

# Curriculum Map – Physics Area – Engineering Physics (Electrical)

NOTE: This curriculum map assumes that students have not transferred in any previously completed college level courses.

**All baccalaureate degree seeking students must complete a minimum of 33 hours of general education courses which includes:**

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| FYS 101 – First Year Seminar                   | ENG 100 – Writing I  |
| MATH 123, 131, 135, 152, 174 or 175*           | ENG 200 – Writing II   |
| COMS 108 – Fund. Of Speech Communication       | Knowledge – Natural Science (NSC; select 2)                    |
| Knowledge – Arts & Humanities (HUM)            | Global Cultures – Arts & Humanities (HUM)                      |
| Knowledge – Social & Behavioral Sciences (SBS) | Ethics & Civil Engagement – Social & Behavioral Sciences (SBS) |

The approved NSC, HUM, and SBS course list is located in the current MSU Undergraduate Catalog.

\*If applicable, specific mathematics course required for degree shown below.

FIRST YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	CHEM 111/L Principles of Chemistry I (Level 2 NSC)	R	4			CHEM 112/L Principles of Chemistry II	R	4	
	MATH 175 Calculus I	G/R	4			ENG 100 Writing I	G	3	
	EEC 241 Circuit Analysis	R	3			EEC 242 Principles of Electronic Communications	R	3	
	PHYS 105 Intro to Physics & Engineering Professions	R	1			PHYS 181 Introduction to Scientific Computing	R	3	
	FYS 101 First Year Seminar	G	3			MATH 275 Calculus II	R	4	
<b>Total Credit Hours</b>				<b>15</b>	<b>Total Credit Hours</b>				<b>17</b>

SECOND YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	MATH 276 Calculus III	R	4			MATH 363 Differential Equations	R/U	3	
	PHYS 231/L Engineering Physics I	R	5			PHYS 232/L Engineering Physics II	R	5	
	ENG 200 Writing II	G	3			COMS 108 Fundamentals of Speech	G	3	
	Level 2 NSC	G	3			EEC 342 Elec Devices & Circuits	R/U	3	
<b>Total Credit Hours</b>				<b>15</b>	<b>Total Credit Hours</b>				<b>14</b>

THIRD YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	PHYS 353 Concepts of Modern Physics I	R/U	4			PHYS 354 Concepts of Modern Physics II	R/U	3	
	PHYS 340 Experimental Physics	R/U	3			PHYS 361 Fundamentals of Electronics	R/U	3	
	Level 2 SBS	G	3			Level 2 HUM	G	3	
	PHYS 481 Mathematics for Scientists & Engineers	R/U	3			PHYS 381 Computer Solutions to Engineering & Science Problems	R/U	3	
	PHYS 211 Circuits	R	3			PHYS 411 Thermodynamics	R/U	3	
<b>Total Credit Hours</b>				<b>16</b>	<b>Total Credit Hours</b>				<b>15</b>

FOURTH YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	PHYS 499C Cap & Senior Thesis I	U	2			PHYS 499D Cap & Senior Thesis II	U	1	
	Level 3 SBS	G	3			Level 3 HUM	G	3	
	MATH 353 Introduction to Statistics	R/U	3			PHYS 332 Electricity and Magnetism	R/U	4	
	Free Elective	E	3			EMM 203 Computer Aided Design I	R	3	
	Free Elective	E/U	3			PHYS 412 Light and Physical Optics	R/U	3	
<b>Total Credit Hours</b>				<b>14</b>	<b>Total Credit Hours</b>				<b>14</b>

(E) Elective,  
(P) Pre-requisite

(G) General Education Course  
(R) Required Course

(S) Supplemental  
(U) Upper Division Course 300-400 level (you must have 42 hours)