

UND B.S. In Electrical Engineering Curriculum Requirements

STUDENT:		STUDENT ID:		PDP <input type="checkbox"/>	Catalog 2011-2013	On-Campus <input type="checkbox"/>
STUDENT EMAIL:		Phone #:		Admit Date:	Year:	Grad Date:
Fr. Advisor:		So. Advisor:		Jr. Advisor:		Sr. Advisor:
Updated by/on:		Updated by/on:		Updated by/on:		Updated by/on:
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REQUIREMENTS: 136 credits / 60 cr. in a 4-yr. institution / 36 hrs. of 300 level courses or above / Last 30 cr. hrs. must be at UND / Min. 2.0 GPA

<p>UND ESSENTIAL STUDIES - Refer to UND Catalog for course listing.</p> <p>I. SPECIAL EMPHASIS (12 credits):</p> <p>A = Advanced Communications (3 cr.) Approved: EE 480 Senior Design I</p> <p>Q = Quantitative Reasoning (3 cr.) Approved: CHEM 121/121L</p> <p>G = Global Diversity (3 cr.)</p> <p>U = United States (3 cr.)</p>	<p>TRANSFER COURSE EQUIVALENCY (List Institution/College Attended):</p> <table border="1" style="width: 100%; height: 40px;"> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> </table>			

II. COMMUNICATION = 9 cr. minimum (ENGL 110; ENGL 120 or 125; & 3 oral) O = Oral Communications (3 cr)- EE 481

UND COURSE	UND COURSE TITLE	CR	ES	TERM	GRADE	COURSE	COURSE TITLE	CR	INSTITUTION
ENGL 110	College Composition I	3							
ENGL 125	Technical & Business Writing	3							
or ENGL 120	College Composition II	3							
EE 481	Senior Design II	3	O						
*									

III. SOCIAL SCIENCE = 9 cr. minimum (minimum of 2 depts.)

UND COURSE	UND COURSE TITLE	CR	ES	TERM	GRADE	COURSE	COURSE TITLE	CR	INSTITUTION
ENGR 460	Engineering Economy	3							
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IV. ARTS & HUMANITIES = 9 cr. Minimum (3 cr. in Fine Arts (FA) & 3 cr. in Humanities)

UND COURSE	UND COURSE TITLE	CR	ES	TERM	GRADE	COURSE	COURSE TITLE	CR	INSTITUTION
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V. MATHEMATICS, SCIENCE & TECHNOLOGY = 9 cr. minimum (minimum of 2 depts. & must include a 4 hour science course w/a lab)

UND COURSE	UND COURSE TITLE	CR	ES	TERM	GRADE	COURSE	COURSE TITLE	CR	INSTITUTION
MATHEMATICS (18 cr.)									
MATH 165	Calculus I	4							
MATH 166	Calculus II	4							
MATH 265	Calculus III	4							
MATH 266	Elem. Differential Equations	3							
MATH 207	Intro to Linear Algebra	2							
CHEMISTRY (4 cr.)									
CHEM 121/121L	General Chemistry I/Lab	3/1	Q						
PHYSICS (8 cr.)									
PHYS 251/251L	University Physics I/Lab	4							
PHYS 252/252L	University Physics II/Lab	4							
*									

NOTES:	<p>(!) 3 Credits for A&H or SS may be satisfied by the Ethics course of your choice. Ethics Option: ChE 340, ME 370 or Phil 250 (W) C - Capstone Course</p> <p>(*) This course will not count towards your degree until successfully petitioned to the appropriate UND Department and the UND Registrar's Office. 11/18/10</p>
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GENERAL, ENGINEERING SCIENCE & ELECTRICAL ENGINEERING SCIENCE DESIGN REQUIREMENTS

UND COURSE	UND COURSE TITLE	CR	ES	TERM	GRADE	COURSE	COURSE TITLE	CR	INSTITUTION
ENGR 101(W)	Graphical Communications-F,S	3							
ENGR 201	<u>Statics – F,S</u>	3							
EE 101 (W)	Intro to Electrical Engr (F,S)	1							
EE 201 (W)	<u>Intro Digital Electronics(F,S)</u>	2							
EE 202 (W)	<u>EE Laboratory (F,S)</u>	1							
EE 206	<u>Circuit Analysis (F,S)</u>	3							
EE 304 (W)	<u>Computer Aided Meas. (F)</u>	3							
EE 306	<u>Circuits Laboratory I (F,S)</u>	1							
EE 307	<u>Circuits Laboratory II (F,S)</u>	1							
EE 308	<u>Junior Laboratory I (F)</u>	2							
EE 309	<u>Junior Laboratory II (F)</u>	2							
EE 313	<u>Linear Electric Circuits (F,S)</u>	3							
EE 314	<u>Signals and Systems (F)</u>	3							
EE 316	<u>Electric & Magnetic Fields (F)</u>	3							
EE 318	<u>Engr. Data Analysis (F)</u>	3							
EE 321	<u>Electronics I (F)</u>	3							
EE 401	<u>Electric Drives (S)</u>	3							
EE 405	<u>Control Systems I (S)</u>	3							
EE 409	<u>Distributed Networks (S)</u>	3							
EE 421	<u>Electronics II (S)</u>	3							
EE 452	<u>Embedded Systems (S)</u>	3							
EE 480	<u>Senior Design I (F,S)</u>	3	A/C						
EE 481	<u>Senior Design II(F,S)</u>	3	O						
	<u>Basic/App. Science Elective</u>	3							
	<u>Engineering Science Elective</u>	3							
	Engineering Science Elective	3							
	<u>EE Elective</u>	3							
	EE Elective	3							
	EE Elective	3							
‡	Technical Elective (W)	3							
‡	Technical Elective (W)	3							

Note: W means that these course can be waived by completing Engr 102 - Professional Assessment & Evaluation.

NOTES: (‡) Technical Electives.

TOTAL CREDITS:

Overall G.P.A:

**I certify that the student named on this contract meets the requirements for a degree of
BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING (BSEE).**

Chair, Electrical Engineering

Date

Dean, School of Engineering and Mines

Date

- [1] EE 101 - Intro to EE may be waived for transfer students (substitute science credit required).
- [2] To meet the University's Essential Studies Breadth of Knowledge requirements, all students must complete 9 credits of Arts & Humanities Electives (minimum of 2 departments, including 3 Fine Arts credits and 3 Humanities credits) and 9 credits of Social Sciences Electives (minimum of 2 departments). Refer to the online Academic Catalog for a listing of acceptable Essential Studies courses.
- [3] To meet the University's Essential Studies Social-Cultural Diversity requirements, all students must complete 3 credits of Global (G) Diversity Electives and 3 credits of United States (U) Diversity Electives. Refer to the online Academic Catalog for a listing of acceptable Essential Studies G and U Diversity Electives.
- [4] Engineering Science Elective choices:
Engr 202 Dynamics,
Engr 203 Mechanics of Materials,
ME 301 Materials Science,
ME 306 Fluid Mechanics,
ME 341 Thermodynamics.
- [5] Math Elective choices:
Math 207 Intro to Linear Algebra
and other Math courses 300 level or higher with approval of instructor and advisor.
- [6] EE 480 Senior Design I meets the Essential Studies Special Emphasis requirements for Advanced Communication (A) and Senior Capstone (C) – Pre-requisite: Senior standing with approval of advisor.
- [7] EE 481 Senior Design II meets the Essential Studies Special Emphasis requirement for Oral Communication (O).
- [8] Basic or Applied Science Elective choices:
Avit 421 Advanced Aerodynamics,
Chem 122/122L General Chemistry II,
Phys 253/253L University Physics III,
SpSt 500 Introduction to Orbital Mechanics,
Physics courses 300 level or higher with approval of instructor and advisor.
Three or four credits, depending on whether the class has a corequisite laboratory.
- [9] Maximum of three credits of EE 490 EE Problems allowed as an independent study, applicable to both EE and Technical Electives.
- [10] The Ethics Elective is a 3-credit course that meets Essential Studies requirements in either the Arts & Humanities or the Social Sciences. Ethics Elective choices:
Phil 370 Ethics in Engineering & Science (A&H, Humanities),
ChE 340 The Role of Engineers and Applied Scientists in a Global Society (SS),
ME 370 Engineering Disasters & Ethics (SS).
- [11] Technical Elective choices: Computer Science, Engineering (including EE), Math, and Physics courses approved by advisor, normally 300 level or higher.
CSci 242 Algorithms and Data Structures,
CSci 260 Advanced Programming Languages,
Math 208 Discrete Mathematics are permitted.
EE 397 Cooperative Education is only applied toward the Technical Electives with S/U grading, 6 credits maximum.

