credits: 3 Management semester (Grades of B or higher required) FNDH 560 - Management in Dietetics Credits: 3 * FNDH 561 - Management in Dietetics Practicum Credits: 8 * FNDH 562 - Management in Dietetics Practicum Recitation Credits: 1 Summer semester FNDH 516 - Communication Competencies in Dietetics Practice Credits: 1 * FNDH 517 - Communication Competencies in Dietetics Practicum Credits: 1 FNDH 570 - Introduction to Research in Dietetics Practice Credits: 1 Clinical semester (Grades of B or higher required) * FNDH 519 - Introduction to Clinical Dietetics Credits: 1 * FNDH 520 - Applied Clinical Dietetics Credits: 3 * FNDH 521 - Clinical Dietetic Practicum Credits: 8 *Must be admitted to the Coordinated Program in Dietetics during semester of completion of professional studies courses to enroll in HMD 510, HMD 517, HMD 520, HMD 521, HMD 561, HMD 562 Unrestricted electives (0-2 credit hours)

HMD 517, HMD 520, HMD 521, HMD 561, HMD 562 Unrestricted electives (~~2~~ credit hours) Total hours required for graduation (~~127 credit hours~~) Program II: Didactic program in dietetics (DPD) Professional studies (~~47 credit hours~~) (Grades of B or higher required) ACCTG 231 - Accounting for Business Operations Credits: 3 FNDH 130 - Careers in Nutrition and Dietetics Credits: 1 ~~HM 341 - Principles of Food Production Management Credits: 3~~ FNDH 342 - Food Production Management Credits: 4 FNDH 426 - Financial Management in Dietetics Credits: 3 FNDH 515 - Counseling Strategies in Dietetic Practice Credits: 3 * FNDH 560 - Management in Dietetics Credits: 3 * FNDH 570 - Introduction to Research in Dietetics Practice Credits: 1 FNDH 132 - Basic Nutrition Credits: 3 FNDH 400 - Human Nutrition Credits: 3 FNDH 413 - Science of Food Credits: 4 FNDH 450 - Nutritional Assessment Credits: 2 FNDH 510 - Life Span Nutrition Credits: 2 FNDH 600 - Public Health Nutrition Credits: 3 FNDH 620 - Nutrient Metabolism Credits: 3 FNDH 631 - Clinical Nutrition I Credits: 3 FNDH 632 - Clinical Nutrition II Credits: 3 *Must be admitted into the DPD program ~~3~~ semesters prior to graduation to enroll in HMD 560 and HMD 570. Unrestricted electives (~~16-19 credit hours~~) Total hours required for graduation (120 credit hours)	Total hours required for graduation (124 credit hours) Program II: Didactic program in dietetics (DPD) Professional studies (44 credit hours) (Grades of B or higher required) ACCTG 231 - Accounting for Business Operations Credits: 3 FNDH 130 - Careers in Nutrition and Dietetics Credits: 1 FNDH 342 - Food Production Management Credits: 4 FNDH 426 - Financial Management in Dietetics Credits: 3 FNDH 515 - Counseling Strategies in Dietetic Practice Credits: 3 * FNDH 560 - Management in Dietetics Credits: 3 * FNDH 570 - Introduction to Research in Dietetics Practice Credits: 1 FNDH 132 - Basic Nutrition Credits: 3 FNDH 400 - Human Nutrition Credits: 3 FNDH 413 - Science of Food Credits: 4 FNDH 450 - Nutritional Assessment Credits: 2 FNDH 510 - Life Span Nutrition Credits: 2 FNDH 600 - Public Health Nutrition Credits: 3 FNDH 620 - Nutrient Metabolism Credits: 3 FNDH 631 - Clinical Nutrition I Credits: 3 FNDH 632 - Clinical Nutrition II Credits: 3 *Must be admitted into the DPD program three semesters prior to graduation to enroll in HMD 560 and HMD 570. Unrestricted electives (15-18 credit hours) Total hours required for graduation (120 credit hours)

Early Childhood Education (B.S.) –
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13810&returnto=7406

Rationale: These changes are to meet newly revised teacher licensure standards in Kansas for the Early Childhood Unified (Birth through Kindergarten) Teaching License. The course changes were processed during the last academic year so that we could advance to this stage.

Impact Statement: This will impact the College of Education, but all changes will be custom-routed through the College of Ed before being approved by the College of Human Ecology's Academic Affairs Committee.

This may impact the College of Arts and Sciences, specifically the Social Science, English, Biology, Natural Science, and Geology departments. A request for impact statements has been sent to each unit as of 9/25/18, to be uploaded upon receipt. Impact is expected to be relatively minor for most departments.

10/5/18 - Geology gave us an initial response (attached). The original proposal draft eliminated earth sciences and cut science requirements to 7 hours with one lab. We reverted the language to allow all sciences again after consulting with the College of Education, but kept the 7 hours with one lab. Waiting for updated response from Geology.

This program is for students who wish to work in birth through kindergarten education programs in administrative or teaching positions, including work with parents and community resources as well as with young children. **Bachelor's degree requirements** **Practicum courses** Before participating in practicum courses involving contact with children, students must undergo a physical examination, including a tuberculosis test, at their own expense. Students must not have any physical or mental conditions that would interfere with the health, safety, or welfare of children. Students will be screened by the Kansas Department of Health and Environment for criminal and child abuse histories (through the Kansas Bureau of Investigation and ~~Social and Rehabilitative~~ Services). Students with questionable histories, as determined by the Kansas Department of Health and Environment, will be dropped from the early childhood education program. **Student teaching** Enrollment in student teaching is by permission only. Student teaching may not be taken until the student has obtained full admission into teacher education and has completed ECED 543, 544, 553, 554, 555. **General requirements (~~51–52~~ credit hours)** **Communications (8–9 credit hours)** (Grades of "C" or higher required.)	This program is for students who wish to work in birth through kindergarten education programs in administrative or teaching positions, including work with parents and community resources as well as with young children. **Bachelor's degree requirements** **Practicum courses** Before participating in practicum courses involving contact with children, students must undergo a physical examination, including a tuberculosis test, at their own expense. Students must not have any physical or mental conditions that would interfere with the health, safety, or welfare of children. Students will be screened by the Kansas Department of Health and Environment for criminal and child abuse histories (through the Kansas Bureau of Investigation and Kansas Department for Children and Family Services). Students with questionable histories, as determined by the Kansas Department of Health and Environment, will be dropped from the early childhood education program. **Student teaching** Enrollment in student teaching is by permission only. Student teaching may not be taken until the student has obtained full admission into teacher education and has completed ECED 543, 544, 553, 554, 555. **General requirements (43-44 credit hours)** **Communications (8–9 credit hours)** (Grades of "C" or higher required.)

COMM 105 - Public Speaking IA Credits: 2 or COMM 106 - Public Speaking I Credits: 3 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 **Social sciences (~~9~~ credit hours)** ECON 110 - Principles of Macroeconomics Credits: 3 PSYCH 110 - General Psychology Credits: 3 SOCIO 211 - Introduction to Sociology Credits: 3 **Humanities electives (6 credit hours)** (Only a course of 3 credits or more will apply.) Fine Arts Elective Credits: 3 **Natural and physical sciences (~~12~~ credit hours)** Biological sciences, physical sciences, and earth science (~~All courses~~ must include a laboratory.) **Quantitative studies (6 credit hours)** (Grades of "C" or higher required.) MATH 100 - College Algebra Credits: 3 or a college-level calculus course STAT 325 - Introduction to Statistics Credits: 3 **Additional requirements ~~for licensure (9~~ credit hours)** ~~Select additional electives from the areas of humanities, social sciences, sciences, mathematics, general religion, philosophy, art and music history, and appreciation of art, architecture, music, or theatre to fulfill the general education requirements for teaching licensure in early childhood education.~~ ~~**Social science elective Credits: 3~~ ~~***Literature elective Credits: 3~~ Diversity elective Credits: 3 **Integrative Human Ecology course (1 credit hour)** GNHE 210 - Foundations of Human Ecology Credits: 1 **Professional studies (~~68-69~~ credit hours)** (Grades of C or higher required.) **Professional courses (6~~1~~ credit hours)** (Teaching Field Courses–Grades of C or higher and an overall 2.75 GPA is required on all courses applied to degree. GPA is calculated ~~o~~ K-State and transfer courses.)	COMM 105 - Public Speaking IA Credits: 2 or COMM 106 - Public Speaking I Credits: 3 ENGL 100 - Expository Writing I Credits: 3 ENGL 200 - Expository Writing II Credits: 3 **Social sciences (12 credit hours)** ECON 110 - Principles of Macroeconomics Credits: 3 PSYCH 110 - General Psychology Credits: 3 SOCIO 211 - Introduction to Sociology Credits: 3 **Social Science Elective Credits: 3 **Humanities electives (6 credit hours)** (Only a course of 3 credits or more will apply.) Fine Arts Elective Credits: 3 Literature Elective (except ENGL 545) Credits: 3 **Natural and physical sciences (7 credit hours)** Biological sciences, physical sciences, and earth science (One course must include a laboratory.) **Quantitative studies (6 credit hours)** (Grades of "C" or higher required.) MATH 100 - College Algebra Credits: 3 or a college-level calculus course STAT 325 - Introduction to Statistics Credits: 3 **Additional requirements (3 credit hours)** Diversity elective Credits: 3 **Integrative Human Ecology course (1 credit hour)** GNHE 210 - Foundations of Human Ecology Credits: 1 **Professional studies (76-77 credit hours)** (Grades of C or higher required.) **Professional courses (62 credit hours)** (Teaching Field Courses–Grades of C or higher and an overall 2.75 GPA is required on all courses applied to degree. GPA is calculated from K-State and transfer courses.) HDFS 110 - Introduction to Human Development Credits: 3 HDFS 350 - Family Relationships and Gender Roles Credits: 3 ECED 310 - Early Childhood Credits: 3 ECED 313 - Pre-Professional Experiences in Early Childhood Unified Credits: 1 ECED 410 - Introduction to Early Childhood Education Credits: 3

ECED 310 - Early Childhood Credits: 3 ECED 313 - Pre-Professional Experiences in Early Childhood Unified Credits: 1 ECED 410 - Introduction to Early Childhood Education Credits: 3 ECED 420 - Interaction Techniques with Young Children Credits: 3 ECED 428 - Exceptional Development in Early Childhood Credits: 3 ~~ECED 450 - Environments in Early Childhood Credits: 3~~ ~~ECED 540 - Curriculum for Cognitive and Language Development of young Children Credits: 3~~ ~~ECED 541 - Curriculum for Emotional, Social and Physical Development of Young Children Credits: 3~~ ~~(Teacher Education Courses- Grades of B or higher and an overall 2.75 GPA is required on all courses applied to degree. GPA is calculated on K-State and transfer courses.)~~ ECED 543 - Reflective Practice: Infants and Toddlers Credits: 3 ECED 544 - Reflective Practice: Preschoolers and Kindergartners Credits: 3 ECED 553 - Early Childhood Practicum I: Infants and Toddlers Credits: 1 ECED 554 - Early Childhood Practicum II: Preschoolers Credits: 1 ECED 555 - Early Childhood Practicum III: Kindergartners Credits: 1 ECED 466 - Language Development Credits: 3 ECED 566 - Emergent Literacy Credits: 3 ECED 597 - Home, School, and Community Partnerships Credits: 3 * ECED 598 - Student Teaching in Early Childhood Unified Credits: 9 ECED 728 - Assessment of Young Children Credits: 3 EDSP 777 - Behavior Management Credits: 3 HDFS 110 - Introduction to Human Development Credits: 3 HDFS 350 - Family Relationships and Gender Roles Credits: 3 **Professional electives (~~7~~ 8 credit hours)** (Grades of "C" or higher required.) Any ~~FSHS~~ Course(s) ACCTG 231 - Accounting for Business Operations Credits: 3 ACCTG 241 - Accounting for Investing and Financing Credits: 3 AGEC 202 - Small Business Operations Credits: 3 EDCI 318 - Educational Technology for Teaching and Learning Credits: 1 EDSP 710 - Education of Exceptional Individuals Credits: 3 EDSP 723 - Characteristics of Cognitive Disorders Credits: 3	ECED 420 - Interaction Techniques with Young Children Credits: 3 ECED 428 - Exceptional Development in Early Childhood Credits: 3 ECED 466 - Language Development Credits: 3 ECED 530 - Teaching & Learning in Early Childhood Education Credits: 3 ECED 531 - Developmental Curriculum in Early Childhood Education Credits: 3 ECED 543 - Reflective Practice: Infants and Toddlers Credits: 3 ECED 544 - Reflective Practice: Preschoolers and Kindergartners Credits: 3 ECED 553 - Early Childhood Practicum I: Infants and Toddlers Credits: 1 ECED 554 - Early Childhood Practicum II: Preschoolers Credits: 1 ECED 555 - Early Childhood Practicum III: Kindergartners Credits: 1 ECED 556 - Early Childhood Practicum IV: Home Visiting Credits: 1 ECED 566 - Emergent Literacy Credits: 3 ECED 597 - Home, School, and Community Partnerships Credits: 3 * ECED 598 - Student Teaching in Early Childhood Unified Credits: 9 ECED 728 - Assessment of Young Children Credits: 3 ECED 797 – Home Visiting Programs for Young Children and Families Credits: 3 EDSP 777 - Behavior Management Credits: 3 **Professional electives (14-15 credit hours)** (Grades of "C" or higher required.) Any HDFS/ECED/CSD/PFP Course(s) ACCTG 231 - Accounting for Business Operations Credits: 3 ACCTG 241 - Accounting for Investing and Financing Credits: 3 AGEC 202 - Small Business Operations Credits: 3 EDCI 318 - Educational Technology for Teaching and Learning Credits: 1 EDSP 710 - Education of Exceptional Individuals Credits: 3

EDSP 728 - Characteristics of Emotional and Behavioral Disorders Credits: 3 MANGT 420 - Principles of Management Credits: 3 MKTG 400 - Introduction to Marketing Credits: 3 **Notes** *First aid/CPR certification required before enrollment in ECED 598. This requirement can be met by successful completion of Red Cross or American Heart Association courses. **A ~~minimum of 9 credit hours~~ other than psychology is required for certification. ***~~Literature for Children and~~ Literature for Adolescents may not be used as literature electives ~~but may be used to fulfill additional general education requirements~~. **Total hours required for graduation (120)**	EDSP 723 - Characteristics of Cognitive Disorders Credits: 3 EDSP 728 - Characteristics of Emotional and Behavioral Disorders Credits: 3 MANGT 420 - Principles of Management Credits: 3 MKTG 400 - Introduction to Marketing Credits: 3 **Notes** *First aid/CPR certification required before enrollment in ECED 598. This requirement can be met by successful completion of Red Cross or American Heart Association courses. **A 3 credit social science other than psychology is required for certification. ***Literature for Adolescents may not be used as a literature elective. **Total hours required for graduation (120)**

Family and Community Services (M.S.) - DISCONTINUE

Contact person: Kiersten Wukitsch
http://catalog.k-state.edu/preview_program.php?catoid=43&poid=14320&hl=%22family+and+community+services%22&returnto=search

Rationale: The MFCSVS degree was established in 2012 by GPIDEA with Dept. of Defense funds with a focus on recruiting military dependents to the program. The six participating universities marketed the program with that focus in-mind. The program has now evolved - especially at K-State - for more civilian students admitted (we currently have 16 students in the program) who seek a graduate degree that prepares them to lead community-based family programs. Dr. Morey MacDonald assisted in establishing MFCSVS as a separate program at K-State, and having discussed the proposed change with him in May he too thought it was no longer necessary that MFCSVS be a separate degree. Instead, it should be a sub-plan/emphasis area of MFSHS.

Pair with Add Curriculum Proposal for FSHS Sub-Plan

Impact statement: Contacted PFP and CNRES units on 9/28/18 about impact to their courses. Both units expect no impact (statements attached).

There is no impact to other units outside the department. The change is to discontinue the Family and Community Services degree as a separate program, but to instead have it become a sub-plan, emphasis within the Family Studies and Human Services graduate program (MFSHS).

~~Family and Community Services (M.S.)~~ ~~Offered through Family Studies and Human Services, the Master of Science in Family and Community Services is offered as an inter-institutional online program sponsored by the Great Plains Interactive Distance Education Alliance (GPIDEA). The degree is uniquely concerned with understanding families and the development, evaluation, and management of program services to them in community context. The program is designed to create better online educational opportunities for family and community science professionals such as Extension agents and for spouses in military service families. The M.S. degree in Family and Community Services will prepare graduates for individual and family services professions that are similar to some positions in social work but distinct from counseling positions. The degree does not lead to licensure.~~ ~~Core Courses (30 credit hours)~~ ~~FSHS 784 - Foundations and Principles of Family and Community Services Credits: 3~~ ~~FSHS 825 - Family Resource Management Credits: 3~~ ~~FSHS 785 - Family Dynamics Credits: 3~~ ~~FSHS 786 - Lifespan Development Credits: 3~~ ~~FSHS 862 - Interpersonal Relationships Credits: 3~~ ~~FSHS 787 - Resilience in Families Credits: 3~~ ~~FSHS 719 - Program Administration and Management Credits: 3~~ ~~FSHS 714 - Program Design, Evaluation, and Implementation Credits: 3~~ ~~FSHS 791 - Parenting Education Credits: 3~~ ~~CNRES 750 - Crises Across the Lifespan Credits: 3~~ ~~Elective Courses (6 credit hours)*~~ ~~*At Kansas State University, a capstone course (PFP 675 or FSHS 881) is required, and students may select one other course from the electives list.~~	

~~For all other participating universities, students may select any two courses from the electives list.~~ ~~PFP 675 - Field Study in Family Economics Credits: 1-3 *(Kansas State University students, see note above)~~ ~~FSHS 881 - Practicum in Family and Community~~ ~~Services Credits: 1-18 *(Kansas State University students, see note above)~~ ~~FSHS 700 - Problems in Family Studies and Human Services Credits: 1-18~~ ~~FSHS 708 - Topics in Family Studies and Human Services Credits: 2-3~~ ~~FSHS 724 - Working with Military Families Credits: 3~~ ~~CNRES 759 - Foundations of Trauma and Traumatic Stress Credits: 3~~ ~~PFP 765 - Military Personal Finance Credits: 3~~ ~~FSHS 871 - Program Development and Administration Credits: 3~~ ~~FSHS 899 - MS Research in Family Studies and Human Services Credits: 1-18~~ ~~Practica~~ ~~Practica not required, but the courses below will support capstone experiences as determined by the student and committee.~~ ~~PFP 675 - Field Study in Family Economics Credits: 1-3~~ ~~FSHS 700 - Problems in Family Studies and Human Services Credits: 1-18~~ ~~FSHS 708 - Topics in Family Studies and Human Services Credits: 2-3~~ ~~FSHS 881 - Practicum in Family and Community Services Credits: 1-18~~	

Family Studies and Human Services (M.S.) - Addition of an academic sub-plan (option, specialization, etc.)

Contact person: Kiersten Wukitsch
http://catalog.k-state.edu/preview_program.php?catoid=43&poid=14321&hl=%22family+studies%22&returnto=search

Rationale: The MFCSVS degree was established in 2012 by GPIDEA with Dept. of Defense funds with a focus on recruiting military dependents to the program. The six participating universities marketed the program with that focus in-mind. The program has now evolved - especially at K-State - for more civilian students admitted (we currently have 16 students in the program) who seek a graduate degree that prepares them to lead community-based family programs. Dr. Morey MacDonald assisted in establishing MFCSVS as a separate program at K-State, and having discussed the proposed change with him in May he too thought it was no longer necessary that MFCSVS be a separate degree. Instead, it should be a sub-plan/emphasis area of MFSHS.

Impact statement: Contacted PFP and CNRES units on 9/28/18 about impact to their courses. Both units expect no impact (statements attached).

There is no impact to other units outside the department. The change is to discontinue the Family and Community Services degree as a separate program, but to instead have it become a sub-plan, emphasis within the Family Studies and Human Services graduate program (MFSHS).

	Family Studies and Human Services with an Emphasis in Family and Community Services (M.S.) Offered through the School of Family Studies and Human Services, the Master of Science in Family Studies and Human Services, with an emphasis in Family and Community Services, is offered as an inter-institutional online program sponsored by the Great Plains Interactive Distance Education Alliance (GPIDEA). The degree is uniquely concerned with understanding families and the development, evaluation, and management of program services to them in community context. The program is designed to create better online educational opportunities for family and community science professionals such as Extension agents and for spouses in military service families. The M.S. degree in Family and Community Services will prepare graduates for individual and family services professions that are similar to some positions in social work but distinct from counseling positions. The degree does not lead to licensure. Core Courses (30 credit hours) FSHS 784 - Foundations and Principles of Family and Community Services Credits: 3 FSHS 825 - Family Resource Management Credits: 3 FSHS 785 - Family Dynamics Credits: 3 FSHS 786 - Lifespan Development Credits: 3 FSHS 862 - Interpersonal Relationships Credits: 3 FSHS 787 - Resilience in Families Credits: 3 FSHS 719 - Program Administration and Management Credits: 3 FSHS 714 - Program Design, Evaluation, and Implementation Credits: 3 FSHS 791 - Parenting Education Credits: 3 CNRES 750 - Crises Across the Lifespan Credits: 3 Elective Courses (6 credit hours)*

	*At Kansas State University, a capstone course (PFP 675 or FSHS 881) is required, and students may select one other course from the electives list. For all other participating universities, students may select any two courses from the electives list. PFP 675 - Field Study in Family Economics Credits: 1-3 *(Kansas State University students, see note above) FSHS 881 - Practicum in Family and Community Services Credits: 1-18 *(Kansas State University students, see note above) FSHS 700 - Problems in Family Studies and Human Services Credits: 1-18 FSHS 708 - Topics in Family Studies and Human Services Credits: 2-3 FSHS 724 - Working with Military Families Credits: 3 CNRES 759 - Foundations of Trauma and Traumatic Stress Credits: 3 PFP 765 - Military Personal Finance Credits: 3 FSHS 871 - Program Development and Administration Credits: 3 FSHS 899 - MS Research in Family Studies and Human Services Credits: 1-18 Practica Practica not required, but the courses below will support capstone experiences as determined by the student and committee. PFP 675 - Field Study in Family Economics Credits: 1-3 FSHS 700 - Problems in Family Studies and Human Services Credits: 1-18 FSHS 708 - Topics in Family Studies and Human Services Credits: 2-3 FSHS 881 - Practicum in Family and Community Services Credits: 1-18

Family and Consumer Sciences Teacher Licensure Program (B.S.)

Contact person: Bronwyn Fees
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=13820&hl=%22family+and+consumer%22&returnto=search

Rationale: To reduce total credit hours to meet requirements set by KBOR to 120. Reduce general requirements to 35 credits by removing COMM 106; ANTH 204; and ART 180 as required courses. Move HDFS 110 to required professional studies. Remove ECED 313 from required professional courses. Add HDFS 506, 550 and 670 as professional elective course alternative course selection. And specify the minimum required credits for EDSEC 620 and 621 as 2 credits.

Impact Statement: The following departments were contacted by Bronwyn Fees on July 17, 2018. Email correspondence is attached.

College of Human Ecology:

Apparel, Textiles, and Interior Design: Barbara Anderson, Department Head, responded on 7/24/18 with no concerns.

Hospitality Management: Michael Ottenbacher, Department Head, responded on 7/20/18 with no concerns.

Family Studies and Human Services, Personal Financial Planning: Sonya Lutter, Interim Director, responded 10/1/18 that the changes seem reasonable and appreciates the notification.

College of Arts and Sciences:

Art: Matthew Gaynor, Department Head, responded on 7/17/18 with no concerns.

Sociology, Anthropology and Social Work: Gerad Middendorf, Professor of Sociology responded on 7/19/18 that while he understands the need to meet KBOR requirements he is concerned that future students will have less access to the social sciences and humanities. Dr. Fees responded that this decision was not taken lightly and shares his concern that students receive a well rounded education.

Communication Studies: Gregory Paul, Interim Department Head, responded on 7/19/18 with a concern that if COMM 106 is removed as a course alternative, students may interpret COMM 105 as the only accepted course and seek other institutions if they cannot enroll due to capacity. He feels COMM 106 is an acceptable alternative. Dr. Fees responded the change only impacts this curriculum and COMM 106 is not removed from the general requirements. COMM 106 will be accepted as a substitution and will be made through their advisors. (Email attached).

College of Education: Todd Goodson, Assistant Dean of Teacher Education and Accreditation, responded on October 8, 2018 that he does not oppose this proposal.

Family and Consumer Sciences Teacher Licensure Program (B.S.)	**Family and Consumer Sciences Teacher Licensure Program (B.S.)**
This licensure program is for general human ecology students who plan to teach family and consumer sciences at the middle, junior high, senior high, or postsecondary levels. Family and consumer sciences educators directly address the needs of individuals and families related to nurturing relationships, parenting education, healthy lifestyles, and resource management. Graduates of the program work in middle and	This licensure program is for general human ecology students who plan to teach family and consumer sciences at the middle, junior high, senior high, or postsecondary levels. Family and consumer sciences educators directly address the needs of individuals and families related to nurturing relationships, parenting education, healthy lifestyles, and resource management. Graduates of the program work in middle and

secondary schools, cooperative extension, business, and industry. Upon successful completion of all family and consumer sciences licensure requirements, the Principles of Learning and Teaching test, and the PRAXIS II content assessment test for family and consumer sciences, graduates are eligible to apply for licensure to teach family and consumer sciences in Kansas schools. See the College of Education section of this catalog for more information on eligibility requirements, admission to teacher education and admission to the professional semester. Inquiries should be directed to the Center for Student and Professional Services, 13 Bluemont Hall. **Bachelor's degree requirements** **General requirements (~~41-42~~ credit hours)** **Communications (8~~–9~~ credit hours)** *(Grades of C or higher required.)* • COMM 105 - Public Speaking IA **Credits:** 2 • ~~or~~ • ~~COMM 106 - Public Speaking I **Credits:** 3~~ • ENGL 100 - Expository Writing I **Credits:** 3 • ENGL 200 - Expository Writing II **Credits:** 3 **Social sciences (~~9~~ credit hours)** • ~~ANTH 204 - A General Education Introduction to Cultural Anthropology **Credits:** 3~~ • ECON 110 - Principles of Macroeconomics **Credits:** 3 • PSYCH 110 - General Psychology **Credits:** 3 **Humanities (~~9~~ credit hours)** • ~~ART 180 - 2- Dimensional Design **Credits:** 3~~ • Literature **Credits:** 3 (any literature course except ENGL 355 or 545)	secondary schools, cooperative extension, business, and industry. Upon successful completion of all family and consumer sciences licensure requirements, the Principles of Learning and Teaching test, and the PRAXIS II content assessment test for family and consumer sciences, graduates are eligible to apply for licensure to teach family and consumer sciences in Kansas schools. See the College of Education section of this catalog for more information on eligibility requirements, admission to teacher education and admission to the professional semester. Inquiries should be directed to the Center for Student and Professional Services, 13 Bluemont Hall. **Bachelor's degree requirements** **General requirements (35 credit hours)** **Communications (8 credit hours)** *(Grades of C or higher required.)* • COMM 105 - Public Speaking IA **Credits:** 2 • • • ENGL 100 - Expository Writing I **Credits:** 3 • ENGL 200 - Expository Writing II **Credits:** 3 **Social sciences (6 credit hours)** • • • • ECON 110 - Principles of Macroeconomics **Credits:** 3 • PSYCH 110 - General Psychology **Credits:** 3 **Humanities (~~6~~ credit hours)** • Literature **Credits:** 3 (any literature course except ENGL 355 or 545) • History **Credits:** 3

• History **Credits:** 3 **Natural and physical sciences (8 credit hours)** • BIOL 198 - Principles of Biology **Credits:** 4 • CHM 110 - General Chemistry **Credits:** 3 • and • CHM 111 - General Chemistry Laboratory **Credits:** 1 **Quantitative studies (6 credit hours)** *(Grades of C or higher required.)* • MATH 100 - College Algebra **Credits:** 3 • or • a college-level calculus course • STAT 325 - Introduction to Statistics **Credits:** 3 **Integrative Human Ecology course (1 credit hour)** • GNHE 210 - Foundations of Human Ecology **Credits:** 1 **Professional studies (~~91~~ credit hours)** *Grades of "C" or higher required.* **Human ecology required courses (~~43~~ credit hours)** • See College of Education for GPA requirements • AT 265 - Textiles **Credits:** 3 • AT 330 - Dress and Human Behavior **Credits:** 3 • ECED 310 - Early Childhood **Credits:** 3 • ~~ECED 313 - Pre-Professional Experiences in Early Childhood Unified **Credits:** 1~~ • FNDH 132 - Basic Nutrition **Credits:** 3 • FNDH 352 - Personal Wellness **Credits:** 3 • FNDH 413 - Science of Food **Credits:** 4 • HDFS 302 - Introduction to Human Sexuality **Credits:** 3 • HDFS 350 - Family Relationships and Gender Roles **Credits:** 3	**Natural and physical sciences (8 credit hours)** • BIOL 198 - Principles of Biology **Credits:** 4 • CHM 110 - General Chemistry **Credits:** 3 • and • CHM 111 - General Chemistry Laboratory **Credits:** 1 **Quantitative studies (6 credit hours)** *(Grades of C or higher required.)* • MATH 100 - College Algebra **Credits:** 3 • or • a college-level calculus course • STAT 325 - Introduction to Statistics **Credits:** 3 **Integrative Human Ecology course (1 credit hour)** • GNHE 210 - Foundations of Human Ecology **Credits:** 1 **Professional studies (85 credit hours)** *Grades of "C" or higher required.* **Human ecology required courses (*42* credit hours)** • See College of Education for GPA requirements • AT 265 - Textiles **Credits:** 3 • AT 330 - Dress and Human Behavior **Credits:** 3 • ECED 310 - Early Childhood **Credits:** 3 • FNDH 132 - Basic Nutrition **Credits:** 3 • FNDH 352 - Personal Wellness **Credits:** 3 • FNDH 413 - Science of Food **Credits:** 4 • HDFS 302 - Introduction to Human Sexuality **Credits:** 3 • HDFS 350 - Family Relationships and Gender Roles **Credits:** 3 • HDFS 670 - Working with Parents **Credits:** 3

~~• HDFS 670 - Working with Parents **Credits:** 3~~ • GNHE 310 - Human Needs **Credits:** 3 • GNHE 410 - Seminar in Human Ecology **Credits:** 2 • ID 210 - Design and Behavior in the Interior Environment **Credits:** 3 • PFP 105 - Introduction to Personal Financial Planning **Credits:** 3 **One of the following courses:** • HDFS 506 - Middle Childhood and Adolescence **Credits:** 3 • HDFS 550 - Family Theory & Science **Credits:** 3 ~~• PFP 310 - Family and Consumer Economics **Credits:** 3~~ **Professional education courses (~~48~~ credit hours)** • See Teacher Education for requirements for acceptance to teacher/education professional program. • * DED 075 - Orientation to Teacher Education at KSU **Credits:** 0 • * EDCI 200 - Teaching as a Career **Credits:** 1 • * EDCI 230 - Early Field Experience **Credits:** 1 • * EDCI 310 - Foundations of Education **Credits:** 3 ~~• HDFS 110 - Introduction to Human Development **Credits:** 3~~	• GNHE 310 - Human Needs **Credits:** 3 • GNHE 410 - Seminar in Human Ecology **Credits:** 2 • HDFS 110 - Introduction to Human Development **Credits:** 3 • ID 210 - Design and Behavior in the Interior Environment **Credits:** 3 • PFP 105 - Introduction to Personal Financial Planning **Credits:** 3 **One of the following courses:** • AT 245 – Apparel and Textile Industry **Credits: 3** • AT 350 – Our Sustainable World: Current Challenges and Future Opportunities **Credits**: 3 • OR • ID 350 Our Sustainable World: Current Challenges and Future Opportunities **Credits**: 3 • HDFS 506 - Middle Childhood and Adolescence **Credits:** 3 • HDFS 550 - Family Theory & Science **Credits:** 3 • HDFS 670 - Working with Parents **Credits:** 3 • HM 351 – • ID 530 Interior Design Practices and Procedures **Credits**: 3 **Professional education courses (43 credit hours)** • See Teacher Education for requirements for acceptance to teacher/education professional program. • * DED 075 - Orientation to Teacher Education at KSU **Credits:** 0 • * EDCI 200 - Teaching as a Career **Credits:** 1 • * EDCI 230 - Early Field Experience **Credits:** 1 • * EDCI 310 - Foundations of Education **Credits:** 3

Block I: • ** EDCEP 315 - Educational Psychology **Credits:** 3 • ** EDCI 320 - Core Teaching Skills and Lab **Credits:** 3 • EDSP 323 - Exceptional Students in the Secondary School **Credits:** 2 **Block II:** • ** EDCEP 525 - Interpersonal Relations in the Schools **Credits:** 1 • ** EDSEC 455 - Teaching in a Multicultural Society **Credits:** 1 • ** EDSEC 477 - Content Area Literacies and Diverse Learners **Credits:** 2 • ** EDSEC 534 - Family and Consumer Science Methods for Secondary and Middle Schools **Credits:** 3 • ** EDSEC 535 - Family and Consumer Science Methods Practicum **Credits:** 2 **Block III:** • ** EDSEC 586 - Teaching Internship in Secondary Schools **Credits:** 1-12 **(12 credit hours required)** • ** EDSEC 621 - Program Planning in Career and Technical Education **Credits:** ~~3~~ **Non-blocked courses:** • EDCI 318 - Educational Technology for Teaching and Learning **Credits:** 1 • EDSEC 405 - Middle-Level Education **Credits:** 2 • EDSEC 510 - Career Pathways in Family and Consumer Sciences Education **Credits:** 2 • * EDSEC 620 - Principles and Philosophy of Career and Technical Education **Credits:** ~~2-3~~ **Notes** *These are the only professional education courses which can be taken prior to admission	**Block I:** • ** EDCEP 315 - Educational Psychology **Credits:** 3 • ** EDCI 320 - Core Teaching Skills and Lab **Credits:** 3 • EDSP 323 - Exceptional Students in the Secondary School **Credits:** 2 **Block II:** • ** EDCEP 525 - Interpersonal Relations in the Schools **Credits:** 1 • ** EDSEC 455 - Teaching in a Multicultural Society **Credits:** 1 • ** EDSEC 477 - Content Area Literacies and Diverse Learners **Credits:** 2 • ** EDSEC 534 - Family and Consumer Science Methods for Secondary and Middle Schools **Credits:** 3 • ** EDSEC 535 - Family and Consumer Science Methods Practicum **Credits:** 2 **Block III:** • ** EDSEC 586 - Teaching Internship in Secondary Schools **Credits:** 1-12 **(12 credit hours required)** • ** EDSEC 621 - Program Planning in Career and Technical Education **Credits:** 2 **Non-blocked courses:** • EDCI 318 - Educational Technology for Teaching and Learning **Credits:** 1 • EDSEC 405 - Middle-Level Education **Credits:** 2 • EDSEC 510 - Career Pathways in Family and Consumer Sciences Education **Credits:** 2 • * EDSEC 620 - Principles and Philosophy of Career and Technical Education **Credits:** 2 **Notes** *These are the only professional education courses which can be taken prior to admission

to teacher education. **These courses are blocked in three sequential semesters; courses in each block are to be taken concurrently and are prerequisites to the subsequent designated block of courses. **Total credit hours required for graduation (~~132-133~~)**	to teacher education. **These courses are blocked in three sequential semesters; courses in each block are to be taken concurrently and are prerequisites to the subsequent designated block of courses. **Total credit hours required for graduation (120)**

Kinesiology (BS)

https://kstate.curriculog.com/proposal:2712/form

Contact person: Rob Pettay

Rationale: This curriculum will remove non-required courses FNDH 132 and CIS 101-104 or CIS 111 from the degree program. An additional three hours of Kinesiology electives are added to the program. Pre-requisite courses are updated based on changes in other departments. Options for students for emphasis areas in majors are changed to reflect current offerings in department.

Impact (i.e. if this impacts another unit) – Statement should include the date when the head of a unit was contacted, and the response or lack of: Departments of Food, Nutrition, Dietetics and Health; CIS; note the BIOL change;

FNDH and CIS department heads were contacted to notify them of decision to remove a courses from each department from requirements for degree progam.

FNDH was notified on 9/10/2018 and responded on 9/11/2018

CIS was notified on 9/21/2018 and responded on 9/21/2018

Kinesiology (B.S.) A total of 120 credit hours are required for graduation. The BS degree is obtained by following the curriculum of the College of Human Ecology. Kinesiology majors must take a minimum of ~~36~~ kinesiology credit hours that include 18 credit hours from the lower-level core, and ~~18~~ hours from the upper level core with a requirement of one of the physiology course options, one of the exercise behavioral science course options, and ~~12~~ credit hours of 300 level or above Kinesiology courses, with at least 3 of the ~~12~~ elective hours being a 600	Kinesiology (B.S.) A total of 120 credit hours are required for graduation. The BS degree is obtained by following the curriculum of the College of Human Ecology. Kinesiology majors must take a minimum of 39 kinesiology credit hours that include 18 credit hours from the lower-level core, and 21 hours from the upper level core with a requirement of one of the physiology course options, one of the exercise behavioral science course options, and 15 credit hours of 300 level or above Kinesiology courses, with

or higher level course, ~~plus 3 credit hours in Human Nutrition.~~ A minimum grade of C and GPA of 2.2 are required for all kinesiology courses meeting degree requirements. General Requirements (~~49-53~~ credit hours) Communications (8-9 credit hours) ENGL 100 - Expository Writing I Credits: (3) ENGL 200 - Expository Writing II Credits: (3) One of the following courses COMM 105 - Public Speaking IA Credits: (2) or COMM 106 - Public Speaking I Credits: (3) Humanities (6 credit hours) Only courses of 3 credits or more will apply. Social Sciences (9 credit hours) ECON 110 - Principles of Macroeconomics Credits: (3) PSYCH 110 - General Psychology Credits: (3) SOCIO 211 - Introduction to Sociology Credits: (3) Natural and Physical Sciences (16-17 credit hours) BIOL 198 - Principles of Biology Credits: (4) ~~BIOL 340 - Structure and Function of the Human Body Credits: (8)~~ or KIN 360 - Anatomy and Physiology Credits: (8) Students must complete one of the following: BIOCH 265 - Introductory Organic and Biochemistry Credits: (5) Chemistry - any course with lab Physics- any course with lab	at least 3 of the 15 elective hours being a 600 or higher level course A minimum grade of C and GPA of 2.2 are required for all kinesiology courses meeting degree requirements. General Requirements (46-49 credit hours) Communications (8-9 credit hours) ENGL 100 - Expository Writing I Credits: (3) ENGL 200 - Expository Writing II Credits: (3) One of the following courses COMM 105 - Public Speaking IA Credits: (2) or COMM 106 - Public Speaking I Credits: (3) Humanities (6 credit hours) Only courses of 3 credits or more will apply. Social Sciences (9 credit hours) ECON 110 - Principles of Macroeconomics Credits: (3) PSYCH 110 - General Psychology Credits: (3) SOCIO 211 - Introduction to Sociology Credits: (3) Natural and Physical Sciences (16-17 credit hours) BIOL 198 - Principles of Biology Credits: (4) BIOL 341/342 - Human Body I & II Credits: (4/4) or KIN 360 - Anatomy and Physiology Credits: (8) Students must complete one of the following: BIOCH 265 - Introductory Organic and Biochemistry Credits: (5) Chemistry - any course with lab

Quantitative Studies (~~9-11~~ credit hours) MATH 100 - College Algebra Credits: (3) Or MATH 150 – Plane Trigonometry (3) Or MATH 220 - Analytic Geometry and Calculus I Credits: (4) One of the following statistics courses STAT 325 - Introduction to Statistics Credits: (3) STAT 340 - Biometrics I Credits: (3) ~~CIS 101 - Introduction to Computing Systems, Information Search, and Security Credits: (1)~~ ~~and~~ ~~CIS 102 - Introduction to Spreadsheet Applications Credits: (1)~~ ~~and~~ ~~CIS 103 - Introduction to Database Applications Credits: (1)~~ ~~and~~ ~~CIS 104 - Introduction to Word Processing Applications Credits: (1)~~ ~~or~~ ~~CIS 111 - Introduction to Computer Programming Credits: (3)~~	Physics- any course with lab Quantitative Studies (6-7 credit hours) MATH 100 - College Algebra Credits: (3) Or MATH 150 – Plane Trigonometry (3) Or MATH 220 - Analytic Geometry and Calculus I Credits: (4) One of the following statistics courses STAT 325 - Introduction to Statistics Credits: (3) STAT 340 - Biometrics I Credits: (3)
Integrative Human Ecology Course (1 credit hour) GNHE 210 - Foundations of Human Ecology Credits: (1)	Integrative Human Ecology Course (1 credit hour) GNHE 210 - Foundations of Human Ecology Credits: (1)
Professional Studies (39 credit hours) Grades of “C” or higher required. Kinesiology Core (~~36~~ credit hours)	Professional Studies (39 credit hours) Grades of “C” or higher required. Kinesiology Core (39 credit hours)
Lower-level core (18 credits hours)	Lower-level core (18 credits hours)

KIN 220 - Biobehavioral Bases of Physical Activity Credits: (4) KIN 310 - Measurement and Research Techniques in Kinesiology Credits: (4) KIN 335 - Physiology of Exercise Credits: (4) KIN 336 - Physiology of Exercise Lab Credits: (1) KIN 345 – Exercise Behavioral Science Credits: (5) Kinesiology Upper-level Core (~~18~~ credit hours) Choose one course from each of the following Exercise Physiology (3 credit hours) Select one course (3 credit hours) from the following. KIN 601 - Cardiorespiratory Exercise Physiology Credits: (3) KIN 603 - Cardiovascular Exercise Physiology Credits: (3) KIN 607 - Muscle Exercise Physiology Credits: (3) Kin 611 – Neurological Exercise Physiology Credits: (3) Exercise Behavioral Science (3 credit hours) Select one course (3 credit hours) from the following. ~~KIN 600 – Interpersonal Aspects of Physical Activity Credits: (3)~~ KIN 602 – Social Structural Determinants of Physical Activity Credits: (3) KIN 612 – Policy, Built Environment and Physical Activity Credits: (3) ~~KIN 614 Physical Activity Behavior Settings: Youth Sport to Senior Centers Credits (3)~~ KIN 655 – Individual Physical Activity Promotion Credits: (3) Kinesiology Elective Courses 300 level or higher ~~(12~~ credit hours)	KIN 220 - Biobehavioral Bases of Physical Activity Credits: (4) KIN 310 - Measurement and Research Techniques in Kinesiology Credits: (4) KIN 335 - Physiology of Exercise Credits: (4) KIN 336 - Physiology of Exercise Lab Credits: (1) KIN 345 – Exercise Behavioral Science Credits: (5) Kinesiology Upper-level Core (21 credit hours) Choose one course from each of the following Exercise Physiology (3 credit hours) Select one course (3 credit hours) from the following. KIN 601 - Cardiorespiratory Exercise Physiology Credits: (3) KIN 603 - Cardiovascular Exercise Physiology Credits: (3) KIN 607 - Muscle Exercise Physiology Credits: (3) KIN 611 – Neurological Exercise Physiology Credits: (3) Exercise Behavioral Science (3 credit hours) Select one course (3 credit hours) from the following. KIN 602 – Social Structural Determinants of Physical Activity Credits: (3) KIN 610 – Program Planning and Evaluation (3) KIN 612 – Policy, Built Environment and Physical Activity Credits: (3) KIN 616 – Obesity & Physical Activity: Behavioral and Environmental Policy Credits: (3) KIN 655 – Individual Physical Activity Promotion Credits: (3) Kinesiology Elective Courses 300 level or higher (15 credit hours)

Select ~~12~~ credit hours of additional upper level Kin courses. At least one elective must be at 600 level or higher (~~12~~ hrs.) ~~Human Nutrition (3 credit hours)~~ ~~HN 132 - Basic Nutrition Credits: (3)~~ Unrestricted electives (~~28-32~~ credit hours) ~~300 level or above (>2 hours)~~ Total hours required for graduation (120 credit hours)	Select 15 credit hours of additional upper level Kin courses. At least one elective must be at 600 level or higher (15 hrs.) Unrestricted electives (31-35 credit hours) Total hours required for graduation (120 credit hours)

Technology & Aviation

School of Integrated Studies
Unmanned Aircraft Systems Minor (RUAS) –
http://catalog.k-state.edu/preview_program.php?catoid=42&poid=14005

Rationale: The UAS faculty have determined that a UAS safety course (UAS 272) is important to include in the UAS minor to emphasize the importance of implementing a culture of safety when working with UAS in the national airspace system (NAS). Furthermore, in order to accommodate students enrolled in the UAS minor on different campuses and to allow them to take courses that are applicable to their chosen major discipline, we revised the elective section to include UAS-relevant courses that would appeal to a wider variety of disciplines across the university. Additional pertinent elective courses may be approved by the program coordinator. This will further increase curricular flexibility with the intent to draw students from disciplines beyond those currently included in the UAS minor. Finally, to enable students to gain industry or research experience as part of the UAS minor program, we decided to expand the program to include the option of either an internship or undergraduate research project.

Impact Statement: No impact on any unit. Agronomy, Geography, and Mass Communications has been notified of additional elective courses.

Unmanned Aircraft Systems Minor (RUAS)

~~Intended for those not majoring in unmanned aircraft systems (UAS), the UAS minor provides a solid grounding in topics that include the current regulatory environment, platform design and field operations with an emphasis on the acquisition of information and processing of data obtained through low altitude remote sensing and surveillance. Students pursuing majors in areas such as manned aviation, agriculture, biology, civil engineering, criminal justice, ecology, emergency management, environmental sciences, geography, geology, landscape architecture and wildlife science and management may benefit from completion of this academic minor, particularly those individuals whose academic interests or career goals include the use of remotely sensed data products for research or commercial spatial, metric or informatory applications.~~

~~Two areas of emphasis are provided to accommodate students having diverse interests: The Air Vehicle Operations Focus is intended for those holding the minimum of an FAA-issued private pilot license with an instrument rating (or equivalent) and are interested in field operations and in flying unmanned aircraft in the National Airspace; The Data Acquisition and Management Focus, is offered for those whose academic or career goals require greater knowledge of the acquisition and use of information and data obtained from the operation of unmanned aircraft as remote sensing platforms.~~ This minor is not available to students pursuing a Bachelor of Science in Engineering Technology – Unmanned Aircraft Systems option (BETB-US) or a Bachelor of Science in Aeronautical Technology – Unmanned Aircraft Systems option (BATN-US).

Minor Requirements (1~~6~~ Hours)
~~Due to course sequencing, a minimum of four semesters in residence will be required for completion of the minor.~~
Students must achieve a minimum GPA of 2.5 and a grade of "C" or better is required in all coursework.

Current
Required Courses (10 hours)

UAS 115	Professional UAS Multi-rotor Flight Lab	1
UAS 270	Introduction to Unmanned Aircraft Systems	3
UAS 474	Introduction to the Processing of Remotely Sensed Data	3
~~UAS 475~~	~~Data Acquisition and Post-processing~~	~~3~~

Elective Courses (6 hours)

~~UAS 370~~	~~Small Unmanned Aircraft Systems Design and Construction~~	~~3~~
UAS 373	UAS Design for Non-Aviators	3
~~UAS 461~~	~~Autonomous Flight Simulation Lab~~	~~1~~
UAS 463	Introduction to Autopilots and Mission Planning for Non-Aviators	3
~~UAS 465~~	~~Autopilot Integration~~	~~2~~

Unmanned Aircraft Systems Minor (RUAS)

Intended for students not majoring in unmanned aircraft systems (UAS), the UAS minor provides a solid grounding in topics that include the current regulatory environment, multirotor field operations, and acquisition of data using low-altitude aerial platforms. UAS are interdisciplinary tools relevant in many disciplines and industries, therefore students will have the opportunity to select six credit hours of UAS-related coursework that they deem most appropriate to their field of study as electives in the minor. Additionally, students will complete a UAS-focused internship or research project at the end of the UAS minor to highlight the skills they obtained in the program.

Students pursuing majors in areas such as manned aviation, agriculture, biology, civil engineering, criminal justice, ecology, emergency management, environmental sciences, geography, geology, landscape architecture, and wildlife science may benefit from completion of this academic minor, particularly those individuals whose academic interests or career goals include the use of remotely sensed data products for research or commercial applications. This minor is not available to students pursuing a Bachelor of Science in Engineering Technology – Unmanned Aircraft Systems option (BETB-US) or a Bachelor of Science in Aeronautical Technology – Unmanned Aircraft Systems option (BATN-US).

Minor Requirements (18 Hours)
Students must achieve a minimum GPA of 2.5 and a grade of "C" or better is required in all coursework.

Proposed
Required Courses (10 hours)

UAS 115	Professional UAS Multi-rotor Flight Lab	1
UAS 270	Introduction to Unmanned Aircraft Systems	3
UAS 272	UAS Safety Fundamentals	3
UAS 474	Introduction to the Processing of Remotely Sensed Data	3

Elective Courses (6 hours)

UAS 373	UAS Design for Non-Aviators	3
UAS 463	Introduction to Autopilots and Mission Planning for Non-Aviators	3
UAS 475	Data Acquisition and Post-processing	3
AGRON 655	Site Specific Agriculture	3
GEOG 508	Geographic Information Systems I	4
GEOG 605	Remote Sensing of the Environment	3
GEOG 705	Thematic Remote Sensing	3
MC 469	Drone Photography and Video	3

(Other courses may be used if approved by the UAS minor program coordinator.)

Research Project or Internship (Minimum 2 hours)

COT 495	Advanced Industrial Internship	2+
COT 497	Undergraduate Research Experience	2+

Veterinary Medicine

Food Animal Veterinary Certificate - NEW

Contact Person: Brad White

FOOD ANIMAL VETERINARY CERTIFICATE

PROGRAM PROPOSAL

EDUCATIONAL OBJECTIVES

The Food Animal Veterinary Certificate (FAVC) program is for current doctor of veterinary medicine (DVM) students. The goal of the FAVC is to prepare DVM students for long-term success in food animal veterinary practice by incorporating skills in varied areas including animal health, production medicine, practice management, and client communications which go beyond the content of the core DVM curriculum. Achieving this goal will result in a veterinary workforce capable of meeting the needs of livestock producers in a sustainable practice environment.

STATEMENT OF PROGRAM NEED

Agriculture is the primary economic driver in many rural communities and food animal veterinary practitioners are a major information source for the community. A critical need exists for well-trained food animal veterinarians in Kansas and throughout the U.S.

In early 2016, the leadership of the college determined that a new set of priorities was essential to enable the college to fulfil its land-grant mission and remain competitive in the world of veterinary education. Surveys were sent to all internal stakeholders and to a broad spectrum of external stakeholders including practitioners, legislators, producers and alumni to seek their perspective on the college's current performance, and to recommend future priorities. Nearly 1,000 survey responses were received, of which 50% were from external individuals, agencies and associations. For these external stakeholders, education, particularly with a food animal focus, was a top priority.

The need for well-trained food animal veterinarians in Kansas is not new. In 2006 the Kansas legislature passed and funded HB 3005, the Veterinary Training Program for Rural Kansas (VTPRK) https://newprairiepress.org/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1039&context=ojrrp). VTPRK provides loan forgiveness to graduates who enter clinical practice in a Kansas county with a population of less than 35,000 people. Five students in each entering DVM class are chosen for VTPRK and must participate in elective coursework and experiential learning opportunities during their veterinary education. A framework was designed to provide these students with additional training in public heath, livestock biosecurity, foreign animal disease diagnosis, regulatory veterinary medicine, the detection and prevention of zoonotic diseases, rural demographics, rural sociology, and rural economics.

This past year, 21 students applied for the five VTPRK training program openings. Students not selected for VTPRK can participate in the same coursework and experiences. But they lack an effective way to communicate their additional knowledge and skills to future employers currently afforded to their classmates formally participating in VTPRK.

The FAVC will provide a framework for any current DVM students to integrate available courses and experiences to increase their level of competence and confidence as new food animal veterinarians. It will also provide a tangible

credential which communicates these additional knowledge and skills to prospective employers. Thereby, the benefits of this approach are two-fold:

1) FAVC students will have a well-defined pathway to successful training by completing complimentary courses and experiential learning to develop the wide spectrum of skills and aptitudes for food animal practice.
2) Completion of the certificate will provide a concise, transparent method for new graduates to communicate their training to prospective employers and allow the employers to easily identify students with skills necessary for practice success. FAVC students will have an advantage when communicating with future employers as completion of the program illustrates interest, commitment to the process, and a specific level of education.

REQUIRED COURSEWORK AND EXPERIENCES

Coursework for completion of the certificate program is divided into two sections: core and elective courses. All coursework in the FAVC program are elective courses available within the DVM curriculum. Students in the DVM program must take 12 pre-clinical elective credits and 11 clinical elective credits as part of the degree requirements.

The core courses (4 credits) provide foundational knowledge and skills which must be acquired by all FAVC students. Students may select elective coursework (10 credits) to align with their specific areas of interest in food animal medicine. The combination of core and elective coursework results in 14 required credit hours for FAVC completion. The clinical elective coursework may include a relevant course at another academic institution with an accredited DVM program as approved by the FAVC faculty committee.

Core courses (4 credits):	
Third year	*Fourth year*
CS713 Production Medicine (1cr)	CS726 Clinical Externship: food animal focus (2cr)
	CS774 Rural Business Management (1cr)
Elective courses (must take at least 4 pre-clinical credits and 6 clinical credits)	
Pre-clinical	*Clinical (Fourth year)*
CS778 Basics of Bovine Theriogenology (1cr)	CS769 Advanced Feedlot production medicine (2cr)
CS811 Bovine palpation (1cr)	CS770 Advanced Cow Calf production medicine (2cr)
DMP719 Herd Disease Outbreak Investigation (2cr)	CS780 Food Animal Reproduction (2cr)
DMP816 Trade and Agricultural Health (2cr)	DMP 825 Dairy Production Medicine (3cr)
DMP804 Ecotoxicology (1cr)	CS726 Clinical Externship: food animal focus (additional 1-6cr)
DMP888 Globalization and food trade (1cr)	Relevant course at another academic institution*

Experiential learning and extracurricular activities are an important part of the FAVC to provide the breadth and depth of education necessary for entry level food animal practice. This portion of the program is designed to enhance technical skills, procedures, and communications.

Core experiences (must complete all):
Member of at least one national veterinary professional association • e.g. AABP, AVC, AASRP, AASV
Complete required procedure log • Appendix 1
Complete required number of procedures from elective procedure log • Appendix 2
Documented proficiency at core clinical skills during DVM core coursework • CS748 Food Animal Local Practice; • CS749 Food Animal Medicine and Surgery; • DMP785 Diagnostic Medicine

College-wide seminar presentation of accumulated experiences and selected case management

- scheduled in conjunction with CS774 Rural Business Management

STATEMENT OF COURSE - EDUCATIONAL OBJECTIVE ALIGNMENT

The FAVC program consists of didactic and experiential learning opportunities which cover a variety of topics aligning with the overall educational objective of preparing students for entry into food animal veterinary practice. A series of core coursework is combined with flexibility in elective coursework to provide the student with the opportunity to customize the program to optimize their training in specific areas of interest.

DESCRIPTION OF PROGRAM ADMINISTRATION AND COORDINATION

Dr. Brad White, Professor and Director of the Beef Cattle Institute will serve as FAVC Program Director. The FAVC Program Director will coordinate with Dr. Peggy Schmidt, Professor and Associate Dean for Academic Programs and Student Affairs to administer FAVC and monitor student progress within the program.

A FAVC faculty committee be charged with assessing relevance of external experiences and capstone presentations in the fourth year. The committee will consist of five faculty members currently involved in food animal training programs within the college. The FAVC Program Director and Associate Dean for Academic Programs and Student Affairs will select committee members to serve on two-year renewable terms. The FAVC Program Director and FAVC faculty committee members will help individual students select elective coursework and externship locations for the certificate program.

ESTIMATED BUDGET

FAVC is a formal endorsement of student's skills and knowledge specifically related to food animal medicine already acquired in the DVM program through core coursework and section of elective courses. It does not involve creation of new courses or activities which are specific to the certificate. Faculty formative and/or summative evaluation of clinical proficiency currently occurs in every clinical training experience. Food animal faculty currently advise students on selection of elective coursework and externship locations for students with interest in food animal medicine. The FAVC simply provides a solid framework for students focusing on expanding their food animal knowledge and experience and a means for transparent communication of that knowledge and experience to prospective employers.

Management of student records pertaining to the certificate will be managed through the office of the Associate Dean for Academic Programs and Student Affairs. In conjunction with the Beef Cattle Institute, this office currently maintains student enrollment and performance information in the Veterinary Training Program for Rural Kansas, which utilizes the same infrastructure and framework as the FAVC program. As such, there are no new resources needed for program implementation or oversight.

FAVC FACULTY

<u>Program Director:</u>

Dr. Brad White; Professor, Department of Clinical Sciences; Director, Beef Cattle Institute

<u>Core Courses:</u>

- Dr. Brad White
- Dr. Robert Larson
- Dr. Matt Miesner
- Dr. Shaun Huser
- Dr. Emily Reppert

Elective Courses:

- Dr. Shaun Huser
- Dr. Elizabeth Davis
- Dr. Mike Apley
- Dr. Robert Larson
- Dr. Ronnie Elmore
- Dr. Brad White
- Dr. Justin Kastner
- Dr. Gregg Hanzlicek
- Dr. Steve Ensley

STUDENT LEARNING OUTCOMES & ASSESSMENT PLAN

Upon completion of the FAVC program, students will be able to:

- Design and implement appropriate diagnostic and treatment plans for common diseases of food animal species (animal health)
- Perform routine diagnostic and therapeutic techniques related to reproductive health (animal health)
- Evaluate production parameters to identify issues affecting productivity at a population level (production medicine)
- Distinguish practices which increase business productivity and enhance clinic profitability (practice management)
- Communicate technical information to clients, animal health industry and allied health professionals to improve animal health and welfare (client communications)

Assessment of student learning will occur in a stepwise fashion throughout the program. Specific learning outcomes are associated with each core or elective course and monitored by the individual faculty teaching the course.

FAVC students will also complete a procedure log throughout their four years documenting experiences and aptitudes with common technical procedures in food animal practice. The procedure log consists of required core clinical skills as well as elective procedures allowing students to document additional skills acquired during training.

Clinical proficiency of core skills will be assessed through direct observation by qualified clinical faculty during third year coursework and fourth year clinical rotations. The capstone assessment will be final presentation open to the entire college describing their portfolio of experiences in addition to case management presentation which will highlight their accumulated skills and knowledge. This final presentation will be assessed by the FAVC faculty committee.

To complete the certificate program, students must:

1. complete the required number of core and elective courses with a minimum grade of “C” in each course,
2. submit a completed procedure log,
3. document proficient performance of core clinical skills, and
4. present capstone experience portfolio and case management seminar.

ENDORSEMENTS

APPENDIX 1: CORE PROCEDURES

Procedures will be initialed by supervising faculty/veterinarian when the student demonstrates proficiency of the procedure at a level expected of an entry level veterinarian.

PHYSICAL EXAMINATION

- ☐ Perform complete physical examination including rectal palpation
- ☐ Memorized normal Physical Exam values for: Cattle, Sheep, Goats, Camelids, Pigs

RESTRAINT

- ☐ Apply halter and quick release halter tie.
- ☐ Manuel chute operation (understand and demonstrate how to adjust head gate and sides)
- ☐ Apply tail jack
- ☐ Apply tail tie, tail twitch, udder cinch

PROCEDURES AND TREATMENTS

- ☐ Perform injections:
  - ☐ IV
  - ☐ IM
  - ☐ SQ
  - ☐ Subconjunctival
- ☐ Perform oral administrations:
  - ☐ Pass stomach tube
  - ☐ Ball gun
  - ☐ Oral gel and paste
  - ☐ Esophageal feeder (neonates)
- ☐ Apply limb, figure of “8” foot, and Robert Jones bandages
- ☐ Apply:
  - ☐ Ear tags
- ☐ Tattoo
  - ☐ Implants
- ☐ Calculate drug dosages (weight and volume conversions)

DIAGNOSTICS: ABLE TO PERFORM & INTERPRET

- ☐ CBC / chemistry

- [ ] CMT
- [ ] Blood collection (jugular, coccygeal, percava)
- [ ] Perform PCV/TP, blood smear
- [ ] Fecal float

COMMON PROCEDURES & TOPIC TO BE FAMILIAR

- [ ] Determine duration to withhold feed and water for general anesthesia.
- [ ] Determine adequate padding/positioning of sedated ruminant.
- [ ] Perform suture patterns: Utrecht, Ford-Interlocking, Cushing, Cruciate
- [ ] Demonstrate knowledge of suture properties and selection of appropriate suture for correct procedure

LOCAL ANESTHESIA TECHNIQUES:

- [ ] Caudal epidural (know appropriate dose)
- [ ] Paravertebral (proximal and distal)
- [ ] Bier block
- [ ] Cornual, auriculopalpebral, Peterson, retrobulbar.

UROGENITAL:

- [ ] Bovine rectal palpation to determine pregnancy status
- [ ] Dystocia management (fetal oversize, breech, uterine torsion)
- [ ] Cesarean section:
  - [ ] Cow
  - [ ] Small ruminant
- [ ] Castration (multiple techniques and species)

MUSCULOSKELETAL:

- [ ] Perform and analyze results from lameness exam including:
  1. Hoof evaluation
  2. Hoof trim
  3. Corn removal
  4. Block application
- [ ] Demonstrate ability to manage:
  1. Sole ulcer
  2. Subsolar abscess
  3. Foot rot
  4. Vertical cracks

PHARMACOLOGY:

- [ ] Indications, withdrawals, and appropriate use of antibiotics in food animal species

☐ Indications, withdrawals, and appropriate use of intra-mammary infusion products

☐ Indications, side effects, and appropriate use of NSAIDS in food animal species

☐ Knowledge regarding FARAD, AMDUCA

☐ Dose and effects of common sedative drugs

☐ Identification of restricted use and prohibited drugs

APPENDIX 2: ELECTIVE PROCEDURES

Procedures will be initialed by supervising faculty/veterinarian when the student demonstrates proficiency of the procedure at a level expected of an entry level veterinarian.

PHYSICAL EXMINATION/RESTRAINT

- ☐ Tie multiple knots including: Square, Halter, Clove hitch, Half hitch, Bowline
- ☐ Restrain a calf in lateral recumbency (with and without ropes)
- ☐ "Set up" and restrain a sheep
- ☐ Cast a cow (half hitch and burley methods)
- ☐ Lift a leg using ropes in a chute
- ☐ Apply appropriate swine restraint including: Hog snare, Rope snare, Boards

PROCEDURES AND TREATMENTS

- ☐ Demonstrate urine collection in: Cow, Bull, Sheep
- ☐ Place an IV catheter:
  - ☐ Jugular
  - ☐ Ear
- ☐ Calculate fluid deficits/rates of administration
- ☐ Proptose eye (treatment of SCC)
- ☐ Apply nose rings

DIAGNOSTIC: ABLE TO PREFORM & INTERPRET

- ☐ Urinalysis (multiple species)
- ☐ Blood gas
- ☐ Rumen fluid exam (including normal pH etc)
- ☐ Blood collection (swine)
- ☐ Fluke finder
- ☐ Fecal sedimentation/acid fast staining for crypto

COMMON PROCEDURES & TOPICS TO BE FAMILIAR

LOCAL ANESTHESIA TECHNIQUES:

- ☐ Lumbosacral epidural (dose and technique)

GASTROINTESTINAL:

- ☐ Exploratory laparotomy

- [ ] Runenotomy/rumenostomy
- [ ] Omentopexy
- [ ] Rectal prolapse repair
- [ ] Umbilical hernia repair

UROGENITAL:

- [ ] Fetotomy
- [ ] Swine cesarean section swine
- [ ] Urethrostomy: High and Low
- [ ] Teaser bull preparation
- [ ] Uterine and vaginal prolapse repair: Buhner stitch

MUSCULOSKELETAL:

- [ ] Claw amputation
- [ ] Cast application

EYE:

- [ ] Extirpation
- [ ] Third Eyelid removal
- [ ] Tarsorrhaphy
- [ ] Third eyelid flap

MAMMARY:

- [ ] Teat infusion
- [ ] Teat amputation

NECROPSY:

- [ ] Systematic necropsy in multiple species
- [ ] Identify and collect appropriate diagnostic samples for laboratory submission