

Curriculum Map – Physics Area (MSU Teach Track)

Effective Fall 2020

NOTE: If you are required to complete any developmental courses, you may not be able to complete the degree in four years. This curriculum map assumes that you have not transferred in any previously completed college level courses.

All students must have 36 hours of general education courses which include:

| | |
|--|---------------------------|
| FYS – First Year Seminar | ENG 100 – Core Writing I |
| COMS 108 – Fund. Of Speech Communication | ENG 200 – Core Writing II |
| MATH 131, 135, 152, 174 or 175 - CORE Math | Capstone |

One 3 credit hour course from each of the following categories

| | | |
|--------|--------|--------|
| HUM I | SBS I | NSC I |
| HUM II | SBS II | NSC II |

The approved course list may be accessed through the current MSU Undergraduate Catalog.

| FIRST YEAR COURSE SCHEDULE | | | | | | | | | |
|----------------------------|--|------|---------------------------|--|---|--|------|---------------------------|----|
| ✓ | Fall Semester | Code | Credits | | ✓ | Spring Semester | Code | Credits | |
| | PHYS 105 Introduction to Physics & Engineering Professions | R | 1 | | | PHYS 181 Introduction to Scientific Computing | R | 3 | |
| | CHEM 111/111L Principles of Chemistry I & Lab | R | 4 | | | CHEM 112/112L Principles of Chemistry II & Lab | R | 4 | |
| | UTCH 100 Step I | R | 1 | | | UTCH 150 Step 2 | R | 1 | |
| | ENG 100 Writing I | G | 3 | | | ENG 200 Writing II | G | 3 | |
| | MATH 175 Calculus I | G | 4 | | | MATH 275 Calculus II | R | 4 | |
| | FYS 101 First Year Seminar | G | 3 | | | COMS 108 Fundamentals of Speech | G | 3 | |
| | | | Total Credit Hours | | | | | Total Credit Hours | 18 |

| 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 231/231L Engineering Physics I & Lab | R | 5 | | | PHYS 232/232L Engineering Physics II & Lab | R | 5 | |
| | HUM I Humanities - Elective | G | 3 | | | SBS I Social/Behavioral Sciences - Elective | G | 3 | |
| | NSC I Natural Sciences - Elective | G | 3 | | | NSC II ASTR 112 Intro to Astronomy | G | 3 | |
| | UTCH 200 Knowing and Learning in Mathematics and Science | R | 3 | | | UTCH 250 Perspectives on Science and Mathematics | R | 3 | |
| | | | Total Credit Hours | | | | | Total Credit Hours | 17 |

| 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 412 Light and Physical Optics | R/U | 3 | |
| | SBS II Social/Behavioral Sciences - Elective | G | 3 | | | PHYS 499C Senior Thesis I | G/U | 2 | |
| | HUM II Humanities - Elective | G | 3 | | | UTCH 315 Functions and Modeling | R/U | 3 | |
| | UTCH 300 Classroom Interactions | R/U | 3 | | | PHYS 350 Nuclear Science | R/U | 4 | |
| | | | Total Credit Hours | | | | | Total Credit Hours | 15 |

| FOURTH YEAR COURSE SCHEDULE | | | | | | | | | |
|-----------------------------|---|------|---------------------------|--|---|------------------------------|------|---------------------------|----|
| ✓ | Fall Semester | Code | Credits | | ✓ | Spring Semester | Code | Credits | |
| | PHYS 381 Computer Solutions | R/U | 3 | | | UTCH 450 Apprentice Teaching | R/U | 12 | |
| | UTCH 400 Research Methods | R/U | 3 | | | | | | |
| | UTCH 350 Project Based Instruction | R/U | 3 | | | | | | |
| | PHYS 481 Mathematics for Scientists & Engineers | R/U | 3 | | | | | | |
| | PHYS 499D Senior Thesis II | G/U | 1 | | | | | | |
| | | | Total Credit Hours | | | | | Total Credit Hours | 12 |

(E) Elective (G) General Education Course (P) Pre-requisite (R) Required Course
 (U) Upper Division Course 300-400 level (you must have 42 hours)