

# Curriculum Map – Physics Area – Astrophysics Track 2021+ Odd Year

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:**

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	
	FYS 101 First Year Seminar	G	3			ENG 200 Writing II	G	3	
	CHEM 111/111L Principles of Chemistry I (Level 2 NSC)	R, G	4			CHEM 112/112L Principles of Chemistry II	R	4	
	ASTR 125 Astronomical & Phys Methods (Level 2 NSC)	R, G	3			PHYS 181 Intro to Scientific Computing	R	3	
	PHYS 105 Intro to Physics & Engineering Professions	R	1			ASTR 130 Stars, Galaxies, and Cosmology	R	3	
	MATH 175 Calculus I*	R, G	4			COMS 108 Fundamentals of Speech Communication	G	3	
	ENG 100 Writing I	G	3						
<b>Total Credit Hours</b>				<b>18</b>	<b>Total Credit Hours</b>				<b>16</b>

SECOND YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	MATH 275 Calculus II	R	4			MATH 276 Calculus II	R	4	
	PHYS 231/231L Engineering Physics I	R	5			PHYS 232/232L Engineering Physics II	R	5	
	Level 2 HUM	G	3			Level 3 HUM	G	3	
	Level 2 SBS	G	3			Level 3 SBS	G	3	
<b>Total Credit Hours</b>				<b>15</b>	<b>Total Credit Hours</b>				<b>15</b>

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 Modern Physics I	R, U	4			MATH 363 Differential Equations	R, U	3	
	Technical Elective	U	3			ESS 303 Planetary Geology	R, U	3	
	PHYS 481 Math for Eng & Sci	R, U	3			ASTR 324 Radio Astronomy	R, U	3	
						PHYS 354 Modern Physics II	R, U	3	
<b>Total Credit Hours</b>				<b>13</b>	<b>Total Credit Hours</b>				<b>15</b>

FOURTH YEAR COURSE SCHEDULE									
✓	Fall Semester	Code	Credits		✓	Spring Semester	Code	Credits	
	PHYS 391 Dynamics	R, U	3			PHYS 332 Electricity & Magnetism	R, U	4	
	PHYS 381 Computer Solns to Engineering & Sci Problems	R, U	3			ASTR 460 High Energy Astrophysics	R, U	3	
	PHYS 340 Experimental Phys	R, U	3			ASTR 431 Space Plasma Physics	R, U	3	
	Free Elective	U	3			PHYS 493 Quantum Mechanics	R, U	3	
	PHYS 499C Senior Thesis I	R, U	2			PHYS 499D Senior Thesis II	R, U	1	
<b>Total Credit Hours</b>				<b>14</b>	<b>Total Credit Hours</b>				<b>14</b>

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

Revised: 10/26/2021