

MINUTES

**Kansas State University Faculty Senate Meeting
March 14, 2000 3:30 p.m. Big 12 Room, K-State Union**

Present: Anderson, Baker, Clegg, Devault, Dodd, Donnelly, Exdell, Fenton, Fenwick, Finnegan, Fjell, R. Flores, S. Flores, Frieman, Geiser, Glasgow, Gormely, Gray, Herald, Heublein, Holden, Jardine, Johnson, Jurich, Keller, Kirkham, Klopfenstein, Koelliker, Legg, Liang, Lutz, Lynch, Martin, McCulloh, Michie, Molt, Mortensen, Nafziger, Olsen, Ossar, Oukrop, Pence, Quirin, Rahman, Ransom, Rintoul, Salsberry, Schapaugh, Schmidt, Selfridge, Sheu, Shultis, Simon, Simons, Stewart, Takemoto, Verschelden, Weiss, Williams, Wissman, Youngman, Zabel, Zivanovic

Absent: Boger, Chenoweth, Devlin, Foster, Gatewood, Heinrich, Jones, Kassebaum, McClaskey, Peterson, Reeck, Ross, Swanson, Taylor, White

Proxies: Bockus, Canter, Fjell, Fraser, Higgins, Hosni, Mosier

Visitors: Ruth Dyer, Heath Harding, Sarah Bailey, James Coffman

- I. President Buddy Gray called the meeting to order at 3:35 p.m.
- II. It was moved and seconded to approve the minutes of the February 8, 2000 meeting. Motion passed.
- III. Announcements - Gray
 - A. & B. Leadership-Administration Meeting and BOR Meeting. Gray referred to minutes of the last EC Meeting, calling attention to Leadership's meeting with Dean Hobrock and Harvard Townsend regarding the proposed Information Commons in Hale Library. A jointly appointed task force, including four senators, has been formed to provide input regarding the Information Commons.
 - C. Big 12 Fellowship Committee. Gray referred to EC minutes (item #3. D.) concerning procedures for appointments to this committee.
 - D. Affirmative Action Task Force - Jerry Frieman, Task Force Chairperson, has presented the report to Gray, who distributed it to the Leadership Council and Faculty Affairs Chair. Frieman will likely report at the next FS meeting.
 - E. Distance Learning Task Force Final Report - After considerable delay, the report has been received and passed on to Academic Affairs.
 - F. Search Committee Task Force - Gray provided background on the mission of this task force. Nancy Peterson, represents FS on the task force. Gray asked senators and colleagues to seriously consider and respond to the questionnaire which will be sent to persons who recently have served on search committees.

G. Student Government Initiatives - Jason Heinrich was unable to attend due to a meeting at the Legislature.

H. Other - Gray announced that Provost Coffman will join FS to discuss FA proposed revisions to Appendix G in the Faculty Handbook and proposals for faculty salary increases.

IV. Queer Straight Alliance presentation - Heath Harding and Sarah Bailey

Harding and Bailey reported on two projects of QSA - "Safe Zone Project" and "Proclamation for Freedom, Justice, and Peace." They mentioned that Mel White, former speech writer for Pat Buchanan and Oliver North, is coming to KSU to talk about hate crimes. Speakers from QSA are available to organizations and classes to answer questions and "put a face to stereotypes". Interested persons can contact the organization at QSA@ksu.edu or www.ksu.edu/QSA. Individuals wishing to receive a "Safe Zone" bookmark to display may request one by e-mail.

V. Reports of Standing Committees

A. Academic Affairs - John Selfridge

1. Course and Curriculum Changes

a. Undergraduate Education

1. Selfridge moved approval of undergraduate course & curriculum changes approved by the College of Technology and Aviation January 13, 2000. Sen. Glasgow questioned dropping Civil Engineering courses dealing with use of computers. Sen. Mortensen said that that content had been moved into other courses.

Department of Arts, Sciences, and Business

CHANGES:

GIS 355 Projects in GIS

GIS 451 Georeferencing

*** ~~GEOG 242 Physical Geography~~ (This course has been deleted from the green & white sheets)

DELETE:

GIS 255 Operating a GIS

Department of Aviation

CHANGES:

PPIL 111 Private Pilot

PPIL 112 Professional Instrument Pilot

PPIL 196 VFR Pilot Proficiency Lab

PPIL 197 IFR Pilot Proficiency Lab

PPIL 211 Professional Commercial Pilot

PPIL 213 Professional Commercial Pilot Flight Lab

PPIL 312 Certified Flight Instructor Ground School

CHANGES (cont.):

PPIL 379 King Air Transition
PPIL 385 Airline Transport Pilot Rating
PPIL 396 Introduction to Aerobatics
PPIL 425 Advanced Aircraft Systems
PPIL 440 FAR 135 Operations
PPIL 482 Certified Instrument Flight Instructor Ground School

DELETIONS:

PPIL 271 Helicopter Pilot (Add On)
PPIL 272 Certified Flight Instructor Helicopter
PPIL 273 Helicopter Pilot Flight Lab
PPIL 274 Certified Flight Instructor Helicopter Flight Lab
PPIL 288 Pilot Rating Transition Course
PPIL 299 Complex Aircraft Familiarization and Proficiency Lab
PPIL 367 Prop-Jet Familiarization and Introduction Lab
PPIL 369 High Altitude Endorsement/Project Familiarization and Introduction Lab
PPIL 395 Multi-Engine Proficiency Lab
PPIL 397 Advanced Aerobatics

CURRICULUM CHANGES:

Associate of Applied Science in Aviation Maintenance
Associate of Technology in Professional Pilot
Bachelor of Science in Aeronautical Technology - Profession Pilot
Bachelor of Science in Aeronautical Technology - Aviation Maintenance

Department of Engineering Technology

CHANGES:

CET 323 Route Location Surveying
CET 312 Transportation Systems

ADDITIONS:

CET 350 Site Construction
CET 351 Construction Techniques and Detailing

CURRICULUM CHANGES:

Associate of Technology in Civil Engineering Technology

NEW CURRICULA:

Associate of Technology in Civil Engineering Technology - Surveying
Option **ATTACHMENT 1**
Associate of Technology in Construction Engineering Technology

*Department of Engineering Technology - Computer Science Technology
Section*

CHANGES:

CMST 100 Operating Systems to Introduction to Operating Systems
CMST 101 Applied BASIC Programming

CHANGES (cont.):

CMST 103 Algorithmic Design to Introduction to Program Design
CMST 180 Database Development
CMST 245 Applications in C Programs to C++ Programming I
CMST 320 COBOL II
CMST 330 Systems Analysis and Design
CMST 250 Networking I
CMST 341 Advanced C++ Programming to C++ Programming II
CMST 345 Networking III

CURRICULUM CHANGES:

Associate of Technology in Computer Information Systems Technology
Associate of Technology in Computer Science Technology
Computer Science Technology - Geographic Information System (GIS)
Option

*Department of Engineering Technology - Electronic Engineering
Technology Section*

ADDITION:

ELET 105 Basic Electronics

*Department of Engineering Technology - Civil/Environmental Engineering
Technology Section*

DELETIONS:

EVET 140 Material and Energy Balances
EVET 230 Environmental Chemistry & Toxicology
EVET 270 Hazardous Waste Management

ADDITIONS:

EVET 100 Introduction to Environmental Engineering Technology
EVET 150 Microbiology for Environmental Engineering Technology
EVET 215 State and Federal Regulations
EVET 220 Waste Water Treatment
EVET 235 Safety and Industrial Hygiene
EVET 245 Waste Handling and Disposal
EVET 265 Recycling and Pollution Prevention

CHANGES:

EVET 240 Applications of Fluid Flow
EVET 255 Environmental Sampling and Analysis

CURRICULUM CHANGES:

Associate of Technology in Environmental Engineering Technology

KSU-Salina College of Technology and Aviation

POLICY CHANGES:

General Undergraduate Catalog Description
Policy for Transfer Students

Motion passed.

2. Selfridge moved approval of undergraduate course and curriculum changes approved by the College of Education, January 25, 2000.

Department of Secondary Education

Health (2nd Teaching Option)

Department of Elementary Education

New Area of Concentration: English as a Second Language

New Endorsement: Bilingual/Multicultural

Department of Secondary Education

New Endorsement: Bilingual/Multicultural

Motion passed.

3. Selfridge moved approval of undergraduate course and curriculum changes approved by the College of Technology and Aviation November 18, 1999.

Technology Management Curriculum Changes

Motion passed.

4. Selfridge moved approval of the undergraduate course and curriculum changes approved by the College of Engineering, December 3, 1999.

CHANGES:

ME 575 Mechanical Engineering Industrial Design Projects

Motion passed.

b. Graduate Education

1. Selfridge moved approval of Graduate Course & Curriculum Changes approved by Graduate Council February 1, 2000, with the following corrections:

Graduate Seminar in Human Nutrition is HN 880

HN 844 is Nutritional Epidemiology

HN 644 is Women, Aging, and Health

CHANGE:

EECE 631 Microcomputer Systems Design

EECE 772 Theory and Techniques of Bioinstrumentation

EECE 773 Bioinstrumentation Design Laboratory

GRSC 820 Advanced Extrusion Processing

HN 650 Practicum in Human Nutrition

HN 701 Sensory Analysis of Foods

HN 741 Consumer Response Evaluation

CHANGE (cont.):

HN 780	Problems in Human Nutrition
HN 782	Topics in Human Nutrition
HN 810	Advanced Macronutrient Metabolism
HN 812	Advanced Micronutrient Metabolism
HN 821	Practicum in Sensory Analysis
HN 844	Nutritional Epidemiology
HN 880	Graduate Seminar in Human Nutrition
HN 999	Doctoral Research (title change)

Master of Science in Human Nutrition (name change)

Doctor of Philosophy in Human Nutrition (name change)

NEW:

ASI 740	Research and Development of Food Products
AT 995	Grantsmanship and Publication
CE 663	Unit Operations and Processes in Environmental Engineering
GENAG 850	Food Science Graduate Seminar
HN 644	Women, Aging and Health
HN 995	Grantsmanship and Publication
HRIMD 995	Grantsmanship and Publication

Motion passed.

2. Selfridge moved approval of the Graduate Certificate Program approved by Graduate Council February 1, 2000.

Complex Fluid Flows Certification Proposal

ATTACHMENT 2

Motion passed.

c. General Education

1. Selfridge moved approval of the General Education policy for the College of Arts and Sciences; approved 10/7/99 by the College of Arts and Sciences and approved at the December 2, 1999 General Education Task Force Meeting.

ATTACHMENT 3

Motion passed.

2. Selfridge moved approval of a course approved for general education at the February 3, 2000 General Education Task Force Meeting.

HIST 556 Bill of Rights in American History

Motion passed.

2. Graduation Lists

- a. Selfridge moved approval of the December 1999 Graduation List.

Motion passed.

- b. Selfridge moved approval of additions to the December 1998, December 1999, and Spring 1999 Graduation Lists.

Anthony William Tovell, Master of Fine Arts

Deborah Lynn Gates, Arts & Sciences, BS-Psychology
Elaine Mose Jackson, Arts & Sciences, Associate of Science
Rebecca Leah Blitz, Arts & Sciences, BS-Social Science
Kelly Anne Fabrizius, Arts & Sciences, BS-History
Matthew Ryan Wessel, Bachelor of Science in Airway Science,
Professional Pilot, AWSPP, U1
Mark Raymond Feuerborn, Bachelor of Science in Airway Science,
Professional Pilot, AWSPP, U1

Motion passed.

B. Faculty Salary Proposal - Gray and Provost Coffman

1. Gray referred to the draft of a proposal for faculty merit and equity salary adjustment for FY 2001 distributed to the Senate. The proposal originated in FA and has been discussed with Provost Coffman. Items of agreement and disagreement are identified in the draft. Gray highlighted some of the important issues.

- There is a working understanding that if 5.9% is allocated, 2.5% will be for merit; 3.45 for equity/compression, and faculty will be informed of their raises in each area (agreement).
- Identified gender and ethnicity salary inequities will be addressed first and adjustments made prior to awarding merit and other equity raises (agreement).
- The goal of bringing salaries closer to peers in the same discipline and rank is the next priority. Generally, discrepancies are greater for full professors than either associates or assistants (agreement).
- Full professors who were promoted prior to promotion-related salary enhancements should be given priority (agreement in principle; Provost Coffman is concerned that this may have to be addressed in phases, given the limited total pool of dollars).
- After gender, ethnicity, and promotion issues have been addressed, remaining equity funds should be used to narrow the degree of compression for each discipline at each rank. (agreement in principle) Sen. Legg asked for clarification. Gray said this refers to the degree of parity with colleagues in peer institutions.

- When there are no outliers (extremely high and low salaries) the percentage of equity adjustment should be the same for all faculty at the same rank within a discipline. (disagreement, Provost Coffman believes that increases should not be "across the board")

2. Provost Coffman added the following comments about the proposed salary distribution procedures:

- There is a long-standing understanding in the Legislature that all salary appropriations are "merit" money. The 2.5% should reflect recent merit as measured in the annual evaluation. The balance in the equity pool is for catch up, and full professors need the most catching up.

- The gap between full professors and their peers varies considerably by discipline (also true for associate and assistant professors). He is trying to develop a pool of money to help address discipline-based gaps.

- In addition, the following circumstances need to be addressed:

a. compression by rank within discipline

b. the largest resources should be devoted to where there are the largest gaps (often with people who were hired at low salaries years ago)

c. some underpaid faculty are in non-market areas where teaching is a major role as opposed to those who obtain funded research

d. individuals who had productive years when there was no or small annual increase

e. individuals who have low salaries due to low productivity

f. a large number of faculty were promoted before there were automatic promotion related adjustments

g. some former administrators have higher salaries than their departmental peers

h. outliers (high and low) need to be considered individually

i. gender and ethnicity inequities need to be documented by evaluation documents

3. Gray said that the discussion has been productive and he appreciates the pursuit of common goals with Provost Coffman. He expressed concern that there be mechanisms of accountability built into the system.

Gray also noted that FS Leadership does not endorse any distinction between teaching and unclassified faculty or library faculty. These are artificial distinctions that have arisen at the state government level.

Gray stressed the importance of openness in the salary distribution process.

4. Sen. Rahman asked about a formula for insuring that gender and ethnicity inequities are addressed. Ruth Dyer, Asst. to the Provost, is working on ways to monitor gender inequities on a long-term basis.

Rahman asked if there were a 19.5% difference in salaries of two faculty members in the same discipline and rank, they would receive the same percentage equity increase. Coffman said he could not agree to that, because it could get us into a position where we are less able to address other equity issues along with compression. Devoting all of the equity money to compression issues would likely solve just 1/4 of the problem.

Sen. Legg said the proposal makes important points and asked that it be sent to all unclassified staff for input. Sen. Ossar asked about compression data with peers by discipline. Coffman suggested using peer institution information supplemented by NASULGC data which is available on the web.

Sen. Lynch pointed out that some associate professors were promoted before promotion adjustments were made.

Sen. Sheu asked about a time table for decisions on the proposed policy. Gray noted that Provost Coffman has asked all deans to meet with their faculty senators. Coffman said he would like to draft a letter over the weekend to send to the deans.

B. Faculty Affairs - Brad Fenwick

1. Fenwick offered background on several proposed changes to grievance procedures in the Faculty Handbook, including C35, Confidentiality of Documents, and Appendix G, concerning General Faculty Grievance Board Policy and Hearing Procedures (See Faculty Senate Agenda **ATTACHMENTS 4, 5, and 6**).

Work on these changes began several years ago with a task force jointly formed by former FS President Legg and Provost Coffman. Following presentation of that task force report, a number of amendments have been made in the Faculty Handbook. Present consideration focuses on Appendix G and hearing procedures. Faculty Affairs has prepared three draft proposals and the Administration has drafted a document, but there continue to be unresolved differences. Fenwick characterized the remaining differences as due to the difficulty of balancing due process, expediency, and clarity in grievance procedures.

Fenwick called attention to proposed policies in Appendix G. section H. (Grievance Hearing Procedures) 1. (**General Policies and Procedures**), parts a, e., g., h., and i, to G. H. 2. (**Filing a Grievance and Pre-Hearing Activities**), parts a., b., c., and e., and to G. H. 4. (**Findings, Recommendations, Appeals, and Reporting Responsibilities**), parts b. and j. He said that Section C35 implements access to documents only in the case of a grievance hearing.

Fenwick moved approval of the proposed changes.

Sen. Michie yielded the floor to Provost Coffman.

Coffman voiced his concern about several features of the proposed policies. He said that proposed Section C35 represents a fundamental change in KSU philosophy about confidentiality of documents. This change could affect the candor of persons contributing materials related to faculty evaluations. He believes the implications of the proposed changes need serious consideration.

Coffman said he has no objectives to G. H. 1. b., which simply explicates what would happen anyway.

Coffman made two points about G. H. 1. e., concerning faculty service on GFGB. He is concerned with the burden placed on the chairperson and with language about consideration of service on grievance panels in faculty merit evaluations and promotion/tenure determinations. He also expressed concern about similar language in G. H. 1. h., concerning the role of advocates, and it could be considered in their merit and tenure/promotion evaluations.

In G. H. 1. i. (scheduling of hearings), Coffman prefers limiting hearings to no more than two days with the possibility of a one-day extension. He also questioned how chairpersons will determine the validity of requests to reschedule due to conflicts.

Coffman prefers replacing "refreshments" with "amenities" in G. H. 1. k. and believes G. H. 1. l. could be dropped, because it is already elsewhere in Section G.

In G. H. 2. a., Coffman supports the last sentence, "regarding the necessity to define such terms as..."capricious", "arbitrary", "collegiality." However, he would like to add, "If the grievant's department defines those terms in its promotion and tenure procedures, those definitions will apply."

He suggested deleting G. H. 2. b. because of the substantial responsibility that it places on the chairperson and because most of the following items provide a detailed outline of this paragraph.

Coffman believes G. H. 2. e. again places the chairperson almost in the position of a litigant. If the grievance becomes a lawsuit, the chairperson is very likely to be involved.

Coffman disagreed with the proposal to give the GFGB panel access to personnel files. While c.v.s are essentially public information, he could not accept a procedure that allows grievance panels to obtain "relevant information, including but not limited to the personnel files of the grievant, administrator(s), other faculty/staff, and information pertaining to the department and/or college." He would view this as a breach of privacy.

Coffman said he has no objection with G. H. 4. a. (goals of the hearing panel). However, he disagrees with G. H. 4. b. He noted that in grievance procedures the burden of proof is on the grievants, thus it is inappropriate for the University to pay attorney fees, even if the grievant's claims are found to be true. He believes there is no university in the country which does this.

Coffman said that, in general, he thinks the proposed procedures are too heavily "lawyered," despite the earlier statement that they are not intended to be a legal process. He offered the following options to representation of grievants by attorneys:

1. Participants may bring attorneys, but the attorneys may not participate.
2. Participants may consult with attorneys, but not bring them to the hearing.
3. Participants could mutually agree not to consult with attorneys until after the hearing.

Coffman believes the less involvement by attorneys, the better, since they use the hearing to build a case for action after the grievance hearing.

Coffman thinks the language in G. H. 4. c. (disciplinary actions) is too prescriptive and contributes to a plaintiff-defendent atmosphere. He suggested a more open-ended language regarding options.

Coffman agrees with the intent of G. H. 4. d (report of findings by panel), but recommended changes to the wording of the final sentence to "The findings of fact and recommendations are final and non appealable."

Questions and discussion followed Provost Coffman's remarks. Fenwick indicated that Faculty Affairs has considered each argument and has justifications for its positions.

Legg said he agrees that the proposals represent a significant change in the privacy of files and the amount of information that could be made available. He believes grievants should have access to their own files.

Sen. Frieman said that 2. b. goes beyond the interest in documents expressed in C35. Fenwick responded that without availability of personnel documents, there is no mechanism for a grievance panel to get information relevant to a grievance. Frieman asked if 2. b. goes beyond C35, and Fenwick said that information about job conditions such as space, resources for travel, salary, and other support may be relevant in grievances. Frieman remarked that he is very troubled about the privacy issue.

Sen. Dodd asked Coffman about reasonable attorney fees in 4. b. and who has the burden of proof. Coffman said there is a fundamental difference between the proposed policy and that in Appendix M, which concerns procedures for dismissal of tenured faculty, where the burden of proof is on the University. In both the private and public sector, those with the burden of proof are responsible for legal fees.

Sen. Baker asked about an additional option where both parties would forgo consulting attorneys. Coffman said the Administration does not have a legal requirement to do that.

Sen. Jurich said that hearings may end up in court, especially when the only way to recover expenses is to go to court. Furthermore, ultimately courts will come down on the side of individuals concerning payment of attorney fees.

Coffman reaffirmed his belief in the right to privacy in grievance procedures, but noted that courts do have subpoena powers.

Fenwick suggested that if we follow the proposed procedures, the courts will approve what we do. The GFGB chairperson will determine potential relevance of information and the panel is bound by confidentiality.

Coffman responded that courts might support the procedures, but he is concerned about making policies that are too invasive of privacy.

Sen. Rahman suggested that sections related to consideration of service on panels as part of merit and promotion determinations should be rewritten. Also, persons asked to write letters as part of evaluations should be informed that the information might be available in grievance hearings.

Sen. Anderson commented on inconsistent use of language (administrator/ respondent), suggested that responsibilities of chairpersons be described as "in consultation with the panel", and urged that the document be made more inclusive by changing the wording from "faculty" to "unclassified staff" and from "academic conduct/duties" to "professional conduct".

Anderson moved that the proposals be sent back to FA for further revision.

Motion passed.

Several senators offered additional comments and recommendations

At this point, Gray was informed that a quorum no longer existed.

VI. Gray adjourned the meeting at 5:45 p.m.

**Kansas State University-Salina
College of Technology and Aviation**
**Department of Engineering Technology
Civil/Environmental Engineering Technology Section**
CURRICULUM CHANGES:
**ASSOCIATE OF TECHNOLOGY
IN
CIVIL ENGINEERING TECHNOLOGY

(CURRENT)**

Freshman Fall Semester	
MATH 100	College Algebra3
MATH 161	Applied Plane Trigonometry.....2
CET 120	Materials Sampling & Testing2
MET 111	Technical Graphics3
ENGL 100	Expository Writing I.....3
GMST 101	Applied BASIC Programming.....2
	Humanities/social science elective2
	17

Freshman Spring Semester	
PHYS 113	General Physics I.....4
MATH 220	Analytic Geometry and Calculus I.....4
CET 110	Civil Technology Drafting.....2
CET 130	Plane Surveying.....4
CET 211	Statics3
	17

Sophomore Fall Semester	
ENGL 202	Technical Writing3
CET 220	Soils and Foundations2
CET 241	Construction Methods & Estimating.....2
CET 323	Route Location Surveying.....4
MET 245	Material Strength and Testing.....3
MET 252	Fluid Mechanics I.....3
	17

Sophomore Spring Semester	
SPCH 105	Public Speaking IA.....2
CET 312	Transportation Systems.....4
CET 313	Structural Design3
CHM 210	Chemistry I or
PHYS 114	General Physics II.....4
CET 240	Civil CAD or
	Humanities/social science elective* 2-3
	15-16

*To be selected from ECON 110, ENGL 255, HIST 231, or PSYCH 110.

TOTAL HOURS REQUIRED: 67

**ASSOCIATE OF TECHNOLOGY
IN
CIVIL ENGINEERING TECHNOLOGY

(PROPOSED)**

Freshman Fall Semester	
MATH 100	College Algebra3
MATH 150	Plane Trigonometry3
CET 120	Materials Sampling & Testing2
MET 111	Technical Graphics3
ENGL 100	Expository Writing I.....3
ECON 110	Principles of Macroeconomics.....3
	17

Freshman Spring Semester	
PHYS 113	General Physics I.....4
MATH220	Analytic Geometry and Calculus I.....4
CET 130	Plane Surveying.....4
CET 211	Statics3
	15

Sophomore Fall semester	
CET 220	Soils and Foundations2
CET 241	Construction Methods. & Estimating.....2
CET 323	Route Location Surveying.....3
CET 410	Managerial & Engineering Economics ..3
MET 245	Material Strength and Testing.....3
MET 252	Fluid Mechanics I.....3
	16

Sophomore Spring semester	
CET 312	Transportation Systems.....3
CET 313	Structural Design3
CET 340	Mechanical and Electrical Systems3
ENGL 202	Technical Writing3
SPCH 105	Public Speaking IA.....2
	UGE elective.....3
	17

TOTAL HOURS REQUIRED: 65

RATIONALE:

The CET associates degree program has been modified to support a new surveying option, which is being proposed to replace the Land Information Technology (LIT) and Surveying Technology (SRVT) degree programs.

MATH 151 Applied Plane Trigonometry (2) as been changed to MATH 150 Plane Trigonometry (3) to provide a better trigonometry background to support the Surveying Option.

CMST 101 Applied Basic Programming has been removed from the curriculum to allow the addition of more relevant courses. Typical computer use in this field requires little general programming capabilities.

The humanities/social science elective in the freshman fall semester has been changed to ECON 110 Principles of Macroeconomics, which is a prerequisite for CET 410. ECON 110 satisfies TAC/ABET requirements and partially satisfies UGE requirements.

CET 110 Civil Technology Drafting, which primarily covered CAD applications related to route surveying and transportation topics, has been removed from the curriculum. It has been decided to incorporate this material into CET 232 Route Location Surveying. This change provides more balanced attention to this topic in relation to other areas of Civil Engineering Technology.

CET 323 Route Location Surveying and CET 312 Transportation Systems have been modified to support the proposed modifications to these courses.

CET 410 Managerial and Engineering Economics has been added to the curriculum to provide some background in management.

CET 340 Mechanical and Electrical System has been included to provide some of the electrical background given by ELET 100 Basic Electricity in the SRVT degree.

The requirement for PHYS 214 General Physics II or CHEM 210 Chemistry I has been changed to a UGE elective to allow students more flexibility in course choices. Currently students must take CHEM 210 to simultaneously satisfy the degree and UGE requirements. Neither PHYS 214 nor CHEM 210 is fundamentally related to the core material for this degree.

The requirement for CET 210 Civil CAD or a humanities/social science elective has been dropped. This has been seen as an asymmetric set of course choices for a number of reasons. In addition, CET 210 has not been taught for a number of years, and TAC/ABET certification does not require another humanities course in addition to the required ECON 110 Principles of Macroeconomics. This change allows the addition of some more relevant courses to the curriculum.

IMPACT:

Arts, Sciences and Business Department of the College of Technology and Aviation will have changes in enrollment in MATH 151 Applied Plane Trigonometry and MATH 150 Plane Trigonometry.

Contact: Nancy Mosier; Arts, Science, and Business Department Chair (826-2696)

EFFECTIVE DATE:

Fall 2000

ADDENDUM 4

Complex Fluid Flows Certification Proposal

Proposal. We propose to create a Certificate in Complex Fluid Flows as a graduate option for students studying for a MS or Ph.D. in Chemical Engineering, Mechanical and Nuclear Engineering, or Physics.

Purpose. The purpose of this certification program is three-fold:

1. To attract quality graduate students to our previously established Program for Complex Fluid Flows (CFF).
2. To give the students an interdisciplinary training relevant to the areas of complex fluid flows.
3. To enhance job opportunities for the students who participate in the program for CFF.

Need. Many problems in industry involve complex fluid flows. These problems require a broad range of knowledge and abilities currently not well supported by any one academic field. The proposed interdisciplinary curriculum, combined with individual departmental degree requirements, will provide that range. Thus students who complete the Program for Complex Fluid Flows certification program will, upon graduation, have the training and the broad knowledge and skills to tackle complex problems and be able to satisfy the need of both industry and academia for suitably trained people.

Scholarship at the university can be enhanced by faculty joining forces to research new areas of substance for our technical civilization. This was the purpose for the creation, two and one half years ago, of the Program for Complex Fluid Flows. Integral to any such program are bright and motivated graduate students receiving training both in the classroom and in the research lab. This certification program will help attract top-notch students to Kansas State University and prepare them for their research experience with our interdisciplinary research team.

Consequence to Campus Goals. Goals include student attraction, retention, and placement. The CFF Certification program will attract high quality students to our campus for a specific reason. Certification will enhance the placement opportunities. Other goals are strong research programs. The students involved in the CFF certification program will be valuable research assistants in the laboratories of the CFF faculty and hence improve research productivity. The CFF program is interdisciplinary and the advocacy of such groups and interdisciplinary training are stated goals of the university.

Benefits. Besides attracting and training quality students and supporting the interdisciplinary efforts of the CFF program, a major benefit is the uniqueness, compared to other universities, of the CFF program and the proposed CFF certification. A unique and high quality program producing certifiably well-trained graduate will reflect well on the university. It is expected that recruiting agencies will target and promote students with CFF certification for employment.

Requirements. Certification in CFF will be achieved by satisfying the following requirements:

- (a) Student must complete their MS or Ph.D. degree requirements in Chemical Engineering, Mechanical and Nuclear Engineering, or Physics.
- (b) Complete three semesters of CFF Seminar: PHYS708, ME708 or CHE708 (one credit hour). The CFF bi-weekly seminar series has brought distinguished speakers from various national and international organizations to the KSU campus for two years.
- (c) Complete at least three (MS students) or five (Ph.D. students) of the courses below (all three credit hours):
 - Intermediate Fluid Mechanics, ME720
 - Advanced Transport Phenomena I, CHE862
 - Advanced Transport Phenomena II, CHE867
 - Boundary Layer Theory, ME831
 - Fundamental of Optics, PHYS651
 - Applied Optics, PHYS652
 - Turbulent Reacting Flows, CHE910
 - Turbulent Flows (course being created)
 - Computational Methods for CFF (course being created)

- Experimental Methods for CFF (course being created)
- (d) Complete the following non-technical course:
 - Introduction to Leadership Concepts, EDADL211 (2 credit hours)

Resources

Faculty

- A. Chakrabarti, Assoc. Professor of Physics
- R. Fox, Assoc. Professor, Electrical & Computer Engineering
- L. Glasgow, Professor, Chemical Engineering
- M. Hosni, Assoc. Professor, Mechanical & Nuclear Engineering
- B. Jones, Professor, Mechanical & Nuclear Engineering
- B. Law, Assoc. Professor of Physics
- H. Meng, Asst. Professor, Mechanical & Nuclear Engineering
- C.M. Sorensen, Professor of Physics and Adjunct Professor of Chemistry

Facilities

- Fluid Flow Diagnostics Lab
- Particle Measurement Lab
- NSF Center for Computation
- Institute for Environmental Research
- Air Movement Laboratory

Program Administration. Students will fill out an application form and submit with a letter to the CFF Director. They must be accepted by one of the three CFF academic departments. Acceptance to pursue certification will be made by the entire CFF faculty upon review of the student's credentials. Students records will be kept in the CFF office in parallel to their departmental records. Upon completion of the certificate requirements the CFF director will notify the Graduate School.



Graduate School
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PROPOSED GRADUATE CERTIFICATE PROGRAM IN COMPLEX FLUID FLOWS

TO: College of Engineering
 College of Arts and Sciences
 Graduate Council
 Faculty Senate

The attached is a proposal to create a *Graduate Certificate Program* in the subdiscipline of *Complex Fluid Flows*. It represents the interdepartmental collaboration between faculty members in the Departments of Physics, Chemical Engineering, Electrical and Computer Engineering, and Mechanical and Nuclear Engineering.

Policies concerning the establishment of such programs have recently been endorsed by the Kansas State University Graduate Council, and can be found as chapter 4 of the Graduate Handbook at the following web site:

<http://www.ksu.edu/grad/handbook/chap4.htm>

This page carries the endorsements of the academic units involved:

Departmental:

	Signature	date
Physics	<u>James C Legg</u>	<u>2-10-99</u>
Chemical Engineering	<u>Stu H. Allen</u>	<u>2/5/99</u>
Electrical and Computer Engineering	<u>David J. Solder</u>	<u>2/14/99</u>
Mechanical and Nuclear Engineering	<u>J. Scott Sharp</u>	<u>3/11/99</u>

College and University:

Arts and Sciences	<u>Pete. Nichell</u>	<u>2/21/00</u>
Engineering	<u>Long-Sung by Richard H. Bellinger</u>	<u>2/15/00</u>
Academic Affairs Physical Sciences Subcommittee	<u>James A. Smith</u>	<u>1/17/00</u>
Graduate Council	<u>James A. Smith</u>	<u>2/1/00</u>
Faculty Senate	<u>Marion W. Gray</u>	<u>3/30/00</u>

College of Arts and Sciences

CHANGE: (Approved 10/7/99, taken directly from white sheets)

College

As required by the university, students must complete at least 18 credit hours of approved university general education courses, at least 6 credit hours of which must be at the 300 level or above. The college ~~furthor~~ requires that at least one university general education course must be taken from each of the three areas of humanities, social sciences, and computational or natural sciences. Except for students in the college's interdisciplinary majors (humanities, life sciences, physical science, and social science), courses used for university's general education credit may not be in the student's major field without the approval of the college and the University.

Within the above guidelines, any course offered by Any college at Kansas State University may be used to satisfy these requirements. General Education courses approved as distribution requirements in the College of Arts and Sciences (see "Bachelor of Arts and Bachelor of Sciences" following this section) may be used to satisfy simultaneously both general education and distribution requirements. Courses from other colleges may be approved as distribution requirements in the College of Arts and Sciences. Students should consult their advisors for up-to-date lists of approved courses.

TO:

College

As required by the University, students must complete at least 18 credit hours of approved University General Education courses, at least 6 credit hours of which must be at the 300 level or above. The College requires that at least one University General Education course must be taken from each of the three areas of humanities, social sciences, and computational or natural sciences. Except for students in the College's interdisciplinary majors (humanities, life sciences, physical science, and social science), courses used for University General Education credit may not be in the student's major field without the approval of the College and the University. Transfer students requiring only 6 hours of University General Education courses should take at least one course from each of two discipline areas.

Within the above guidelines, any approved University General Education course offered by any college at Kansas State University may be used to satisfy these requirements. University General Education courses approved for basic requirements in the College of Arts and Sciences (see "Bachelor of Arts and Bachelor of Sciences" following this section) may be used to satisfy simultaneously both University General Education and College of Arts and Sciences basic requirements. Courses from other colleges may be approved for meeting basic requirements in the College of Arts and Sciences. Students should consult their advisors for up-to-date lists of approved courses. A list of currently offered University General Education courses is available on the web at <http://www.ksu.edu/artsci/uge.html>.

RATIONALE: Placing the College's URL site at the end of the College's UGE section of the catalog gives students and advisors access to the list of currently approved UGE courses in Arts and Sciences, and provides the distribution of the courses in the three broad subject areas (humanities, social sciences, and computational or natural sciences).

EFFECTIVE DATE: Spring 2000