

# ELECTRICAL ENGINEERING Program Balance Sheet - UW Colleges/ UW-Platteville Equivalencies

Student Name: \_\_\_\_\_ Date \_\_\_\_\_ Gen. Ed. Requirements: \_\_\_ Met w/ Bachelor's \_\_\_ Met w/ Associate \_\_\_ Will be met w/ Assoc.

## Pre-Engineering

### Mathematics – 19/21 Credits

\_\_\_ 5 \*◇MAT 221 (MATH 2640) **Calculus & Analytic Geom I** \_\_\_\_\_  
 \_\_\_ 5 \*◇MAT 222 (MATH 2740) **Calculus & Analytic Geom II** \_\_\_\_\_  
 \_\_\_ 3/5 ◇MAT 223 or 234 (MATH 2840) **Calc & Analytic Geom III** \_\_\_\_\_  
 \_\_\_ 3 ◇MAT 271 (MATH 3630) **Ordinary Differential Equations** \_\_\_\_\_  
 \_\_\_ 3 **MAT Elective: MAT 230 (2730), 240 (4030) or 262 (3230)** \_\_\_\_\_

### Basic Sciences – 19/24 Credits

\_\_\_ 5/10 \*CHE 165 (CHEM 1450) **Chemistry for Engineers**  
 or CHE 145 & 155 (CHEM 1140 & 1240) **Gen Chemistry I & II** \_\_\_\_\_  
 \_\_\_ 5/4 **PHY 201 (PHYS 2240) University Physics I** \_\_\_\_\_  
 \_\_\_ 5/4 ◇PHY 202 (PHYS 2340) **University Physics II** \_\_\_\_\_  
 \_\_\_ 4 **PHY 205 (PHYS 3140) Modern Physics** \_\_\_\_\_

### Other Courses – 15 Credits

\_\_\_ 3 \*EGR 105 (GE 1000 & GE 1030) **Engr Fundamentals** \_\_\_\_\_  
 \_\_\_ 3 **EGR 282 (GE 2820) Engineering Economics** \_\_\_\_\_  
 \_\_\_ 3 **CPS 216 (COSC 1430) Prob Solv & Prog C++** \_\_\_\_\_  
 \_\_\_ 3 **PHI 237 (PHIL 2540) Tech, Values & Society** \_\_\_\_\_  
 \_\_\_ 3 \*ENG 101 (ENGL 1130) **Composition I** \_\_\_\_\_

### Engineering Sciences – 6/7 Credits

\_\_\_ 3 **EGR 201 (GE 2130) Statics** \_\_\_\_\_  
 \_\_\_ 3/4 **EGR 202 (GE 2230), EGR 203 (GE 2340), EGR 263 (GE 2630) or (ME 2630)** \_\_\_\_\_

**Note:**\*Students must earn a 2.3 GPA in these courses to matriculate out of General Engineering and into the Electrical Engineering program.

◇Students must receive a C- or better in these courses when used as prerequisites for EE courses.  
 Classes in bold print are UW Colleges courses that are equivalent to required UW-Platteville courses.  
 An Associate of Arts and Science degree from UW Colleges satisfies the UW-Platteville general education requirements.

## Professional Electrical Engineering – Required Courses 27/28 Credits

All required professional EE courses must be completed with a grade of C- or better.

\_\_\_ 1 EE 1020 EE Projects & Tools – on-campus students ONLY  
 \_\_\_ 3 EE 1210 Circuit Modeling I \_\_\_\_\_  
 \_\_\_ 4 EE 2210 Circuit Modeling II \_\_\_\_\_  
 \_\_\_ 4 EE 2220 Signals and Systems \_\_\_\_\_  
 \_\_\_ 4 EE 3020 Analog Electronics \_\_\_\_\_  
 \_\_\_ 4 EE 3140 Electric & Magnetic Fields \_\_\_\_\_  
 \_\_\_ 4 EE 3320 Automatic Controls/Lab \_\_\_\_\_  
 \_\_\_ 4 EE 3770 Logic and Digital Design \_\_\_\_\_

## Professional Electrical Engineering - Emphasis Courses 24 credits

Students shall complete a total of 24 credits from the course listing below in the following manner:

- 1) Select two of the following courses: **EE 4040, EE 4050, EE 4350, EE 4450, EE 4750**, one from the chosen emphasis and one from outside the chosen emphasis.
- 2) Select at least four (4) credits at the 4000 level from the same chosen emphasis.

### Communications & Electronics Emphasis

___ 4	EE 3130	Solid State Electronic Devices	<u>Design</u> None
___ 4	EE 3780	Intro to Microprocessors	Medium
___ 4	EE 4040	Analog IC Design ( <b>S Even Years</b> )	High
___ 4	EE 4050	Advanced Analog Electronic Circuits ( <b>S Odd Years</b> )	High
___ 4	EE 4430	Power Electronics & Electrical Machines ( <b>F Odd Years</b> )	High
___ 4	EE 4610	Communication Systems ( <b>Fall</b> )	Low
___ 4	EE 4620	Optical Systems ( <b>Spring</b> )	Low
___ 4	EE 4630	Advanced Communication Systems ( <b>By Demand</b> )	Medium
___ 1	EE 4010	UHF Amplifier Design ( <b>Occasionally</b> )	High
___ 1	EE 4020	UHF Oscillator Design ( <b>Occasionally</b> )	High
___ 1-4	EE 4980	Current Topics in EE	-----
___ 1-3	EE 4990	Independent Study	-----

### Computer Engineering Emphasis

___ 4	EE 3130	Solid State Electronics Devices	None
___ 4	EE 3780	Intro to Microprocessors	Medium
___ 4	EE 4720	Microcomputer Architecture & Interfacing ( <b>Spring</b> )	High
___ 4	EE 4750	Advanced Digital Design ( <b>Fall</b> )	High
___ 1-4	EE 4980	Current Topics in EE	-----
___ 1-3	EE 4990	Independent Study	-----

### Controls Emphasis

___ 4	EE 3410	Electric Power Engineering	Low
___ 4	EE 3780	Intro to Microprocessors	Medium
___ 4	EE 4310	Modern Control Systems ( <b>Spring Odd Years</b> )	High
___ 4	EE 4320	Digital Signal Processing ( <b>Spring Even Years</b> )	High
___ 4	EE 4350	Discrete Time Control Systems ( <b>Fall</b> )	High
___ 1-4	EE 4980	Current Topics in EE	-----
___ 1-3	EE 4990	Independent Study	-----

### Power & Energy Emphasis

___ 4	EE 3410	Electric Power Engineering	Low
___ 4	EE 3780	Intro to Microprocessors	Medium
___ 4	EE 4430	Power Electronics & Electrical Machines ( <b>F Odd Years</b> )	High
___ 4	EE 4440	Electric Motor Drives ( <b>Fall Even Years</b> )	High
___ 4	EE 4450	Power Systems Analysis & Design ( <b>Spring</b> )	High
___ 1-4	EE 4980	Current Topics in EE	-----
___ 1-3	EE 4990	Independent Study	-----

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## General Education Requirements – Associate Degree

Minimum of 60 credits required. Cumulative 2.0 GPA required.  
 At least 24 of the 60 credits must be completed within the UW Colleges system or at least 12 of the last 24 must be earned within the UW Colleges system.

**Core Requirements:** Grade of C or better or exemption from the following

- \_\_\_ 3 English 102
- \_\_\_ 3 Math 108 or 110

## Breadth Categories:

**Humanities/Fine Arts** – Minimum of 9 credits (1 Humanities & 1 Fine Arts)

**\*PHI 237 satisfies PHIL 2540 requirement**

- \_\_\_ 3 FA \_\_\_\_\_
- \_\_\_ 3 HU/\*PHI 237 \_\_\_\_\_
- \_\_\_ 3 HU or FA \_\_\_\_\_

**Math and Natural Science** – Minimum of 11 credits  
 (8 credits of NS in 2 disciplines including one lab course)

- \_\_\_ \_\_\_ LS \_\_\_\_\_
- \_\_\_ \_\_\_ NS/LS \_\_\_\_\_
- \_\_\_ \_\_\_ NS/LS/MS \_\_\_\_\_

**Social Science** – Minimum of 9 credits (At least 2 disciplines)

- \_\_\_ \_\_\_ SS \_\_\_\_\_
- \_\_\_ \_\_\_ SS \_\_\_\_\_
- \_\_\_ \_\_\_ SS \_\_\_\_\_

**Application/Performance** – Minimum of 3 credits

**\*Note: EGR 105 satisfies IS & AP requirement**

- \_\_\_ \_\_\_ AP \_\_\_\_\_
- \_\_\_ \_\_\_ AP \_\_\_\_\_
- \_\_\_ \_\_\_ AP \_\_\_\_\_

Note: Courses used to complete Breadth Requirements may also be used to satisfy Interdisciplinary or Ethnic Studies Requirements.

**Interdisciplinary Studies** – Minimum of 3 credits (not included in credit total if counted in other breadth area)

\_\_\_ \_\_\_ IS \_\_\_\_\_

**Ethnic Studies** – Minimum of 3 credits (not included in credit total if counted in other breadth area)

\_\_\_ \_\_\_ ES \_\_\_\_\_

**Electives:** A student who has met the Core Requirements & other Breadth Category minima may complete the 60 credit requirement with Elective courses.

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**Total Credits Earned = \_\_\_\_\_ (60 required)**

Associate Degree application submitted: \_\_\_\_\_

Waiver submitted: \_\_\_\_\_