

Department of Physics | Engineering Dual Degree Curriculum
 Example Course Plan for B.A. in Physics + B.S. in Electrical Engineering from UNC

ADRIAN COLLEGE
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 Adrian, MI 49221
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First Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
CCC 100	Introduction to College Writing	3	AC	
MATH 135	Calculus I ¹	4	AC	
CHEM 105/117	General Chemistry I & Lab	4	AC	
GCON XXX	Great Conversation Course	3	AC	
GCON XXX	Great Conversation Course	3	AC	

Second Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
MATH 215	Calculus III	4	AC	MATH205
PHYS 202/204	General Phys: Therm. & Electromagnetics/Laboratory ²	4	AC	PHYS201, PHYS202
EE 221/L	Electric Circuits I / Laboratory	4	UND	MATH135
CSCI 160	Computer Science I ³	4	UND	

Third Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
PHYS 375	Quantum Physics	3	AC	
XXX XXX	Linear Algebra ⁴	3	AC or UND	MATH135
EE 360	Signals and Systems	3	UND	EE222, MATH305
EE 330	Electric and Magnetic Fields ⁵	3	UND	EE222, MATH305, PHYS202
EE 321/L	Electronics I / Laboratory	4	UND	EE222/L

Fourth Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
PHYS 3XX/4XX	Elective	3	AC	
PHYS 3XX/4XX	Elective	3	AC	
GCON XXX	Great Conversation Course	3	AC	
EE 385	Engineering Data Analysis	3	UND	EE221/EE222
EE 492	Senior Design I	3	UND	EE321/L, EE330, EE360, EE392

Fifth Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
PHIL 304	Ethics	3	AC	
GCON XXX	Great Conversation Course	3	AC	
EE XXX	Approved EE Elective	3	UND	
EE XXX	Approved EE Elective	3	UND	
ENGR 460	Engineering Economy	3	UND	MATH135

First Year Spring				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
CCC 102	Public Speaking	3	AC	
MATH 205	Calculus II ¹	4	AC	MATH135
PHYS 201/203	General Physics: Mechanics/ Laboratory ²	4	AC	MATH135/ MATH205
EE 101	Intro. to Electrical Engineering	3	UND	
EE 111/L	Digital Circuits/ Laboratory	4	UND	

Second Year Spring				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
MATH 305	Differential Equations	3	AC	MATH205
GCON XXX	Great Conversation Course	3	AC	
EE 211	Embedded Systems	3	UND	EE111/L, CSCI 160
EE 222/L	Electric Circuit II / Laboratory	4	UND	EE221/L
EE 292	Sophomore Design	3	UND	EE 101, EE 111/L

Third Year Spring				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
PHYS 385	20 th Century Physics	3	AC	
PHYS 424	Junior Physics Lab (WID/EXP)	3	AC	
EE 301	Electric Drives	3	UND	EE360
EE 322	Electronics II	3	UND	EE360, EE321
EE 392	Junior Design	3	UND	EE211, EE222/L, EE292

Fourth Year Spring				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
PHYS 3XX/4XX	Elective	3	AC	
PHYS 454	Capstone: Senior Project	1	AC	
EE XXX	Approved EE Elective	3	UND	
EE 331	Electromagnetic Waves ⁶	3	UND	EE330
EE 350	Fundamentals of Control	3	UND	EE360, MATH305
EE 493	Senior Design II	3	UND	EE492

Notes				
¹ Math 135 and MATH 205 combine for equivalency to MATH 165 and 166 at UND.				
² PHYS 201, 202, 203, & 204 satisfies UND's PHYS 251 and PHYS 252 requirement.				
³ UND's CSCI 160 substitutes for AC's CS103.				
⁴ Student can either take MATH303 at AC or MATH207 at UND.				
⁵ UND's EE330 substitutes for AC's PHYS403				
⁶ UND's EE331 substitutes for PHYS301/303				