MEMORANDUM

March 4, 2003

TO: Academic Deans Council

FROM: Dr. Keith L. Belli
UCCC Chair

RE: Change Notice 5

Listed below are curriculum change proposals which have been recommended by the University Committee on Courses and Curricula. Under current procedure, members of the Academic Deans Council may question the approval of these proposals at any time prior to ***5:00 p.m.*** on March 19, 2003 by contacting the Committee's office (5-0831), or the office of the Vice President for Academic Affairs (5-3742). If no questions have been raised, the proposals will be considered to have been approved automatically.

ARTS & SCIENCES

REVIEW	GR 4113/6113	**Micropaleontology**. (3) (Prerequisite: GG 4203 or equivalent). Three hours lecture. A study of microscopic fossils. May be taken with GG 4201. **Effective: Fall 2003**
REVIEW	GR 4233/6233	**Geography of Asia**. (3) Three hours lecture. A regional survey of Asia with emphasis upon placenames, physical geography, cultural diversity and cultural landscapes, geopoltical conflicts, and environmental issues. **Effective: Fall 2003**

MODIFY PH 4152/6152 FROM: TO:	**Modern Physics Laboratory.** (2) Six hours laboratory. Introduction to measurement theory. The determination of **e**, **e/m**, and **h**; beta-ray spectroscopy, gamma-ray scintillation spectroscopy; Geiger counters; Raman effect; other experiments. **Modern Physics Laboratory**. (2) (Prerequisite: PH 4143/613). Six hours laboratory. Scientific report writing. Experiments in modern physics, optics, and classical physics. **Effective: Spring 2003**
REVIEW PH 4813/6813	**Introduction to Solid State Physics**. (3) (Prerequisite: PH 3613). Three hours lecture. Crystal structure, crystal diffraction and the reciprocal lattice, crystal binding, free electron gas, energy bands, and semiconductors. **Effective: Fall 2003**
REVIEW PH 8013	**Modern Topics for Physics Teachers**. (3) (Prerequisite: Consent of instructor). Two hours lecture. Three hours laboratory. Historical development of special relativity and quantum physics with particular emphasis on topics and experiments in atomic and nuclear physics. **Effective: Fall 2003**
REVIEW PSY 4103/6103	**Psychometrics**. (3) Three hours lecture. Theory, problems, skills, and techniques of psychological measurement. Emphasis on construction, evaluation, item analysis, reliability and validity techniques in the improvement of measures of human behavior. Laboratory hours to be arranged. **Effective: Fall 2003**

MODIFY PSY 4403/6403 FROM: TO:	**Physiological Psychology**. (3) (Prerequisite: PSY 1013). Three hours lecture. Nervous, muscular, sensory and glandular systems of the body as they affect behavior and adjustment. Emphasis upon the role of the central and peripheral nervous systems. **Biological Psychology**. (3) (Prerequisite: PSY 1013). Three hours lecture. Nervous, endocrine, and immune systems of the body as they affect behavior and adjustment. Emphasis upon the role of the central and peripheral nervous systems. **Effective: Fall 2003**
REVIEW PSY 8503	Learning. (3) (Prerequisite: PSY 3343). Three hours lecture. Current theories and learning models; methods and results of experimental studies of human and animal learning. **Effective: Spring 2004**

EDUCATION

MODIFY FROM: COE 6393 TO: COE 83583	**Vocational Rehabilitation Counseling**. (3) Three hours lecture. Rehabilitation legislation and the rehabilitation counseling process. **Vocational Rehabilitation Counseling**. (3) Three hours lecture. Rehabilitation legislation and the rehabilitation counseling process. **Effective: Fall 2003**

ENGINEERING

ADD	ASE 4513	**Aerospace Vehicle Design I**. (3) (Prerequisites: ASE 3123, ASE 3313, ASE 3223). Two hours lecture. Three hours laboratory. Introduction to the principles and techniques of aerospace vehicle design. Introduction to systems engineering and requirements analysis; design optimization; layout; weight; performance. **METHOD OF INSTRUCTION**: C **C.I.P. NUMBER**: 14.0201 **24-CHARACTER ABBREVIATION**: Aero Vehicle Design I **Effective: Fall 2003**
ADD	ASE 4523	**Aerospace Vehicle Design II.** (3) (Prerequisite: ASE 4513). One hour lecture. Five hours laboratory. Continuation of ASE 4513. Students make use of principles and techniques covered in ASE 4513 to create a design of an aerospace vehicle. **METHOD OF INSTRUCTION:** B **C.I.P. NUMBER:** 14.0201 **24-CHARACTER ABBREVIATION:** Aero Vehicle Design II **Effective: Spring 2004**
DELETE	ASE 4613	**Systems Design.** (3) (Prerequisites:ASE 4343, ASE 4123, ASE 3213). Two hours lecture. Three hours laboratory. Problem synthesis; layout; weight analysis; aerodynamics; parameters; thermal environment; propulsion analysis; human factors; structural analysis; system optimization; cost effectiveness. **Effective: Fall 2003**

MODIFY CS 3124 FROM: TO:	**(prerequisite change only)** **Microprocessors I**. (3) (Prerequisites: CS 1233 or CS 1314 and ECE 3714). **Microprocessors I**. (3) (Prerequisites: Grade of C or better in CS 1233 or CS 1314, and grade of C or better in ECE 3714). **Effective: Fall 2003**
MODIFY CS 4113/6113 FROM: TO:	**(prerequisite change only)** **Computer Architecture.** (3) (Prerequisite: ECE 3724/CS 3124). **Computer Architecture**. (3) (Prerequisite: Grade of C or better in ECE 3724/CS 3124). **Effective: Fall 2003**
MODIFY CS 4213/6213 FROM: TO:	**Software Engineering I.** (3) (Prerequisite: CS 2324 with a grade of C or better). Two hours lecture. Two hours laboratory. Software planning; software requirements analysis and specification; software design; testing and debugging; maintenance; documentation. **Software Engineering I.** (3) (Prerequisite: CS 2314 with a grade of C or better). Two hours lecture. Two hours laboratory. Software planning; software requirements analysis and specification; software design; testing and debugging; maintenance; documentation. **Effective: Spring 2003**

ADD CS 8673	**Machine Learning.** (3) (Prerequisite: CS 4633/6633). Three hours lecture. Introduction to machine learning, including computational learning theory, major approaches to machine learning, evaluation of models, and current research. **METHOD OF INSTRUCTION:** C **C.I.P. NUMBER:** 14.0903 **24-CHARACTER ABBREVIATION:** Machine Learning **Effective: Spring 2003**
REVIEW CE 8833	**Sludge Treatment and Disposal.** (3) (Prerequisites: CE 8803 and CE 8823). Three hours lecture. Basic theory of sludge handling; treatment, disposal, and design application. **Effective: Spring 2003**
REVIEW CE 4303/6303	**Stress Analysis**. (3) (Prerequisites: EM 3213 and MA 3253). Two hours lecture. Three hours laboratory. Stress and strain at a point, theories of failure, shear center, elastic instability, columns, dynamic loads and theory of measurements. **Effective: Spring 2003**
DELETE CE 4823/6823	**Public Health Engineering.** (3) (Prerequisite: CE 3824). Three hours lecture. Public health engineering principles for protection against biological and chemical health hazards. Appropriate control methods for rural areas and developing countries. **Effective: Spring 2003**
REVIEW CE 8133	**Traffic Flow Theory**. (3) (Prerequisite: Consent of instructor). Three hours lecture. An analysis of the engineering and mathematical principles of traffic flow. **Effective: Spring 2003**

DELETE	CE 8603	**Indeterminate Structures II.** (3) (Prerequisite: CE 4603/6603). Three hours lecture. Advanced study of classical and modern techniques used in the analysis of complex indeterminate structures. **Effective: Spring 2003**
REVIEW	CE 8613	**Advanced Design in Metals**. (3) (Prerequisite: CE 4623). Three hours lecture. Principles and methods of design based on the plastic properties of steel. **Effective: Spring 2003**
REVIEW	CE 8663	**Advanced Computational Methods in Structural Analysis**. (3) (Prerequisite: CE 4663/6663 or consent of instructor). Three hours lecture. Advanced computational methods used in the stiffness analysis of two-and three-dimension structures. Programming strategies and techniques used in computer software development. **Effective: Spring 2003**
REVIEW	CE 8693	**Advanced Structural Design**. (3) (Prerequisite: CE 4623 and CE 4633). Three hours lecture. The analysis and design of complex structural systems. Advanced methods of analysis, including computer methods. **Effective: Spring 2003**
REVIEW	CE 8843	**Water Treatment Plant Design.** (3) (Prerequisite: CE 3824). Three hours lecture. An in-depth consideration of criteria for the selection of water sources for a potable supply. Theory and design considerations for selecting treatment alternatives. **Effective: Spring 2003**
REVIEW	CS 9253	**Topics in Software Engineering.** (3) (Prerequisite: Consent of Instructor). Three hours lecture. Reading and study of current work related to the area of software engineering. Intended for doctoral students. (May be taken for credit more than once). **Effective: Spring 2003**

MODIFY ECE 3163 FROM: TO:	**(prerequisite change only)** **Signals and Systems.** (Prerequisite: ECE 3153). **Signals and Systems**. (Prerequisite: Grade of C or better in ECE 3153). **Effective: Spring 2003**
MODIFY ECE 3243 FROM: TO:	**(prerequisite change only)** **Electronic Circuits I.** (Prerequisite: ECE 3714, grade of C or better in ECE 3144, and credit or registration in ECE 3153). **Electronic Circuits I**. (Prerequisites: Grade of C or better in both ECE 3714 and ECE 3144, and credit or registration in ECE 3153). **Effective: Spring 2003**
MODIFY ECE 3254 FROM: TO:	**(prerequisite change only)** **Electronic Circuits II.** (Prerequisite: ECE 3243). **Electronic Circuits II.** (Prerequisite: Grade of C or better in ECE 3243). **Effective: Spring 2003**
MODIFY ECE 3283 FROM: TO:	**(prerequisite change only)** **Electronics.** (Prerequisite: ECE 3144 or ECE 3183). **Electronics**. (Prerequisites: Grade of C or better in either ECE 3144 or ECE 3183). **Effective: Spring 2003**
MODIFY ECE 3324 FROM: TO:	**(prerequisite change only)** **Electromagnetics II.** (Prerequisite: ECE 3313). **Electromagnetics II.** (Prerequisite: Grade of C or better in ECE 3313). **Effective: Spring 2003**

MODIFY ECE 3414 FROM: TO:	**(prerequisite change only)** **Fundamentals of Energy Systems**. (Prerequisites: ECE 3313 and a grade of C or better in ECE 3144). **Fundamentals of Energy Systems.** (Prerequisites: Grade of C or better in both ECE 3144 and ECE 3313). **Effective: Spring 2003**
MODIFY ECE 3724 FROM: TO:	**(prerequisite change only)** **Microprocessors I.** (Prerequisites: CS 1233 or CS 1314, ECE 3714). Microprocessors I. (Prerequisites: Grade of C or better in CS 1233 or CS 1314 and grade of C or better in ECE 3714). **Effective: Spring 2003**
MODIFY ECE 3732 FROM: TO:	**(prerequisite change only)** **Software Tools for EEs.** (Prerequisites: CS 1233 or equivalent C/C++ programming course, ECE 3714). **Software Tools for EEs**. (Prerequisites: Grade of C or better in CS 1233 or equivalent C/C++ programming course, and a grade of C or better in ECE 3714). **Effective: Spring 2003**
MODIFY ECE 4243/6243 FROM: TO:	**(prerequisite change only)** **Introduction to Physical Electronics**. (Prerequisite: ECE 3243). **Introduction to Physical Electronics**. (Prerequisite: Grade of C or better in ECE 3243). **Effective: Spring 2003**

MODIFY ECE 4263/6263 FROM: TO:	**(prerequisite change only)** **Principles of VLSI Design**. (Prerequisites: ECE 3724/CS 3124, ECE 4243). **Principles of VLSI Design**. (Prerequisites: Grade of C or better in both ECE 3724/CS 3124, and ECE 4243). **Effective: Spring 2003**
MODIFY ECE 4273/6273 FROM: TO:	**(prerequisite change only)** **Microelectronics Devise Design**. (Prerequisite: ECE 3243). **Microelectronics Devise Design**. (Prerequisite: Grade of C or better in ECE 3243). **Effective: Spring 2003**
MODIFY ECE 4283/6283 FROM: TO:	**(prerequisite change only)** **Microelectronics Process Design**. (Prerequisite: ECE 3243). **Microelectronics Process Design**. (Prerequisite: Grade of C or better in ECE 3243). **Effective: Spring 2003**
MODIFY ECE 4333/6333 FROM: TO:	**(prerequisite change only)** **Microwave Theory**. (Prerequisite: ECE 3324). **Microwave Theory**. (Prerequisite: Grade of C or better in ECE 3324). **Effective: Spring 2003**
MODIFY ECE 4343/6343 FROM: TO:	**(prerequisite change only)** **Electro-Optics.** (Prerequisite: ECE 3243 or consent of instructor). **Electro-Optics.** (Prerequisite: Grade of C or better in ECE 3243 or consent of instructor). **Effective: Spring 2003**

MODIFY ECE 4413/6413 FROM: TO:	**(prerequisite change only)** **Digital Signal Processing.** (Prerequisite: ECE 3163). **Digital Signal Processing.** (Prerequisite: Grade of C or better in ECE 3163). **Effective: Spring 2003**
MODIFY ECE 4522 FROM: TO:	**(prerequisite change only)** **EE Design II.** (Prerequisite: ECE 4512). **EE Design II.** (Prerequisite: Grade of C or better in ECE 4512). **Effective: Spring 2003**
MODIFY ECE 4532 FROM: TO:	**(prerequisite change only)** **CPE Design I**. (Prerequisites: ECE 2324, ECE 4713, and consent of instructor). **CPE Design I**. (Prerequisites: ECE 2324, Grade of C or better in ECE 4713, and consent of instructor). **Effective: Spring 2003**
MODIFY ECE 4542 FROM: TO:	**(prerequisite change only)** **CPE Design II.** (Prerequisite: ECE 4532). **CPE Design II.** (Prerequisite: Grade of C or better in ECE 4532). **Effective: Spring 2003**
MODIFY ECE 4643/6643 FROM: TO:	**(prerequisite change only)** **Power Systems Relaying and Control**. (Prerequisite: ECE 4613). **Power Systems Relaying and Control**. (Prerequisite: Grade of C or better in ECE 4613). **Effective: Spring 2003**

MODIFY ECE 4713/6713 FROM: TO:	**(prerequisite change only)** **Computer Architecture**. (Prerequisite: ECE 3724/CS3124). **Computer Architecture**. (Prerequisite: Grade of C or better in ECE 3724/CS3124). **Effective: Spring 2003**
MODIFY ECE 4743/6743 FROM: TO:	**(prerequisite change only)** **Digital Systems Design**. (Prerequisites: ECE 3724. Credit or registration in ECE 3243). **Digital Systems Design**. (Prerequisites: Grade of C or better in ECE 3724. Credit or registration in ECE 3243). **Effective: Spring 2003**
MODIFY ECE 4813/6813 FROM: TO:	**(prerequisite change only)** **Communications Theory.** (Prerequisite: ECE 3163). **Communications Theory.** (Prerequisite: Grade of C or better in ECE 3163). **Effective: Spring 2003**
MODIFY ECE 4913/6913 FROM: TO:	**(prerequisite change only)** **Feedback Control Systems I**. (Prerequisite: ECE 3163). **Feedback Control Systems I**. (Prerequisite: Grade of C or better in ECE 3163). **Effective: Spring 2003**
MODIFY ECE 4923/6923 FROM: TO:	**(prerequisite change only)** **Feedback Control Systems II**. (Prerequisite: ECE 3163). **Feedback Control Systems II**. (Prerequisite: Grade of C or better in ECE 3163). **Effective: Spring 2003**

MODIFY ECE 4933/6933 FROM: TO:	**(prerequisite change only)** **State Space Design and Instrumentation**. (Prerequisite: ECE 3163). **State Space Design and Instrumentation**. (Prerequisite: Grade of C or better in ECE 3163). **Effective: Spring 2003**
MODIFY ECE 4512 FROM: TO:	**EE Design I**. (2) (Prerequisite: Credit or registration in an EE Technical Elective). One hour lecture. Three hour laboratory. Electronic module implementation, emphasizing rapid prototyping. Lectures on design philosophy, creativity, fabrication. Students must select mentor, propose their ECE 4522 project, document and present orally. **EE Design I**. (2) (Prerequisite: Grade of C or better in each of ECE 3163, ECE 3243, ECE 3724/CS 3124, and ECE 3732; and grade of C or better in one of either ECE 3324, ECE 3254, or ECE 3414; and consent of instructor). One hour lecture. Three hours laboratory. Lectures on design, teaming, entrepreneurship, project management, professional development, and ethics. Students must select mentor, perform project design, document and present orally. **Effective: Fall 2003**

MODIFY ECE 4613/6613 FROM:	**Power Transmission Systems**. (3) (Prerequisite: Credit or registration in ECE 3414). Three hours lecture. Transmission of power from generator to distribution system; transmission line design; load flow; symmetrical components; balanced/unbalanced faults; stability.
TO:	**Power Transmission Systems**. (3) (Prerequisite: Grade of C or better ECE 3414). Three hours lecture. Transmission of power from generator to distribution system; transmission line design; load flow; symmetrical components; balanced/unbalanced faults; stability. **Effective: Fall 2003**
MODIFY ECE 4633/6633 FROM:	**Power Distribution Systems**. (3) (Prerequisite: Credit or registration in ECE 3414). Three hours lecture. Distribution of power from transmission system to users; primary and secondary feeders; voltage regulation; distribution transformers; protective device coordination; system design; load management.
TO:	**Power Distribution Systems**. (3) (Prerequisite: Grade of C or better in ECE 3414). Three hours lecture. Distribution of power from transmission system to users; primary and secondary feeders; voltage regulation; distribution transformers; protective device coordination; system design; load management. **Effective: Fall 2003**

MODIFY ECE 4723/6723 FROM:	**Microprocessors II.** (3) (Prerequisites: ECE 3724/CS 33224 and ECE 3254). Three hours lecture. Advanced topics in microprocessor system design with emphasis on standard microcomputer components. Program-controlled I/O, interrupts, DMA, digital peripheral devices, A/D and D/A conversion.
TO:	**Microprocessors II.** (3) (Prerequisites: Grade of C or better in both ECE 3724/CS 3224 and ECE 3243). Two hours lecture. Three hours laboratory. Advanced topics in microprocessor system design with emphasis on standard microcomputer components. Program-controlled I/O, interrupts, DMA, digital peripheral devices, A/D and D/A conversion. **Effective: Fall 2003**
MODIFY EM 2413 FROM:	**Engineering Mechanics I**. (3) (Prerequisites: MA 1723 and PH 2213). Three hours lecture. Concepts of force, moments and other vector quantities; analysis of force systems; conditions of equilibrium; friction; centroids and moments of inertia..
TO:	**Engineering Mechanics I**. (3) (Prerequisites: Grades C or better in MA 1723 and PH 2213). Three hours lecture. Concepts of force, moments and other vector quantities; analysis of force systems; conditions of equilibrium; friction; centroids and moments of inertia.. **Effective: Fall 2003**

MODIFY EM 2433 FROM: TO:	**Engineering Mechanics II.** (3) (Prerequisites: EM 2413 and MA 2733). Three hours lecture. Kinematics of particles and rigid bodies, kinetics of particle and rigid bodies using mass-force-acceleration, energy, momentum methods. **Engineering Mechanics II.** (3) (Prerequisites: Grade of C or better in EM 2413 and MA 2733). Three hours lecture. Kinematics of particles and rigid bodies, kinetics of particle and rigid bodies using mass-force-acceleration, energy, momentum methods. **Effective: Fall 2003**
MODIFY EM 3213 FROM: TO:	**Mechanics of Materials**. (3) (Prerequisite: EM 2413). Three hours lecture. Free body diagrams, equilibrium of simple structures; shear and bending moment diagrams; analysis of stress and strain; deflections of beams. **Mechanics of Materials**. (3) (Prerequisite: Grade of C or better in EM 2413 and MA 2733). Three hours lecture. Free body diagrams, equilibrium of simple structures; shear and bending moment diagrams; analysis of stress and strain; deflections of beams **Effective: Fall 2003**
MODIFY EM 3313 FROM: TO:	**Fluid Mechanics**. (3) (Prerequisite: EM 2413). Three hours lecture. Fluid statics; analysis of fluid motion using the continuity, momentum and energy relationships; introduction to viscous flow. **Fluid Mechanics**. (3) (Prerequisite: Grade of C or better in EM 2433). Three hours lecture. Fluid statics; analysis of fluid motion using the continuity, momentum and energy relationships; introduction to viscous flow. **Effective: Fall 2003**

MODIFY EM 3413 FROM:	**Vibrations.** (3) (Prerequisites: EM 2433 and MA 3253). Three hours lecture. Fundamentals of free vibrations, energy methods; forced and damped vibration, single degree of freedom; two degrees of freedom.
TO:	**Vibrations.** (3) (Prerequisites: Grades of C or better in EM 2433 and MA 3253). Three hours lecture. Fundamentals of free vibrations, energy methods; forced and damped vibration, single degree of freedom; two degrees of freedom. **Effective: Fall 2003**
REVIEW ME 4473/6473	**Kinematic Theory and Design of Mechanisms**. (3) (Prerequisite: ME 3423). Three hours lecture. Advanced kinematic theory of plane mechanisms. Velocity and acceleration analysis, coupler curves, centrodes, precision points, graphical and computer synthesis of 4 bar mechanism. **Effective: Spring 2003**
REVIEW ME 8323	**Radiative Heat Transfer**. (3) Three hours lecture. Thermal radiation through non-absorbing media; integral equations for radiative transfer; unified method for radiation-exchange calculations; solar terrestrial, and planetary radiation. **Effective: Spring 2003**
REVIEW ME 8823	**Viscous Flow II.** (3) (Prerequisite: ME 8813 or equivalent). Three hours lecture. Numerical solution techniques for viscous flow equations. Turbulence and turbulence modeling. Current literature and topics. **Effective: Spring 2003**

DEGREE PROGRAMS

MODIFY	**College of Engineering, Bachelor of Science: Aerospace Engineering Major**	Changes in course requirements **Effective: Fall 2003**
MODIFY	**College of Engineering, Bachelor of Science: Computer Engineering**	Changes in course requirements **Effective: Fall 2003**

All of the proposals were approved with the exception of the following:

Proposals**

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Dr. George Rent Date
Associate Vice President for Academic Affairs

**Please include copies of letters accompanying proposals that are returned to departments.