UNDERGRADUATE AND PROFESSIONAL MAJOR CHANGE BULLETIN NO. 9

Spring 2023

--REQUIREMENTS—

Faculty Senate approved February 16, 2023

The requirements listed below reflect the undergraduate major curricular changes approved by the Catalog Subcommittee since approval of the last Undergraduate Major Change Bulletin. All changes are underlined. Deletions are crossed out. The column to the far right indicates the date each change becomes effective. Note: Items marked **{S}** have been streamlined and do not require Catalog Subcommittee review.

Department	Proposed	Effective Date
History Revise graduation requirements for BA in History - Education Option	**History - Education Option (129 Credits)** Students who wish to earn a teaching credential must apply to the Teacher Preparation Program in the College of Education. They should consult with an advisor in history about choosing additional electives that may apply toward a minor or second major and that complements a History endorsement. To be admitted to the History - Education option, a student must make their intention known to the department and have earned at least a 2.5 cumulative GPA. A grade of C or better is required in all history courses used to fulfill the requirements for this degree. **First Year** ***First Term*** ***Credits*** Biological Sciences [BSCI] with lab[1] 4 HISTORY 101 [HUM] 3 HISTORY 105 [ROOT] 3 Quantitative Reasoning [QUAN] 3 or 4 ***Second Term*** ***Credits*** ECONS 102 [SSCI] or POL S 101 [SSCI] 3 ENGLISH 101 [WRTG] 3 HISTORY 102 3 HISTORY 121 3 Physical Sciences [PSCI] with lab[1] 4 **Second Year** ***First Term*** ***Credits***	**8-23**

Arts [ARTS] (Non-History)[2]	3	
ECONS 102 [SSCI] or POL S 101 [SSCI]	3	
ENGLISH 201 [WRTG], 301 [WRTG], 302 [M], or 402 [WRTG][3]	3	
HISTORY 110	3	
HISTORY 308 or 410	3	
Second Term	***Credits***	
200-level HISTORY course[4]	3	
HISTORY 111	3	
HISTORY 120	3	
HISTORY 279	3	
Complete Writing Portfolio		
Third Year		
First Term	***Credits***	
300-400-level HISTORY courses[5]	6	
HISTORY 300 [M]	3	
TCH LRN 301	3	
Equity and Justice [EQJS]	3	
Foreign Language, if needed[6]	0 - 4	
Second Term	***Credits***	
300-400-level HISTORY course[5]	6	
HISTORY 324 or 380	3	
HISTORY 469 [M]	3	
~~Integrative Capstone [CAPS]~~	~~3~~	
Foreign Language, if needed[6]	0 - 4	
Third Term	***Credits***	
TCH LRN 317 (Summer Session)	2	
Fourth Year		
First Term	***Credits***	
Diversity [DIVR] (Non-History)[2]	3	
~~HISTORY 469 [M]~~	~~3~~	
Integrative Capstone [CAPS]	3	
TCH LRN 464	3	
TCH LRN 465	3	
TCH LRN 466	2	
Second Term	***Credits***	
ED PSYCH 468	3	
HISTORY 324 or 380	3	

	TCH LRN 467 [M] 3 TCH LRN 469 2 - 3 TCH LRN 470 3 **Fifth Year** ***First Term*** ***Credits*** TCH LRN 415 16 Complete History Department's Exit Survey Footnotes [1] To meet University and College of Arts and Sciences requirements, students must take a [BSCI] course with lab and [PSCI] course with lab. [2] Only 3 HISTORY courses may be used to meet UCORE requirements. [3] One from ENGLISH 201, 301, 302, or 402 is required for admission to the Teacher Education Program. Students who take ENGLISH 302 will need to take an additional [WRTG] or [COMM] course. [4] 200-level HISTORY course: Choose one from HISTORY 230, 232, 270, 271, 272, 273, 274, or 275. [5] History education majors must choose their 12 hours of 300-400-level electives from the following: one from early U.S.: HISTORY 311, 313, 314, 316, or 415; one from Modern U.S.: HISTORY 312, 318, 319 or 417; one upper-division ~~from~~ European History course; ~~: HISTORY 340, 341, 342, 343, 344, 345, 347, 349, 350, 353, 354, 356, 359, 367, 368, 381, 382, 386, 391, 444, 448 or 463~~; and one ~~from~~ upper-division non-West History course ~~: HISTORY 291, 294, 306, 315, 325, 330, 331, 332, 333, 334, 335, 337, 339, 364, 366, 370, 371, 372, 373, 374, 377, 387, 388, 435, 436, 474, 475, 476, 483, 492, or 495~~. [6] Two years of high school foreign language or at least two semesters of college-level foreign language are required by the College of Arts and Sciences for graduation.	
History Revise requirements for minor in War and Society	**War and Society** The minor in War and Society addresses political, social, economic, and cultural impacts of war. The minor requires 18 credits, 9 of which must be taken in residence at WSU or through WSU-approved education abroad or educational exchange courses. A grade of C or better is required in all course work for the minor. Approved courses include: HISTORY 285, 316, 318, 319, 345, 349, 366, 368, 386, 387, 388, 390, 391 ~~416, 418, 419, 445, 449, 455, 464, 466, 468~~.	**8-23**
Languages, Cultures, and Race	**Japanese (120 Credits)**	**8-23**

Revise graduation requirements for BA in Foreign Languages and Cultures - Japanese major	A minimum of 34 credits beyond the 203 level (or the equivalent level in competence) in the major language is required for a Bachelor of Arts degree in Foreign Languages and Cultures. 101, 102, and 203 do not count toward the major. Students who place into 102 and receive a B or better qualify for an additional 4 departmental advanced placement credits; students placing into 203 or above and receiving a B or better qualify for 8 departmental advanced placement credits. A maximum of 8 departmental AP credits is possible. See school for details. Majors must complete either a minor in a second foreign language, a concentration of at least 16 credits in a related field, or a second major. Students are admitted to the Japanese major upon making their intentions known to the School of Languages, Cultures and Race. However, no course in which a C- or lower grade is earned will be counted toward the major. 300-400-level courses taken pass, fail may not be included for credit toward the major. No course may be repeated for credit toward the major unless thus designated in the catalog. No course may count for both the major and the minor. Majors and prospective majors are strongly encouraged to spend at least one semester abroad, living in the target culture and enhancing their fluency. Many accredited study abroad programs are available; students should work with their advisors in the selection of a program. Of the 34 credits required for the major, a minimum of 15 must be taken in residence with 6 of these credits at the 400 level. A maximum of 12 credits per semester or 18 credits per year earned in a study abroad program may be applied toward the major. Credits for 105, 205, 305, 405 may not be applied toward the major. Honors students complete the Honors College requirements which replace the UCORE requirements. All majors must complete an exit proficiency examination during the semester in which they complete the last language course of their major. There is a fee charged for the exam. **First Year** ***First Term*** ***Credits*** Biological Sciences [BSCI] with lab[1] 4 ENGLISH 101 [WRTG] 3 FOR LANG 101, 110, 120, 130, or 220 3 JAPANESE 101, 102, 203, or Elective [2] 4 JAPANESE 105 or Elective 1 ***Second Term*** ***Credits***	

	HISTORY 105 [ROOT]	3
	JAPANESE 102, 203, or Elective[2]	4
	~~JAPANESE 111, 120, 123, or 131~~	~~3~~
	Japan Related courses[2]	3
	Quantitative Reasoning [QUAN]	3
	Equity and Justice [EQJS]	3
	Second Year	
	First Term	***Credits***
	JAPANESE 203 or Elective[2]	4
	JAPANESE 205 or Elective	1
	Physical Sciences [PSCI] with lab[1]	4
	Social Sciences [SSCI]	3
	Electives[3]	3
	Second Term	***Credits***
	Arts [ARTS]	3
	Communication [COMM] or Written Communication [WRTG]	3
	Humanities [HUM]	3
	JAPANESE 204[4]	4
	JAPANESE 205 or Elective	1
	Complete Writing Portfolio	
	Third Year	
	First Term	***Credits***
	Area Studies Courses[45]	3
	~~ASIA 330 [M], CHINESE 311 [M], JAPANESE 320 [M], or JAPANESE 322 [DIVR]~~[5]	~~3~~
	JAPANESE 306, 307, 308, or 361	3
	Japan Related courses[3]	3
	Electives[3]	6
	Second Term	***Credits***
	~~ASIA 330 [M], CHINESE 311 [M], JAPANESE 320 [M], or JAPANESE 322 [DIVR]~~[5]	~~3~~
	FOR LANG 440 ~~if teaching major~~ or Electives[4]	4
	JAPANESE 305 or Elective[4]	1
	JAPANESE 306, 307, 308, or 361	3
	Japan Related courses[2]	3
	Electives	3
	Fourth Year	

	First Term ***Credits*** ~~ASIA 330 [M], CHINESE 311 [M], JAPANESE 320 [M], or JAPANESE 322 [DIVR]~~[5] ~~3~~ FOR LANG 441 ~~if teaching major~~ or 300-400-level Electives[6]3 3 JAPANESE 305 or Elective[4] 1 JAPANESE 306, 307, 308, or 361 3 Japan Related courses[2] 3 Electives[6]4 6 ***Second Term*** ***Credits*** Area Studies Courses[4]5 3 Integrative Capstone [CAPS] 3 300-400-level Electives[6]4 9 Language Proficiency Exam **Footnotes** [1] To meet University and College of Arts and Sciences requirements, students must take a [BSCI] course with lab and [PSCI] course with lab. [2] Japan Related courses: 12 credits required from JAPANESE 111, 131, 120, 123, 320 [M] and 322 [DIVR]; ASIA 275, 311, 330 [M], 374, and 377 [DIVR]; or as approved by advisor. At least 9 credits must be taken from the upper-division level. Core Language course credits (for JAPANESE 306, 307, 308, and 361) may not be used twice. Students who do not take JAPANESE 320, 322, or ASIA 377 must take another course to fulfill University Diversity [DIVR] requirement. Two Writing in the Major [M] courses are required. [3] Electives must be represented by an approved university minor in a second foreign language; 16 credits in a concentrated related field; or a second major in another field. Electives should include sufficient 300-400 level coursework to meet University requirement of 40 upper division credits. [4] Student must meet proficiency requirement to enroll in JAPANESE 204. [4]5 Area Studies courses: ~~Students must take~~ 6 credits required ~~in Japanese-related courses~~ from ~~CES 313, 314, 315, 411, and 413;~~ ASIA ~~275, 374, 387, 477, and 479; FINE ART 302; PHIL 314 and 315;~~ ASIA 302 [M], 378, 379, 387; FOR LANG 410, 440, 441; or as approved by advisor. Two Writing in the Major [M] are required.	
Mechanical and Materials Engineering Revise graduation requirements for BS in Materials Science and Engineering	**Materials Science and Engineering (123 Credits)** **Admission Requirements** To be admitted into Materials Science and Engineering major, students must have 83% or higher ALEKS placement score (MATH) or Completion of Math 106 and 108, 171 or higher calculus course with "C" or better or Calc AP score of 2. Transferring students must satisfy all of the above admission requirements. Students must earn a 2.6 GPA in transferred major courses and have earned a "C" or better in all transferred courses required for the MSE degree. **Benchmarks to Maintain Major in MSE Status** To keep their status as Materials Science Engineering majors, students must: (1) maintain 2.6 average GPA in major courses required for MSE degree, (2) obtain grade "C" of better in all courses required for MSE degree. No more	**8-23**

than one repeat per course is allowed in all ME and MSE courses required for MSE degree.

Major courses required for MSE degree include all engineering and computer science courses, in addition to ME, MSE, physics, chemistry, and math courses listed in the schedule of studies.

Graduation Requirement

Maintain a minimum 2.6 average GPA in major courses required for the ME degree. Receive a letter grade of C or better in all major courses.

Any further questions should be addressed to the Undergraduate Student Services office located in Sloan 205 or contact an MME academic advisor.

First Year

First Term	***Credits***
CHEM 105 [PSCI]	4
ENGLISH 101 [WRTG]	3
MATH 171 [QUAN]	4
ME 116	2
MSE 201	3

Second Term	***Credits***
CHEM 106	4
HISTORY 105 [ROOT]	3
MATH 172	4
MSE 202	3
Technical Elective[1]	3

Second Year

First Term	***Credits***
MATH 220	2
MATH 273	2
ME 220	1
MSE 316	3
PHYSICS 201	3
PHYSICS 211	1
UCORE Inquiry[2]	3

Second Term	***Credits***
MATH 315	3
MSE 241	3

MSE 33~~X~~1, 332, or 333[2]	3	
PHYSICS 202	3	
PHYSICS 212	1	
UCORE Inquiry[2]	3	
Complete Writing Portfolio		

Third Year

First Term	***Credits***
ECONS 102 [SSCI]	3
MSE 302	3
MSE 321	3
MSE 323	2
MSE 413	3
STAT 370	3

Second Term	***Credits***
MSE 318	3
MSE 320 [M]	3
MSE 33~~X~~ 1, 332, or 333[2]	3
Technical Elective[1]	3
UCORE Inquiry[2]	3

Fourth Year

First Term	***Credits***
ENGLISH 402 [WRTG] [M]	3
ME 312	3
ME 416 [CAPS]	3
MSE Electives[3]	6

Second Term	***Credits***
MSE 425; or MSE 488 and ENGR 489	3
MSE Elective[3]	3
Technical Elective[1]	3
UCORE Inquiry[2]	3
Complete Exit Survey	

Footnotes

[1] Technical Elective (Minimum of 9 credits, of which 3 must be upper-division or 500 level): Any upper-division CE, CH E, CHEM, CPT S, E E, MATH, ME, MSE, or PHYSICS course not used to fulfill other requirements (excluding ME 416), CE 211, and 215, EE 261, and 262, ME 212 and 216.

[2] Must complete 4 of these 5 UCORE categories: ARTS, BSCI, DIVR, EQJS, HUM.

[3] ~~MSE 33X (6 credits):~~ Choose two courses from MSE 331, 332, or 333.

	[4] MSE Elective (9 credits): Any 300, 400, or 500-level MSE course except MSE 499 not used to fulfill other requirements.	
Music Revise graduation requirements for Bachelor of Music in Music Performance - Voice Option	**Music Performance - Voice Option (120 Credits)** Requirements include: junior and senior qualifying exams; piano proficiency exam; achieve a cumulative 2.5 GPA and a grade of C or better in all music classes; junior and senior recitals. Only 9 credits of MUS courses can be used to fulfill UCORE requirements. **First Year** ***First Term*** ***Credits*** Applied MUS[1] 4 Diversity [DIVR] (Non-MUS) 3 ENGLISH 101 [WRTG] 3 MUS 181[2] 0 or 1 MUS 251[3] 3 MUS 252[3] 1 MUS 429, 430, or 431 1 ***Second Term*** ***Credits*** Applied MUS[1] 4 HISTORY 105 [ROOT] 3 MUS 164 1 MUS 182[2] 0 or 1 MUS 253[4] 3 MUS 254[4] 1 MUS 429, 430, or 431 1 Quantitative Reasoning [QUAN] 3 **Second Year** ***First Term*** ***Credits*** Applied MUS[1] 4 Communication [COMM] or Written Communication [WRTG] 3 MUS 351[3] 3 MUS 352[3] 1 MUS 371[3,5] 2 MUS 429, 430, or 431 1 ***Second Term*** ***Credits*** Applied MUS[1] 4 Equity and Justice [EQJS] 3 MUS 281[2] 0 or 1	**8-23**

	MUS 353[4]	3
	MUS 354[4]	1
	MUS 359 [HUM] [M][4]	3
	MUS 372[4,5]	2
	MUS 429, 430, or 431	1
	Complete Writing Portfolio	
	Pass Piano Proficiency	
	Third Year	
	First Term	***Credits***
	Applied MUS[1]	4
	Biological Sciences [BSCI] with lab[6]	4
	MUS 360 [HUM] [M][3]	3
	MUS 428, 433, or 439	1
	MUS 429, 430, or 431	1
	MUS 491[3]	2
	Junior Qualifying Exam	
	Second Term	***Credits***
	Applied MUS[1]	4
	Equity and Justice [EQJS]	3
	MUS 428	1
	MUS 429, 430, or 431	1
	MUS 461 [CAPS][4]	3
	MUS 483[4]	1
	Physical Sciences [PSCI] with lab[6]	4
	Junior Recital	
	Fourth Year	
	First Term	***Credits***
	Applied MUS[1]	4
	MUS 429, 430, or 431	1
	MUS 465[3,5]	2
	~~Foreign Language, if needed, and/or~~ Non-MUS Electives[7]	~~7~~3
	Foreign Language[8]	4
	Senior Qualifying Exam	
	Second Term	***Credits***
	Applied MUS[1]	4
	MUS 429, 430, or 431	1
	Social Sciences [SSCI]	3
	~~Foreign Language, if needed, and/or~~ Non-MUS Electives	~~7~~3

	Foreign Language[8] 4 Senior Full Recital **Footnotes** [1] Applied Music: 32 credits of MUS 303 and 403 required with a minimum of 4 credits of MUS 403. [2] Class piano credits not required. [3] Fall only. [4] Spring only. [5] Course taught alternate years. [6] To meet University and College of Arts and Sciences requirements, students must take a [BSCI] course with lab and [PSCI] course with lab. [7] Students must complete a minimum of 6 credits of electives outside of MUS and UCORE requirements. Please consult with advisor for elective selection. [8] Foreign Language: 8 credits in addition to the College of Arts and Sciences foreign language requirement.	
Nursing Revise graduation requirements for BS in Nursing	**Nursing (~~121~~ 120 Credits)** A grade of C or better is required in all prerequisite courses and nursing courses. Criteria for admission to the 300-400-level nursing major include an overall cumulative GPA of 3.00 or higher and a cumulative GPA of 3.00 or higher in prerequisite courses. Achievement at a "proficient" level or above on the Test of Essential Academic Skills (TEAS) is required for all Pre-licensure applicants. Responses to personal interview questions may be used as additional admission criteria. All pre-licensure applicants are required to have at least 50 hours of volunteer/work health experience and provide a proctored writing sample at interview time. Part-time schedule of study is available; see advisor. **First Year** ***First Term*** ***Credits*** CHEM 101 [PSCI] 4 HISTORY 105 [ROOT] 3 UCORE Inquiry [1] 6 ***Second Term*** ***Credits*** BIOLOGY 102 [BSCI], 106 [BSCI], or 107 [BSCI] 4 CHEM 102 4 ENGLISH 101 [WRTG] 3 PSYCH 105 [SSCI] 3 SOC 101 or 102 3	**8-23**

Second Year

First Term	*Credits*
BIOLOGY 251	4
Humanities [HUM]	3
MBIOS 101	4
STAT 212 [QUAN]	4
UCORE Inquiry [1]	3

Second Term	*Credits*
BIOLOGY 140 or 333	3
BIOLOGY 315	4
Communication [COMM] or Written Communication [WRTG]	3
H D 101	3
Elective	2
Complete Writing Portfolio	

Third Year

First Term	*Credits*
~~NURS 308~~	~~3~~
NURS 306 [M]	3
NURS 311	~~4~~ 3
NURS 315	4
NURS 316	2
NURS 317	3
~~NURS 328~~	~~2~~

Second Term	*Credits*
~~NURS 309 [M]~~	~~3~~
NURS 308 [M]	3
NURS 322	2
~~NURS 323~~	~~2~~
NURS 324	~~4~~ 5
NURS 325	5

Fourth Year

First Term	*Credits*
NURS 408	3
NURS 412	~~1~~ 2
NURS 414	3
NURS 415	2

	NURS 416 3 NURS 417 2 ***Second Term*** ***Credits*** NURS 409 2 NURS 424 3 NURS 425 2 NURS 426 [M] 2 NURS 427 ~~3~~ 2 NURS 430 [CAPS] ~~3~~ 4 Footnotes [1] Must complete 3 of these 4 UCORE categories: ARTS, DIVR, EQJS, HUM.	
Physics & Astronomy Revise graduation requirements for BS in Physics - Applied Physics Option	**Applied Physics Option (121 Credits)** The program of courses below is appropriate for students who wish to enter industry upon graduation. The program of courses below is appropriate for students who have had a good experience with calculus in high school and wish to start physics in the first semester at WSU (even though the student may be placed in MATH 171, if their high school grades for the year course were B or better they can follow this schedule of study). Students who have placed in MATH 172 can accelerate the math sequence. Students who have not had calculus in high school should defer PHYSICS 201/211 until they have completed MATH 171. Upon consultation with the departmental advisor, modifications can be made in the list of required courses to fit the needs of individual students. The schedule of studies below includes the additional lab credit required for graduation by the College of Arts and Sciences. **Admission to the Major requirements** Students may be admitted to the major upon making their intentions known to the department. **Graduation Requirements** A research experience is required of all students as a PHYSICS 489 project; however, to gain valuable work experience outside the university, students are strongly encouraged to participate in an internship or research experience in industry or a government lab outside of WSU. The summer after the junior year is the most appropriate time for this experience. All students are required to submit an undergraduate thesis to a committee of two physics faculty members in the senior year. PHYSICS 490 will give credit for this effort. The student must earn a C (2.0) or better grade in each of the required physics courses. **First Year**	**8-23**

First Term		***Credits***
CHEM 105 [PSCI]		4
Diversity [DIVR]		3
ENGLISH 101 [WRTG]		3
MATH 171 [QUAN]		4
~~MSE 110~~		~~2~~
PHYSICS 188		1
Second Term		***Credits***
CHEM 106		4
ENGR 120		2
HISTORY 105 [ROOT]		3
MATH 172		4
PHYSICS 189		1
Second Year		
First Term		***Credits***
ECONS 101 [SSCI]		3
Equity and Justice [EQJS]		3
MATH 220		2
MATH 273		2
PHYSICS 201		3
PHYSICS 211		1
Foreign Language, if needed[1]		0-4
Option Elective[2]		3
Second Term		***Credits***
Arts [ARTS]		3
ECONS 102 [SSCI]		3
MATH 315		3
PHYSICS 202		3
PHYSICS 212		1
Foreign Language, if needed[1]		0-4
Option Elective[2]		3
Complete Writing Portfolio		
Third Year		
First Term		***Credits***
PHYSICS 303		3
PHYSICS 320		3
PHYSICS 341		3

	STAT 360 or 370 3 Option Elective[2] 3 ***Second Term*** ***Credits*** Biological Sciences [BSCI] 3 PHYSICS 304 3 PHYSICS 330 3 PHYSICS 342 3 PHYSICS 489 1 Option Elective[2] 3 **Fourth Year** ***First Term*** ***Credits*** COM 400 [COMM], ENGLISH 301 [WRTG], or ENGLISH 402 [WRTG] 3 Humanities [HUM] 3 PHYSICS 443 3 PHYSICS 450 3 PHYSICS 490 [M] 1 Option Elective[2] 3 ***Second Term*** ***Credits*** ~~Diversity [DIVR]~~ ~~3~~ Integrative Capstone [CAPS] 3 PHYSICS 415 [M] 3 PHYSICS Electives[3] 3 Option Elective[2] 3 Footnotes [1] Two years of high school foreign language or at least two semesters of college-level foreign language are required by the College of Arts and Sciences for graduation. [2] Option Electives (18 credits): Choose from CE, CPT S, E E, ME, and MSE courses not used to fulfill other requirements. [3] Physics Electives (3 credits): Choose any 300-400-level ASTRONOM or PHYSICS courses not used to fulfill other requirements.	
Physics & Astronomy Revise graduation requirements for BS in Physics - Standard Option	**Standard Option (120 Credits)** The program of courses below is appropriate for students who have had a good experience with calculus in high school and wish to start physics in the first semester at WSU (even though the student may be placed in MATH 171, if their high school grades for the year course were B or better they can follow this schedule of study). Students who have placed in MATH 172 can accelerate the math sequence. Students who have not had calculus in high school should defer PHYSICS 201/211 until they have completed MATH	**8-23**

171. Upon consultation with the departmental advisor, modifications can be made in the list of required courses to fit the needs of individual students. The schedule of studies below includes the additional lab credit required for graduation by the College of Arts and Sciences.

Students may be admitted to the physics major upon making their intentions known to the department.

Graduation Requirements
A research experience is required of all students as a PHYSICS 489 project; however, to gain valuable work experience outside the university, students are strongly encouraged to participate in an internship or research experience in industry or a government lab outside of WSU. The summer after the junior year is the most appropriate time for this experience. All students are required to submit an undergraduate thesis to a committee of two physics faculty members in the senior year. PHYSICS 490 will give credit for this effort. The student must earn a C (2.0) or better grade in each of the required physics courses.

First Year

First Term	***Credits***
CHEM 105 [PSCI]	4
ENGLISH 101 [WRTG]	3
MATH 171 [QUAN]	4
PHYSICS 188	1
Social Sciences [SSCI]	3

Second Term	***Credits***
CHEM 106 or 116	4
HISTORY 105 [ROOT]	3
MATH 172	4
PHYSICS 189	1
PHYSICS 201	3
PHYSICS 211	1

Second Year

First Term	***Credits***
Biological Sciences [BSCI]	3
MATH 220	2
MATH 273	2
PHYSICS 202	3
PHYSICS 212	1
PHYSICS 303	3

Foreign Language, if needed[1]	0-4	
Second Term	***Credits***	
Arts [ARTS]	3	
MATH 315	3	
PHYSICS 304	3	
PHYSICS 330	3	
Foreign Language, if needed[1]	0-4	
Complete Writing Portfolio		
Third Year		
First Term	***Credits***	
CPT S 111, 121, 131, E E 221, or MATH 300	2-4	
Diversity [DIVR]	3	
Humanities [HUM]	3	
MATH Elective[2]	3	
PHYSICS 320	3	
PHYSICS 341	3	
Second Term	***Credits***	
COM 400 [COMM], ENGLISH 301 [WRTG], or ENGLISH 402 [WRTG]	3	
MATH Elective[2]	3	
PHYSICS 342	3	
PHYSICS 410	4	
PHYSICS 489	1	
Standard Option Elective [3]	3	
Fourth Year		
First Term	***Credits***	
Equity and Justice [EQJS]	3	
PHYSICS 450	3	
PHYSICS 490 [M]	1	
Standard Option Electives[3]	6	
Technical Elective[4]	3	
Second Term	***Credits***	
Integrative Capstone [CAPS]	3	
PHYSICS 415 [M]	3	
Standard Option Electives[3]	4 - 6	
Technical Elective[4]	3	

	Footnotes [1] Two years of high school foreign language or at least two semesters of college-level foreign language are required by the College of Arts and Sciences for graduation. [2] MATH Electives (6 credits): Choose from 300-400-level MATH courses not used to fulfill other requirements. [3] Standard Option Electives (13 credits minimum): Choose from 300-400-level ASTRONOM and PHYSICS courses not used to fulfill other requirements. [4] Technical Electives (6 credits, at least 3 must be 300-400 level): Choose from ASTRONOM, CHEM, MATH, or PHYSICS courses not used to fulfill other requirements.	
Physics & Astronomy Revise graduation requirements for BS in Physics - Astrophysics Option	**Astrophysics Option (120 Credits)** The program of courses below is appropriate for students who have had a good experience with calculus in high school and wish to start physics in the first semester at WSU (even though the student may be placed in MATH 171, if their high school grades for the year course were B or better they can follow this schedule of study). Students who have placed in MATH 172 can accelerate the math sequence. Students who have not had calculus in high school should defer PHYSICS 201/211 until they have completed MATH 171. Upon consultation with the departmental advisor, modifications can be made in the list of required courses to fit the needs of individual students. The schedule of studies below includes the additional lab credit required for graduation by the College of Arts and Sciences. Students may be admitted to the physics major upon making their intentions known to the department. **Graduation Requirements** A research experience is required of all students as a PHYSICS 489 project; however, to gain valuable work experience outside the university, students are strongly encouraged to participate in an internship or research experience in industry or a government lab outside of WSU. The summer after the junior year is the most appropriate time for this experience. All students are required to submit an undergraduate thesis to a committee of two physics faculty members in the senior year. PHYSICS 490 will give credit for this effort. The student must earn a C (2.0) or better grade in each of the required physics courses. **First Year** ***First Term*** ***Credits*** CHEM 105 [PSCI] 4 ENGLISH 101 [WRTG] 3 MATH 171 [QUAN] 4 PHYSICS 188 1 Social Sciences [SSCI] 3 ***Second Term*** ***Credits***	**8-23**

	CHEM 106 or 116	4
	HISTORY 105 [ROOT]	3
	MATH 172	4
	PHYSICS 189	1
	PHYSICS 201	3
	PHYSICS 211	1
	Second Year	
	First Term	***Credits***
	Biological Sciences [BSCI]	3
	MATH 220	2
	MATH 273	2
	PHYSICS 202	3
	PHYSICS 212	1
	PHYSICS 303	3
	Foreign Language, if needed[1]	0-4
	Second Term	***Credits***
	Arts [ARTS]	3
	ASTRONOM 390	1
	MATH 315	3
	PHYSICS 304	3
	PHYSICS 330	3
	Foreign Language, if needed[1]	0-4
	Complete Writing Portfolio	
	Third Year	
	First Term	***Credits***
	ASTRONOM 345	3
	CPT S 111, 121, 131, E E 221, or MATH 300 ~~[M]~~	2-4
	Humanities [HUM]	3
	MATH Elective[~~1~~2]	3
	PHYSICS 320	3
	PHYSICS 341	3
	Second Term	***Credits***
	ASTRONOM 435 or 436	3
	COM 400 [COMM], ENGLISH 301 [WRTG], or ENGLISH 402 [WRTG]	3
	MATH Elective[~~1~~2]	3
	PHYSICS 342	3
	PHYSICS 410	4

PHYSICS 489	1	
Fourth Year		
First Term	***Credits***	
Diversity [DIVR]	3	
Equity and Justice [EQJS]		
PHYSICS 450	3	
PHYSICS 490 [M]	1	
Technical Elective[~~2~~3]	3	
Second Term	***Credits***	
ASTRONOM 435 or 436	3	
Integrative Capstone [CAPS]	3	
PHYSICS 415 [M]	3	
Technical Elective[~~2~~3]	6	

Footnotes

1 Two years of high school foreign language or at least two semesters of college-level foreign language are required by the College of Arts and Sciences for graduation.

[~~1~~2] MATH Electives (6 credits): Choose from 300-400-level MATH courses not used to fulfill other requirements.

[~~2~~3] Technical Electives (9 credits, at least 6 must be 300-400 level): Choose from ASTRONOM, CHEM, MATH, or PHYSICS courses not used to fulfill other requirements.