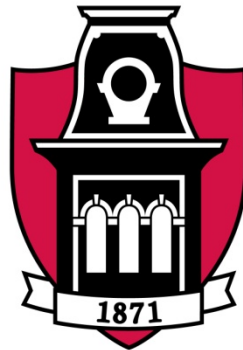


MECHANICAL ENGINEERING

UNDERGRADUATE ADVISING MANUAL



UNIVERSITY OF
ARKANSAS

For Students Entering Fall 2008 and Later

Revised: June 2009

DISCLAIMER

This document is intended to assist students in planning their academic program. It is not an official publication. The only official documents describing a student's degree requirements are those of any one catalog in effect while that student is enrolled. Degree requirements of a catalog must be satisfied by present course offerings.

Contents

I. INTRODUCTION	1
II. WHERE ARE YOU GOING?	1
Professionalism	1
For Whom Will You Work?	1
III. CURRICULUM	2
2008-2009 Curriculum.	3
General Procedure for Course Substitutions.	3
V. OVERVIEW OF PROGRAM	4
ABET Guidelines.	4
VI. PROGRAM OPTIONS	5
VII. ELECTIVES	6
Lab Science Electives.	6
Technical/Science Electives.	6
Mechanical Engineering Electives.	6
Engineering Electives.	6
Science Electives.	6
Humanistic Social Electives.	7
VIII. MISCELLANEOUS.	7
Special Projects, MEEG 491V.	7
Advanced Composition.	8
Course Exemption.	8
Courses That Do Not Count Toward an Mechanical Engineering Degree.	8
IX. Appendices	9
Appendix A: Program Courses	9
Appendix B: Your Degree Evaluation Form	10
Appendix C: Common Freshman Year	14
Appendix D: Mechanical Engineering Course Substitution Form	15
Appendix E: Hum/soc Science Electives	16
Appendix F: Honors Program	17
Appendix G: Department Faculty	18

I. INTRODUCTION

This manual has been designed to aid students enrolled in the BSME program in selecting their courses as they progress through the required curriculum. Each student is assigned an advisor who will assist the student in selecting courses that are appropriate for personal career choices. It is the student's responsibility to ensure that he/she meets all of the requirements listed in the catalog at the time of entry into the program. For example, the formal graduation requirements for students entering engineering under the current catalog requires a total of 124 semester hours for graduation. No student will be allowed to graduate with less than 124 hours. Many students will find that more than 124 hours are required because of personal deficiencies in background educational material in mathematics, basic sciences, or other areas.

II. WHERE ARE YOU GOING?

Professionalism

We congratulate you on having selected mechanical engineering as your field of study. We welcome you to the student ranks of the department and look forward to having you join us as professional peers. In order to do that, you will, of course, have to successfully complete all of the requirements for the degree as described in the catalog. Our program is fully accredited by Accreditation Board for Engineering and Technology (ABET), which means that the curriculum you are enrolled in and the qualifications of the faculty exceed ABET's minimum criteria.

(To be able to enter private practice, or to work for some consulting firms, you will need to become a registered professional engineer. There are several steps to becoming a registered professional engineer. You will have to obtain a degree from an ABET accredited university such as the University of Arkansas, take and pass the Fundamentals of Engineering (FE) exam, gain at least 4 years of experience, then take and pass the Professional Engineering (PE) exam. The FE exam is offered to UA students in October and April of each year. It is suggested that students take the exam their last semester so that they have the broadest knowledge of engineering when they take the test.

Applications to take the exam are available in the department office every fall and spring you are strongly recommended to take the examination.

For Whom Will You Work?

University of Arkansas Mechanical engineering students who complete 30 hours of coursework with at least a 2.25 cumulative GPA are eligible to get cooperative education (Co-op) jobs in which the student works for a company in an engineering type of job. Some benefits of Co-op include:

- Gain hands-on experience in a real world setting
- Confirm the choice of your major
- Make valuable industry contacts

- Enhance your communication skills
- Make money (\$12 - \$18 per hour)
- Help insure an excellent job at graduation

Co-op jobs can take either alternating or parallel forms. In alternating form a student will alternate working full time and taking classes full time. In parallel form, a student will work 15-20 hours per week while still taking classes. For more information, including current Co-op opportunities, students should talk to the career planning staff in Bell engineering room 3188.

There are many opportunities available to you as a BSME engineer. You can learn what these opportunities are through interviewing with companies. You should visit one of the Career Services Offices, located in Room 3158 Bell Engineering, or room 607 of the Arkansas Union, and acquaint yourself with its services. The first office you should check with, and the one that you should have most of your dealings with, is the office in Bell Engineering. That office is the one that will be most familiar with opportunities for engineers. The Placement Center can be of great assistance to you in finding suitable employment upon graduation. The faculty are also happy to discuss your career alternatives with you and explain the significance of working in different types of industries.

III. CURRICULUM

The mechanical engineering program is designed to offer a high-quality course of instruction involving classroom, laboratory, and extracurricular activities that results in qualified graduates prepared to meet the demands of a professional career in the present and future work place, and able to assume a responsible place of leadership in a complex technological society.

The courses offered in mechanical engineering provide the student with a broad understanding of fundamental scientific principles that serve as a background for many fields of specialization. The undergraduate curriculum is designed to stress basic engineering principles and to assist in developing creative thinking. Emphasis is placed on mechanical systems and energy systems. The undergraduate program leads to a Bachelor of Science degree in Mechanical Engineering; its educational objectives are to produce graduates who

1. effectively analyze and design mechanical systems and energy systems;
2. contribute to the success of companies in Arkansas and the rest of the world through the practice of mechanical engineering;
3. meet or exceed the needs and expectations of mechanical engineering employers in industry, government, and private practice;
4. engage in professional activities that promote the mechanical engineering profession and provide continuing self-development;
5. succeed in graduate study and research if pursued.

The Bachelor of Science in Mechanical Engineering curriculum includes, in addition to the humanities/social science courses, a total of 12 hours of technical/science electives. A student must select these electives with the approval of his or her advisor. It is expected that electives will be chosen to provide a coherent program within one or more areas of specialization available to mechanical engineers. Areas of specialization are available in traditional mechanical engineering subject areas and other selected areas. The traditional subject areas include

mechanical systems, materials, and thermal systems. Nontraditional subject areas include management, premedical, math, physics, and aerospace. Students choosing the nontraditional areas of specialization may be required to take more than 124 hours. Details relating to the nontraditional areas are available in the department office.

All incoming freshman engineering students take the common freshman year and are not admitted to a specific department until the common freshman year requirements are met. The full curriculum may be found in Appendix A. In addition to the curriculum listed, all students must take ENGL 2003 Advanced Composition, or meet the exemption requirements.

2008-2009 Curriculum.

The 2008-2009 curriculum with prerequisite requirements is shown by the flow chart. Required courses are enclosed by circles, elective humanity/social science courses by triangles, and technical/science electives by squares. The connecting lines represent prerequisites (solid lines) or pre/co requisites (dashed lines)). Appendix A contains a list of the program courses for each semester followed by a Degree Evaluation Form in Appendix B. Course descriptions for these courses are available in the department office and in the catalog.

Students should keep a copy of the Degree Evaluation Form and mark their status on the sheet as they progress in the program. A copy of this form is maintained in the office file and is used to determine which students have successfully satisfied all requirements for their degree. The Degree Evaluation Form and Figure 1 summarize the catalog requirements. They do not supersede or replace the catalog. The catalog is the only official document which forms the basis of the contract between the student and the University. It is the student's responsibility to be knowledgeable of the contents of the catalog and to ensure that its requirements are fulfilled.

Appendix C contains a description of the Common freshman year. You should study this carefully and note in particular that they are not admitted to the Mechanical Engineering program until they have completed the common freshman year.

In general, students will not be permitted to enroll in a course until all prerequisites have been satisfied. Only under special circumstances will formal prerequisites be waived, and only then with the consent of the course instructor and Department Head; without this approval, the student will not be allowed to enroll in the class.

General Procedure for Course Substitutions.

Students desiring to have credit accepted for courses other than those listed in the catalog under which they entered, should follow the procedure outlined below:

1. review and obtain the approval of your advisor for the proposed substitution. The form used is in Appendix D (extra forms are available on the web);
2. forward the form to the Department Head with the suggested proposal and signed approval of your advisor;
3. you will receive in return, a signed copy of the form from the Department Head indicating approval, disapproval, or recommended action on your part; and
4. maintain a file of all such correspondence for use at the time of your degree evaluation prior to graduation.

V. OVERVIEW OF PROGRAM

ABET Guidelines.

The Accreditation Board of Engineering and Technology (ABET) periodically reviews the curriculum offered by this department to ensure that it meets the minimal standards set by the Professional Engineering Societies in the United States. The accreditation of the department's program guarantees you that employers, other universities, and professional engineering registration boards will accept the credits and degree you earn throughout the United States.

During an accreditation review the transcripts of graduates are reviewed by ABET to ensure that they meet certain program outcomes and objectives. We must demonstrate that our students have:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multi-disciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

And that our graduates can:

1. effectively analyze and design mechanical systems and energy systems;
2. contribute to the economic development of Arkansas and the world through the practice of Mechanical Engineering;
3. meet or exceed the needs and expectations of Mechanical Engineering employers in industry, government, and private practice;
4. engage in professional activities that promote the Mechanical Engineering profession and provide continuing self-development, and;
5. succeed in graduate study and research, if pursued.

In addition to the above objectives, the department must demonstrate that graduates are able to apply principles of engineering, basic science, and mathematics (including multivariate calculus and differential equations) to model, analyze, design, and realize physical systems, components or processes; and work professionally in both thermal and mechanical systems areas

The guidelines above offer considerable flexibility to the faculty in designing the curriculum; however, they are easily violated by a student who chooses to take a course that has not formally been approved by the faculty. Consequently, deviations from the curriculum as described in the catalog are not acceptable.

VI. PROGRAM OPTIONS

One of the advantages of being a mechanical engineer is the breadth of employment opportunities that are available upon graduation. The curriculum of this department provides the student many options in preparing for his/her career. In an attempt to give the student some guidelines in this area, the department offers the student eight informal options. These options are mechanical systems, materials, thermal systems, aerospace, management, premedical, math, and physics. Some options may require the student to take more than 124 hours total.

Mechanical Systems. This is one of the most popular options within mechanical engineering. Mechanical engineering designers are responsible for the design of machines that produce useful work. The courses available in this option support the needs of an individual interested in designing machines or mechanisms for industry.

Materials. The materials option is designed to give students more exposure to development and selection of engineering materials. Topics in this area include surfaces, finishes, material properties, and tribology.

Thermal Systems. Students interested in areas such as power generation, fluid mechanics, heating and cooling, engines and propulsion, air conditioning, pumps, turbines, and fans should consider this option. Many opportunities exist throughout all industries in the country for students electing this option.

Aerospace. The aerospace option in mechanical engineering provides students an opportunity to concentrate on engineering and scientific issues associated with aircraft, spacecraft and space exploration. Students interested in this option are encouraged to visit the Mechanical Engineering office for more details.

Management. Most mechanical engineers will start in an entry-level engineering position and then move into a management position or an advanced engineering position later in their careers. Students interested in management should consider this option. With prior approval students can apply approved technical/science electives towards a minor in business. Visit the Mechanical Engineering office for more details.

Premedical. Students who are considering medical school after graduation are encouraged to look into the premedical option. Visit the Mechanical Engineering Department for more details.

Math or Physics. Many students have an interest in studying math or physics at a higher level. For these students the technical/science electives can be used to take courses that can be applied to a minor in either math or physics. Students interested in either of these options are encouraged to visit the Mechanical Engineering office for more details.

VII. ELECTIVES

Lab Science Electives.

Mechanical engineering students are required to complete two four hour laboratory based science electives. One of the four hour science elective must be PHYS 2074. The other four hour science elective must be chosen from one of the following :

BIOL 1543 & 1541L
CHEM 1123 & 1121L
GEOL 1113 & 1111L
PHYS 2094
PHYS 3554
PHYS 3603 & 3601L

Technical/Science Electives.

As part of the mechanical engineering curriculum, students are required to complete 12 hours of technical/science electives. These electives can be categorized into three groups: (1) Mechanical Engineering Electives, (2) Engineering Electives, and (3) Science Electives. Each group is described in more detail below.

Mechanical Engineering Electives.

The acceptable mechanical engineering electives are all mechanical engineering courses numbered at or above the 4000 level not already required in the mechanical engineering curriculum. Special Project courses (491V) are normally not allowed as electives. Special Project courses may be allowed under very special conditions but must be approved **in advance** by the Department Head.

Engineering Electives.

The rules governing the selection of engineering electives are:

1. All Engineering or Computer Science and Computer Engineering courses at or above the 3000 level (with the exception of INEG 3513 Manufacturing System Design and INEG 3413 Engineering Economic Analysis) not already required in the mechanical engineering curriculum will be allowed as a technical/science elective. Courses with content remedial to required courses are not allowed and courses considered redundant to required courses are not allowed.
2. One freshman level programming course CSCE 2003 may be allowed as a technical/science elective.

Science Electives.

The following approved science electives will be accepted as a technical/science elective:

Chemistry
2262 Analytical Chemistry Lecture
2272 Analytical Chemistry Lab

2613 Organic Physiological Chemistry
3113 Intermediate Inorganic Chemistry
3453 Elements of Physical Chemistry
3451L Elements of Physical Chemistry Lab
3504 Physical Chemistry I
3514 Physical Chemistry II
3512L Physical Chemistry Laboratory
3603 Organic Chemistry I
3613 Organic Chemistry II

Physics

3113 Analytical Mechanics
3414 Electromagnetic Theory
3544 Optics
3614 Modern Physics
4073 Intro to Quantum Mechanics

Math

3083 Linear Algebra
3423 Advanced Applied Math

Humanistic Social Electives.

Each student in the College of Engineering is required to complete a minimum of 18 semester hours in the humanities and social sciences. Each student must complete at least six semester hours at the 3000 level or above. The student and advisor may select any of the humanities and social sciences on the approved list but must include one of the following courses: HIST 2003 U.S. History to 1877; HIST 2013 U.S. History since 1877; or PLSC 2003 American National Government, to meet the requirements of Arkansas law that each student must pass a college course in American history and civil government prior to graduation. ECON 2143 Basic Economics or ECON 2013 Principles of Macroeconomics is required. The remaining four courses must be selected so that two are from the social sciences and two from humanities area. In addition, two of these four courses must be at the 3000 or higher level, and all must be from the approved list of humanities and social sciences. This list is available on the university web page.

Appendix E contains a chart showing three sample options, which meet all requirements. It is strongly recommended that students select one of the options and follow it to avoid problems at the time of graduation. Do not deviate from these three options without first written approval from the Department Head.

VIII. MISCELLANEOUS.

Special Projects, MEEG 491V.

A special project may be undertaken by an undergraduate student through consultation with a faculty member. The number of credits earned is variable, one to six hours. Projects

earning less than three (3) hours of credit are discouraged because of their general lack of productivity.

Before enrolling in a special project, obtain a Course Substitution Form from the Mechanical Engineering website or office, and then approach a faculty member and define the scope of the project. This information is written on the Course Substitution Form and has the signed approval of the faculty member who agrees to act as the student's advisor. Once the faculty member has signed the document, it is given to the Department Head for approval. If approved, it becomes a part of the student's official file.

Advanced Composition.

Every undergraduate student at the University of Arkansas is also required to take and pass ENGL 2003, a three-hour course in composition, unless exemption can be gained in one of the following ways: 1) by demonstrating a satisfactory writing ability on the Advanced Composition Examination; 2) by completing ENGL 2013 (Essay Writing) or; 3) by achieving a grade of "A" or "B" in ENGL 1013 and a grade of "A" in ENGL 1023, both courses taken at the University of Arkansas (Fayetteville). Students not gaining exemption from ENGL 2003 must register for the course before the last semester of their senior year. ENGL 2003 may not be transferred into the University of Arkansas Fayetteville.

Course Exemption.

Based on a student's background knowledge in a particular subject area, one occasionally may be exempted from taking a particular course. This does not reduce the total credit hours required for the BSME degree. Exemption from a course and university credit hours must be granted in order for a course to fully count toward the degree requirements.

Courses That Do Not Count Toward an Mechanical Engineering Degree.

Courses that do not count toward an engineering degree are listed below:

ENGL	0003	Basic Writing
ENGL	2003	Advanced Composition
ENGL	2013	Essay Writing
MATH	0003	Beginning and Intermediate Algebra
MATH	1203	College Algebra
MATH	1213	Plane Trigonometry
MATH	1285	Precalculus Mathematics
CIED	0003	Developmental Reading

IX. Appendices

Appendix A: Program Courses

Effective Fall 2008

Freshman Year

FALL			SPRING		
ENGL	1013	Composition	ENGL	1023	Tech Comp (recommended)
CHEM	1103	University Chemistry I			4 hour science elective
MATH	2554	Calculus I	MATH	2564	Calculus II
PHYS	2054	University Physics & Lab			3 hour humanistic-social elective
GNEG	1111	Introduction to engineering I	GNEG	1121	introduction to engineering II
Total: 15 semester hours			Total: 15 semester hours		

Sophomore Year

FALL			SPRING		
MATH	2574	Calculus III	MEEG	2403	Thermodynamics I
MEEG	2303	Intro to Materials	\$ MEEG	2703	Computer Methods
MEEG	2003	Statics	MATH	3404	Differential Equations
		4 hour science elective	MEEG	2103	Intro to machine Analysis
		MEEG 2100 CAD proficiency	MEEG	2013	Dynamics
Total: 14 semester hours			Total: 16 semester hours		

Junior Year

FALL			SPRING		
MEEG	3013	Mechanics of Materials	MEEG	3212	Mech Engr Lab II
\$ MEEG	3113	Mach Dyn & Control	\$ MEEG	4413	Heat Transfer
MEEG	3202	Mech Engr Lab I	\$ MEEG	4104	Machine Element Design
\$ MEEG	3503	Mechanics of Fluids	ELEG	3913	Engineering electronics
\$ ELEG	3903	Engineering Electronics (c&m)			3 hrs Technical/Science Elective
		3 hrs Humanistic-Social Elective			3 hrs Humanistic-Social Elective
Total: 17 semester hours			Total: 18semester hours		

Senior Year

FALL			SPRING		
MEEG	4131	Creative proj Design I	MEEG	4133	Creative Proj Design II
MEEG	4132	engineering practice			3 hrs Technical/Science Elective
\$ MEEG	4483	Thrml Sys Anlys & Design			3 hrs Technical/Science Elective
MEEG	4202	Mech. Engr. Lab III			3 hrs Humanistic/Social Elective
		3 hrs Technical/Science Elective			3 hrs Humanistic/Social Elective
		3 hrs Humanistic/Social Elective			(3000-4000 level)
		(3000-4000 level)			
Total: 14 semester hours			Total: 15 semester hours		

\$ Course is only offered in the semester listed.

Appendix B: Your Degree Evaluation Form

Degree evaluations are done at the **DEPARTMENT LEVEL, THE COLLEGE LEVEL (DEAN'S OFFICE)**, and the **UNIVERSITY LEVEL**. In other words, if one level makes a mistake in the assessment of a student's progress, that mistake will be exposed in all probability.

The Degree Evaluation Form, which you received from the Mechanical Engineering Department, is a guideline for you, your advisor and the department. It is a review of what you have taken and what you need to take. **However, it is not an official document. The ultimate responsibility for successfully completing a degree program rests on the individual student; and the Degree Evaluation Form should be checked item for item by the student so that, if a mistake is made in the recording of courses and/or grades, a corrected version of the evaluation can be made.**

Listed below are a few suggestions to avoid an attack of "Oh, my goodness, I thought that course would count" hysteria:

READ THE UNIVERSITY CATALOG APPLICABLE TO YOUR DEGREE PROGRAM -- REVIEW IT, IF NECESSARY, EACH SEMESTER.

READ AND REVIEW THE MECHANICAL ENGINEERING ADVISING MANUAL.

IF YOU HAVE QUESTIONS ABOUT YOUR DEGREE PROGRAM, DO NOT SPECULATE. ASK YOUR ADVISOR AND/OR SOMEONE IN THE OFFICE TO CLARIFY OR ELABORATE ON DEGREE REQUIREMENTS.

STUDENTS REQUESTING TRANSFER CREDIT FOR COURSES TAKEN AT OTHER INSTITUTIONS SHOULD PICK UP A **PRE-APPROVAL OF TRANSFER CREDIT** FORM IN THE OFFICE. THIS FORM IS TO BE COMPLETED AND APPROVAL GRANTED **BEFORE** ENROLLING IN ANY COURSE. AGAIN, BE AWARE OF THE NUMBER OF CREDIT HOURS THOSE COURSES CARRY AND THE NUMBER OF CREDIT HOURS REQUIRED BY THE DEPARTMENT.

An exit interview with the Department Head is required of all graduating seniors.

The most important thing to remember is that **YOU** are ultimately responsible for the successful completion of your degree program. Needless to say, if you need assistance, someone in the Mechanical Engineering Department will be glad to help you.

DEGREE EVALUATION FORM

Mechanical Engineering
Students Entering Fall 2008 or Later

Evaluation Updated: 8/26/2006

Name _____
ID _____
Term Entered _____
Advisor _____
Email _____
Mail Box _____



Colleges Attended _____
Concentration _____
Honors College _____
Minors _____
Double Major _____
Best Hum/Soc Option _____

REQUIRED HOURS	CREDIT HOURS						COMMENTS
	SEM	A	B	C	D	TR	
ENGL 1013 Composition I							
CHEM 1103 Univ Chemistry I							
PHYS 2054 Univ Physics I							
MATH 2554 Calculus I							
GNEG 1111 Intro to Engineering I							
	SEM	A	B	C	D	TR	
GNEG 1121 Intro to Engineering II							
MATH 2564 Calculus II							
ENGL 1023 Tech Composition							
	SEM	A	B	C	D	TR	
MEEG 2100 CAD Proficiency							
MATH 2574 Calculus III							
MEEG 2303 Intro to Materials							
MEEG 2003 Statics							
	SEM	A	B	C	D	TR	
MATH 3404 Differential Equations							
MEEG 2013 Dynamics							
MEEG 2403 Thermodynamics							
MEEG 2703 Computer Methods							
MEEG 2103 Int. Machine Analysis							
	SEM	A	B	C	D	TR	
MEEG 3013 Mech of Mat							
MEEG 3113 Mach Dynamics & Ctrl							
MEEG 3202L Mech Engr Lab I							
MEEG 3503 Mech of Fluids							
ELEG 3903 Circuits							
	SEM	A	B	C	D	TR	
MEEG 3212L Mech Engr Lab II							
MEEG 4413 Heat Transfer							
MEEG 4104 MED							
ELEG 3913 Engr Electronics							
	SEM	A	B	C	D	TR	
MEEG 4132 Prof. Engr. Pract.							
MEEG 4131 Creative Proj. Design I							
MEEG 4202L Mech Engr Lab III							
MEEG 4483 TSAD							
	SEM	A	B	C	D	TR	
MEEG 4133 Creative Proj Design II							
Required Totals							

Mechanical Engineering Degree Evaluation Form

Name 0

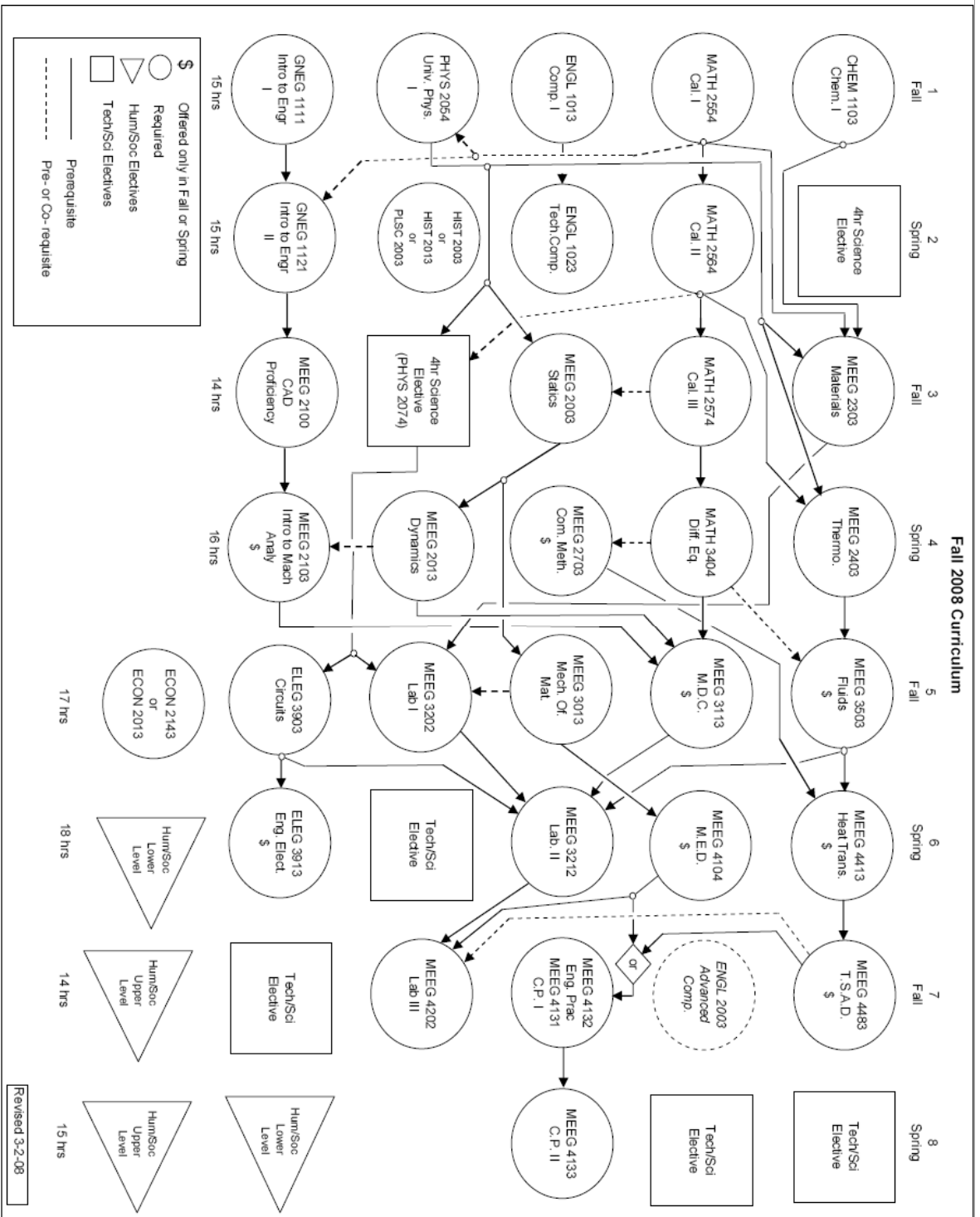
SCIENCE ELECTIVES			CREDIT HOURS						COMMENTS
			SEM	A	B	C	D	TR	
PHYS	2074	Univ Physics II							
SCIENCE									
SCIENCE LAB									
Science Totals									

TECH & SCI ELECTIVES			CREDIT HOURS						COMMENTS
			SEM	A	B	C	D	TR	
TECH/SCI									
TECH/SCI									
TECH/SCI									
TECH/SCI									
Tech/Sci Totals									

HUM & SOC ELECTIVES			CREDIT HOURS						COMMENTS
			SEM	A	B	C	D	TR	
HIST									
ECON									
Lower Level									
Lower Level									
Upper Level									
Upper Level									
Hum/Soc Totals									

Page 1 and Page 2 Totals Total Credit Hours

Degree Check Items	
Remaining Credit Hours	
Hours of D's	limit <input type="text"/> Based on 124 hrs (15% of curriculum hrs taken at the U of A)
Curriculum GPA	Minimum 2.00. All courses on degree evaluation form.
MEEG GPA	Minimum 2.00. All required MEEG courses on degree evaluation form.
College GPA	Minimum 2.00. All required engineering courses on degree evaluation form.
University GPA	Minimum 2.00. All courses taken at the University of Arkansas, Fayetteville.
Hum/Soc Option Fulfilled	by <input type="text"/> (Option 1, Option 2, or Option 3)
Advanced Comp. Fulfilled	by <input type="text"/> (Exam, Exempt, ENGL 2003)
Senior Exit Interview	
Honors College Requirements Met	
Concentration Requirements Met	



Appendix C: Common Freshman Year

Students entering the University of Arkansas seeking a Mechanical Engineering degree are placed in the college of engineering's common freshman year and are not considered a mechanical engineering student. 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. 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 the Mechanical Engineering undergraduate program. These students are required to enroll in the courses necessary to remove their deficiencies; however, they can also enroll in Mechanical Engineering courses for which they have satisfied the pre-requisites.

Appendix D: Mechanical Engineering Course Substitution Form

Please Print

Name: _____ Student ID#: _____

Address: _____ Phone #: _____

In my mechanical engineering curriculum (20__ - 20__ catalog curriculum), I request the substitution of the following:

<u>Year Taken</u>	<u>Course # and Title</u>	<u>Grade</u>	<u>Course # and Title</u>
_____	_____	_____	for _____
_____	_____	_____	for _____
_____	_____	_____	for _____

MEEG 491, 591 Special Project (Description of Project) _____

Reasons for these requests are: _____

Catalog description(s) of the course(s) and any other supporting documentation is presented on the attached page(s).

Approvals Signature Date

Student's Instructor _____

James Davis, Advisor ME _____

Joseph J. Rencis _____

Department Head

cc: Dean's Office
Department
Student

040705

Appendix E: Hum/soc Science Electives

MEEG Hum/Soc Electives Option Sheet

OPTION 1 (Both Upper Level Courses from Humanities)								
SELECT ONE COURSE	SELECT TWO COURSES Two from Column C From Two Different Departments				SELECT THREE COURSES Two from Column F & One from Column H From at Least Two Different Departments			
Column A	Column B	Column C (Upper Level)	Column D	Column E	Column F (Lower Level)	Column G	Column H	
HIST 2003 HIST 2013 PLSC 2003		ARHS **** AIST **** FLED 2273 ENGL **** CIIN 3803 FLAN **** FREN **** ARAB 4213 GERM **** GREK **** HIST **** HUMN **** ITAL **** JOUR 3433 LATN **** MUIG **** PHIL **** RUSS **** SPAN **** WLIT ****			AGEC **** ANTH 1323 ECON 2023 GEOG **** IICSC **** HIST **** HUMN 1114H HUMN 2114H PLSC **** PSYC 2303 RSOC 2303 SOCL **** WCIV ****		ECON 2143 ECON 2013	
OPTION 2 (On Upper Level Course from Humanities & One Upper Level Course from Social Sciences)								
SELECT ONE COURSE	SELECT TWO COURSES One from Column B & One from Column C From Two Different Departments				SELECT THREE COURSES One from Each Column From at Least Two Different Departments			
Column A	Column B (Lower Level)	Column C (Upper Level)	Column D	Column E	Column F (Lower Level)	Column G (Upper Level)	Column H	
HIST 2003 HIST 2013 PLSC 2003	ARCH 1003 ARHS 1003 ARTS 1003 CLST **** COMM 1003 DANC 1003 DRAM 1003 ENGL **** FLAN 2003 HUMN 1003 HUMN 1113H HUMN 1124H HUMN 2003 HUMN 2124H LARC 1003 MJIT 1003 PHIL **** WLIT ****	ARHS **** AIST **** FLED 2273 ENGL **** CIIN 3803 FLAN **** FREN **** ARAB 4213 GERM **** GREK **** HIST **** HUMN **** ITAL **** JOUR 3433 LATN **** MUIG **** PHIL **** RUSS **** SPAN **** WLIT ****			AGEC **** ANTH 1323 ECON 2023 GEOG **** IICSC **** HIST **** HUMN 1114H HUMN 2114H PLSC **** PSYC 2303 RSOC 2303 SOCL **** WCIV ****	AGEC 4413 ANTH **** COMM **** CDIS 4103 CNCD 3053 CMJS 3003 ECON **** GEOG **** GEOS 4563H HESC 4053 KINS **** MGMT **** MKTT 4553 PLSC **** PSYC **** SCWK 3183 SOCL ****		ECON 2143 ECON 2013
OPTION 3 (Both Upper Level Courses from Social Sciences)								
SELECT ONE COURSE	SELECT TWO COURSES Each from a Different Column From Two Different Departments				SELECT THREE COURSES Two from Column G One from Column H From at Least Two Different Departments			
Column A	Column B	Column C	Column D	Column E	Column F	Column G (Upper Level)	Column H	
HIST 2003 HIST 2013 PLSC 2003	ARCH 1003 ARHS 1003 ARTS 1003 COMM 1003 DANC 1003 DRAM 1003 HUMN 1003 LARC 1003 MJIT 1003	PHIL 2003 PHIL 2103 PHIL 2203	CLST 1003 CLST 1013 HUMN 21244 HUMN 11244 WLIT 1113 WLIT 1123	FLAN 2003 HUMN 2003			AGEC 4413 ANTH **** COMM **** CDIS 4103 CNCD 3053 CMJS 3003 ECON **** GEOG **** GEOS 4563H HESC 4053 KINS **** MGMT **** MKTT 4553 PLSC **** PSYC **** SCWK 3183 SOCL ****	ECON 2143 ECON 2013

NOTES: 1. Courses marked DEPT **** must come from an approved list. Goto WWW.MEEG.UARK.EDU for approved list.
 2. Columns B through E are humanities & Columns F through H are social sciences.
 3. Students may not take both ECON 2143 & ECON 2023.

60822

Appendix F: Honors Program

The College of Engineering has established an honors program to challenge superior students with a more in-depth academic program and research experience and to provide a structure for working more closely with faculty members and other students in a team environment. An honors program is highly recommended for individuals planning academic or research related careers that require considerable critical and original independent thinking. Admission requirements for the college's Honors Program are as follows: entering freshmen must have at least a 3.5 high school GPA and at least 28 composite score on the ACT; entering transfer students must have a 3.25 GPA on their transfer work. Students not qualifying for the Engineering Honors Program initially are eligible after one year if they earn at least a 3.25 GPA. Students must formally apply for admission to the Engineering Honors Program. Once accepted into the program, Honors students take a minimum of 12 hours of Honors courses (a minimum of 6 of these 12 hours must be in engineering), participate in undergraduate research and write an undergraduate thesis, and must fulfill any additional departmental requirements. To retain status in the Honors Program, a student must maintain a minimum cumulative GPA (for all course work, computed at the end of the spring semester) of 3.25. To receive honors distinction at graduation, a student must hold a cumulative GPA of 3.50 or better (for all course work, computed at graduation). Students with a GPA between 3.25 and 3.50 do not receive honors distinction at graduation.

Appendix G: Department Faculty

- COUVILLION, RICK J., ph. 575-4155, email. rjc@uark.edu, B.S.M.E. (University of Arkansas), M.S.M.E., Ph.D. (Georgia Institute of Technology), P.E., Associate Professor of Mechanical Engineering, 1981, 1986.
- DAVIS, JAMES A. JR., ph. 575-3603, email. Jad03@uark.edu, B.S.M.E., M.S.M.E., Ph.D. (University of Arkansas), P.E., Instructor of Mechanical Engineering and Assistant Department Head.
- GORDON, MATT, ph. 575-4458, email. mhg@uark.edu, B.S.M.E., M.S.M.E., Ph.D. (Stanford University), P.E., Professor of Mechanical Engineering, and Twenty First Century Professorship in Mechanical Engineering, 1992, 2009.
- HUANG, PO-HAO ADAM, ph 575-4054 email. phuang@uark.edu, BS, MS, Ph.D Aerospace Engineering (University of California), Assistant Professor of Mechanical Engineering, 2006
- JONG, ING-CHANG, ph. email. icjong@uark.edu, 575-4350, B.S.C.E. (National Taiwan University), M.S.C.E. (South Dakota School of Mines and Technology), Ph.D. (Northwestern University), P.E., Professor of Mechanical Engineering, 1965, 1974.
- MALSHE, AJAY P., ph. 575-6561, email. apm2@uark.edu, B.Sc., M.Sc., Ph.D., Physics, (University of Poona, Pune, India), Professor of Mechanical Engineering and Twenty First Century Professor of Materials, Manufacturing, and Integrated Systems, 1995, 2000.
- NUTTER, DARIN, ph. 575-4503, email. dnutter@uark.edu, B.S.M.E., M.S.M.E., (Oklahoma State University), Ph.D., (Texas A & M University) P.E., Associate Professor of Mechanical Engineering, 1994, 2000.
- RENCIS, JOSEPH J., ph. 575-4153, email. jjrencis@uark.edu, B.S. (Milwaukee School of Engineering), M.S. (Northwestern University), Ph.D. (Case Western Reserve University). P.E., Professor, Department Head and Twenty First Century Leadership Chair in Mechanical Engineering.
- ROE, LARRY A., ph. 575-3750, email. lar@uark.edu, B.S.M.E., M.S., (University of Mississippi), Ph.D. (University of Florida), P.E., Associate Professor of Mechanical Engineering, 1994, 2000.
- SAXENA, ASHOK, ph. 575-3054, email. asaxena@uark.edu, B.S. (Indian Institute of Technology) 1970, M.S. (University of Cincinnati) 1972, Ph.D. (University of Cincinnati) 1974. College of Engineering Dean
- SPEAROT, DOUGLAS E., ph 575-3040, email. dspearot@uark.edu, B.S.M.E (University of Michigan), M.S.M.E, Ph.D. (Georgia Institute of Technology), Assistant Professor of Mechanical Engineering, 2005.
- SPRINGER, WILLIAM T., ph. 575-2948, email. wts@uark.edu, B.S.M.E., M.S.M.E., Ph.D. (University of Texas at Arlington), P.E., Associate Professor of Mechanical Engineering, 1981, 1988.
- TUNG, STEVE, ph. 575-5557, email. chstung@uark.edu, B.S.M.E. (National Taiwan University), M.S.M.E., Ph.D. (University of Houston), Associate Professor, and Twenty First Century Professorship in Mechanical Engineering, 2000, 2005.

WEST, LEON, ph. 575-3449, email. west@uark.edu, B.S. Physics (University of Arkansas), M.S. Physics, Ph.D. (Florida State University), P.E., Professor of Mechanical Engineering, 1982, 1990.

WEJINYA, UCHECHUKWU C, ph. 575-4800, email. uwejinya@uark.edu, B.S.E.E, M.S.E.E, Ph.D. (Michigan State University), Assistant Professor, 2008.

ZOU, MIN, ph. 575-6671, email. mzou@uark.edu, B.S.A.E., M.S.A.E. (Northwestern Polytechnical University), M.S.M.E., Ph.D. (Georgia Institute of Technology). Associate Professor, and Twenty First Century Professorship in Mechanical Engineering, 2003, 2008.