

2009-2010 ENGINEERING TECHNOLOGY DEGREE PLAN

Name \_\_\_\_\_ ID: U \_\_\_\_\_ Advisor \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_ Eval/Entry Date: \_\_\_\_\_

**FALL SEMESTER**

**SPRING SEMESTER**

FRESHMAN YEAR

** ( ) ENGL 1010	3	** ( ) ENGL 1020	3
** ( ) MATH 1730	4	*** ( ) MATH 1910	4
*** ( ) TECH 1711	3	*** ( ) TECH 1211	3
*** ( ) TECH 1010	3	*** ( ) TECH 1521	3
*** ( ) TECH 1411	1	*** ( ) TECH 1811	3
	<u>14</u>		<u>16</u>

SOPHOMORE YEAR

ENGL Literature* ( ) ENGL	3	( ) COMM 2381	3
*** ( ) PHYS 2010	3	*** ( ) PHYS 2020	3
*** ( ) PHYS 2011	1	*** ( ) PHYS 2021	1
** ( ) TECH 2822	4	** ( ) TECH 3044	4
** ( ) TECH 2821	3	*** ( ) CHEM 1010	3
American Hist.* ( )	3	*** ( ) CHEM 1011	1
	<u>17</u>	TECH Elective** ( )	3
			<u>18</u>

JUNIOR YEAR

Humanities* ( )	3	Social Science* ( )	3
** ( ) ENGL 3603	3	TECH Elective** ( )	3-4
American Hist.* ( )	3	TECH Elective** ( )	3
TECH Elective** ( )	3-4	TECH Elective** ( )	3
TECH Elective** ( )	3	** ( ) TECH 3440	3
	<u>15-16</u>		<u>15-16</u>

SENIOR YEAR

Social Science* ( )	3	Humanities* ( )	3
TECH Elective** ( )	3-4	TECH Elective** ( )	3
TECH Elective** ( )	3	TECH Elective** ( )	3
TECH Elective** ( )	3	** ( ) TECH 4462	3
** ( ) TECH 4381	3	** ( ) TECH 4944	3
	<u>15-16</u>		<u>15</u>

Summary of Graduation Requirements:

1. 60 semester hours at a senior (4-year) institution
2. 30 of the final 60 semester hours must be taken as upper division courses in the Herff College of Engineering.
3. Cumulative and U of M GPA 2.00 or better required.
4. Courses designated with a single asterisk (\*) must satisfy the General Education Requirements as described in the 2009-2010 U of M Undergraduate Catalog (see the back side of this sheet).
5. A grade of C- or better is required in each course designated with a double asterisk (\*\*).
6. A grade of C- or better is required in each course designated with a triple asterisk (\*\*\*) and the ten (10) courses noted with a triple asterisk (\*\*\*) must have a combined GPA of 2.5.
7. Complete minimum of TWO Technical Specialty elective sequences to be selected in consultation with faculty advisor.
8. All students are required to file an intention to graduate during the semester preceding the semester of graduation. Deadlines are published in the academic calendar. It is the responsibility of the student to insure that this deadline is met.

COMMENTS: \_\_\_\_\_

## GENERAL EDUCATION and BSET REQUIREMENTS

### Communication

ENGL 1010 English Composition  
ENGL 1020 English Composition and Analysis  
COMM 2381 Oral Communication and Rhetoric  
ENGL 3603 Engineering Communications

### Humanities and Fine Arts

*Select One of the Following:* ENGL 2201 Literary Heritage  
ENGL 2202 Literary Heritage: African-American Emphasis

*Plus Two (2) of the Following::* ART 1030 Introduction to Art  
CLAS 2481 Mythology  
COMM 1851 Introduction to Film  
DANC 1151 Introduction to Dance  
HIST 1110 Development of World Civilization I  
HIST 1120 Development of World Civilization II  
JDST 2850 Religions of Abraham: Judaism, Christianity, Islam  
MUS 1030 Music Appreciation  
MUS 1040 Music in America  
PHIL 1101 Classical Issues in Philosophy  
PHIL 1102 Values and the Modern World  
POLS 1101 Introduction to Ancient Political Thought  
POLS 1102 Introduction to Modern Political Thought  
THEA 1030 Introduction to Theatre  
UNIV 3580 Hebrew and Greek Legacy  
UNIV 3581 Faith, Reason, and Imagination

### Social and Behavioral Sciences

*Select Two of the Following:* ANTH 1100 Human Origins and Variations  
ANTH 1200 Cultural Anthropology  
CSED 2101 The Family in Global Perspective  
ECON 2110 Introduction to Macroeconomics  
ECON 2120 Introduction to Microeconomics  
ESCI 1301 Survey of World Regions  
ESCI 1401 Introduction to Cultural Geography  
POLS 1100 American Government  
POLS 1301 Governments of the World  
POLS 1501 International Relations  
PSYC 1200 General Psychology  
PSYC 3510 Deviance: Its role in History and Culture  
SOC 1111 An Introduction to Sociology  
SOC 2100 Sociology of International Development  
UNIV 2304 Gender and Society

### American History

HIST 2010 The United States to 1877  
HIST 2020 The United States since 1877

*One of the following may be substituted  
for HIST 2010 or HIST 2020* ANTH 3282 Cultural History of American Communities  
HIST 2030 History of Tennessee  
HIST 3863 Social & Intellectual History of the United States  
HIST 3881 African-American History  
HIST 4851 History of Women in America  
POLS 4212 Constitutional Law: The Origins and Evolution of Civil  
Liberties in the United States  
POLS 4405 Origin and Development of American Political Thought  
SOC 3422 Racial and Ethnic Minorities

### Natural Sciences

CHEM 1010/1011 Chemistry of Materials w/Lab  
PHYS 2010/2011 General Physics I / Trigonometry w/Lab  
PHYS 2020/2021 General Physics II / Trigonometry w/Lab

### Mathematics

MATH 1730 College Algebra and Trigonometry  
MATH 1910 Calculus I

## Bachelor of Science in Engineering Technology

### Technical Specialty Course Sequences

The BSET program requires 33-36 semester hours of technical electives. Complete a minimum of two (2) technical specialty elective course sequences selected from the list below:

#### **Automation & Control Systems (13 hrs):**

- TECH 2831 (3) Advanced Solid-State Technology & Lab
- TECH 3821 (3) Industrial Electronics & Lab
- TECH 3822 (4) Programmable Logic Controllers & Lab
- TECH 3841 (3) Electrical Power and Motor Control & Lab **\*OR\***
- TECH 4474 (3) Automation and Robotics & Lab **\*OR\***
- TECH 4823 (3) Advanced Prog. Logic Controllers & Lab

#### **Electronic Communication Systems (13 hrs):**

- TECH 2831 (3) Advanced Solid-State Technology & Lab
- TECH 3811 (3) Electronic Communications & Lab
- TECH 3812 (3) Advanced Electronic Communications
- TECH 4821 (4) Microwave Technology & Lab

#### **Mechanical Systems Design (18 hrs):**

- TECH 3401 (3) Strength of Materials
- TECH 3408 (3) Industrial Materials & Lab
- TECH 3421 (3) Manufacturing Processes II & Lab
- TECH 3573 (3) Dynamics & Design for Automation
- TECH 4472 (3) Computer Aided Drafting & Lab
- TECH 4571 (3) Tool Design & Lab

#### **Microprocessor Systems (15 hrs):**

- TECH 2831 (3) Advanced Solid-State Technology & Lab
- TECH 3232 (4) Digital Technology & Lab
- TECH 3233 (4) Microprocessor Technology & Lab
- TECH 4234 (4) Microprocessor Interfacing & Lab

#### **Operations Strategy & Lean Principles (9 hrs):**

- TECH 4460 (3) Work Design/Improvement/Measurement
- TECH 4464 (3) Production Control Systems
- TECH 4466 (3) Facility Design

#### **Product Realization (18 hrs):**

- TECH 3401 (3) Strength of Materials
- TECH 3408 (3) Industrial Materials & Lab
- TECH 3421 (3) Manufacturing Processes II & Lab
- TECH 4472 (3) Computer Aided Drafting & Lab
- TECH 4474 (3) Automation and Robotics & Lab
- TECH 4476 (3) Computer Aided Manufacturing & Lab

#### **Software Design (14 hrs):**

- TECH 2251 (3) Advanced Programming Technology
- TECH 2261 (3) Data Structures
- TECH 4262 (4) Modern Programming & Lab
- TECH 4263 (4) Server Application Technology & Lab

#### **Systems Modeling (18 hrs):**

- TECH 2251 (3) Advanced Programming Technology
- TECH 2261 (3) Data Structures
- TECH 3232 (4) Digital Technology & Lab
- TECH 3233 (4) Microprocessor Technology & Lab **\*OR\***
- TECH 4281 (4) Computer Network Tech & Lab
- TECH 4272 (4) Operating Systems & Lab

#### **Web Programming (17 hrs):**

- TECH 2251 (3) Advanced Programming Technology
- TECH 4241 (3) Internet Technology
- TECH 4242 (3) Client Application Technology
- TECH 4262 (4) Modern Programming
- TECH 4263 (4) Server Application Technology & Lab