

TRANSFER EVALUATION AND CHECK-OFF FORM  
ELECTRICAL ENGINEERING PROGRAM

SEMESTER 1 (15 cr)	MU CR	TR CR	GR	COMMENT
EECE 1953	1			
GEEN 1200	3			
ENGL 1001 or ESSV1	3			MCC
MATH 1450	4			
PHYS 1003	4			
<b>SEMESTER 3 (19 cr)</b>				
EECE 2010	3			
EECE 2015	1			
EECE 2710	3			
GEEN 2952	1			
CHEM 1001	4			
MATH 2450	4			
PHIL 1001 or THEO 1001	3			MCC
<b>SEMESTER 5 (17 cr)</b>				
EECE 3010	3			
EECE 3015	2			
ELEN 3020	3			
ELEN 3110	3			
CORE 1929				MCC
DSCV <sup>1,2</sup>				MCC
<b>SEMESTER 7 (17 cr)</b>				
ELEN 3035	2			
ELEN 4920	3			
EE Elective <sup>3</sup>	3			
EE Elective <sup>3</sup>	3			
EE Elective <sup>3</sup>	3			
DSCV <sup>1,2</sup>	3			MCC

SEMESTER 2 (18 cr)	MU CR	TR CR	GR	COMMENT
EECE 1610	3			
EECE 1954	1			
GEEN 1210	3			
ENGL 1001 or ESSV1	3			MCC
MATH 1451	4			
PHYS 1004	4			
<b>SEMESTER 4 (17 cr)</b>				
EECE 2030	3			
EECE 2035	1			
ELEN 2020	3			
ELEN 2040	3			
MATH 2451	4			
PHIL 1001 or THEO 1001	3			MCC
<b>SEMESTER 6 (17 cr)</b>				
ELEN 3025	2			
ELEN 3030	3			
EE Elective <sup>3</sup>	3			
EE Elective <sup>3</sup>	3			
MATH 4720	3			
DSCV <sup>1,2</sup>	3			MCC
<b>SEMESTER 8 (15 cr)</b>				
ELEN 4998	3			
EE Elective <sup>3</sup>	3			
SCI/MATH Elec <sup>4</sup>	3			
CORE 4929	3			
DSCV <sup>1,2</sup>	3			MCC
<b>TOTAL CREDITS</b>	<b>135</b>			

MCC Requirement	Course No.	EE Electives	Course No.	Course No.	Course No.
1. DSCV		Electronic Devices & Systems			
2. DSCV		Signals, Systems & Control			
3. DSCV		EM & Communications			
4. DSCV		Power & Energy			
5. WRIT <sup>2</sup>		Computer HW & SW			
6. ESSV2 <sup>2</sup>		Other Tech elective			

**DEGREE REQUIREMENTS INCLUDE:**

- Every required course
- Approved elective program.
- A "C" (2.0) or more average at Marquette
- A "C" (2.0) or more average in Engineering courses
- A minimum of 135 semester hours
- No course may be taken for credit without the required prerequisite(s)
- All substitutions and/or departures from stated curriculum must be approved in writing in advance

**Notes:*****Marquette Common Core (MCC)***

(1) The four courses in the Discovery Tier (DSCV) of the MCC must be completed in the same theme and include the following content areas: Humanities (HUM), Social Science (SSC), Natural Science and Mathematics (NSM) and one elective (ELE), which is an additional course from any of the three content areas. A maximum of two courses in the Discovery Tier can apply towards a primary major.

(2) Students must also complete the Writing Intensive (WRIT) and Engaging Social System and Values 2 (ESSV2) requirements of the MCC. These requirements can be fulfilled through designated courses in the Discovery Tier or other degree requirements.

***Electrical Engineering Major***

(3) The six EE Electives must satisfy both a breadth and a depth requirement. To satisfy the breadth requirement, the student must take EE electives in at least three of the following five areas: Electronic Devices and Systems; Signals, Systems and Control; Electromagnetic Fields and Communication; Power and Energy Systems; and Computer Hardware and Software. To satisfy the depth requirement, the student must take at least three EE electives in one of the aforementioned areas. A course listed in two concentration areas may be counted toward only one elective.

(4) The science/math elective can be fulfilled with any upper division math or physics course (except PHYS 4031 Electricity and Magnetism 1) or any biology or chemistry course for which the prerequisite requirements are met.

## Elective Choices

**The breadth requirement:** Students must choose at least one course from at least 3 different concentration areas.

**The depth requirement:** Students must choose at least 3 courses from one concentration area.

**Courses listed in multiple concentration areas count in ONLY one concentration area.**

Concentration areas:

Electronic Devices and Systems		
	EECE 4410	Integrated Microelectronic Circuits
	EECE 4740	Advanced VHDL and FPGA Design
	ELEN 4430	Physical Principles of Solid State Devices
	ELEN 4450	Surface Acoustic Wave Devices and Systems
	ELEN 4460	Sensor Devices: Theory, Design, and Application
	ELEN 4490	Developments in Devices
	ELEN 4565	Optical Fiber Communications
Signals, Systems and Control		
	ELEN 4310	Control Systems
	ELEN 4320	Digital Control Systems
	ELEN 4390	Developments in Control
	EECE 4510	Digital Signal Processing
	ELEN 4550	Developments in Signal Processing
	ELEN 4560	Introduction to Communication Systems
	ELEN 4565	Optical Fiber Communications
	ELEN 4590	Developments in Communications
Electromagnetic Fields and Communication		
	ELEN 3120	Electromagnetic Fields 2
	ELEN 4110	Microwave Engineering
	ELEN 4130	Antenna Theory and Design
	ELEN 4150	Applied Finite Elements in Electromagnetics
	ELEN 4190	Developments in Electromagnetics
	EECE 4510	Digital Signal Processing
	ELEN 4560	Introduction to Communication Systems
	ELEN 4565	Optical Fiber Communications
	ELEN 4570	Wireless Communications
	ELEN 4590	Developments in Communications
Power and Energy Systems		
	ELEN 3210	Electric Drives
	ELEN 4210	Design & Analysis of Electric Motor Drive Systems
	ELEN 4220	Power Electronics for Renewable Energy Systems
	ELEN 4230	Renewable and Legacy Electric Energy Systems Analysis
	ELEN 4240	Protection & Monitoring of Electric Energy Systems
	ELEN 4250	Transients in Electric Energy Systems and Devices
	ELEN 4290	Developments in Energy and Power
Computer Hardware & Software		
	COEN 4620	Modern Programming Practices
	COEN 4630	Software Testing
	COEN 4710	Computer Hardware
	COEN 4720	Embedded Systems Design
	COEN 4730	Computer Architecture
	COEN 4810	Database Applications
	COEN 4820	Operating Systems and Networking
	COEN 4830	Introduction to Computer Graphics
	COEN 4840	Computer Security
	COEN 4850	Introduction to Intelligent Systems
	COEN 4860	Introduction to Neural Networks and Fuzzy Systems
	COEN 4870	Evolutionary Computation
	EECE 4410	Integrated Microelectronic Circuits
	EECE 4740	Advanced VHDL and FPGA Design