

Curriculum Map – Physics Area (Astrophysics 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	
	FYS 101 First Year Seminar	G	3			ENG 100 - Writing I	G	3	
	CHEM 111/111L Principles of Chemistry I & Lab	R	4			CHEM 112/112L Principles of Chemistry II & Lab	R	4	
	NSC 2 ASTR 125 (Exchange)	G	3			PHYS 181 Introduction to Scientific Computing	R	3	
	PHYS 105 Introduction to Physics & Engineering Professions	R	3			ASTR 130 Stars, Galaxies, and Cosmology	R	3	
	MATH 175 Calculus I	G/R	4			COMS 108 Fundamentals of Speech Comm.	G	3	
			Total Credit Hours					Total Credit Hours	16

SECOND YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	MATH 275 Calculus II	R	4			MATH 276 Calculus III	R	4	
	PHYS 231/231L Engineering Physics I & Lab	R	5			PHYS 232/232L Engineering Physics II & Lab	R	5	
	ESS 303 Planetary Geology	R/U	3			HUM 1 Humanities - Elective	G	3	
	SBS 1 Social/Behavioral Sciences - Elective	G	3			ENG 200 Writing II	G	3	
			Total Credit Hours					Total Credit Hours	15

THIRD YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	ASTR 311 Astrophysics I	R/U	3			ASTR 312 Astrophysics II	R/U	3	
	PHYS 353 Concepts of Modern Physics I	R/U	4			MATH 363 Differential Equations	R/U	3	
	Technical Elective	R/U	3			NSC I – Natural Sciences - Elective	G	3	
	PHYS 481 Math for Eng. And Sci.	R/U	3			ASTR 324 Radio Astronomy	R/U	3	
	SBS 2 Social/Behavioral Sciences - Elective	G	3			PHYS 354 Concepts of Modern Physics II	R/U	3	
			Total Credit Hours					Total Credit Hours	15

FOURTH YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	PHYS 391 Dynamics	R/U	3			PHYS 332 Electricity and Magnetism	R/U	4	
	PHYS 381 Comp. Solns. to Engineering and Science Prob.	R/U	3			ASTR 460 High Energy Astrophysics	R/U	3	
	ASTR 499C Senior Thesis I	G/U	2			ASTR 499D Senior Thesis II	G/U	1	
	PHYS 340 Experimental Physics	R/U	3			ASTR 431 Space Plasma Physics	R/U	3	
	HUM 2 Humanities - Elective	G	3			PHYS 493 Quantum Mechanics	R/U	3	
			Total Credit Hours					Total Credit Hours	14

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