

University Course and Programs Committee
December 15, 2006

MEMBERS PRESENT:

Voting: Chuck Adams, Fran Beatty, Tom Costello, Bill Curington, Judy Ganson, Patricia Koski, Stephen Langsner, Terry Martin, John Norwood, Peggy Whan

Non-Voting: William Warnock, Kathryn Baker

MEMBERS ABSENT:

Voting: Rhonda Adams, Larry Foley, Donna Graham, Louise Montgomery, Amy Paris, Dale Thompson, Jeannie Whyne

Non-Voting: Gary McHenry

GUESTS:

John Norwood called the meeting to order at 2:30 P.M.

1. The minutes for November 17, 2006 were approved.
2. Course Change Proposals:
 - A. The undergraduate and School of Law course change proposals ([Table A and D](#)) were approved and forwarded for the January 17, 2007 Faculty Senate meeting.
 - B. The graduate and dual courses ([Tables B and C](#)) were approved and forwarded to the Graduate Council.
3. Old Business:

A program change for the Bumpers College of Agriculture, Food and Life Sciences – School of Human Environmental Sciences ([Table 1, Attachment 1A](#)) – was removed from being tabled at the November 17, 2006 meeting and presented by Peggy Whan. The program change added a new required course HESC 2643 and reduced the number of general elective hours. Documentation was presented that satisfied previous objections and the program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.

4. New Business:
 - A. A program change for the Walton College of Business – Department of Economics - ([Table 2, Attachment 2A](#)) was presented by Bill Curington. The proposal changed the AP Test score for receiving course credit for ECON 2013 and ECON 2023. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.
 - B. A program change for the College of Engineering – General Engineering – ([Table 3, Attachment 3A](#)) was presented by Terry Martin. The program change created a new a common first-year experience for students in several BS engineering majors. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.
 - C. A program change for the College of Engineering – Department of Biological and Agricultural Engineering – ([Table 3, Attachment 3B](#)) was presented by Tom Costello. The program change created a new common first-year experience for the BENGBS program's students and proposed five other curriculum changes. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.
 - D. A program change for the College of Engineering – Department of Civil Engineering – ([Table 3, Attachment 3C](#)) was presented by Terry Martin. The program change created a new common first-year experience for the CVEGBS program's students. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.

- E. A program change for the College of Engineering – Department of Computer Science and Computer Engineering – ([Table 3, Attachment 3D](#)) was presented by Terry Martin. The program change created a new common first-year experience for the CENGBS program’s students and requested seven other curriculum changes. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.
- F. A program change for the College of Engineering – Department of Computer Science and Computer Engineering – ([Table 3, Attachment 3E](#)) was presented by Terry Martin. The program change created a new common first-year experience for the CSCEBS program’s students and requested seven other curriculum changes. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.
- G. A program change for the College of Engineering – Department of Electrical Engineering – ([Table 3, Attachment 3F](#)) was presented by Terry Martin. The program change created a new common first-year experience for the ELEGBS program’s students and proposed four other curriculum changes. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.
- H. A program change for the College of Engineering – Department of Industrial Engineering – ([Table 3, Attachment 3G](#)) was presented by Terry Martin. The program change created a new common first-year experience for the INEGBS program’s students and proposed four other curriculum changes. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.
- I. A program change for the College of Engineering – Department of Mechanical Engineering – ([Table 3, Attachment 3H](#)) was presented by Terry Martin. The program change created a new common first-year experience for the MEEGBS program’s students and requested eleven other curriculum changes. The program change was approved without opposition and forwarded for the January 17, 2007 Faculty Senate meeting.

5. Other Business: None

Meeting was adjourned at 2:48 PM.

TABLE A

UCPC

Undergraduate Courses

December 15, 2006

COLL -	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
AFLS	Crop, Soil and Environmental Sciences	CSES	ENSC	1001L	Environmental Science Laboratory	U	ANC	1	Fall 2007
AFLS	Food Science	FDSC	FDSC	2523	Sanitation and Safety in Food	U	ANC	3	Fall 2007
AFLS	Human Environmental Sciences	HESC	HESC	2643	Principles of Tourism	U	ANC	3	Fall 2007
AFLS	Biological & Agricultural Engineering	BAEG	BENG	4223	Numerical Methods in Biomedical Engineering	U	ANC	3	Fall 2007
AFLS	Biological & Agricultural Engineering	BAEG	BENG	4903	Ecological Engineering Principles to Watershed Eco-Hydrology	U	CT, CD	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	1111L to 2001L	Programming Foundations I Lab	U	CD, CHN	1	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	1113 to 2003	Programming Foundations I	U	CHN	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	1121L to 2011L	Programming Foundations II Lab	U	CHN	1	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	1121M to 2011M	Honors Programming Foundations II Laboratory	U	CHN	1	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	1123 to 2013	Programming Foundation II to Programming Foundations II	U	CT, CHN	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	1123H to 2013H	Honors Programming Foundations II	U	CHN	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	2143 to 3143	Data Structures	U	CHN	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	390V	Topics in Computer Science	U	ELC	variable	Fall 2007

ENGR	Computer Science & Computer Engineering	CSCE	CSCE	4013	Special Topics in Computer Science	U	ANC	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	4023H	Honors Special Topics in Computer Science	U	ANC	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	490V	Special Problems to Individual Study in Computer Science	U	CT, CD	variable	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CENG	4003	Special Topics in Computer Engineering	U	ANC	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CENG	4013H	Honors Special Topics in Computer Engineering	U	ANC	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CENG	490V	Special Problems to Individual Study in Computer Engineering	U	CT, CD	variable	Fall 2007
ENGR	Electrical Engineering	ELEG	ELEG	1011	Engineering Success and Ethics	U	ELC	1	Fall 2007
ENGR	Electrical Engineering	ELEG	ELEG	3143 to 4143	Stochastic Signal Processing	U	CHN	3	Fall 2007
ENGR	Electrical Engineering	ELEG	ELEG	3921L	Microprocessor Systems Design Laboratory	U	ELC	1	Fall 2007
ENGR	Department of Engineering Dean	ENGD	GNEG	1111	Introduction to Engineering I	U	ANC	1	Fall 2007
ENGR	Department of Engineering Dean	ENGD	GNEG	1121	Introduction to Engineering II	U	ANC	1	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	1103 to 2101	Principles of Industrial Engineering	U	CHN, CCH	3 to 1	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	1403 to 2403	Industrial Cost Analysis	U	CHN	3	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	2503	Engineering Materials	U	ELC	3	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	3213	Safety Engineering	U	ELC	3	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	3813H	Honors Product Integrity	U	ANC	3	Fall 2007

ENGR	Industrial Engineering	INEG	INEG	399V	Special Problems	U	ELC	variable	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	400VH	Honor's Thesis	U	ANC	variable	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	410V	Special Problems to Special Topics in Industrial Engineering	U	CD, CT, OTH	variable	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	411V	Individual Study in Industrial Engineering	U	ANC	variable	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	4121	I.E. Seminar	U	ELC	1	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	4243	Automated Manufacturing	U	ANC	3	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	4633	Transportation Logistics	D to U	CEGUC, OTH	3	Fall 2007

TABLE B**UCPC****Graduate Courses**

December 15, 2006

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
AFLS	Food Science	FDSC	FDSC	6323	Nutraceutical and Functional Foods	G	ANC	3	Fall 2007
AFLS	Biological & Agricultural Engineering	BAEG	BENG	5273	Numerical Methods in Biomedical Engineering	G	ANC	3	Fall 2007
AFLS	Biological & Agricultural Engineering	BAEG	BENG	5943	Ecological Engineering Principles to Watershed Eco-Hydrology	G	CT	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CENG	5013	Topics in Computer Hardware to Advanced Special Topics in Computer Engineering	G	CT, CD	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CENG	510V to 590V	Special Problems to Advanced Individual Study in Computer Engineering	G	CT, CD, CHN	variable	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CENG	5801	Seminar	G	ELC	1	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	5013	Advanced Special Topics in Computer Science	G	ANC	3	Fall 2007
ENGR	Computer Science & Computer Engineering	CSCE	CSCE	590V	Advanced Topics in Computer Science to Advanced Individual Study in Computer Science	G	CT, CD	variable	Fall 2007
ENGR	Chemical Engineering	CHEG	CHEG	5033	Technical Administration	G	CD	3	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	514V	Research and Special Topics to Special Topics in Industrial Engineering	G	CD, CT	variable	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	515V	Individual Study in Industrial Engineering	G	ANC	variable	Fall 2007

ENGR	Industrial Engineering	INEG	INEG	5243	Automated Manufacturing	G	ANC	3	Fall 2007
ENGR	Industrial Engineering	INEG	INEG	5533	Transportation Logistics	G	ANC	3	Fall 2007

TABLE C**UCPC**

December 15, 2006

DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
BAEG	BENG	4103 to 4104	Instrumentation in Biological Engineering to Electronic Instrumentation for Biological Systems	D	CT, CD, CHN, CCH	3 to 4	Fall 2007
INEG	INEG	4233	Energy Conservation	D	ELC	3	Fall 2007
INEG	INEG	4343	Introduction to Human-Computer Interaction	D	ANC	3	Fall 2007
INEG	INEG	4513	Electronics Manufacturing Processes	D	ELC	3	Fall 2007
INEG	INEG	4633	Transportation Logistics	D to U	CEGUC, OTH	3	Fall 2007

Table D**UCPC****Law Courses**

December 15, 2006

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
LAWW	Department of Law	LAWD	LAWW	5123	Legislation	L	ELC	3	Fall 2007

KEY

ACTION

ANC=	ADD NEW COURSE
ELC=	ELIMINATE COURSE
CT=	CHANGE TITLE
CD=	CHANGE DESCRIPTION
CHN=	CHANGE COURSE NUMBER FROM ___ TO ___
CCH=	CHANGE CREDIT HOURS FROM ___ TO ___
CL=	CROSS LISTED
CEUDC=	CHANGE EXISTING UNDERGRADUATE COURSE TO DUAL CREDIT
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CEGUC=	CHANGE EXISTING DUAL/GRADUATE COURSE TO UNDERGRADUATE CREDIT
OTH=	OTHER
RA=	REACTIVATE COURSE
IN=	INACTIVATE COURSE

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AFLS	Human Environmental Sciences	HESC	HESC	2643	Principles of Tourism	U	ANC	3	Fall 2007
AFLS	Biological & Agricultural Engineering	BAEG	BENG	4223	Numerical Methods in Biomedical Engineering	U	ANC	3	Fall 2007
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ENGR	Computer Science & Computer Engineering	CSCE	CSCE	1121L to 2011L	Programming Foundations II Lab	U	CHN	1	Fall 2007
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December 15, 2006

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INEG	INEG	4633	Transportation Logistics	D to U	CEGUC, OTH	3	Fall 2007

Table D**UCPC****Law Courses**

December 15, 2006

COLL	DEPARTMENT NAME	DEPT	CRSE ALPHA	CRSE NUM	CRSE TITLE	CREDIT LEVEL	ACTION	CREDIT HOURS	EFFECTIVE DATE
LAWW	Department of Law	LAWD	LAWW	5123	Legislation	L	ELC	3	Fall 2007

KEY

ACTION

ANC=	ADD NEW COURSE
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University Course and Programs Committee
15-Dec-06

TABLE ONE
Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO
Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE
College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

**ATTACHMENT 1A
ADD, CHANGE OR DELETE PROGRAM OR UNIT**

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair	Date Submitted	Faculty Senate Chair	Date
College Dean	Date	Provost	Date
University Course and Programs Committee	Date	Board of Trustees Approval/Notification Date	
Graduate Council Chair	Date	Arkansas Higher Education Coordinating Board Approval/Notification Date	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit **Concentration C of FHNH**
 Level: Undergraduate Graduate Law Effective Catalog Year **Fall 2007**

Current Name **Food, Human Nutrition, and Hospitality**

College, School, Division **AFLS** Department Code **HESC**

Current Code (6 digit Alpha) **FHNHBS** Proposed Code (6 digit Alpha) _____
 Prior approval from the Office of the Registrar is required.

Interdisciplinary Program CIP Code **19.0501**
 Prior assignment from Office of Institutional Research is required.

Proposed Name _____
 When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____
 No new students admitted to program after Term: ____ Year: _____
 Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made: **Adding a course to concentration C of the FHNH area curriculum. The course being added is Principles of Tourism, HESC 2643. General Electives will be reduced from 8-18 hours to 5-15 hours.**

HESC 2643 Principles of Tourism.

Check all the boxes that apply and complete the required sections of the form:

Change of Name and Code (Complete only sections I, II, V and VII.)

- Change Course Requirements: (Complete all sections of the form except “Proposed Name” in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except “Proposed Name” in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except “Proposed Name” in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

Tourism has been added as a component of the hospitality management curriculum. This entry level course will provide students with basic elements of tourism management and the foundations of the tourism industry. This course will better prepare students for jobs in all areas of the hospitality industry.

SECTION VII: Catalog Text and Format

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

Old Catalog Copy: (tracking feature did not work)

Food, Human Nutrition, and Hospitality (FHNH)

Janet M. Noble

Area Coordinator

215 Home Economics Bldg.

479-575-4700

The curriculum in Food, Human Nutrition, and Hospitality allows students to prepare for a career in a specialized area of foods and nutrition by completing a common set of basic courses and one of the concentrations:

A: Dietetics (DIET)

B: General Human Nutrition (GHNU), and

C: Hospitality and Restaurant Management (HRMN).

Interest and aptitude for the biological and physical sciences that support nutrition science are needed to complete concentrations in Dietetics and General Human Nutrition successfully. Hospitality and Restaurant Management is the best choice for those students who have an interest in management and who enjoy working with people.

Dietetics (DIET)

Dietetics is for the student who intends to become a registered dietitian (RD). Courses required include those necessary as prerequisites to a dietetic internship. An internship is required for eligibility to take the national registration examination and for eligibility for licensure. Students who complete the program with a minimum grade-point average of 3.0 may apply for an internship. Upon licensure, students practice as registered dietitians in the health care field or as consulting dietitians in private practice, sports nutrition, or in wellness and health maintenance centers. Students with lower GPAs may apply for supervised practice programs leading to the dietetic technician registered (DTR) certification.

Dietetics Degree Requirements

English/Communications (12-15 hours)

English University Core Courses (6 hours)

COMM 1313 Fundamentals of Communication

ENGL 2003 Advanced Composition or Exemption Elective

– See page 41 for exemption information

ENGL 3053 Technical and Report Writing or JOUR 3123

Feature Writing or AGED 3142/3141L Agri Communications with lab

Mathematics University Core Course (3 hours)

MATH 1203 College Algebra or MATH 1213 Plane Trigonometry

Science University Core Courses and Departmental Requirements (24-27 hours)

CHEM 1103/1101L University Chemistry I with lab and CHEM

1123/1121L University Chemistry II with lab

BIOL 1543/1541L Principles of Biology with lab and

ANSC 3032 Animal Physiology I and ANSC 3042 Animal

Physiology II

CHEM 2613/2611L Organic Physiological Chemistry with lab

CHEM 3813 Organic Chemistry II

BIOL 2013/2011L General Microbiology with lab

Fine Arts/Humanities University Core Courses (6 hours)

Select 3 hours from “State Minimum Arts/Humanities Core”

(sections b, c, or d) – See page 40

US History University Core Course (3 hours)

Social Sciences University Core Courses (9 hours)

HESC 2413 Family Relations

PSYC 2003 General Psychology

Social Science University Core Elective (3 hours)

DIET Major Requirements:

Physical Education (2 hours)

Human Environmental Sciences (50 hours)

HESC 1201 Introduction to Dietetics and Nutrition

HESC 1501 Orientation to HESC

HESC 1213 Nutrition in Health

HESC 2112/2111L Foods I with lab

HESC 3203 Nutrition for Health Professionals and Educators

HESC 3213 Dietetic and Nutrition Practice: Tools

& Applications

HESC 3604 Food Preparation for the Hospitality Industry

HESC 3653 Food Systems Management

HESC 4103 Experimental Foods

HESC 4213 Advanced Nutrition

HESC 4223 Nutrition During the Life Cycle

HESC 4243 Community Nutrition

HESC 425V Food and Nutrition Seminar (1 hour)

AGST 4023 Principles of Experimentation or Equivalent

Elective

HESC 4264/4260L Medical Nutrition Therapy I with lab

HESC 4273 Medical Nutrition Therapy II
HESC 4613 Food Service Purchasing
HESC 4623 Selection and Layout of Food Service Equipment
General Electives (9-15 hours)

Recommend:

HESC 2203 Nutrition for Exercise & Sport

KINS 3153 Exercise Physiology

PHIL 2103 Introduction to Ethics

ARTS 1313 Two Dimensional Design

124 Total Hours

General Foods and Nutrition (GFNU)

Students taking this concentration are encouraged to select an approved minor from the Bumpers, Walton, or Fulbright colleges or plan other combinations of courses to prepare for non-traditional vocations including work in community or government sponsored programs, wellness and health maintenance centers, public relations in the food industry, TV/media outlets for food and nutrition information, and international food or nutritional programs.

General Foods & Nutrition Requirements:

English/Communications (12-15 hours)

English University Core courses (6 hours)

ENGL 2003 Advanced Composition or Exemption Elective

– See page 41 for exemption information

COMM 1313 Fundamentals of Communication

Communication Intensive Elective – ENGL 3053 Technical and

Report Writing or JOUR 3123 Feature Writing or

AGED 3142/3141L Agri Communications with lab

Mathematics University Core Course (3 hours)

Science University Core Courses and Departmental Requirements

(27 hours)

CHEM 1103/1101L University Chemistry I with lab

CHEM 1123/1121L University Chemistry II with lab

CHEM 2613/2611L Organic Physiological Chemistry with lab

CHEM 3813 Introduction to Biochemistry

BIOL 2013/2011L General Microbiology with lab

Select either: BIOL 2213/2211L Human Physiology with lab

and BIOL 2443/2441L Human Anatomy with lab

or BIOL 1543/1541L Principles of Biology with lab and

ANSC 3032 Animal Physiology I and ANSC 3042 Animal

Physiology II

Fine Arts/Humanities University Core Courses (6 hours)

Select in two categories from “State Minimum Arts/Humanities

Core” (sections a, b, c, or d) – See page 40

US History University Core Course (3 hours)

Social Sciences University Core Courses (9 hours)

PSYC 2003 General Psychology

HESC 2413 Family Relations

Select a 3-hr economic course from “State Minimum Core”

– See page 40

GFNU Major Requirements (37-39 hours)

HESC 1201 Introduction to Dietetics and Nutrition or HESC

1603 Introduction to Hospitality Management

HESC 1501 Orientation to HESC

HESC 1213 Nutrition in Health

HESC 2112/2111L Foods I with lab

HESC 2203 Nutrition for Exercise and Sport

HESC 3203 Nutrition for Health Professionals and Educators

HESC 3213 Dietetic and Nutrition Practices: Tools and

Applications

HESC 3604 Food Preparation for the Hospitality Industry

HESC 3653 Food Systems Management

HESC 4103 Experimental Foods
HESC 4213 Advanced Nutrition
HESC 4223 Nutrition During the Life Cycle
HESC 4243 Community Nutrition
HESC 425V Food and Nutrition Seminar (1 hour)
Physical Education (2 hours)
General Electives (20-25 hours)

124 Total Hours

Hospitality and Restaurant Management (HRMN): Students in the hospitality and restaurant management concentration prepare themselves for managerial positions in the restaurant and hospitality industry. This dynamic curriculum provides students with skills in foods and business, as well as hospitality and restaurant management. Students have the opportunity to manage and operate a restaurant on campus. Students obtain hands-on experience by completing 1,000 hours of satisfactory, verifiable work experience in the hospitality and restaurant industry, usually completed during the summer and on part-time jobs during the school year. This noncredit work experience must be completed prior to graduation. A management internship, which allows students to acquire practical management experience and specialized knowledge from supervised work in a hotel, restaurant, or other hospitality-related business, is also part of this degree. Students in this program can complete a minor in business.

Hospitality and Restaurant Management Degree Requirements:

English/Communications (12-15 hours)

English University Core courses (6 hours)

ENGL 2003 Advanced Comp or Exemption Elective – See page 41 for exemption information

COMM 1313 Fundamentals of Communication

Communication Intensive Course - AGED 3142/3141L Agri Communications with lab

Mathematics University Core Course (3 hours) and

WCOB 1120 Computer Competency Requirement or Equivalent Science University Core Courses and Departmental Requirements (8-9 hours)

University Core CHEM 1103/1101L University Chemistry I with lab and

University Core CHEM 1123/1121L University Chemistry II with lab or

BIOL 1543/1541L Principles of Biology with lab and

CHEM 1074/1071L Fundamentals of Chemistry with lab

Fine Arts/Humanities University Core Courses (6 hours)

Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40

US History University Core Course (3 hours)

Social Sciences University Core Courses (9 hours)

PSYC 2003 General Psychology

HESC 2413 Family Relations

ECON 2143 Basic Economics

HRMN Major Requirements (17 hours)

HESC 1501 Orientation to HESC

HESC 1213 Nutrition in Health

HESC 2112/2111L Foods I with lab

HESC 3604 Food Preparation for the Hospitality Industry

HESC 3653 Food Systems Management

HESC 4103 Experimental Foods

Additional Requirements (46-52 hours)

HESC 1601 Work Experience Practicum (1-4 hours)

HESC 1603 Introduction to Hospitality and Restaurant Management

HESC 2123 Catering Management with lab

HESC 2623 Legal Issues in Hospitality Industry with lab or Equivalent

HESC 2633 Introduction to Hotel Operations

HESC 3613 Resort Management

HESC 3633 Front Office Management

HESC 4613 Food Service Purchasing

HESC 4623 Selection and Layout of Food Service Equipment

HESC 4633 Advanced Hotel Operations

HESC 4643 Convention and Meeting Management

HESC 4653 Global Travel and Tourism Management

HESC 4693 Hospitality Management Internship (3-6 hours)

FDSC 2503 Food Safety/Sanitation

AGEC 2143 Ag Financial Records or Equivalent

AGEC 3303 Food & AG Marketing or Equivalent

Physical Education (2 hours)

General Electives (8-18 hours) – Recommend foreign language (6 hours), HLSC 3633 First Responder-First Aid

124 Total Hours

Food, Human Nutrition and Hospitality Eight-Semester Degree Program

Students wishing to follow the degree plan in Food, Human Nutrition and Hospitality should see page 42 in the Academic Regulations section for university requirements of the program. The Food, Human Nutrition and Hospitality major has three concentrations: Dietetics; General Human Nutrition, and Hospitality and Restaurant Management. Specific courses for all concentrations are available in Section 2 of the Catalog of Studies, available at <http://catalogofstudies.uark.edu>. A description of HESC courses is listed on page 358.

Dietetics Concentration

Fall Semester 1

4 CHEM 1103/1101L University Chemistry I with lab

3 MATH 1203 College Algebra or MATH 1213 Plane

Trigonometry

1 HESC 1501 Orientation to HESC

1 HESC 1201 Introduction to Dietetics & Nutrition

3 HESC 1213 Nutrition in Health

3 ENGL 1013 Composition I

1 PEAC or DEAC Elective

16 semester hours

Spring Semester 1

4 CHEM 1123/1121L University Chemistry II with lab

3 ENGL 1023 Composition II

4 BIOL 1543/1541L Principles of Biology with lab

3 Elective – Rec: HESC 2203 Nutrition for Exercise and Sport or Elective

3 Fine Arts & Humanities University Core

17 semester hours

Fall Semester 2

3 HESC 2112/211L Foods I

2 ANSC 3032 Animal Physiology I

3 PSYC 2003 General Psychology

3 ENGL 2003 Advanced Composition or Exemption Elective

3 COMM 1313 Fundamentals of Communication

1 PEAC or DEAC

15 semester hours

Spring Semester 2

4 CHEM 2613/ 2611L Organic Physiological Chemistry

3 HESC 2413 Family Relations

2 ANSC 3042 Animal Physiology II

3 HESC 3203 Nutrition for the Health Professional & Educator

3 Fine Arts & Humanities University Core

15 semester hours

Fall Semester 3

3 CHEM 3813 Organic Chemistry II

4 HESC 3604/3600L Food Preparation for the Hospitality Industry with lab

3 HESC 3213 Dietetic & Nutrition Practices

3 HESC 3653 Food Systems Management

3 General Elective

16 semester hours

Spring Semester 3

4 BIOL 2013/2011L Microbiology with lab (BIOL 1543/1541L and 2 semesters of general chemistry)

3 Communications Intensive Elective: ENGL 3053 Technical and Report Writing, JOUR 3123 Feature Writing or AGED 3142/3141L Agri Communications

3 AGST 4023 Principles of Experimentation or Equivalent Elective

3 HESC 4103/4100L Experimental Foods with lab

3 US History University Core Elective

16 semester hours

Fall Semester 4

3 HESC 4213 Advanced Nutrition

3 HESC 4613 Food Service Purchasing

4 HESC 4264/4260L Medical Nutrition Therapy I

3 HESC 4223 Nutrition During the Life Cycle

3 Social Science Core Elective

16 semester hours

Spring Semester 4

3 HESC 4273 Medical Nutrition Therapy II

3 HESC 4623 Selection & Layout of Food Service Equipment

1 HESC 425V Food and Nutrition Seminar

3 HESC 4243 Community Nutrition.

3 General Elective

13 semester hours

124 Total Hours

New Catalog Copy:

Food, Human Nutrition, and Hospitality (FHNH)

Marjorie E. Fitch-Hilgenberg

Area Coordinator

24 Home Economics Bldg.

479-575-6815

The curriculum in Food, Human Nutrition, and Hospitality allows students to prepare for a career in a specialized area of foods and nutrition by completing a common set of basic courses and one of the concentrations:

A: Dietetics (DIET)

B: General Human Nutrition (GHNU), and

C: Hospitality and Restaurant Management (HRMN).

Interest and aptitude for the biological and physical sciences that support nutrition science are needed to complete concentrations in Dietetics and General Human Nutrition successfully. Hospitality and Restaurant Management is the best choice for those students who have an interest

in management and who enjoy working with people.

Concentration A: Dietetics (DIET)

Dietetics is for the student who intends to become a registered dietitian (RD). Courses required include those necessary as prerequisites to a dietetic internship. An internship is required for eligibility to take the national registration examination and for eligibility for licensure. Students who complete the program with a minimum grade-point average of 3.0 may apply for an internship. Upon licensure, students practice as registered dietitians in the health care field or as consulting dietitians in private practice, sports nutrition, or in wellness and health maintenance centers. Students with lower GPAs may apply for supervised practice programs leading to the dietetic technician registered (DTR) certification.

Dietetics Degree Requirements

English/Communications (12-15 hours)

English University Core Courses (6 hours)

COMM 1313 Fundamentals of Communication

ENGL 2003 Advanced Composition or Exemption Elective

– See page 41 for exemption information

ENGL 3053 Technical and Report Writing or JOUR 3123

Feature Writing or AGED 3142/3141L Agri Communications with lab

Mathematics University Core Course (3 hours)

MATH 1203 College Algebra or MATH 1213 Plane Trigonometry

Science University Core Courses and Departmental Requirements (24-27 hours)

CHEM 1103/1101L University Chemistry I with lab and CHEM

1123/1121L University Chemistry II with lab

BIOL 1543/1541L Principles of Biology with lab and

ANSC 3032 Animal Physiology I and ANSC 3042 Animal Physiology II

CHEM 2613/2611L Organic Physiological Chemistry with lab

CHEM 3813 Organic Chemistry II

BIOL 2013/2011L General Microbiology with lab

Fine Arts/Humanities University Core Courses (6 hours)

Select 3 hours from “State Minimum Arts/Humanities Core”

(sections b, c, or d) – See page 40

US History University Core Course (3 hours)

Social Sciences University Core Courses (9 hours)

HESC 2413 Family Relations

PSYC 2003 General Psychology

Social Science University Core Elective (3 hours)

DIET Major Requirements:

Physical Education (2 hours)

Human Environmental Sciences (50 hours)

HESC 1201 Introduction to Dietetics and Nutrition

HESC 1501 Orientation to HESC

HESC 1213 Nutrition in Health

HESC 2112/2111L Foods I with lab

HESC 3203 Nutrition for Health Professionals and Educators

HESC 3213 Dietetic and Nutrition Practice: Tools

& Applications

HESC 3604 Food Preparation for the Hospitality Industry

HESC 3653 Food Systems Management

HESC 4103 Experimental Foods

HESC 4213 Advanced Nutrition

HESC 4223 Nutrition During the Life Cycle

HESC 4243 Community Nutrition

HESC 425V Food and Nutrition Seminar (1 hour)

AGST 4023 Principles of Experimentation or Equivalent Elective

HESC 4264/4260L Medical Nutrition Therapy I with lab

HESC 4273 Medical Nutrition Therapy II

HESC 4613 Food Service Purchasing

HESC 4623 Selection and Layout of Food Service Equipment

General Electives (9-15 hours)

Recommend:

HESC 2203 Nutrition for Exercise & Sport

KINS 3153 Exercise Physiology

PHIL 2103 Introduction to Ethics

ARTS 1313 Two Dimensional Design

124 Total Hours

Concentration B: General Foods and Nutrition (GFNU)

Students taking this concentration are encouraged to select an approved minor from the Bumpers, Walton, or Fulbright colleges or plan other combinations of courses to prepare for non-traditional vocations including work in community or government sponsored programs, wellness and health maintenance centers, public relations in the food industry, TV/media outlets for food and nutrition information, and international food or nutritional programs.

General Foods & Nutrition Requirements:

English/Communications (12-15 hours)

English University Core courses (6 hours)

ENGL 2003 Advanced Composition or Exemption Elective

– See page 41 for exemption information

COMM 1313 Fundamentals of Communication

Communication Intensive Elective – ENGL 3053 Technical and

Report Writing or JOUR 3123 Feature Writing or

AGED 3142/3141L Agri Communications with lab

Mathematics University Core Course (3 hours)

Science University Core Courses and Departmental Requirements (27 hours)

CHEM 1103/1101L University Chemistry I with lab

CHEM 1123/1121L University Chemistry II with lab

CHEM 2613/2611L Organic Physiological Chemistry with lab

CHEM 3813 Introduction to Biochemistry

BIOL 2013/2011L General Microbiology with lab

Select either: BIOL 2213/2211L Human Physiology with lab

and BIOL 2443/2441L Human Anatomy with lab

or BIOL 1543/1541L Principles of Biology with lab and

ANSC 3032 Animal Physiology I and ANSC 3042 Animal

Physiology II

Fine Arts/Humanities University Core Courses (6 hours)

Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40

US History University Core Course (3 hours)

Social Sciences University Core Courses (9 hours)

PSYC 2003 General Psychology

HESC 2413 Family Relations

Select a 3-hr economic course from “State Minimum Core”

– See page 40

GFNU Major Requirements (37-39 hours)

HESC 1201 Introduction to Dietetics and Nutrition or HESC

1603 Introduction to Hospitality Management

HESC 1501 Orientation to HESC

HESC 1213 Nutrition in Health

HESC 2112/2111L Foods I with lab

HESC 2203 Nutrition for Exercise and Sport

HESC 3203 Nutrition for Health Professionals and Educators

HESC 3213 Dietetic and Nutrition Practices: Tools and Applications
HESC 3604 Food Preparation for the Hospitality Industry
HESC 3653 Food Systems Management
HESC 4103 Experimental Foods
HESC 4213 Advanced Nutrition
HESC 4223 Nutrition During the Life Cycle
HESC 4243 Community Nutrition
HESC 425V Food and Nutrition Seminar (1 hour)
Physical Education (2 hours)
General Electives (20-25 hours)
124 Total Hours

Concentration C: Hospitality and Restaurant Management (HRMN): Students in the hospitality and restaurant management concentration prepare themselves for managerial positions in the restaurant and hospitality industry. This dynamic curriculum provides students with skills in foods and business, as well as hospitality and restaurant management. Students have the opportunity to manage and operate a restaurant on campus. Students obtain hands-on experience by completing 1,000 hours of satisfactory, verifiable work experience in the hospitality and restaurant industry, usually completed during the summer and on part-time jobs during the school year. This noncredit work experience must be completed prior to graduation. A management internship, which allows students to acquire practical management experience and specialized knowledge from supervised work in a hotel, restaurant, or other hospitality-related business, is also part of this degree. Students in this program can complete a minor in business.

Hospitality and Restaurant Management Degree Requirements:

English/Communications (12-15 hours)

English University Core courses (6 hours)

ENGL 2003 Advanced Comp or Exemption Elective – See page 41 for exemption information

COMM 1313 Fundamentals of Communication

Communication Intensive Course - AGED 3142/3141L Agri Communications with lab

Mathematics University Core Course (3 hours) and

WCOB 1120 Computer Competency Requirement or Equivalent Science University Core Courses and Departmental Requirements (8-9 hours)

University Core CHEM 1103/1101L University Chemistry I with lab and

University Core CHEM 1123/1121L University Chemistry II with lab or

BIOL 1543/1541L Principles of Biology with lab and

CHEM 1074/1071L Fundamentals of Chemistry with lab

Fine Arts/Humanities University Core Courses (6 hours)

Select in two categories from “State Minimum Arts/Humanities Core” (sections a, b, c, or d) – See page 40

US History University Core Course (3 hours)

Social Sciences University Core Courses (9 hours)

PSYC 2003 General Psychology

HESC 2413 Family Relations

ECON 2143 Basic Economics

HRMN Major Requirements (17 hours)

HESC 1501 Orientation to HESC

HESC 1213 Nutrition in Health

HESC 2112/2111L Foods I with lab

HESC 3604 Food Preparation for the Hospitality Industry

HESC 3653 Food Systems Management

HESC 4103 Experimental Foods

Additional Requirements (46-52 hours)

HESC 1601 Work Experience Practicum (1-4 hours)

HESC 1603 Introduction to Hospitality and Restaurant Management

HESC 2123 Catering Management with lab

HESC 2623 Legal Issues in Hospitality Industry with lab or Equivalent

HESC 2633 Introduction to Hotel Operations

HESC 2643 Principles of Tourism

HESC 3613 Resort Management

HESC 3633 Front Office Management

HESC 4613 Food Service Purchasing

HESC 4623 Selection and Layout of Food Service Equipment

HESC 4633 Advanced Hotel Operations

HESC 4643 Convention and Meeting Management

HESC 4653 Global Travel and Tourism Management

HESC 4693 Hospitality Management Internship (3-6 hours)

FDSC 2503 Food Safety/Sanitation

AGEC 2143 Ag Financial Records or Equivalent

AGEC 3303 Food & AG Marketing or Equivalent

Physical Education (2 hours)

General Electives (5-15 hours) – Recommend foreign language (6 hours), HLSC 3633 First Responder-First Aid

124 Total Hours

Food, Human Nutrition and Hospitality Eight-Semester Degree Program

Students wishing to follow the degree plan in Food, Human Nutrition and Hospitality should see page 42 in the Academic Regulations section for university requirements of the program. The Food, Human Nutrition and Hospitality major has three concentrations: Dietetics; General Human Nutrition, and Hospitality and Restaurant Management. Specific courses for all concentrations are available in Section 2 of the Catalog of Studies, available at <http://catalogofstudies.uark.edu>. A description of HESC courses is listed on page 358.

Dietetics Concentration

Fall Semester 1

4 CHEM 1103/1101L University Chemistry I with lab

3 MATH 1203 College Algebra or MATH 1213 Plane

Trigonometry

1 HESC 1501 Orientation to HESC

1 HESC 1201 Introduction to Dietetics & Nutrition

3 HESC 1213 Nutrition in Health

3 ENGL 1013 Composition I

1 PEAC or DEAC Elective

16 semester hours

Spring Semester 1

4 CHEM 1123/1121L University Chemistry II with lab

3 ENGL 1023 Composition II

4 BIOL 1543/1541L Principles of Biology with lab

3 Elective – Rec: HESC 2203 Nutrition for Exercise and Sport or

Elective

3 Fine Arts & Humanities University Core

17 semester hours

Fall Semester 2

3 HESC 2112/211L Foods I

2 ANSC 3032 Animal Physiology I

3 PSYC 2003 General Psychology

3 ENGL 2003 Advanced Composition or Exemption Elective

3 COMM 1313 Fundamentals of Communication

1 PEAC or DEAC

15 semester hours

Spring Semester 2

4 CHEM 2613/ 2611L Organic Physiological Chemistry

3 HESC 2413 Family Relations

2 ANSC 3042 Animal Physiology II

3 HESC 3203 Nutrition for the Health Professional & Educator

3 Fine Arts & Humanities University Core

15 semester hours

Fall Semester 3

3 CHEM 3813 Organic Chemistry II

4 HESC 3604/3600L Food Preparation for the Hospitality Industry with lab

3 HESC 3213 Dietetic & Nutrition Practices

3 HESC 3653 Food Systems Management

3 General Elective

16 semester hours

Spring Semester 3

4 BIOL 2013/2011L Microbiology with lab (BIOL 1543/1541L and 2 semesters of general chemistry)

3 Communications Intensive Elective: ENGL 3053 Technical and Report Writing, JOUR 3123 Feature Writing or AGED 3142/3141L Agri Communications

3 AGST 4023 Principles of Experimentation or Equivalent Elective

3 HESC 4103/4100L Experimental Foods with lab

3 US History University Core Elective

16 semester hours

Fall Semester 4

3 HESC 4213 Advanced Nutrition

3 HESC 4613 Food Service Purchasing

4 HESC 4264/4260L Medical Nutrition Therapy I

3 HESC 4223 Nutrition During the Life Cycle

3 Social Science Core Elective

16 semester hours

Spring Semester 4

3 HESC 4273 Medical Nutrition Therapy II

3 HESC 4623 Selection & Layout of Food Service Equipment

1 HESC 425V Food and Nutrition Seminar

3 HESC 4243 Community Nutrition.

3 General Elective

13 semester hours

124 Total Hours

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
Initials _____ Date _____

Distribution

Notification to:

(1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
(7) Treasurer (8) Undergraduate Program Committee Initials _____ Date _____

University Course and Programs Committee
15-Dec-06

TABLE ONE
Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO
Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE
College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

ATTACHMENT 2A
ADD, CHANGE OR DELETE PROGRAM OR UNIT

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

<hr/> Department / Program Chair	<hr/> Date Submitted	<hr/> Faculty Senate Chair	<hr/> Date
<hr/> College Dean	<hr/> Date	<hr/> Provost	<hr/> Date
<hr/> Undergraduate Program Committee Chair	<hr/> Date	<hr/> Board of Trustees Approval Date	
<hr/> Graduate Council Chair	<hr/> Date	<hr/> Arkansas Higher Education Coordinating Board Approval Date	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit AP Credit

Level: Undergraduate Graduate Law Effective Catalog Year Fall 2007

Current Name Economics AP Credit for ECON 2013 and ECON 2023

College, School, Division BADM Department Code ECON

Current Code (6 digit Alpha) BECOBS Proposed Code (6 digit Alpha) _____
Prior approval from the Office of the Registrar is required.

Interdisciplinary Program CIP Code 52.0601
Prior assignment from Office of Institutional Research is required.

Proposed Name _____
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____

No new students admitted to program after Term: ____ Year: _____

Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made: We are requesting to change the AP requirements for ECON 2013 and 2023 so that students would receive credit automatically if they received a score of 4 or 5 on the AP test.

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

The proposed change recognizes the exceptional achievement an AP score of 4 or 5 as credit along with those for other classes at the University of Arkansas

SECTION VII: Catalog Text and Format

Insert the current catalog text and the proposed catalog text. Be sure that the proposed text includes all the elements listed below in order. Do not include university requirements or college requirements. Do not substitute a sample schedule for an explicit statement of requirements. Use standard terms and vocabulary (see Academic Policy 1621.10).

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

Current Catalog text (p. 49 of 2006-2007 catalog):

Macroeconomics ECON 2013 3Pq - subsequent paperwork reads 3Pq, 5C but is not reflected in the 2006-2007 catalog

Microeconomics ECON 2023 3Pq - subsequent paperwork reads 3Pq, 5C but is not reflected in the 2006-2007 catalog

Proposed Catalog text:

Macroeconomics ECON 2013 4C

Microeconomics ECON 2023 4C

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
Initials _____ Date _____

Distribution

Notification to:

(1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
(7) Treasurer (8) Undergraduate Program Committee Initials _____ Date _____

University Course and Programs Committee
15-Dec-06

TABLE ONE
Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO
Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE
College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

**ATTACHMENT 3A
ADD, CHANGE OR DELETE PROGRAM OR UNIT**

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair	Date Submitted	Faculty Senate Chair	Date
College Dean	Date	Provost	Date
University Course and Programs Committee	Date	Board of Trustees Approval/Notification Date	
Graduate Council Chair	Date	Arkansas Higher Education Coordinating Board Approval/Notification Date	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit _____

Level: Undergraduate Graduate Law Effective Catalog Year _____

Current Name **Engineering**

College, School, Division **ENGR** Department Code _____

Current Code (6 digit Alpha) _____ Proposed Code (6 digit Alpha) _____
Prior approval from the Office of the Registrar is required.

Interdisciplinary Program CIP Code _____
Prior assignment from Office of Institutional Research is required.

Proposed Name _____
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

- For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.
- Program proposal uses courses offered by another academic college. The signature of the dean of that academic college is required here: _____

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____

No new students admitted to program after Term: ____ Year: _____

Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made: The College of Engineering is implementing a common first-year experience for students pursuing the following Bachelor of Science degrees: Biological Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, Computer Science. See separate program change forms for each of these programs for specific details.

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college. The signature of the dean of that academic college is required here: _____
- Program change proposal deletes courses offered by another academic college. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

During the 2005-2006 academic year, the Dean of the College of Engineering (COE) appointed the COE Retention Task Force to investigate ways of improving the retention and graduation rates of new freshmen entering the COE. The COE Retention Task Force was asked to place particular emphasis on the retention of new freshmen to their sophomore year. The COE Retention Task Force studied the reasons why new freshmen (at the University of Arkansas and around the United States) are not retained, as well the characteristics of successful and unsuccessful programs aimed at improving retention rates in other colleges of engineering. Ultimately, the COE Retention Task Force recommended the creation of a sub-committee, the Freshman Engineering Committee, to develop a proposal for the creation of a Freshman Engineering Center designed to provide support services to new freshmen in the COE, and creation of a common first-year academic experience for new freshmen in the COE. The Freshman Engineering Committee was formed and, in the summer of 2006, decided that the appropriate course of action was to pursue a two-semester common experience that includes both an academic experience and a student services center.

SECTION VII: Catalog Text and Format

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

FRESHMAN ENGINEERING PROGRAM

With the exception of students intending to pursue a Bachelor of Science in Chemical Engineering, all new freshmen entering the College of Engineering and all transfer students entering the College of Engineering with less than 24 credit hours are

initially designated as either General Engineering or Pre-Engineering students. These students participate in the Freshman Engineering Program. The objective of the Freshman Engineering Program is to establish the foundation for the academic and professional success of new students entering the College of Engineering by:

- delivering to them appropriate educational content so that they can move on to a discipline-specific College of Engineering undergraduate program,
- facilitating the development of their academic skills so that they understand the workload, professionalism, and ethics required to succeed in a rigorous academic environment, and
- providing them with academic, career, and personal advising in a proactive manner.

The Freshman Engineering Program is comprised of two sub-programs: the Freshman Engineering Academic Program and the Freshman Engineering Student Services Program. These programs work together to meet the objective of the Freshman Engineering Program.

To become a General Engineering student, a new student must: (i) be placed into MATH 1285: Precalculus Mathematics or higher, and (ii) not be placed into ENGL 0003: Basic Writing. New students who do not meet these requirements are designated as Pre-Engineering students, and they may only become General Engineering students when they: (i) have a University of Arkansas GPA of 2.0 or higher, and (ii) have rectified the deficiencies that prevented their becoming General Engineering students upon entry into the program.

Freshman Engineering Academic Program

The Freshman Engineering Academic Program is a two-semester program for General Engineering students. The coursework content of this program is as follows:

Fall Semester

<u>GNEG 1111</u>	<u>Introduction to Engineering I</u>	<u>1</u>
<u>ENGL 1013</u>	<u>Composition I</u>	<u>3</u>
<u>MATH 2554</u>	<u>Calculus I</u>	<u>4</u>
<u>CHEM 1103</u>	<u>University Chemistry I</u>	<u>3</u>
<u>PHYS 2054</u>	<u>University Physics I</u>	<u>4</u>
		<u>15 total credit hours</u>

Spring Semester

<u>GNEG 1121</u>	<u>Introduction to Engineering II</u>	<u>1</u>
<u>ENGL 1023</u>	<u>Technical Composition II</u>	<u>3</u>
<u>MATH 2564</u>	<u>Calculus II</u>	<u>4</u>
	<u>Freshman Engineering Science Elective</u>	<u>4</u>
	<u>Humanities/Social Science Elective</u>	<u>3</u>
		<u>15 total credit hours</u>

The Freshman Engineering Science Elective requires students to select either CHEM 1123/1121L: University Chemistry II or PHYS 2074: University Physics II. In choosing a course, students are made aware of the preferences of each College of Engineering undergraduate program. However, all College of Engineering undergraduate programs accept both of these courses.

For new students who are placed into MATH 1285, the MATH 2554 and PHYS 2054 requirements shift to the spring semester, the Humanities/Social Science Elective requirement shifts to the fall semester, and PHYS 2074 is removed as an option for the Freshman Science Elective. These students are encouraged to complete MATH 2564 during the summer prior to their sophomore year.

Students who enter the Freshman Engineering Program with credit for or exemptions from one or more of the required courses in the Freshman Engineering Academic Program (or other courses required by College of Engineering undergraduate programs) are advised on a case-by-case basis and given the opportunity to choose advanced, replacement courses that are appropriate for any College of Engineering undergraduate program or for a program that they are seriously considering. However, ENGL 1013: Composition I and ENGL 1023T: Technical Composition II are closely coordinated with the Introduction to Engineering course sequence. Therefore, General Engineering students are encouraged to complete the Composition sequence regardless of their academic background.

Declaring a College of Engineering Major

A short time before pre-registration for the fall semester of the sophomore year (typically in mid-March), General Engineering students choose a major within a specific College of Engineering discipline. To move into this College of Engineering undergraduate program, a General Engineering student must have completed each required course in the

Freshman Engineering Academic Program with a University of Arkansas GPA of 2.0 and satisfied any additional requirements set forth by their new home department. General Engineering students who do not meet these conditions are advised academically within the Freshman Engineering Program on a case-by-case basis until they meet the conditions for entering a discipline-specific College of Engineering undergraduate program. These students are required to enroll in the courses necessary to remove their deficiencies; however, they can also enroll in discipline-specific College of Engineering courses for which they have satisfied the pre-requisites.

Freshman Engineering Student Services Program

The Freshman Engineering Student Services Program provides proactive support to General Engineering and Pre-Engineering students through two sets of activities. First, the Freshman Engineering Student Services Program organizes and executes, for General Engineering and Pre-Engineering students:

- summer orientation,
- a peer mentoring program, and
- a tutoring program.

Second, the Freshman Engineering Students Services Program provides, for General Engineering and Pre-Engineering students:

- academic advising,
- basic career advising,
- personal counseling, and
- academic success strategy training.

The Freshman Engineering Student Services Program is executed by a team of professionals who constitute the Freshman Engineering Student Services Staff. The Freshman Engineering Center, located on the third floor of the southeast wing of Engineering Hall, houses the Freshman Engineering Student Services Program and includes common study areas and computer labs for General Engineering and Pre-Engineering students, space for the peer mentoring and tutoring programs, and offices for the Freshman Engineering Student Services Staff.

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____
 DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
 Initials _____ Date _____

Distribution

Notification to:
 (1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
 (7) Treasurer (8) Undergraduate Program Committee Initials _____ Date _____

University Course and Programs Committee
15-Dec-06

TABLE ONE

Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO

Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE

College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

**ATTACHMENT 3B
ADD, CHANGE OR DELETE PROGRAM OR UNIT**

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair	Date Submitted	Faculty Senate Chair	Date
College Dean	Date	Provost	Date
University Course and Programs Committee	Date	Board of Trustees Approval/Notification Date	
Graduate Council Chair	Date	Arkansas Higher Education Coordinating Board Approval/Notification Date	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit _____
 Level: Undergraduate Graduate Law Effective Catalog Year 2007

Current Name **Biological Engineering**

College, School, Division **ENGR**

Department Code **BAEG**

Current Code (6 digit Alpha) **BENGBS**

Proposed Code (6 digit Alpha) _____

Prior approval from the Office of the Registrar is required.

Interdisciplinary Program

CIP Code **14.0301**

Prior assignment from Office of Institutional Research is required.

Proposed Name _____

When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.

Program proposal uses courses offered by another academic college. The signature of the dean of that academic college is required here: _____

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____

No new students admitted to program after Term: ____ Year: _____

Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made:

There are 5 proposed changes to the requirements for the B.S. degree in Biological Engineering:

(1) Add requirement of GNEG 1111, GNEG 1121 and GNEG 1122 and eliminate the requirement of GNEG 1103 and BENG 1022.

(2) Add the requirement of CHEM 3603/3601L and CHEM 3613/3611L and eliminate the requirement of CHEM 2613/2611L.

(3) Eliminate the requirement of BIOL 1543/1541L and recognize it as a needed deficiency course but not for degree credit.

(4) Add 1 hour to BENG 4103 increasing it to a 4-hour required course, and eliminate the requirement for ELEG 2103/2101L.

(5) Increase Technical Elective requirement by 3 hours to 12 hours, with at least 6 hours in engineering courses.

These changes will decrease total hours for the degree from 129 hours to 128 hours.

Check if either of these boxes apply and provide the necessary signature:

Program change proposal adds courses offered by another academic college. The signature of the dean of that academic college is required here: _____

Program change proposal deletes courses offered by another academic college. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

Change of Name and Code (Complete only sections I, II, V and VII.)

Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

(1) above is needed to adopt the new common freshman engineering program.

(2) above is needed to strengthen the basic science background, as suggested by our Advisory Board.

(3) above is needed to recognize college preparation of many entering freshman and to encourage advanced study of biological sciences.

(4) above is needed to effect efficiency in the program in covering biological instrumentation and circuits.

(5) above is needed to maintain sufficient engineering content as needed for accreditation while providing more flexibility for students.

SECTION VII: Catalog Text and Format

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

Current Catalog (2006-2007) Text

BIOLOGICAL AND AGRICULTURAL ENGINEERING (BAEG)

Lalit Verma

Head of the Department

203 Engineering Hall

479-575-2351

- Professors Gardisser, Griffis, Li, Loewer, VanDevender, Verma
- Associate Professors Carrier, Chaubey, Costello, Huitink, Matlock, Tacker
- Assistant Professors Bajwa, Kavdia, Kim, Osborn, Ye
- Adjunct Professor Ang, Clausen, Deaton, Ingels
- Adjunct Associate Professors Beitle, Yang
- Adjunct Assistant Professors Haggard, Howell, Shafirstein, Wimberly

Biological Engineers improve people's lives today and help assure a sustainable quality of life for tomorrow. They create solutions to problems by coupling living systems (human, plant, animal, environmental, food, and microbial) with the tools of engineering and biotechnology. Biological engineers improve human health through biomedical engineering; ensure a safe, nutritious food supply and create critical, new medicines through biotechnology engineering; secure a healthy and safe environment through ecological engineering. A bachelor of science degree in biological engineering is also excellent preparation for medical school.

Biological Engineering is an ABET accredited program leading to the B.S. degree. M.S. and Ph.D. degrees are also offered. The curriculum is under the joint supervision of the dean of the College of Engineering and the dean of the Dale Bumpers College of Agricultural, Food and Life Sciences. The Bachelor of Science in Biological Engineering degree is conferred by the College of Engineering and is granted after the successful completion of 129 hours of approved course work.

The educational objectives of the Biological Engineering program are to produce graduates who 1) effectively apply engineering to biological systems and processes (plant, animal, human, microbial, and ecosystem) with demonstrated proficiency in basic professional and personal skills, and 2) are well prepared for future challenges in biological engineering, life-long learning, and professional and ethical contributions to society through sustained accomplishments.

Areas of Concentration

The three areas of concentration in biological engineering are as follows:

Biomedical Engineering – nanomedicine, tissue engineering, organ regeneration and its clinical application, bioinstrumentation, biosensing/medical imaging, medical electronics, physiological modeling, biomechanics, and rehabilitation engineering. This area is excellent preparation for medical, veterinary or dental school as well as for graduate programs in biomedical engineering.

Biotechnology Engineering – biotechnology at the micro- and nano-scale, food processing, food safety and security, developing new products from biomaterials, and biotransformation to synthesize industrial and pharmaceutical products.

Ecological Engineering – integrates ecological principles into the design of sustainable systems to treat, remediate, and prevent pollution to the environment. Applications include stream restoration, watershed management, water and wastewater treatment design, ecological services management, urban greenway design and enclosed ecosystem design.

Each student is required to complete 15 semester hours of approved electives in his or her area of concentration. Six hours must be from the biological engineering design elective courses (listed below) from a single area of concentration. The remaining nine hours are classified as technical electives and consist mainly of upper-division courses in engineering, mathematics, and the sciences as approved by the student's adviser. The selected technical electives must include at least three hours of upper-level engineering courses, either within BENG or from other engineering departments. The department maintains a list of approved electives.

The areas of technical concentration and the recommended elective courses for each are listed here.

Biomedical Engineering

Design Electives:

BENG 3213 Biomedical Engineering: Emerging Methods and Applications

BENG 4203 Biomedical Engineering Principles

Technical Electives:

BIOL 2533/2531L Cell Biology

CHEM 3613 Organic Chemistry II

CHEM 3611L Organic Chemistry II Lab

BIOL 2404 Comparative Vertebrate Morphology, or BIOL 2443/2441L Human Anatomy

BIOL 4234 Comparative Physiology, or BIOL 2213/2211L Human Physiology

BENG 4113 Risk Analysis for Biological Systems

BENG 4123 Biosensors and Bioinstrumentation

BENG 4623 Biological Reactor Systems Design

BENG 451VH, Honors Thesis

BIOL 4233 Microbial Genetics

KINS 3353 Mechanics of Human Movement

ELEG 2903 Digital Systems

HESC 3204 Nutrition

Biotechnology Engineering

Design Electives:

BENG 4703 Biotechnology Engineering

BENG 4623 Biological Reactor Systems Design

Technical Electives:

BENG 4113 Risk Analysis for Biological Systems

BENG 4123 Biosensors and Bioinstrumentation

BENG 451VH Honors Thesis

FDSC 4304 Food Chemistry

FDSC 4124 Food Microbiology

FDSC 3103 Principles of Food Proc.

BIOL 4233 Microbial Genetics

BIOL 4313 Physiology of Microorganisms

CHEM 3453/3451L Elements of Physical Chemistry

MEEG 4413 Heat Transfer

CHEG 3153 Non-equilibrium Mass Transfer

CHEG 4423 Auto. Process Control

HESC 3204 Nutrition

Ecological Engineering

Design Electives:

BENG 4903 Ecological Engineering Principles

BENG 4923 Ecological Engineering Design

Technical Electives:

BENG 4113 Risk Analysis for Biological Systems

BENG 4403 Enclosed Ecosystems Design

BENG 4623 Biological Reactor Systems Design

BENG 4803 Precision Agriculture

BENG 4123 Digital Remote Sensing and GIS

BENG 451VH, Honors Thesis

BIOL 3863/3861L General Ecology

CVEG 3243 Environmental Engineering

CVEG 4243 Environmental Engineering Design

CSES 2203 Soil Science

CSES 4043 Environmental Impact and Fate of Pesticides

GEOG 4543 Geographic Information Systems

ENSC 4034 Analysis of Environmental Contaminants

Biological Engineering Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Biological Engineering degree and a suggested sequence. Some courses are not offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Pre-Medical students must take CHEM 3603/3601L, Organic Chemistry I, and CHEM 3613/3611L, Organic Chemistry II, instead of CHEM 2613/2611L, Organic Physiological Chemistry. This requires special scheduling of courses beginning in the first sophomore semester. See your faculty adviser for this schedule plan.

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take ENGL 2023 during the third year or gain exemption.

Fall 1

3 GNEG 1103 Introduction to Engineering

3 ENGL 1013 Composition I

3 CHEM 1103 University Chemistry I

4 MATH 2554 Calculus I

3 U.S. History Requirement

16 semester hours

Spring 1

2 BENG 1022 Biological Engr Design Studio I

3 ENGL 1023 Technical Composition II

3 CHEM 1123 University Chemistry II

1 CHEM 1121L University Chemistry II Lab

4 MATH 2564 Calculus II

3 BIOL 1543 Principles of Biology

1 BIOL 1541L Principles of Biology Lab

17 semester hours

Fall 2

2 BENG 2612 Biological Engr Design Studio II

3 MEEG 2003, Statics

4 PHYS 2054 University Physics I

4 MATH 2574 Calculus III

3 BIOL 2013 General Microbiology*

1 BIOL 2011L General Microbiology Lab

17 semester hours

Spring 2

2 BENG 2622 Biological Engr Design Studio III

4 PHYS 2074 University Physics II

3 MEEG 2403 Thermodynamics, or CHEG 2313 Thermodynamics of Single Component Systems

3 ELEG 2103 Electronic Circuits

1 ELEG 2101L Electronic Circuits Lab

3 CHEM 2613 Organic Physiological Chemistry*

1 CHEM 2611L Organic Physiological Chemistry Lab

17 semester hours

Fall 3

2 BENG 3712 Engr Properties of Biol Materials

3 MEEG 3013 Mechanics of Materials

3 CVEG 3213 Hydraulics, or MEEG 3503 Mechanics of Fluids, or CHEG 2133 Fluid Mechanics

3 CHEM 3813 Intro. to Biochemistry

4 MATH 3404 Differential Equations

3 Technical Elective

18 semester hours

Spring 3

3 BENG 3723 Unit Operations in Biological Engr
3 BENG 3803 Mechanical Design in Biological Engr
3 BENG 4103 Instrumentation in Biological Engr
3 BENG Design elective
3 Humanities/Social Science Elective
0 ENGL 2003 Advanced Composition or Exemption

15 semester hours

Fall 4

3 BENG 4813 Senior Biological Engr Design I
3 BENG 3733 Transport Phenomena in Biological Systems
3 BENG Design Elective
6 Humanities/Social Studies Elective

15 semester hours

Spring 4

2 BENG 4822 Senior Biological Engr Design II
6 Humanities/Social Science Elective
3 Technical (Engineering) elective
3 Technical elective

14 semester hours

129 Total hours

SEE PAGE 321 FOR BIOLOGICAL ENGINEERING (BENG) COURSES

Revised Catalog Text (proposed 2007-2008)

BIOLOGICAL AND AGRICULTURAL ENGINEERING (BAEG)

Lalit Verma

Head of the Department

203 Engineering Hall

479-575-2351

- Professors Gardisser, Griffis, Li, Loewer, VanDevender, Verma
- Associate Professors Carrier, Chaubey, Costello, Huitink, Kim, Matlock, Tacker
- Assistant Professors Bajwa, Kavdia, Osborn, Ye
- Adjunct Professor Ang, Clausen, Deaton, Ingels
- Adjunct Associate Professors Beitle, Yang
- Adjunct Assistant Professors Haggard, Howell, Shafirstein, Wimberly

Biological Engineers improve people's lives today and help assure a sustainable quality of life for tomorrow. They create solutions to problems by coupling living systems (human, plant, animal, environmental, food, and microbial) with the tools of engineering and biotechnology. Biological engineers improve human health through biomedical engineering; ensure a safe, nutritious food supply and create critical, new medicines through biotechnology engineering; secure a healthy and safe environment through ecological engineering. A bachelor of science degree in biological engineering is also excellent preparation for medical school.

Biological Engineering is an ABET accredited program leading to the B.S. degree. M.S. and Ph.D. degrees are also offered. The curriculum is under the joint supervision of the dean of the College of Engineering and the dean of the Dale Bumpers College of Agricultural, Food and Life Sciences. The Bachelor of Science in Biological Engineering degree is conferred by the College of Engineering and is granted after the successful completion of 128 hours of approved course work.

The educational objectives of the Biological Engineering program are to produce graduates who 1) effectively apply engineering to biological systems and processes (plant, animal, human, microbial, and ecosystem) with demonstrated proficiency in basic professional and personal skills, and 2) are well prepared for future challenges in biological engineering, life-long learning, and professional and ethical contributions to society through sustained accomplishments.

Areas of Concentration

The three areas of concentration in biological engineering are as follows:

Biomedical Engineering – nanomedicine, tissue engineering, organ regeneration and its clinical application, bioinstrumentation, biosensing/medical imaging, medical electronics, physiological modeling, biomechanics, and rehabilitation engineering. This area is excellent preparation for medical, veterinary or dental school as well as for graduate programs in biomedical engineering.

Biotechnology Engineering – biotechnology at the micro- and nano-scale, food processing, food safety and security, developing new products from biomaterials, and biotransformation to synthesize industrial and pharmaceutical products.

Ecological Engineering– integrates ecological principles into the design of sustainable systems to treat, remediate, and prevent pollution to the environment. Applications include stream restoration, watershed management, water and wastewater treatment design, ecological services management, urban greenway design and enclosed ecosystem design.

Each student is required to complete 18 semester hours of approved electives in his or her area of concentration. Six hours must be from the biological engineering design elective courses (listed below) from a single area of concentration. The remaining twelve hours are classified as technical electives and consist mainly of upper-division courses in engineering, mathematics, and the sciences as approved by the student's adviser. The selected technical electives must include at least six hours of upper-level engineering courses, either within BENG or from other engineering departments. The department maintains a list of approved electives.

The areas of technical concentration and the recommended elective courses for each are listed here.

Biomedical Engineering

Design Electives:

BENG 3213 Biomedical Engineering: Emerging Methods and Applications

BENG 4203 Biomedical Engineering Principles

Technical Electives:

BIOL 2533/2531L Cell Biology

BIOL 2404 Comparative Vertebrate Morphology, or BIOL 2443/2441L Human Anatomy

BIOL 4234 Comparative Physiology, or BIOL 2213/2211L Human Physiology

BENG 4113 Risk Analysis for Biological Systems

BENG 4123 Biosensors and Bioinstrumentation

BENG 4623 Biological Reactor Systems Design

BENG 451VH, Honors Thesis

BIOL 4233 Microbial Genetics

KINS 3353 Mechanics of Human Movement

ELEG 2903 Digital Systems

HESC 3204 Nutrition

Biotechnology Engineering

Design Electives:

BENG 4703 Biotechnology Engineering

BENG 4623 Biological Reactor Systems Design

Technical Electives:

BENG 4113 Risk Analysis for Biological Systems

BENG 4123 Biosensors and Bioinstrumentation

BENG 451VH Honors Thesis

FDSC 4304 Food Chemistry

FDSC 4124 Food Microbiology

FDSC 3103 Principles of Food Proc.
BIOL 4233 Microbial Genetics
BIOL 4313 Physiology of Microorganisms
CHEM 3453/3451L Elements of Physical Chemistry
MEEG 4413 Heat Transfer
CHEG 3153 Non-equilibrium Mass Transfer
CHEG 4423 Auto. Process Control
HESC 3204 Nutrition

Ecological Engineering

Design Electives:

BENG 4903 Ecological Engineering Principles
BENG 4923 Ecological Engineering Design

Technical Electives:

BIOL 3863/3861L General Ecology
CVEG 3223 Hydology
BENG 4113 Risk Analysis for Biological Systems
BENG 4403 Enclosed Ecosystems Design
BENG 4623 Biological Reactor Systems Design
BENG 4803 Precision Agriculture
BENG 4123 Digital Remote Sensing and GIS
BENG 451VH, Honors Thesis
CVEG 3243 Environmental Engineering
CVEG 4243 Environmental Engineering Design
CSES 2203 Soil Science
CSES 4043 Environmental Impact and Fate of Pesticides
GEOG 4543 Geographic Information Systems
ENSC 4034 Analysis of Environmental Contaminants

Biological Engineering Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Biological Engineering degree and a suggested sequence. Some courses are not offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites.

Students should note that BIOL 1543/1541L is a pre- or co-requisite to BENG 2612 in the Fall 2 semester and BIOL 2013/2011L in the Spring 2 semester. Students should earn advanced college credit for BIOL 1543/1541L, obtain placement permission from the Biological Sciences Department or take the course for non-degree credit.

Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take ENGL 2003 during the third year or gain exemption.

Fall 1

1 GNEG 1111 Introduction to Engineering I
3 ENGL 1013 Composition I
3 CHEM 1103 University Chemistry I
4 MATH 2554 Calculus I
4 PHYS 2054 University Physics I
15 semester hours

Spring 1

1 GNEG 1121 Introduction to Engineering II
3 ENGL 1023 Technical Composition II
4 Freshman Engineering Science Elective <footnote 1>
4 MATH 2564 Calculus II

3 Humanities/ Social Science Elective
15 semester hours

Fall 2

2 BENG 2612 Biological Engr Design Studio II
4 Sophomore Science Elective <footnote 2>
4 MATH 2574 Calculus III
3 CHEM 3603 Organic Chemistry I
1 CHEM 3601L Organic Chemistry I Lab
2 GNEG 1122 Introduction to CAD
16 semester hours

Spring 2

2 BENG 2622 Biological Engr Design Studio III
4 MATH 3404 Differential Equations
3 CHEM 3613 Organic Chemistry II
1 CHEM 3611L Organic Chemistry II Lab
3 MEEG 2003 Statics
3 BIOL 2013 General Microbiology
1 BIOL 2011L General Microbiology Lab
17 semester hours

Fall 3

2 BENG 3712 Engr Properties of Biol Materials
3 CHEM 3813 Introduction to Biochemistry
3 MEEG 2403 Thermodynamics, or CHEG 2313 Thermodynamics of Single Component Systems
3 MEEG 3013 Mechanics of Materials
3 CVEG 3213 Hydraulics, or MEEG 3503 Mechanics of Fluids, or CHEG 2133 Fluid Mechanics
3 Technical Elective
17 semester hours

Spring 3

3 BENG 3723 Unit Operations in Biological Engr
3 BENG 3803 Mechanical Design in Biological Engr
4 BENG 4104 Instrumentation in Biological Engr
3 BENG Design Elective
3 U.S. History Requirement
0 ENGL 2003 Advanced Composition or Exemption
16 semester hours

Fall 4

3 BENG 4813 Senior Biological Engr Design I
3 BENG 3733 Transport Phenomena in Biological Systems
3 BENG Design Elective
3 Technical Elective
6 Humanities/Social Science Elective
18 semester hours

Spring 4

2 BENG 4822 Senior Biological Engr Design II
6 Humanities/Social Science Elective
6 Technical Elective
14 semester hours

128 Total hours

<footnote 1> The Freshman Engineering Science Elective must be chosen from either: CHEM 1123/1121L or PHYS 2074.

<footnote 2> The Sophomore Science Elective must be PHYS 2074 (if CHEM 1123/1121L was chosen as the Freshman Engineering Science Elective) or CHEM 1123/1121L (if PHYS 2074 was chosen as the Freshman Engineering Science Elective). That is, both courses are required for the degree.

SEE PAGE 321 FOR BIOLOGICAL ENGINEERING (BENG) COURSES

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____
DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
Initials _____ Date _____

Distribution

Notification to:

(1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
(7) Treasurer (8) Undergraduate Program Committee Initials _____ Date _____

University Course and Programs Committee
15-Dec-06

TABLE ONE
Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO
Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE
College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

**ATTACHMENT 3C
ADD, CHANGE OR DELETE PROGRAM OR UNIT**

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair	Date Submitted	Faculty Senate Chair	Date
College Dean	Date	Provost	Date
University Course and Programs Committee	Date	Board of Trustees Approval/Notification Date	
Graduate Council Chair	Date	Arkansas Higher Education Coordinating Board Approval/Notification Date	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit _____

Level: Undergraduate Graduate Law Effective Catalog Year 2007

Current Name Civil Engineering

College, School, Division ENGR Department Code CVEG

Current Code (6 digit Alpha) CVEGBS Proposed Code (6 digit Alpha) _____
Prior approval from the Office of the Registrar is required.

Interdisciplinary Program CIP Code 14.0801
Prior assignment from Office of Institutional Research is required.

Proposed Name _____
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

- For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.
- Program proposal uses courses offered by another academic college. The signature of the dean of that academic college is required here: _____

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____

No new students admitted to program after Term: ____ Year: _____

Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made:

a. Drop the current requirement for CVEG 1012, Civil Engineering Fundamentals

b. Drop the current requirement for CVEG 1113, Civil Engineering Computer Applications

c. Drop the current requirement for CHEM 1101L, University Chemistry I Lab

d. Add new requirement -- GNEG 1111, Introduction to Engineering 1 (new course)

e. Add new requirement -- GNEG 1121, Introduction to Engineering 2 (new course)

f. These changes will decrease the total hours required for completing the degree from 136 hours to 132 hours.

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college. The signature of the dean of that academic college is required here: _____
- Program change proposal deletes courses offered by another academic college. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

The proposed changes provide compliance with the College of Engineering's proposed Freshman Engineering Program.

The proposed changes do not affect any other degree program.

SECTION VII: Catalog Text and Format

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

Current Catalog Text

CIVIL ENGINEERING (CVEG)

Kevin D. Hall

Head of the Department

4190 Bell Engineering Center

479-575-4954

- University Professor Emeritus LeFevre
- University Professor Elliott
- Professors Buffington, Dennis, Gattis, Gross, Hall, Selvam, Wang, Young
- Associate Professors Edwards, Soerens
- Associate Professor Emeriti Pleimann
- Assistant Professors Hale, Heymsfield, Tooley, Williams (R.), Williams (S.)

Civil engineering is the oldest of all the engineering fields, yet it is as contemporary as the need to provide solutions to today's environmental problems and to develop advanced transportation systems. The civil engineer plans, designs, builds, and operates projects for the advancement and well being of society while coordinating and conserving human and natural resources. Civil engineering projects range from small to monumental and include public water systems, buildings, bridges, rail and highway networks, wastewater treatment plants, solid and hazardous waste disposal facilities, airports, and soil conservation and flood diversion controls.

The civil engineering profession offers a vast array of opportunities. Civil engineers may work in private employment or with public agencies. They may work indoors in activities such as planning and design, or outdoors in areas such as construction supervision. Employment is possible anywhere in the world.

The objectives of the civil engineering program are to produce graduates who are:

1. employable in any of the following fields: foundation, earthwork, and embankment design and analysis; water, wastewater, and waste handling and treatment; highway facility design and operation; and structural design and analysis.
2. academically prepared to pursue licensure as a Professional Engineer.
3. prepared to pursue an advanced education.

To fulfill these objectives, all students must take courses in geotechnical, environmental, transportation, and structural engineering. Courses are designed to present "real world" applications without sacrificing conceptual and theoretical basics. Students complete design problems in each of these areas; and, as part of the senior year, they participate in two major design projects.

Civil Engineering Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Civil Engineering degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take ENGL 2023 during the third year or gain exemption.

Fall Semester 1

3 ENGL 1013 Composition I

4 MATH 2554 Calculus I

2 CVEG 1012 Civil Engr Fund

3 CHEM 1103 University Chemistry I

1 CHEM 1101L University Chemistry I Lab

3 Humanities/social science elective

16 semester hours

Spring Semester 1

3 ENGL 1023 Technical Composition II

3 PHYS 2054 University Physics I

1 PHYS 2050L University Physics I Lab

3 CHEM 1123 University Chemistry II

1 CHEM 1121L University Chemistry II Lab
4 MATH 2564 Calculus II
2 GNEG 1122 Introduction CAD
17 semester hours

Fall Semester 2

4 MATH 2574 Calculus III
3 MEEG 2003 Statics
3 CVEG 1113 CE Computer Applications
3 Humanities/social science elective
3 CVEG 2053 Surveying Systems
1 CVEG 2051L Surveying Systems Lab
17 semester hours

Spring Semester 2

3 CVEG 2113 Structural Materials
3 INEG 3313 Engineering Statistics
4 MATH 3404 Differential Equations
3 MEEG 3013 Mechanics of Materials
3 Humanities/Social Science Elective
16 semester hours

Fall Semester 3

4 CVEG 3304 Structural Analysis
3 CVEG 3133 Soil Mechanics
3 CVEG 3213 Hydraulics
3 CVEG 3413 Transportation Engineering
2 GEOL 3002 Geology for Engineers
3 Humanities/social science elective
18 semester hours

Spring Semester 3

2 CVEG 3022 Public Works Economics
3 CVEG 3223 Hydrology
3 CVEG 3243 Environmental Engineering
3 CVEG 4313 Structural Steel Design I
4 Science elective
3 Humanities/social science elective
0 ENGL 2003 Advanced Composition or Exemption
18 semester hours

Fall Semester 4

3 CVEG 4143 Foundation Engineering
3 CVEG 4303 Reinforced Concrete Design I
3 CVEG 4433 Transportation Pavements & Materials
2 CVEG 4852 Professional Practice Issues
6 Engineering elective
1 Civil Engineering design elective
18 semester hours

Spring Semester 4

3 CVEG 4243 Environmental Engr Design
3 CVEG 4513 Construction Mgmt
6 Engineering electives
1 Civil Engineering design elective
3 Humanities/social science elective
16 semester hours

136 Total hours

Elective Courses

Students must select four 3-hour engineering elective courses in conference with their adviser. The selection must include at least three civil engineering courses. The fourth course can be a civil engineering course or one of the following: MEEG 2013 Dynamics, MEEG 2403 Thermodynamics, ELEG 3903 Electric Circuits and Machines, MEEG 3703 Numerical Methods. Normally, the civil engineering courses are selected from among the 4000-level elective CVEG courses. Exceptional students may be allowed to choose from the 5000 (graduate-level) course series. Humanities and social science electives are selected from courses approved by the college. The science elective requirement is satisfied by completing one of the following course sequences: CHEM 3603 and CHEM 3601L, Organic Chemistry, GEOL 3513 and GEOL 3511L, Structural Geology, BIOL 2013 and BIOL 2011L, General Microbiology, or PHYS 2074 and PHYS 2070L, University Physics II. Lists of approved electives are on file in the department office.

Civil Engineering Design Electives

Students must complete two of the following four CVEG design project electives: CVEG 4811 Environmental Design Project, CVEG 4821 Geotechnical Design Project, CVEG 4831 Structural Design Project, and CVEG 4841 Transportation Design Project. Each design project elective is associated with a specific design oriented course. The associated course must be taken at the same time as the design project elective. The associated courses may be taken alone but the design electives cannot.

Honors Program Requirements

Students enrolled in the Honors College who are to receive the Bachelor of Science in Civil Engineering must complete a minimum of 12 hours of honors credit. At least 6 hours must be completed within the Civil Engineering program including at least 3 hours resulting in an Honors Thesis. The CVEG honors courses are acceptable as engineering electives and in some cases may be substituted for required courses. The following Civil Engineering courses are offered for honors credit: CVEG 491V H Honors Studies in Geotechnical Engineering, CVEG 492V H Honors Studies in Environmental Engineering, CVEG 493V H Honors Studies in Structural Engineering, CVEG 494V H Honors Studies in Transportation Engineering, and CVEG 4983 H Undergraduate Honors Thesis

Proposed Catalog Text

CIVIL ENGINEERING (CVEG)

Kevin D. Hall
Head of the Department
4190 Bell Engineering Center
479-575-4954

- University Professor Emeritus LeFevre
- University Professor Elliott
- Professors Buffington, Dennis, Gattis, Hall, Selvam, Wang, Young

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Fall Semester 1

3 ENGL 1013 Composition I

4 MATH 2554 Calculus I

3 CHEM 1103 University Chemistry I

3 PHYS 2054 University Physics I

1 PHYS 2050L University Physics I Lab

1 GNEG 1111 Introduction to Engineering 1

15 semester hours

Spring Semester 1

3 ENGL 1023 Technical Composition II

4 Freshman Science Elective

0 Freshman Science Elective Lab

4 MATH 2564 Calculus II

3 Humanities/social science elective

1 GNEG 1121 Introduction to Engineering 2

15 semester hours

Fall Semester 2

4 MATH 2574 Calculus III

3 MEEG 2003 Statics

3 Humanities/social science elective

3 CVEG 2053 Surveying Systems

1 CVEG 2051L Surveying Systems Lab

2 GNEG 1122 Introduction CAD

16 semester hours

Spring Semester 2

3 CVEG 2113 Structural Materials

3 INEG 3313 Engineering Statistics

4 MATH 3404 Differential Equations

3 MEEG 3013 Mechanics of Materials

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3 Humanities/Social Science Elective

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3 CVEG 3213 Hydraulics

3 CVEG 3413 Transportation Engineering

4 Science Elective

17 semester hours

Spring Semester 3

2 CVEG 3022 Public Works Economics

3 CVEG 3223 Hydrology
3 CVEG 3243 Environmental Engineering
3 CVEG 4313 Structural Steel Design I
3 Humanities/social science elective
3 Engineering Elective
0 ENGL 2003 Advanced Composition or Exemption
17 semester hours

Fall Semester 4
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3 CVEG 4303 Reinforced Concrete Design I
3 CVEG 4433 Transportation Pavements & Materials
2 CVEG 4852 Professional Practice Issues
3 Engineering elective
3 Humanities/social science elective
1 Civil Engineering design elective
18 semester hours

Spring Semester 4
3 CVEG 4243 Environmental Engr Design
3 CVEG 4513 Construction Mgmt
6 Engineering electives
1 Civil Engineering design elective
3 Humanities/social science elective
16 semester hours
132 Total hours
Elective Courses

Students must select four 3-hour engineering elective courses in conference with their adviser. The selection must include at least three civil engineering courses. The fourth course can be a civil engineering course or one of the following: MEEG 2013 Dynamics, MEEG 2403 Thermodynamics, ELEG 3903 Electric Circuits and Machines, MEEG 3703 Numerical Methods. Normally, the civil engineering courses are selected from among the 4000-level elective CVEG courses. Exceptional students may be allowed to choose from the 5000 (graduate-level) course series. Humanities and social science electives are selected from courses approved by the college. The science elective requirement is satisfied by completing one of the following course sequences: CHEM 3603 and CHEM 3601L, Organic Chemistry, GEOL 3513 and GEOL 3511L, Structural Geology, BIOL 2013 and BIOL 2011L, General Microbiology, or PHYS 2074 and PHYS 2070L, University Physics II. Lists of approved electives are on file in the department office.

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Civil Engineering Design Electives

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University Course and Programs Committee
15-Dec-06

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PAGE TWO

TABLE THREE (CONTINUED)

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INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

2. The course numbers for CSCE 1123/1121L Programming Foundations II and lab change to CSCE 2013/2011L keeping the same course name.

3. The course number for CSCE 2143 Data Structures is changing to CSCE 3143 keeping the same course name.

4. The course number for CSCE 3513 Software Engineering is changing to CSCE 4513 keeping the same course name.

5. GNEG 1111, Introduction to Engineering I and 1121, Introduction to Engineering II are being added to the program requirements replacing a 3 hour free elective.

6. A lab component is being required with the basic science elective to replace the Chemistry I lab that was removed from the freshman year.

7. The total number of hours required for the degree is changing from 127 to 126 due to the implementation of the Freshman Year.

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college. The signature of the dean of that academic college is required here: _____
- Program change proposal deletes courses offered by another academic college. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

This change is being implemented to accommodate the changes in the freshman year proposed by the College of Engineering. The change will not affect any other degree program outside the college.

SECTION VII: Catalog Text and Format

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

CURRENT CATALOG:

COMPUTER SCIENCE AND COMPUTER ENGINEERING (CSCE)

Jerry Yeargan

Head of the Department

311 Engineering Hall

479-575-6197

- Distinguished Professor Yeargan
- Professors Crisp, Deaton, Skeith, Thompson (C.)
- Associate Professors Apon, Beavers, Li, Lusth, Panda, Parkerson, Thompson (D.)
- Assistant Professors Di, Hexmoor
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The educational objectives of the department are to produce graduates who are recruited in a competitive market and make valuable contributions to a wide variety of industries, particularly in computer and information technology; succeed in graduate or professional studies; pursue life-long learning and continued professional development; and undertake leadership roles in their profession, in their communities, and in the global society.

Since almost all of today's complex systems encompass hardware and software elements, the computer engineering degree (CENG) has required sequences of courses in both hardware and software aspects of computer applications and design. Computer engineering graduates must acquire the skills required to design, build, and test complex digital systems. At the advanced level, students are exposed to hands-on experience with open-ended problems with opportunities for research and design.

A degree in computer science (CSCE) provides unique diversity in career choices. Computer science graduates can design, implement, or manage computer systems, as well as adapt computers to new applications. Computer science core courses include the fundamentals of programming concepts, data structures, operating systems, algorithms, formal languages, database management systems, and programming languages.

Humanities and social science electives are selected from courses approved by the College of Engineering. The Undergraduate Handbook has a list of approved basic science, mathematics, and technical electives. Any course not included in these lists requires faculty approval.

The following section contains the list of courses required for the Bachelor of Science in Computer Engineering (B.S.Cmp.E.) and the Bachelor of Science in Computer Science (B.S.C.S.) degrees and suggested sequences for each.
Computer Engineering Eight-Semester Program

The following section contains the list of courses required for the Bachelor of Science in Computer Engineering (B.S.Cmp.E.) degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.
Students must also take ENGL 2023 during the third year or gain exemption.

Fall Semester 1

4 MATH 2554 Calculus I

3 CHEM 1103 University Chemistry

1 CHEM 1101L University Chemistry Lab

3 CSCE 1113 Programming Foundations I
1 CSCE 1111L Programming Foundations I Lab
3 ENGL 1013 English Composition
15 semester hours

Spring Semester 1
4 MATH 2564 Calculus II
4 PHYS 2054 University Physics I
0 PHYS 2050L University Physics I Lab
3 CSCE 1123 Programming Foundations II
1 CSCE 1121L Programming Foundations II Lab
3 ENGL 1023 Composition II
3 MATH 2103 Discrete Math
18 semester hours

Fall Semester 2
4 MATH 2574 Calculus III
4 PHYS 2074 University Physics II
0 PHYS 2070L University Physics II Lab
3 CENG 2113 Digital Techniques I
0 CENG 2110L Digital Techniques I Lab
3 CSCE 2143 Data Structures
3 Humanities/social sciences elective
17 semester hours

Spring Semester 2
4 MATH 3404 Differential Equations
3 ELEG 3933 Circuits and Electronics
3 CENG 2213 Computer Organization
3 CENG 2123 Digital Techniques II
0 CENG 2120L Digital Techniques II Lab
3 Basic science elective
16 semester hours

Fall Semester 3
3 CENG 3953 Logic Synthesis-VHDL
3 CSCE 3313 Algorithms
3 Technical Elective
3 History/Government requirement
3 Humanities/social sciences elective
15 semester hours

Spring Semester 3
3 CSCE 3613 Operating Systems
3 CSCE 3513 Software Engineering
3 PHIL 3103 Ethics and the Professions
3 Technical Elective
3 STAT 3013 Introduction to Probability and Statistics (INEG 3313 may be substituted)
0-3 ENGL 2003 Advanced Composition or Exemption
15 semester hours

Fall Semester 4
1 CENG 4571 Senior Design Project I
3 Technical electives/hardware
3 Technical electives/software
3 Humanities/social sciences elective
3 Free Elective
3 Free Elective
16 semester hours

Spring Semester 4

3 CENG 4973 Senior Design Project II
3 CENG 4213 Intro. to Computer Architecture
3 Technical electives/hardware
3 Technical electives/software
3 Humanities/social sciences elective (3000+)
15 semester hours
127 Total hours

Computer Science Eight-Semester Program

The following section contains the list of courses required for the Bachelor of Science in Computer Science (B.S.C.S.) degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.
Students must also take ENGL 2023 during the third year or gain exemption.

Computer Science majors are required to take 12 hours of natural science consisting of either PHYS 2054/2050L, PHYS 2074/2070L and CHEM 1103/1101L; or CHEM 1103/1101L, CHEM 1123/1121L and PHYS 2054/2050L.

Fall Semester 1

4 MATH 2554 Calculus I
4 PHYS 2054 University Physics I
0 PHYS 2050L University Physics I Lab
3 CSCE 1113 Programming Foundations I
1 CSCE 1111L Programming Foundations I Lab
3 ENGL 1013 English Composition
15 semester hours

Spring Semester 1

4 MATH 2564 Calculus II
4 PHYS 2074 University Physics II
0 PHYS 2070L University Physics II Lab
3 CSCE 1123 Programming Foundations II
1 CSCE 1121L Programming Foundations II Lab
3 ENGL 1023 Composition II
3 MATH 2103 Discrete Mathematics
18 semester hours

Fall Semester 2

3 MATH 3083 Linear Algebra
3 CHEM 1103 University Chemistry I
1 CHEM 1101L University Chemistry I Lab
3 CENG 2113 Digital Techniques I
0 CENG 2110L Digital Techniques I Lab
3 CSCE 2143 Data Structures
3 Humanities/Social sciences elective
16 semester hours

Spring Semester 2

3 MATH 3103, Combinatorics
3 Free elective
3 CENG 2213, Computer Organization
3 Humanities/social sciences elective
3 History/government requirement
15 semester hours

Fall Semester 3

3 STAT 3013 Intro to Probability and Statistics
(INEG) 3313 can be substituted)
3 CS Elective

3 CSCE 3313 Algorithms
3 Humanities/social sciences elective
3 Humanities/social sciences elective
15 semester hours

Spring 3

3 CSCE 3613 Operating Systems
3 CSCE 3513 Software Engineering
3 Free elective
3 Free elective
3 PHIL 3103 Ethics & the Profession
0 ENGL 2003 Advanced Composition or Exemption
15 semester hours

Fall Semester 4

1 CSCE 4561 CS Capstone I
3 CSCE 4313 Programming Languages
3 CSCE 4523 Database Management
3 CS elective
3 Free elective
3 Humanities/social sciences elective
16 semester hours

Spring 4

3 CSCE 4963 CS Capstone II
3 CS elective
3 CSCE 4323 Formal Languages
3 Free elective
3 Humanities/social sciences elective (3000+)
15 semester hours
125 Total hours

Degree Program Changes

Students must meet all requirements of their degree programs and are expected to keep informed concerning current regulations, policies, and program requirements in their fields of study. Changes made in curriculum at a level beyond that at which a student is enrolled might become graduation requirements for that student. Changes made in the curriculum at a level lower than the one at which a student is enrolled are not required of that student. Students should consult their departmental adviser for additional information.

Requirements for Departmental Honors Computer Science and Computer Engineering

The Honors Program in Computer Science and Computer Engineering is designed for the superior student and is intended to help the student develop a more comprehensive view of Computer Science and Computer Engineering. The program provides a vehicle for the recognition of achievements of work beyond the usual course of study. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the candidate's whole program of honors studies.

The department considers the following requirements necessary for graduation with honors:

1. The candidate must satisfy the requirements set forth by the College of Engineering.
2. A student must obtain at least a 3.50 grade-point average in required Computer Engineering and/or Computer Science courses.
3. The student must complete 7 hours of Honors credit in the major, which includes 4 hours of Honors Thesis taken as two successive semesters of CSCE 4912H or CENG 4912H and 3 hours of non-thesis.

Requirements for the Bachelor of Arts degree with a Major in Computer Science (B.A.C.S):

At least 30 hours in computer science including CSCE 1113/1111L, CSCE 1123/1121L, CSCE 2143, CSCE 3313, and CSCE 4313 plus 13 hours of electives to be selected from a list of CSCE courses numbered 3000 or higher offered by the department.

The mathematics requirements of the degree are MATH 2043 or MATH 2554, MATH 2103, and MATH 3103. The remaining courses should meet the requirements for a B.A. degree listed in the Fulbright College section.

Requirements for a Minor in Computer Science:

CSCE 1113/1111L, CSCE 1123/1121L, CSCE 2143, CSCE 3313, and either CENG 2213 or CSCE 4313.

SEE PAGE 326 FOR COMPUTER ENGINEERING (CENG) courses AND PAGE 337 FOR Computer Science (CSCE) COURSES

NEW CATALOG:

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Since almost all of today's complex systems encompass hardware and software elements, the computer engineering degree (CENG) has required sequences of courses in both hardware and software aspects of computer applications and design. Computer engineering graduates must acquire the skills required to design, build, and test complex digital systems. At the advanced level, students are exposed to hands-on experience with open-ended problems with opportunities for research and design. The CE program culminates in a senior design project that is a two-semester consecutive course with the first semester forming teams and developing a project proposal. The second semester expands the project to encompass the development, implementation, and presentation of the final project.

A degree in computer science (CSCE) provides unique diversity in career choices. Computer science graduates can design, implement, or manage computer systems, as well as adapt computers to new applications. Computer science core courses include the fundamentals of programming concepts, data structures, operating systems, algorithms, formal languages, database management systems, and programming languages. The CS program culminates in a capstone project that is a two-semester consecutive course with the first semester forming teams and developing a project proposal. The second semester expands the project to encompass the development, implementation, and presentation of the final project.

Humanities and social science electives are selected from courses approved by the College of Engineering. The Undergraduate Handbook has a list of approved basic science, mathematics, and technical electives. Any course not included in these lists requires faculty approval.

The following sections contain the list of courses required for the Bachelor of Science in Computer Engineering (B.S.Cmp.E.) and the Bachelor of Science in Computer Science (B.S.C.S.) degrees and suggested sequences for each.

Computer Engineering Eight-Semester Program:

Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam. Students must also take the Advanced Composition exam or ENGL 2003 during the third year.

Fall Semester 1

4 MATH 2554 Calculus I
3 CHEM 1103 University Chemistry
4 PHYS 2054 University Physics I
0 PHYS 2050L, University Physics I Lab
3 ENGL 1013 English Composition
1 GNEG 1111 Introduction to Engineering I
15 semester hours

Spring Semester 1
4 MATH 2564 Calculus II
4 Freshman Science elective*
3 Humanities/social science elective
3 ENGL 1023 Composition II
1 GNEG 1121 Introduction to Engineering II
15 semester hours

Fall Semester 2
4 MATH 2574 Calculus III
4 Basic Science elective
3 CSCE 2003 Programming Foundations I
1 CSCE 2001L Programming Foundations I Lab
3 CENG 2113 Digital Techniques I
0 CENG 2110L Digital Techniques I Lab
3 Humanities/social sciences elective
18 semester hours

Spring Semester 2
4 MATH 3404 Differential Equations
3 MATH 2103 Discrete Math
3 CSCE 2013 Programming Foundations II
1 CSCE 2011L Programming Foundations II Lab
3 CENG 2213 Computer Organization
3 CENG 2123 Digital Techniques II
0 CENG 2120L Digital Techniques II Lab
17 semester hours

Fall Semester 3
3 CENG 3953 Logic Synthesis-VHDL
3 CSCE 3143 Data Structures
3 Technical Elective
3 History/Government requirement
3 PHIL 3103 Ethics & the Professions
15 semester hours

Spring Semester 3
3 CSCE 3613 Operating Systems
3 CSCE 3313 Algorithms
3 ELEG 3933 Electronics & Circuits
3 Technical Elective
3 STAT 3013 Introduction to Probability and Statistics (INEG 3313 may be substituted)
15 semester hours

Fall Semester 4
1 CENG 4571 Senior Design Project I
3 Technical electives/hardware
3 Technical electives/software
3 Humanities/social sciences elective
3 CSCE 4513 Software Engineering
3 Free Elective
16 semester hours

Spring Semester 4

3 CENG 4973 Senior Design Project II

3 CENG 4213 Intro. to Computer Architecture

3 Technical electives/hardware

3 Technical electives/software

3 Humanities/social sciences elective (3000+)

15 semester hours

126 Total hours

***Choose between PHYS 2074 University Physics II or CHEM 1123/1121L University Chemistry II and lab**

Computer Science Eight-Semester Program:

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Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take the Advanced Composition exam or ENGL 2003 during the third year.

Fall Semester 1

4 MATH 2554 Calculus I

4 PHYS 2054 University Physics I

0 PHYS 2050L University Physics I Lab

3 CHEM 1103 University Chemistry I

3 ENGL 1013 English Composition

1 GNEG 1111 Introduction to Engineering I

15 semester hours

Spring Semester 1

4 MATH 2564 Calculus II

4 Freshman Science elective*

1 GNEG 1121 Introduction to Engineering II

3 ENGL 1023 Composition II

3 Human/Social Science elective

15 semester hours

Fall Semester 2

3 MATH 2103 Discrete Math

3 CENG 2113 Digital Techniques I

0 CENG 2110L Digital Techniques I Lab

3 CSCE 2003 Programming Foundations I

1 CSCE 2001 Programming Foundations I Lab

4 Basic Science elective with lab

3 History/Government elective

17 semester hours

Spring Semester 2

3 MATH 3083 Linear Algebra

3 CSCE 2013 Programming Foundations II

1 CSCE 2011L Programming Foundations II Lab

3 CENG 2213 Computer Organization

3 Humanities/social sciences elective

3 Humanities/social sciences elective

16 semester hours

Fall Semester 3

3 STAT 3013 Intro to Probability and Statistics

(INEG 3313 can be substituted)

3 CSCE 3143 Data Structures

3 MATH 3103 Combinatorics
3 Humanities/social sciences elective
3 Free elective
15 semester hours

Spring 3
3 CSCE 3613 Operating Systems
3 CSCE 3313 Algorithms
3 Free elective
3 Free elective
3 PHIL 3103 Ethics & the Profession
15 semester hours

Fall Semester 4
1 CSCE 4561 CS Capstone I
3 CSCE 4313 Programming Languages
3 CSCE 4523 Database Management
3 CSCE 4513 Software Engineering
3 CS elective
3 Humanities/social sciences elective
16 semester hours

Spring 4
3 CSCE 4963 CS Capstone II
3 CS elective
3 CSCE 4323 Formal Languages
3 Free elective
3 Humanities/social sciences elective (3000+)
15 semester hours
124 Total hours

*Choose between PHYS 2074 University Physics II or CHEM 1123/1121L University Chemistry II and lab

Degree Program Changes

Students must meet all requirements of their degree programs and are expected to keep informed concerning current regulations, policies, and program requirements in their fields of study. Changes made in curriculum at a level beyond that at which a student is enrolled might become graduation requirements for that student. Changes made in the curriculum at a level lower than the one at which a student is enrolled are not required of that student. Students should consult their departmental adviser for additional information.

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The department considers the following requirements necessary for graduation with honors:

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Requirements for the Bachelor of Arts degree with a Major in Computer Science (B.A.C.S):

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The mathematics requirements of the degree are MATH 2554, MATH 2103, and MATH 3103. The remaining courses should meet the requirements for a B.A. degree listed in the Fulbright College section.

Requirements for a Minor in Computer Science:

CSCE 2003/2001L, CSCE 2013/2011L, CSCE 3143, CSCE 3313 and either CENG 2213 or CSCE 4313.

SEE PAGE 326 FOR COMPUTER ENGINEERING (CENG) courses AND PAGE 337 FOR Computer Science (CSCE) COURSES

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
Initials _____ Date _____

Distribution

Notification to:

- (1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
(7) Treasurer (8) Undergraduate Program Committee Initials _____ Date _____

University Course and Programs Committee
15-Dec-06

TABLE ONE
Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO
Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE
College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

**ATTACHMENT 3E
ADD, CHANGE OR DELETE PROGRAM OR UNIT**

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair	Date Submitted	Faculty Senate Chair	Date
College Dean	Date	Provost	Date
University Course and Programs Committee	Date	Board of Trustees Approval/Notification Date	
Graduate Council Chair	Date	Arkansas Higher Education Coordinating Board Approval/Notification Date	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit _____

Level: Undergraduate Graduate Law Effective Catalog Year **Fall 2007**

Current Name **Computer Science**

College, School, Division **ENGR**

Department Code **CSCE**

Current Code (6 digit Alpha) **CSCEBS**

Proposed Code (6 digit Alpha) _____

Prior approval from the Office of the Registrar is required.

Interdisciplinary Program

CIP Code **11.0101**

Prior assignment from Office of Institutional Research is required.

Proposed Name _____

When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.

Program proposal uses courses offered by another academic college. The signature of the dean of that academic college is required here: _____

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____

No new students admitted to program after Term: ____ Year: _____

Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made: **The following changes are being implemented to accommodate the introduction of the freshman year changes implemented by the College of Engineering:**

1. The course numbers for CSCE 1113/1111L Programming Foundations I and lab change to CSCE 2003/2001L keeping the same course name.

2. The course numbers for CSCE 1123/1121L Programming Foundations II and lab change to CSCE 2013/2011L keeping the same course name.

3. The course number for CSCE 2143 Data Structures is changing to CSCE 3143 keeping the same course name.

4. The course number for CSCE 3513 Software Engineering is changing to CSCE 4513 keeping the same course name.

5. GNEG 1111 Introduction to Engineering I and 1121 Introduction to Engineering II are being added to the program requirements replacing a 3 hour free elective.

6. A science elective with lab (4 hours) replaces another 3 hour free elective and the Chemisry I lab that was removed from the freshman year.

7. The total number of hours required for the degree is changing from 125 to 124 due to the implementation of the Freshman Year.

Check if either of these boxes apply and provide the necessary signature:

Program change proposal adds courses offered by another academic college. The signature of the dean of that academic college is required here: _____

Program change proposal deletes courses offered by another academic college. The signature of the dean of that academic college is required here: _____

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Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

This change is being implemented to accommodate the changes in the freshman year proposed by the College of Engineering. The change will not affect any other degree program outside the college.

SECTION VII: Catalog Text and Format

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

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- Emeritus Professor Starling
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The faculty of the Computer Science and Computer Engineering department is engaged in multidisciplinary academic research, course offerings, and student projects in areas such as: high performance and scientific computing, grid computing, agents, middleware, networking, data security, nanotechnology, graph theory, and subsystem design.

The educational objectives of the department are to produce graduates who are recruited in a competitive market and make valuable contributions to a wide variety of industries, particularly in computer and information technology; succeed in graduate or professional studies; pursue life-long learning and continued professional development; and undertake leadership roles in their profession, in their communities, and in the global society.

Since almost all of today's complex systems encompass hardware and software elements, the computer engineering degree (CENG) has required sequences of courses in both hardware and software aspects of computer applications and design. Computer engineering graduates must acquire the skills required to design, build, and test complex digital systems. At the advanced level, students are exposed to hands-on experience with open-ended problems with opportunities for research and design.

A degree in computer science (CSCE) provides unique diversity in career choices. Computer science graduates can design, implement, or manage computer systems, as well as adapt computers to new applications. Computer science core courses include the fundamentals of programming concepts, data structures, operating systems, algorithms, formal languages, database management systems, and programming languages.

Humanities and social science electives are selected from courses approved by the College of Engineering. The Undergraduate Handbook has a list of approved basic science, mathematics, and technical electives. Any course not included in these lists requires faculty approval.

The following section contains the list of courses required for the Bachelor of Science in Computer Engineering (B.S.Cmp.E.) and the Bachelor of Science in Computer Science (B.S.C.S.) degrees and suggested sequences for each.
Computer Engineering Eight-Semester Program

The following section contains the list of courses required for the Bachelor of Science in Computer Engineering (B.S.Cmp.E.) degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.
Students must also take ENGL 2023 during the third year or gain exemption.

Fall Semester 1

4 MATH 2554 Calculus I

3 CHEM 1103 University Chemistry

1 CHEM 1101L University Chemistry Lab
3 CSCE 1113 Programming Foundations I
1 CSCE 1111L Programming Foundations I Lab
3 ENGL 1013 English Composition
15 semester hours

Spring Semester 1

4 MATH 2564 Calculus II
4 PHYS 2054 University Physics I
0 PHYS 2050L University Physics I Lab
3 CSCE 1123 Programming Foundations II
1 CSCE 1121L Programming Foundations II Lab
3 ENGL 1023 Composition II
3 MATH 2103 Discrete Math
18 semester hours

Fall Semester 2

4 MATH 2574 Calculus III
4 PHYS 2074 University Physics II
0 PHYS 2070L University Physics II Lab
3 CENG 2113 Digital Techniques I
0 CENG 2110L Digital Techniques I Lab
3 CSCE 2143 Data Structures
3 Humanities/social sciences elective
17 semester hours

Spring Semester 2

4 MATH 3404 Differential Equations
3 ELEG 3933 Circuits and Electronics
3 CENG 2213 Computer Organization
3 CENG 2123 Digital Techniques II
0 CENG 2120L Digital Techniques II Lab
3 Basic science elective
16 semester hours

Fall Semester 3

3 CENG 3953 Logic Synthesis-VHDL
3 CSCE 3313 Algorithms
3 Technical Elective
3 History/Government requirement
3 Humanities/social sciences elective
15 semester hours

Spring Semester 3

3 CSCE 3613 Operating Systems
3 CSCE 3513 Software Engineering
3 PHIL 3103 Ethics and the Professions
3 Technical Elective
3 STAT 3013 Introduction to Probability and Statistics (INEG 3313 may be substituted)
0-3 ENGL 2003 Advanced Composition or Exemption
15 semester hours

Fall Semester 4

1 CENG 4571 Senior Design Project I
3 Technical electives/hardware
3 Technical electives/software
3 Humanities/social sciences elective
3 Free Elective
3 Free Elective
16 semester hours

Spring Semester 4

3 CENG 4973 Senior Design Project II

3 CENG 4213 Intro. to Computer Architecture

3 Technical electives/hardware

3 Technical electives/software

3 Humanities/social sciences elective (3000+)

15 semester hours

127 Total hours

Computer Science Eight-Semester Program

The following section contains the list of courses required for the Bachelor of Science in Computer Science (B.S.C.S.) degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take ENGL 2023 during the third year or gain exemption.

Computer Science majors are required to take 12 hours of natural science consisting of either PHYS 2054/2050L, PHYS 2074/2070L and CHEM 1103/1101L; or CHEM 1103/1101L, CHEM 1123/1121L and PHYS 2054/2050L.

Fall Semester 1

4 MATH 2554 Calculus I

4 PHYS 2054 University Physics I

0 PHYS 2050L University Physics I Lab

3 CSCE 1113 Programming Foundations I

1 CSCE 1111L Programming Foundations I Lab

3 ENGL 1013 English Composition

15 semester hours

Spring Semester 1

4 MATH 2564 Calculus II

4 PHYS 2074 University Physics II

0 PHYS 2070L University Physics II Lab

3 CSCE 1123 Programming Foundations II

1 CSCE 1121L Programming Foundations II Lab

3 ENGL 1023 Composition II

3 MATH 2103 Discrete Mathematics

18 semester hours

Fall Semester 2

3 MATH 3083 Linear Algebra

3 CHEM 1103 University Chemistry I

1 CHEM 1101L University Chemistry I Lab

3 CENG 2113 Digital Techniques I

0 CENG 2110L Digital Techniques I Lab

3 CSCE 2143 Data Structures

3 Humanities/Social sciences elective

16 semester hours

Spring Semester 2

3 MATH 3103, Combinatorics

3 Free elective

3 CENG 2213, Computer Organization

3 Humanities/social sciences elective

3 History/government requirement

15 semester hours

Fall Semester 3

3 STAT 3013 Intro to Probability and Statistics

(INEG) 3313 can be substituted)

3 CS Elective

3 CSCE 3313 Algorithms

3 Humanities/social sciences elective

3 Humanities/social sciences elective

15 semester hours

Spring 3

3 CSCE 3613 Operating Systems

3 CSCE 3513 Software Engineering

3 Free elective

3 Free elective

3 PHIL 3103 Ethics & the Profession

0 ENGL 2003 Advanced Composition or Exemption

15 semester hours

Fall Semester 4

1 CSCE 4561 CS Capstone I

3 CSCE 4313 Programming Languages

3 CSCE 4523 Database Management

3 CS elective

3 Free elective

3 Humanities/social sciences elective

16 semester hours

Spring 4

3 CSCE 4963 CS Capstone II

3 CS elective

3 CSCE 4323 Formal Languages

3 Free elective

3 Humanities/social sciences elective (3000+)

15 semester hours

125 Total hours

Degree Program Changes

Students must meet all requirements of their degree programs and are expected to keep informed concerning current regulations, policies, and program requirements in their fields of study. Changes made in curriculum at a level beyond that at which a student is enrolled might become graduation requirements for that student. Changes made in the curriculum at a level lower than the one at which a student is enrolled are not required of that student. Students should consult their departmental adviser for additional information.

Requirements for Departmental Honors Computer Science and Computer Engineering

The Honors Program in Computer Science and Computer Engineering is designed for the superior student and is intended to help the student develop a more comprehensive view of Computer Science and Computer Engineering. The program provides a vehicle for the recognition of achievements of work beyond the usual course of study. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the candidate's whole program of honors studies.

The department considers the following requirements necessary for graduation with honors:

1. The candidate must satisfy the requirements set forth by the College of Engineering.

2. A student must obtain at least a 3.50 grade-point average in required Computer Engineering and/or Computer Science courses.

3. The student must complete 7 hours of Honors credit in the major, which includes 4 hours of Honors Thesis taken as two successive semesters of CSCE 4912H or CENG 4912H and 3 hours of non-thesis.

Requirements for the Bachelor of Arts degree with a Major in Computer Science (B.A.C.S):

At least 30 hours in computer science including CSCE 1113/1111L, CSCE 1123/1121L, CSCE 2143, CSCE 3313, and CSCE 4313 plus 13 hours of electives to be selected from a list of CSCE courses numbered 3000 or higher offered by the department.

The mathematics requirements of the degree are MATH 2043 or MATH 2554, MATH 2103, and MATH 3103. The remaining courses should meet the requirements for a B.A. degree listed in the Fulbright College section.

Requirements for a Minor in Computer Science:

CSCE 1113/1111L, CSCE 1123/1121L, CSCE 2143, CSCE 3313, and either CENG 2213 or CSCE 4313.

SEE PAGE 326 FOR COMPUTER ENGINEERING (CENG) courses AND PAGE 337 FOR Computer Science (CSCE) COURSES

NEW CATALOG:

COMPUTER SCIENCE AND COMPUTER ENGINEERING (CSCE)

Jerry Yeargan

Head of the Department

311 Engineering Hall

479-575-6197

- Distinguished Professor Yeargan
- Professors Crisp, Deaton, Skeith, Thompson (C.)
- Associate Professors Apon, Beavers, Li, Lusth, Panda, Parkerson, Thompson (D.)
- Assistant Professors Di, Shen
- Instructor Baker
- Emeritus Professor Starling
- Emeritus Instructor Johnson

The faculty of the Computer Science and Computer Engineering department is engaged in multidisciplinary academic research, course offerings, and student projects in areas such as: high performance and scientific computing, grid computing, agents, middleware, networking, data security, nanotechnology, graph theory, and subsystem design.

The educational objectives of the department are to produce graduates who are recruited in a competitive market and make valuable contributions to a wide variety of industries, particularly in computer and information technology; succeed in graduate or professional studies; pursue life-long learning and continued professional development; and undertake leadership roles in their profession, in their communities, and in the global society.

Since almost all of today's complex systems encompass hardware and software elements, the computer engineering degree (CENG) has required sequences of courses in both hardware and software aspects of computer applications and design. Computer engineering graduates must acquire the skills required to design, build, and test complex digital systems. At the advanced level, students are exposed to hands-on experience with open-ended problems with opportunities for research and design. The CE program culminates in a senior design project that is a two-semester consecutive course with the first semester forming teams and developing a project proposal. The second semester expands the project to encompass the development, implementation, and presentation of the final project.

A degree in computer science (CSCE) provides unique diversity in career choices. Computer science graduates can design, implement, or manage computer systems, as well as adapt computers to new applications. Computer science core courses include the fundamentals of programming concepts, data structures, operating systems, algorithms, formal languages, database management systems, and programming languages. The CS program culminates in a capstone project that is a two-semester consecutive course with the first semester forming teams and developing a project proposal. The second semester expands the project to encompass the development, implementation, and presentation of the final project.

Humanities and social science electives are selected from courses approved by the College of Engineering. The Undergraduate Handbook has a list of approved basic science, mathematics, and technical electives. Any course not included in these lists requires faculty approval.

The following sections contain the list of courses required for the Bachelor of Science in Computer Engineering (B.S.Cmp.E.) and the Bachelor of Science in Computer Science (B.S.C.S.) degrees and suggested sequences for each.

Computer Engineering Eight-Semester Program:

Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam. Students must also take the Advanced Composition exam or ENGL 2003 during the third year.

Fall Semester 1

4 MATH 2554 Calculus I

3 CHEM 1103 University Chemistry

4 PHYS 2054 University Physics I

0 PHYS 2050L, University Physics I Lab

3 ENGL 1013 English Composition

1 GNEG 1111 Introduction to Engineering I

15 semester hours

Spring Semester 1

4 MATH 2564 Calculus II

4 Freshman Science elective*

3 Humanities/social science elective

3 ENGL 1023 Composition II

1 GNEG 1121 Introduction to Engineering II

15 semester hours

Fall Semester 2

4 MATH 2574 Calculus III

4 Basic Science elective

3 CSCE 2003 Programming Foundations I

1 CSCE 2001L Programming Foundations I Lab

3 CENG 2113 Digital Techniques I

0 CENG 2110L Digital Techniques I Lab

3 Humanities/social sciences elective

18 semester hours

Spring Semester 2

4 MATH 3404 Differential Equations

3 MATH 2103 Discrete Math

3 CSCE 2013 Programming Foundations II

1 CSCE 2011L Programming Foundations II Lab

3 CENG 2213 Computer Organization

3 CENG 2123 Digital Techniques II

0 CENG 2120L Digital Techniques II Lab

17 semester hours

Fall Semester 3

3 CENG 3953 Logic Synthesis-VHDL

3 CSCE 3143 Data Structures

3 Technical Elective

3 History/Government requirement

3 PHIL 3103 Ethics & the Professions

15 semester hours

Spring Semester 3

3 CSCE 3613 Operating Systems

3 CSCE 3313 Algorithms

3 ELEG 3933 Electronics & Circuits

3 Technical Elective

3 STAT 3013 Introduction to Probability and Statistics (INEG 3313 may be substituted)

15 semester hours

Fall Semester 4

1 CENG 4571 Senior Design Project I

3 Technical electives/hardware

3 Technical electives/software

3 Humanities/social sciences elective

3 CSCE 4513 Software Engineering

3 Free Elective

16 semester hours

Spring Semester 4

3 CENG 4973 Senior Design Project II

3 CENG 4213 Intro. to Computer Architecture

3 Technical electives/hardware

3 Technical electives/software

3 Humanities/social sciences elective (3000+)

15 semester hours

126 Total hours

***Choose between PHYS 2074 University Physics II or CHEM 1123/1121L University Chemistry II and lab**

Computer Science Eight-Semester Program:

Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see page 42 in the Academic Regulations chapter for university requirements of the program.

Students who have earned 45 hours must take the Rising Junior Exam.

Students must also take the Advanced Composition exam or ENGL 2003 during the third year.

Fall Semester 1

4 MATH 2554 Calculus I

4 PHYS 2054 University Physics I

0 PHYS 2050L University Physics I Lab

3 CHEM 1103 University Chemistry I

3 ENGL 1013 English Composition

1 GNEG 1111 Introduction to Engineering I

15 semester hours

Spring Semester 1

4 MATH 2564 Calculus II

4 Freshman Science elective*

1 GNEG 1121 Introduction to Engineering II

3 ENGL 1023 Composition II

3 Human/Social Science elective

15 semester hours

Fall Semester 2

3 MATH 2103 Discrete Math

3 CENG 2113 Digital Techniques I

0 CENG 2110L Digital Techniques I Lab

3 CSCE 2003 Programming Foundations I

1 CSCE 2001 Programming Foundations I Lab

4 Basic Science elective with lab

3 History/Government elective

17 semester hours

Spring Semester 2

3 MATH 3083 Linear Algebra

3 CSCE 2013 Programming Foundations II

1 CSCE 2011L Programming Foundations II Lab

3 CENG 2213 Computer Organization

3 Humanities/social sciences elective

3 Humanities/social sciences elective

16 semester hours

Fall Semester 3

3 STAT 3013 Intro to Probability and Statistics

(INEG 3313 can be substituted)

3 CSCE 3143 Data Structures
3 MATH 3103 Combinatorics
3 Humanities/social sciences elective
3 Free elective
15 semester hours

Spring 3

3 CSCE 3613 Operating Systems
3 CSCE 3313 Algorithms
3 Free elective
3 Free elective
3 PHIL 3103 Ethics & the Profession
15 semester hours

Fall Semester 4

1 CSCE 4561 CS Capstone I
3 CSCE 4313 Programming Languages
3 CSCE 4523 Database Management
3 CSCE 4513 Software Engineering
3 CS elective
3 Humanities/social sciences elective
16 semester hours

Spring 4

3 CSCE 4963 CS Capstone II
3 CS elective
3 CSCE 4323 Formal Languages
3 Free elective
3 Humanities/social sciences elective (3000+)
15 semester hours
124 Total hours

*Choose between PHYS 2074 University Physics II or CHEM 1123/1121L University Chemistry II and lab

Degree Program Changes

Students must meet all requirements of their degree programs and are expected to keep informed concerning current regulations, policies, and program requirements in their fields of study. Changes made in curriculum at a level beyond that at which a student is enrolled might become graduation requirements for that student. Changes made in the curriculum at a level lower than the one at which a student is enrolled are not required of that student. Students should consult their departmental adviser for additional information.

Requirements for Departmental Honors Computer Science and Computer Engineering

The Honors Program in Computer Science and Computer Engineering is designed for the superior student and is intended to help the student develop a more comprehensive view of Computer Science and Computer Engineering. The program provides a vehicle for the recognition of achievements of work beyond the usual course of study. Higher degree distinctions are recommended only in truly exceptional cases and are based upon the candidate's whole program of honors studies.

The department considers the following requirements necessary for graduation with honors:

1. The candidate must satisfy the requirements set forth by the College of Engineering.
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3. The student must complete 7 hours of Honors credit in the major, which includes 4 hours of Honors Thesis taken as two successive semesters of CSCE 4912H or CENG 4912H and 3 hours of non-thesis.

Requirements for the Bachelor of Arts degree with a Major in Computer Science (B.A.C.S):

At least 30 hours in computer science including CSCE 2003/2001L, CSCE 2013/2011L, CSCE 3143, CSCE 3313, and CSCE 4313 plus 13 hours of electives to be selected from a list of CSCE courses numbered 3000 or higher offered by the department.

The mathematics requirements of the degree are MATH 2554, MATH 2103, and MATH 3103. The remaining courses should meet the requirements for a B.A. degree listed in the Fulbright College section.

Requirements for a Minor in Computer Science:

CSCE 2003/2001L, CSCE 2013/2011L, CSCE 3143, CSCE 3313 and either CENG 2213 or CSCE 4313.

SEE PAGE 326 FOR COMPUTER ENGINEERING (CENG) courses AND PAGE 337 FOR Computer Science (CSCE) COURSES

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
Initials _____ Date _____

Distribution

Notification to:

- (1) College (2) Department (3) Admissions (4) Institutional Research (5) Continuing Education (6) Graduate School
(7) Treasurer (8) Undergraduate Program Committee Initials _____ Date _____

University Course and Programs Committee
15-Dec-06

TABLE ONE
Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO
Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE
College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

**ATTACHMENT 3F
ADD, CHANGE OR DELETE PROGRAM OR UNIT**

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair _____	Date Submitted _____	Faculty Senate Chair _____	Date _____
College Dean _____	Date _____	Provost _____	Date _____
University Course and Programs Committee _____	Date _____	Board of Trustees Approval/Notification Date _____	
Graduate Council Chair _____	Date _____	Arkansas Higher Education Coordinating Board Approval/Notification Date _____	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit _____

Level: Undergraduate Graduate Law Effective Catalog Year 2007

Current Name Bachelor of Science in Electrical Engineering

College, School, Division ENGR Department Code ELEG

Current Code (6 digit Alpha) ELEGBS Proposed Code (6 digit Alpha) _____
Prior approval from the Office of the Registrar is required.

Interdisciplinary Program CIP Code 14.1001
Prior assignment from Office of Institutional Research is required.

Proposed Name _____
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.

Program proposal uses courses offered by another academic college. The signature of the dean of that academic college is required here: _____

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____

No new students admitted to program after Term: ____ Year: _____

Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made: The proposed changes in the ELEGBS are required to align the program with the common freshman year adopted by the College of Engineering. This common freshman year will be implemented for the first time in the Fall 2007. The proposed changes are the following:
(1) Adopt the common freshman year for the first two semesters by adding GNEG 1111 and GNEG 1121.
(2) Move ELEG 1903 and ELEG 1913 to the sophomore year (these courses are also renamed ELEG 2903 and ELEG 2913).

(3) Move CSCE 1113 and CSCE 1123 to the second semester of the sophomore year and the first semester of the junior year. These courses will be CSCE 2003 and CSCE 2013; new courses numbers assigned by the CSCE Department.

(4) Renumber ELEG 3143 to ELEG 4143 since it is in the senior year of the program.

As a result of the common freshman year, the BSELEG program will have 131 hours (2 more than the current BSELEG program).

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college. The signature of the dean of that academic college is required here: _____
- Program change proposal deletes courses offered by another academic college. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

The College of Engineering has adopted a common freshman year to be implemented for the first time in the Fall 2007. As a result of these changes in the freshman year, the department is changing its current eight-semester degree completion plan. These changes will not affect any other degree program.

SECTION VII: Catalog Text and Format

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

CURRENT CATALOG TEXT: **ELECTRICAL ENGINEERING CURRICULUM** **2006-2007**

Freshman Year

3	GNEG 1103	Intro to Engineering	3	ENGL 1023	Technical Composition II
3	ENGL 1013	Composition I	4	MATH 2564	Calculus II
4	MATH 2554	Calculus I	3	ELEG 1913	Digital Design II
3	ELEG 1903	Digital Design I	0	ELEG 1910L	Digital Design II Lab
0	ELEG 1900L	Digital Design I Lab	4	PHYS 2054	University Physics I
3	History/Government Requirement		0	PHYS 2050L	University Physics I Lab
			3	Humanities/Social Science elective	
<hr/>			<hr/>		
16	semester hours		17	semester hours	

Sophomore Year (1)

3	CSCE 1113	Programming Foundations I	3	CENG 1123	Programming Foundations II
1	CSCE 1111L	Prog. Found. I Lab	1	CENG 1121L	Prog. Found. II Lab
3	ELEG 2103	Electric Circuits I	4	Math/Science Elective	
1	ELEG 2101L	Electric Circuits I Lab	3	ELEG 2113	Electric Circuits II
4	MATH 2574	Calculus III	1	ELEG 2111L	Electric Circuits II Lab
4	PHYS 2074	University Physics II	4	MATH 3404	Differential Equations
0	PHYS 2070L	University Physics II Lab			
<hr/>			<hr/>		
16	semester hours		16	semester hours	

Junior Year (2)

3	ELEG 3123	Analog Signal Processing	3	ELEG 3133	Digital Signal Processing
1	ELEG 3121L	Analog Signal Processing Lab	1	ELEG 3131L	Digital Signal Processing Lab
3	ELEG 3213	Electronics I	3	ELEG 3223	Electronics II
1	ELEG 3211L	Electronics I Lab	1	ELEG 3221L	Electronics II Lab
3	ELEG 3923	Microprocessor System Design	3	ELEG 3303	Energy Conversion
0	ELEG 3920L	Microprocessor Sys Design Lab	1	ELEG 3301L	Energy Conversion Lab
3	Humanities/Social Science elective		3	ELEG 3703	Electromagnetics
3	Math/Science elective				
<hr/>			<hr/>		
17	semester hours		15	semester hours	

Senior Year

1	ELEG 4061	EE Design I	1	ELEG 4071	EE Design II
3	ELEG 3143	Stochastic Signal Processing	6	Electrical Eng Technical Elective	
3	Electrical Engineering Technical Elective		3	Technical Elective	
3	Engineering Science Elective		3	Upper level humanities/social science elective	
3	Technical Elective		3	Humanities/social science Elective	
3	Upper-level Humanities-Social Science Elective				
<hr/>			<hr/>		
16	semester hours		16	semester hours	

TOTAL: 129 semester hours

- (1) Students who have earned 45 hours must take the Rising Junior Exam
- (2) Students are required to take ENGL 2003 or gain exemption

PROPOSED CATALOG TEXT:

ELECTRICAL ENGINEERING CURRICULUM
2007-2008

Freshman Year

1	GNEG 1111	Intro to Engineering I	1	GNEG 1121	Introduction to Engineering II
4	MATH 2554	Calculus I	4	MATH 2564	Calculus II
3	CHEM 1103	University Chemistry I	4	Freshman Science Elective (1)	
4	PHYS 2054	University Physics I	3	Humanities/Social Science Elective	
3	ENGL 1013	Composition I	3	ENGL 1023	Technical Composition II
15	semester hours		15	semester hours	

Sophomore Year (2)

3	ELEG 2903	Digital Design I	3	CSCE 2003	Programming Foundations I
0	ELEG 2900L	Digital Design I Lab	1	CSCE 2001L	Programming Foundations I Lab
3	ELEG 2103	Electric Circuits I	3	ELEG 2113	Electric Circuits II
1	ELEG 2101L	Electric Circuits I Lab	1	ELEG 2111L	Electric Circuits II Lab
4	MATH 2574	Calculus III	3	ELEG 2913	Digital Design II
4	Sophomore Science Elective (3)		0	ELEG 2910L	Digital Design II Lab
			4	MATH 3404	Differential Equations
			3	History Government Requirement	
15	semester hours		18	semester hours	

Junior Year (4)

3	ELEG 3123	Analog Signal Processing	3	ELEG 3133	Digital Signal Processing
1	ELEG 3121L	Analog Signal Processing Lab	1	ELEG 3131L	Digital Signal Processing Lab
3	ELEG 3213	Electronics I	3	ELEG 3223	Electronics II
1	ELEG 3211L	Electronics I Lab	1	ELEG 3221L	Electronics II Lab
3	ELEG 3923	Microprocessor System Design	3	ELEG 3303	Energy Conversion
0	ELEG 3920L	Microprocessor Sys Design Lab	1	ELEG 3301L	Energy Conversion Lab
3	CSCE 2013	Programming Foundations II	3	ELEG 3703	Electromagnetics
1	CSCE 2011L	Prog. Found. II Lab	3	Humanities/Social Science elective	
3	Math/Science Elective		0	ENGL 2003	Advanced Composition
18	semester hours		18	semester hours	

Senior Year

1	ELEG 4061	EE Design I	1	ELEG 4071	EE Design II
3	ELEG 4143	Stochastic Signal Processing	6	Electrical Eng Technical Elective	
3	Electrical Engineering Technical Elective		3	Technical Elective	
3	Engineering Science Elective		3	Upper level humanities/social science elective	
3	Technical Elective		3	Humanities/Social Science Elective	
3	Upper-level Humanities-Social Science Elective				
16	semester hours		16	semester hours	

TOTAL: 131 semester hours

- (1) Freshman Science Elective - CHEM 1123/1121L – University Chemistry II or PHYS 2074 – University Physics II
- (2) Students who have earned 45 hours must take the Rising Junior Exam
- (3) PHYS 2074 if student took CHEM 1123/1121L in Freshman Year. Otherwise, CHEM1123/1121L or approved 4 hours in Science
- (4) Students are required to take ENGL 2003 or gain exemption

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____
 DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____

REQ. DEF.

Initials _____

Date _____

Distribution

Notification to:

(1) College
(7) Treasurer

(2) Department
(8) Undergraduate Program Committee

(3) Admissions

(4) Institutional Research

(5) Continuing Education
Initials _____

(6) Graduate School
Date _____

University Course and Programs Committee
15-Dec-06

TABLE ONE
Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO
Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE
College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

ATTACHMENT 3G

ADD, CHANGE OR DELETE PROGRAM OR UNIT

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair _____	Date Submitted _____	Faculty Senate Chair _____	Date _____
College Dean _____	Date _____	Provost _____	Date _____
Undergraduate Program Committee Chair _____	Date _____	Board of Trustees Approval Date _____	
Graduate Council Chair _____	Date _____	Arkansas Higher Education Coordinating Board Approval Date _____	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit _____
Level: Undergraduate Graduate Law Effective Catalog Year **2007**

Current Name **Bachelor of Science in Industrial Engineering**

College, School, Division **ENGR** Department Code **INEG**

Current Code (6 digit Alpha) **INEGBS** Proposed Code (6 digit Alpha) _____
Prior approval from the Office of the Registrar is required.

Interdisciplinary Program CIP Code **14.3501**
Prior assignment from Office of Institutional Research is required.

Proposed Name _____
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____
No new students admitted to program after Term: ____ Year: _____
Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made: Adjust the course requirements for the BSIE degree to accommodate the introduction of the Freshman Engineering Program in the College of Engineering (slated to begin in Fall 2007). This requires

a) adding GNEG 1111 and GNEG 1121 to the first two semesters, respectively, as they are new additions to the Freshmen Engineering Program

b) renumbering of INEG 1403 to 2403 in order to denote its new intended semester that students should take the course (4th semester--course is moving to 4th semester from its current 2nd semester)

c) renumbering of INEG 1103 to 2101, as much of the current course content in 1103 will be covered by the two GNEG Intro to Engineering courses in the Freshman Engineering Program. As there is still some INEG-specific content we wish to convey to our students, the course hours are being reduced from 3 to 1 and the course is to be taken in a student's 3rd semester, thereby facilitating the need to renumber the course to 2101 (course is moving to 3rd semester from its current 1st semester)

d) Deleting the requirement of CHEM 1101L from the current degree program in order to align with the required first year courses in the Freshman Engineering Program

e) Adding CSCE 1111L and CSCE 1121L to the required course list, as the CSCE department requires all students who take their programming courses to register for these labs. As our students are required to take the labs, it is appropriate to include these two hours in our 8 semester degree plan.

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

The introduction of the Freshman Engineering Program in the College of Engineering in Fall 2007 requires INEG to adjust our current 8 semester degree completion plan. The Freshmen Engineering Program has a common first-year experience for all students with a fixed set of required courses to be taken by each new engineering student in their first two semesters. This program change represents the necessary changes to the current BSIE degree requirements in order to accommodate the Freshman Engineering Program. These changes will not affect any other degree program in the College of Engineering.

SECTION VII: Catalog Text and Format

Insert the current catalog text and the proposed catalog text. Be sure that the proposed text includes all the elements listed below in order. Do not include university requirements or college requirements. Do not substitute a sample schedule for an explicit statement of requirements. Use standard terms and vocabulary (see Academic Policy 1621.10).

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

CURRENT CATALOG TEXT:

The total graduation requirement in industrial engineering is 128 hours. For further information please visit us on the World Wide Web at <http://www.ineg.uark.edu/>.

INDUSTRIAL ENGINEERING PROGRAM

Freshman Year - First Semester

3 INEG 1103 Principles of Indust Engr

4 MATH 2554 Calculus I

3 ENGL 1013 Composition I

3 CHEM 1103 University Chemistry I
1 CHEM 1101L Univ Chemistry I Lab
14 semester hours

Second Semester

4 MATH 2564 Calculus II
3 INEG 1403 Industrial Cost Analysis
3 ENGL 1023 Technical Composition II
3 Science elective
13 semester hours

Sophomore Year - First Semester

4 MATH 2574 Calculus III
3 Computer Elective I
3 INEG 3313 Engineering Statistics
4 PHYS 2054 University Physics I
3 ECON 2143 Basic Economics
17 semester hours

Second Semester

4 MATH 3404 Differential Equations
3 Computer Elective II
4 PHYS 2074 University Physics II
3 INEG 3413 Eng Economic Analysis
3 INEG 3333 Industrial Statistics
17 semester hours

Junior Year - First Semester

3 INEG 3713 Methods and Standards
3 INEG 4623 Intro. to Simulation
3 Engineering Science Elective I
3 ELEG 3903 Electric Circuits and Machines
3 INEG 3513 Manuf Design and Processes
3 (History or government requirement:
HIST 2003, HIST 2013, or PLSC 2003)
18 semester hours

Second Semester

3 INEG 3613 Intro. to Operations Research
3 Engineering Science Elective II
3 INEG 4523 Automated Production
3 Engineering Science Elective III
3 Humanities/social science electives
15 semester hours

Senior Year - First Semester

3 INEG 4433 Sys Engineering and Management
(An upper-level ROTC course may be substituted.)
3 INEG 4543 Materials Handling
3 Technical elective
3 INEG 4723 Ergonomics
6 Humanities/social science electives
18 semester hours

Second Semester

3 INEG 4553 Production Planning/ Control
4 INEG 4904 I.E. Design
3 Humanities/social science elective
6 Technical electives
16 semester hours

128 Total hours required

Technical Electives

The purpose of technical electives is to provide students with the opportunity to expand their education along lines of particular interest to them. The approved list of technical electives is available in the industrial engineering department. At least three hours must be selected from INEG courses.

Humanities/Social Science Electives

Although any elective included on the humanities/social science list may be selected, PSYC 2003 General Psychology is recommended for industrial engineers.

Science Elective

The approved list of science electives is available in the industrial engineering departmental office.

Computer Elective

The approved list of computer electives is available in the industrial engineering departmental office.

Engineering Science Electives

The approved list of engineering science electives is available in the industrial engineering departmental office.

PROPOSED CATALOG TEXT:

The total graduation requirement in industrial engineering is 129 hours. For further information please visit us on the World Wide Web at <http://www.ineg.uark.edu/>.

INDUSTRIAL ENGINEERING PROGRAM

Freshman Year - First Semester

4 MATH 2554 Calculus I

3 CHEM 1103 University Chemistry I

4 PHYS 2054 University Physics I

1 GNEG 1111 Intro to Engineering I

3 ENGL 1013 Composition I

15 semester hours

Second Semester

4 MATH 2564 Calculus II

4 Freshman Science elective1

3 Humanities/social science elective

1 GNEG 1121 Intro to Engineering II

3 ENGL 1023 Technical Composition II

15 semester hours

Sophomore Year - First Semester

4 MATH 2574 Calculus III

3 INEG 3413 Eng Economic Analysis

1 INEG 2101 Principles of Indust Engr

3 INEG 3313 Engineering Statistics

4 CSCE 1113/1111L Prog Foundation I

15 semester hours

Second Semester

4 MATH 3404 Differential Equations

3 INEG 2403 Industrial Cost Analysis

3 Science Requirement2

3 INEG 3333 Industrial Statistics

4 CSCE 1123/1121L Prog Foundation II

17 semester hours

Junior Year - First Semester

3 INEG 3713 Methods and Standards

3 INEG 4623 Intro. to Simulation

3 Engineering Science Elective I3

3 ELEG 3903 Electric Circuits and Machines

3 History or Government Requirement6
3 INEG 3513 Manuf Design and Processes
18 semester hours

Second Semester

3 INEG 3613 Intro to Operations Research
3 INEG 3523 Manufacturing Systems
3 Engineering Science Elective II4
3 Engineering Science Elective III5
3 ECON 2143 Basic Economics
15 semester hours

Senior Year - First Semester

3 INEG 44XX Management Requirement7
3 INEG 4543 Materials Handling
3 INEG 4723 Ergonomics
3 Technical elective8
6 Humanities/social science electives
18 semester hours

Second Semester

4 INEG 4904 I.E. Design
3 INEG 4553 Prodn Planning/Control
6 Technical electives
3 Humanities/social science elective
16 semester hours

129 Total hours required

Notes:

- 1) CHEM 1123/1121L University Chemistry II or PHYS 2074 University Physics II
- 2) If the student selected CHEM 1123/1121L as their freshman science elective then this must be PHYS 2074 University Physics II, else please see the approved list of IE science electives.
- 3) Engineering Science 1 (MEEG 2003 Statics or MEEG 2023 Intro. to Mech.)
- 4) Engineering Science 2 (If ES 1 = MEEG 2003, then ES 2 = MEEG 3013), (If ES 1 = MEEG 2023, then ES 2 = MEEG 2303)
- 5) Engineering Science 3 (CHEG 2133 Mom. Trans. or MEEG 2403 Thermo, or CHEG 2313 Thermo)
- 6) History or government requirement HIST 2003, 2013 or PLSC 2003 should be taken at this time
- 7) Either INEG 4433 Systems Engineering & Management or INEG 4443 Project Management
- 8) Please consult the approved technical elective list. At least 3 hours must be selected from INEG courses

Technical Electives

The purpose of technical electives is to provide students with the opportunity to expand their education along lines of particular interest to them. The approved list of technical electives is available in the industrial engineering department. At least three hours must be selected from INEG courses.

Humanities/Social Science Electives

Although any elective included on the humanities/social science list may be selected, PSYC 2003 General Psychology is recommended for industrial engineers.

Science Elective

The approved list of science electives is available in the industrial engineering departmental office.

Computer Elective

The approved list of computer electives is available in the industrial engineering departmental office.

Engineering Science Electives

The approved list of engineering science electives is available in the industrial engineering departmental office..

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____
DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____

REQ. DEF.

Initials _____

Date _____

Distribution

Notification to:

(1) College
(7) Treasurer

(2) Department
(8) Undergraduate Program Committee

(3) Admissions

(4) Institutional Research

(5) Continuing Education
Initials _____

Date _____

(6) Graduate School

University Course and Programs Committee
15-Dec-06

TABLE ONE
Bumpers College of Agricultural, Food and Life Sciences

School of Human Environmental Sciences

FHNHBS - Food, Human Nutrition, and Hospitality - Attachment 1A

Proposal adds course HESC 2643 as a requirement and reduces the hours of general electives as specified in Section V of the attachment.

TABLE TWO
Walton College of Business

Department of Economics

BECOBS - Economics - Attachment 2A

Proposal changes the AP Score requirements for receiving course credit for ECON 2013 and ECON 2023 as specified in Section V of the attachment.

TABLE THREE
College of Engineering

General Engineering

GNEG - General Engineering - Attachment 3A

Proposal creates a common first-year experience for students pursuing a BS degree in several majors as specified in Section V of the attachment.

Department of Biological and Agricultural Engineering

BENGBS - Biological Engineering - Attachment 3B

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Civil Engineering

CVEGBS - Civil Engineering - Attachment 3C

Proposal allows the curriculum to conform to the new first-year experience program as specified in the attachment.

PAGE TWO

TABLE THREE (CONTINUED)

College of Engineering

Department of Computer Science and Computer Engineering

CENGBS - Computer Engineering - Attachment 3D

Proposal requests seven curriculum changes as specified in Section V of the attachment.

CSCEBS - Computer Science - Attachment 3E

Proposal requests seven curriculum changes as specified in Section V of the attachment.

Department of Electrical Engineering

ELEGBS - Electrical Engineering - Attachment 3F

Proposal requests four curriculum changes as specified in Section V of the attachment.

Department of Industrial Engineering

INEGBS - Industrial Engineering - Attachment 3G

Proposal requests five curriculum changes as specified in Section V of the attachment.

Department of Mechanical Engineering

MEEGBS - Mechanical Engineering - Attachment 3H

Proposal requests eleven curriculum changes as specified in Section V of the attachment.

**ATTACHMENT 3H
ADD, CHANGE OR DELETE PROGRAM OR UNIT**

Complete this form consistent with the instructions in Academic Policy 1622.20. Use the form to add, change, or delete a program or unit. Proposed additions and changes must be consistent with Academic Policies 1100.40 and 1621.10 and any other policies which apply.

SECTION I: Approvals

Department / Program Chair	Date Submitted	Faculty Senate Chair	Date
College Dean	Date	Provost	Date
University Course and Programs Committee	Date	Board of Trustees Approval/Notification Date	
Graduate Council Chair	Date	Arkansas Higher Education Coordinating Board Approval/Notification Date	

SECTION II: Profile Data - Required Information and Name Change Information

Academic Unit: Major/Field of Study Minor Other Unit _____

Level: X Undergraduate Graduate Law Effective Catalog Year Fall 2007

Current Name **Bachelor of Science in Mechanical Engineering**

College, School, Division ENGR Department Code MEEG

Current Code (6 digit Alpha) MEEGBS Proposed Code (6 digit Alpha) _____
Prior approval from the Office of the Registrar is required.

Interdisciplinary Program CIP Code 14.1901
Prior assignment from Office of Institutional Research is required.

Proposed Name _____
When a program name is changed, enrollment of current students reflects the new name.

SECTION III: Add a New Program/Unit

- For new program proposals, complete Sections II and VII and use as a cover sheet for a full program proposal as described in 'Criteria and Procedures for Preparing Proposals for New Programs in Arkansas.' ADHE <<http://www.adhe.arknet.edu.aadept.html>>.
- Program proposal uses courses offered by another academic college. The signature of the dean of that academic college is required here: _____

SECTION IV: Eliminate an Existing Program/Unit

Code/Name _____ Effective Catalog Year _____

No new students admitted to program after Term: ____ Year: _____

Allow students in program to complete under this program until Term: ____ Year: _____

SECTION V: Proposed Changes to an Existing Program

Insert here a statement of the exact changes to be made: **Adjust the course requirements for the BSME degree to accommodate the introduction of the Freshman Engineering Program in the College of Engineering (slated to begin in Fall 2007). This requires a) eliminating MEEG 1103 in the first semester freshman year; b) eliminating CHEM 1101L in the first semester freshman year; c) moving GNEG 1122 from the first semester freshman year to the first semester sophomore year; d) adding GNEG 1111 to the first semester freshman year; e) adding GNEG 1121 to the second semester freshman year; f) moving PHYS 2054 from the second semester freshman year to the first semester freshman year; g) moving PHYS 2074 from**

the first semester sophomore year to the second semester freshman year; h) dropping the requirement of completing CHEM 1123 and 1121L in the second semester freshman year; i) adding a four hour lab based science elective to the first semester sophomore year; j) moving a humanistic/social course from the first semester junior year to the second semester freshman year k) adding a two hour MEEG elective in the junior year first semester.

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college. The signature of the dean of that academic college is required here: _____
- Program change proposal deletes courses offered by another academic college. The signature of the dean of that academic college is required here: _____

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)

SECTION VI: Justification

Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)

The introduction of the Freshman Engineering Program in the College of Engineering in Fall 2007 requires MEEG to adjust our current 8 semester degree completion plan. The Freshmen Engineering Program has a common first-year experience for all students with a fixed set of required courses to be taken by each new engineering student in their first two semesters. This program change represents the necessary changes to the current BSME degree requirements in order to accommodate the Freshman Engineering Program.

SECTION VII: Catalog Text and Format

Insert the current catalog text, with proposed changes identified in Section V inserted and tracked in Microsoft Word. Be sure that all proposed changes are inserted and tracked. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate.

Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.

For minors, state requirements in terms of hours, required courses, electives, etc.

For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.

For Law School program/units, prepare text consistent with current catalog style.

For centers, prepare text consistent with current catalog style.

CURRENT CATALOG TEXT:

The total graduation requirement in mechanical engineering is 124 hours. For further information please visit us on the World Wide Web at <http://www.meeg.uark.edu/>.

MECHANICAL ENGINEERING PROGRAM

Freshman Year - First Semester

3 CHEM 1103 University Chemistry I

1 CHEM 1101L University Chemistry I Lab

4 MATH 2554 Calculus I

3 ENGL 1013 Compisition I

2 GNEG 1122 Introduction CAD

3 MEEG 1103 Intro. to Mechanical Engineering

16 SEMESTER HOURS

Freshman Year - Second Semester

3 CHEM 1123 Univ Chemistry II

1 CHEM 1121L Univ Chemistry II Lab

4 MATH 2564 Calculus II

3 ENGL1023 Tech Composition

4 PHYS 2054 Univ Phycis I & Lab

15 Semester Hours

Sophomore Year - First Semester

3 MEEG 2303 Intro to Materials

4 MATH 2574 Calculus III

3 MEEG 2003 Statics

4 PHYS 2074 Univ Physics II & Lab

14 Semester Hours

Sophomore Year - Second Semester

3 MEEG 2403 Thermodynamics

4 MATH 3404 Differential Equations

3 MEEG 2703Comp. Methods

3 MEEG 2013 Dynamics

3 ELEG 3903 Circuits & Machines

16 Semester Hours

Junior Year - First Semester

3 MEEG 3503 Mechanics of Fluids

3 MEEG 3113 Machine Dynamics & Control

3 MEEG 3013 Mechanics of Materials

2 MEEG 3202 Mechanical Engineering Laboratory I

3 ELEG 3913 Engineering Electronics

3 Humanities/Social Science Elective (History or Gov. Requirement)

17 Semester Hours

Junior Year - Second Semester

3 MEEG 4413 Heat Transfer

3 MEEG 4103 Machine Element Design

2 MEEG 3212 Mechanical Engineering Laboratory II

3 Technical/Science Elective

3 ECON 2143 or ECON 2013

3 Humanities/Social Science Elective (Lower Level)

17 Semester Hours

Senior Year - First Semester

3 MEEG 4483 Thermal Systems Analysis and Design
0 ENGL 2003 Advanced Composition or Exemption
2 MEEG 4132 Professional Engineering Practices
1 MEEG 4131 Creative Project Design I
2 MEEG 4202 Mechanical Engineering Laboratory III
3 Technical/Science Elective
3 Humanities/Social Science Elective (3000-4000) Level

14 Semester Hours

Senior Year - Second Semester

3 Technical/Science Elective
3 Technical/Science Elective
3 MEEG 4133 Creative Project Design II
3 Humanities/Social Science Elective Lower Level
3 Humanities/Social Science Elective (3000-4000) Level

15 Semester Hours

124 Total hours required

PROPOSED CATALOG TEXT:

The total graduation requirement in mechanical engineering is 124 hours. For further information please visit us on the World Wide Web at <http://www.meeg.uark.edu/>.

MECHANICAL ENGINEERING PROGRAM

Freshman Year - First Semester

4 MATH 2554 Calculus I
3 CHEM 1103 University Chemistry I
4 PHYS 2054 University Physics I
1 GNEG 1111 Intro to Engineering I
3 ENGL 1013 Composition I
15 semester hours

Freshman Year - Second Semester

4 MATH 2564 Calculus II
4 Freshman Science elective Note 1
3 Humanities/social science elective
1 GNEG 1121 Intro to Engineering II
3 ENGL 1023 Technical Composition II
15 semester hours

Sophomore Year - First Semester

3 MEEG 2303 Intro to Materials
4 MATH 2574 Calculus III
3 MEEG 2003 Statics
4 Science Elective Notes 1,2
2 GNEG 1122 CAD
16 Semester Hours

Sophomore Year - Second Semester

3 MEEG 2403 Thermodynamics
4 MATH 3404 Differential Equations
3 MEEG 2703 Comp. Methods
3 MEEG 2013 Dynamics

3 ELEG 3903 Circuits & Machines
16 Semester Hours

Junior Year - First Semester

3 MEEG 3503 Mechanics of Fluids
3 MEEG 3113 Machine Dynamics & Control
3 MEEG 3013 Mechanics of Materials
2 MEEG 3202 Mechanical Engineering Laboratory I
3 ELEG 3913 Engineering Electronics
2 MEEG Elective Note 3
16 Semester Hours

Junior Year - Second Semester

3 MEEG 4413 Heat Transfer
3 MEEG 4103 Machine Element Design
2 MEEG 3212 Mechanical Engineering Laboratory II
3 Technical/Science Elective Note 4
3 ECON 2143 or ECON 2013
3 Humanities/Social Science Elective (Lower Level) Note 5
17 Semester Hours

Senior Year - First Semester

3 MEEG 4483 Thermal Systems Analysis and Design
0 ENGL 2003 Advanced Composition or Exemption
2 MEEG 4132 Professional Engineering Practices
1 MEEG 4131 Creative Project Design I
2 MEEG 4202 Mechanical Engineering Laboratory III
3 Technical/Science Elective Note 4
3 Humanities/Social Science Elective (3000-4000) Level Note 5
14 Semester Hours

Senior Year - Second Semester

3 Technical/Science Elective Note 4
3 Technical/Science Elective Note 4
3 MEEG 4133 Creative Project Design II
3 Humanities/Social Science Elective Lower Level Note 5
3 Humanities/Social Science Elective (3000-4000) Level Note 5
15 Semester Hours

124 Total hours required

Notes:

- 1) The science elective in the freshman year second semester or the science elective in the sophomore year first semester must include PHYS 2074.**
- 2) Science elective from an approved list. See MEEG office.**
- 3) Two hour MEEG elective from an approved list. See MEEG office.**
- 4) Three hours of technical / science elective from an approved list. See MEEG office.**
- 5) Humanities / Social Science elective from an approved list. See MEEG office**

SECTION VIII: Action Recorded by Registrar's Office

PROGRAM INVENTORY/DARS

PGRM _____ SUBJ _____ CIP _____ CRTS _____

DGRE _____ PGCT _____ OFFC&CRTY VALID _____

REPORTING CODES

PROG. DEF. _____ REQ. DEF. _____
Initials _____ Date _____

Distribution

Notification to:

(1) College
(7) Treasurer

(2) Department
(8) Undergraduate Program Committee

(3) Admissions

(4) Institutional Research

(5) Continuing Education
Initials _____ Date _____

(6) Graduate School