

BS in Physics

The problem-solving skills learned through a BS with a major in Physics will provide you with the necessary scientific background and preparation for a wide variety of future career opportunities. Upon completing your undergraduate degree, you can either continue to graduate studies or to finding a physics-related job in industry or teaching. The interest in our undergraduate program is supported by the significant increase in the number of Physics majors over the past year. Currently, we enroll more than 110 undergraduate students, and, just during the past semester, the number of Physics freshman has doubled.

Marketable Skills

1. Communication: Reach mutual understanding through the effective exchange of information, ideas, and feelings.
2. Critical thinking: Analyze and evaluate issues in order to solve problems and develop informed opinions.
3. Organization: Use resources effectively and efficiently in order to stay focused on different tasks.
4. Problem-solving: Find solutions to difficult or complex issues.
5. Be able to search, investigate and critically analyze information in response to a specific research question.
6. Time management: Prioritize goals and organize time to be more productive and efficient.

Learning Outcomes

1. Develop superior communication and scientific presentation skills.
2. Develop critical thinking and the ability to apply basic physics principles to solve problems.
3. Students should demonstrate knowledge of mathematical techniques used for understanding physics.
4. Develop skills and competencies in advanced physics laboratory work.

Fast Track

The Fast-Track Program (<http://catalog.utep.edu/admissions/undergraduate/fast-track/#text>) enables outstanding undergraduate UTEP students to receive both undergraduate and graduate credit for up to 15 hours of UTEP course work as determined by participating Master's and Doctoral programs.

Not all undergraduate programs have elected to participate in the Fast Track option, so students should see their departmental graduate advisor for information about requirements and guidelines. A list of courses that have been approved for possible use at the graduate level is found here (<http://catalog.utep.edu/admissions/undergraduate/fast-track/#fasttrackcoursestext>).

M.S. in Physics (<http://catalog.utep.edu/grad/college-of-science/physics/physics-ms/>) / B.S. in Physics

Code	Title	Hours
PHYS 5196	Graduate Research in Physics	1
PHYS 5321	Mechanics	3
PHYS 5325	Mathematical Physics	3
PHYS 5341	Electrodynamics	3
PHYS 5361	Quantum Mechanics	3
PHYS 5365	Advanced Statistical Mechanics	3
PHYS 5371	Solid State Physics	3
PHYS 5396	Graduate Research in Physics	3

M.B.A. - Master of Business Administration (<http://catalog.utep.edu/grad/college-of-business-administration/business-administration-deans-office/master-of-business-administration/>) / B.S. in Physics - Applied Physics Concentration

Code	Title	Hours
ACCT 5304	Accounting Analysis	3
BLAW 5306	Business Law and Ethics	3
ECON 5311	Managerial Economics	3
FIN 5311	Financial Management	3
MGMT 5311	Organizational Mgmt Seminar	3
MKT 5311	Marketing Management	3
QMB 5311	Quantitative Methods-Business	3
OSCM 5308	Concepts of Production Mgmt	3

Degree Plan

The requirements to obtain the BS in Physics consist of the general College of Science requirements plus the following specific requirements:

Required Credits: 120

Code	Title	Hours
Designated Core (All courses require a grade of C or better)		
Required Courses: ¹		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
MATH 1411	Calculus I	4
University Core Curriculum		
Complete the University Core Curriculum requirements. (p. 8)		42
Physics Major		
Required Courses:		
MATH 1312	Calculus II	3
MATH 2313	Calculus III ^C	3
MATH 2326	Differential Equations ^C	3
MATH 3335	Applied Analysis I	3
PHYS 2210	Vibrations and Waves ^C	2
PHYS 2230	Thermal and Fluid Physics ^C	2
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PHYS 2325	Survey of Modern Physics ^C	3
PHYS 3280	Physics Seminar	2
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3351	Analytical Mechanics I	3
PHYS 3352	Analytical Mechanics II	3
PHYS 4341	Electromagnetics I	3
PHYS 4342	Electromagnetics II	3
PHYS 4355	Intro Quantum Mechanics	3
At least two courses from:		
MATH 3323	Matrix Algebra	3
MATH 4329	Numerical Analysis	3
MATH 4336	Applied Analysis II	3
Required:		
PHYS 3243	Advanced Laboratory Practice (complete two semesters)	4
PHYS 4356	Atoms, Molecules, & Solids	3
Additional Hours:		
Select twelve additional hours, with at least seven being upper-division with advisor approval:		12
Upper Division Requirement		
Select a total of thirty-seven hours of upper-division course work ²		
Total Hours		120

¹ Although the UTEP choice is larger, these choices satisfy the requirements of both the core and the major.

² A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.

C Course requires a grade of C or better

Concentrations

7-12 Physics/Math

Required Credits: 120

Code	Title	Hours
Education Concentration Required		
This minor requires the Secondary Education concentration		
Background Check Required		
A complete background check is required of all students who wish to receive teacher certification in the State of Texas. Students must satisfy three criteria before they can apply to the Educator Preparation Program: 1) have a UTEP overall GPA of at least 2.75, have a UTEP majors GPA of at least 2.75, pass the UTEP Qualifying Exam for Mathematics with a score of at least 80%.		
Designated Core (All courses require a grade of C or better)		
Required Courses: ¹		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
MATH 1411	Calculus I	4
University Core Curriculum		
Complete the University Core Curriculum requirements. (p. 8)		42
Physics Major		
Required Courses:		
ASTR 1107	Astronomy Lab I	1
ASTR 1307	Elem Astronomy-Solar System	3
ASTR 1308	Elem Astr Stars & Galaxies	3
MATH 1312	Calculus II	3
MATH 2313	Calculus III ^C	3
MATH 2326	Differential Equations ^C	3
MATH 3323	Matrix Algebra	3
PHYS 2230	Thermal and Fluid Physics ^C	2
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PHYS 2325	Survey of Modern Physics ^C	3
PHYS 3243	Advanced Laboratory Practice (Class must be taken three times)	6
Select 12 hours from the following:		
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3351	Analytical Mechanics I	3
PHYS 3352	Analytical Mechanics II	3
PHYS 4341	Electromagnetics I	3
PHYS 4342	Electromagnetics II	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 4356	Atoms, Molecules, & Solids	3
Other Electives:		
Select two courses from the following:		6
MATH 3335	Applied Analysis I	
MATH 4329	Numerical Analysis	
MATH 4336	Applied Analysis II	
Secondary Education Minor		
Required Courses:		
EDPC 3300	Intro to Youth Dev & Spec Ed	3

RED 3342	Content Area Literacy	3
SCED 3311	Curriculum Plan-Secondary Schl	3
SCED 3317	Multicultural Ed in Sec School	3
SCED 4368	Teaching Science in Sec School	3
SCED 4691	Student Teaching in Sec School	6

Upper Division RequirementSelect a total of thirty-seven hours of upper-division course work ³**Total Hours** **120**¹ Although the UTEP choice is larger, these choices satisfy the requirements of both the core and the major.² Complete course two times.³ A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.

C Course requires a grade of C or better

Applied Physics

Required Credits: 120

Code	Title	Hours
Designated Core (All courses require a grade of C or better)		
Required Courses:		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
MATH 1411	Calculus I	4
University Core Curriculum		
Complete the University Core Curriculum requirements. (p. 8)		42
Applied Physics Concentration		
Required Courses:		
MATH 1312	Calculus II	3
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
MATH 3335	Applied Analysis I	3
PHYS 2230	Thermal and Fluid Physics ^C	2
PHYS 2325	Survey of Modern Physics	3
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PHYS 3243	Advanced Laboratory Practice (complete two semesters)	4
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3351	Analytical Mechanics I	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
Math Electives:		
Select two courses of the following:		6
MATH 3323	Matrix Algebra	
MATH 4329	Numerical Analysis	
MATH 4336	Applied Analysis II	
Upper-Division Physics:		
Select nine semester hours of approved physics courses		9
Select one of the following courses:		3
CS 1301	Intro to Computer Science	

or CS 1320 Computer Programming Sci/Engr

Electives

Complete 11 additional semester hours, 7 upper division with advisor approval 11

C Course requires a grade of C or better.

Atmospheric Physics

Required Credits: 120

Code	Title	Hours
Designated Core (All courses require a grade of C or better)		
Required Courses		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
MATH 1411	Calculus I	4
University Core Curriculum		
Complete the University Core Curriculum requirements. (p. 8)		42
Atmospheric Physics Concentration		
Required Courses:		
GEOP 4306	Meteorology	3
MATH 1312	Calculus II	3
MATH 2313	Calculus III ^C	3
MATH 3335	Applied Analysis I	3
MATH 2326	Differential Equations ^C	3
PHYS 2210	Vibrations and Waves ^C	2
PHYS 2230	Thermal and Fluid Physics ^C	2
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PHYS 2325	Survey of Modern Physics ^C	3
PHYS 3280	Physics Seminar	2
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3351	Analytical Mechanics I	3
PHYS 3352	Analytical Mechanics II	3
PHYS 4327	Atmospheric Physics	3
PHYS 4329	Atmospheric Radiation	3
PHYS 4341	Electromagnetics I	3
PHYS 4342	Electromagnetics II	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 3243	Advanced Laboratory Practice (complete two semesters)	4
PHYS 4356	Atoms, Molecules, & Solids	3
Other Electives:		
Select two courses of the following:		6
MATH 3323	Matrix Algebra	
MATH 4329	Numerical Analysis	
MATH 4336	Applied Analysis II	

C Course requires a grade of C or better.

Medical Physics

Required Credits: 120

Code	Title	Hours
Designated Core (All courses require a grade of C or better)		
Required Courses:		
BIOL 1305 & BIOL 1107	General Biology and Topics in Study of Life I	4
BIOL 2311 & BIOL 2111	Human Anat/Physiology I and Human Anat/Physio Lab I	4
MATH 1411	Calculus I	4
University Core Curriculum		
Complete the University Core Curriculum requirements. (p. 8)		42
Medical Physics Concentration		
Required Courses:		
MATH 1312	Calculus II	3
MATH 2313	Calculus III	3
MATH 2326	Differential Equations ^C	3
MATH 3335	Applied Analysis I	3
PHYS 2210	Vibrations and Waves	2
PHYS 2230	Thermal and Fluid Physics ^C	2
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PHYS 2325	Survey of Modern Physics ^C	3
PHYS 3243	Advanced Laboratory Practice (Complete two semesters)	4
PHYS 3280	Physics Seminar	2
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3351	Analytical Mechanics I	3
PHYS 3352	Analytical Mechanics II	3
PHYS 3360	Comp Methods-Physics Problems	3
PHYS 4341	Electromagnetics I	3
PHYS 4342	Electromagnetics II	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 4356	Atoms, Molecules, & Solids	3
PHYS 4370	Health Physics I	3
PHYS 4371	Health Physics II	3
Math Elective:		
Select two courses of the following:		6
MATH 3323	Matrix Algebra	
MATH 4329	Numerical Analysis	
MATH 4336	Applied Analysis II	
Other Electives:		
Select three additional hours at any level with advisor approval		3

^C Course requires a grade of C or better.

Physics Pre-Med

Required Credits: 120

Code	Title	Hours
Designated Core (All courses require a grade of C or better)		
Required Courses: ¹		
BIOL 1305 & BIOL 1107	General Biology and Topics in Study of Life I	4
BIOL 1306 & BIOL 1108	Organismal Biology and Organismal Biology Laboratory	4
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
MATH 1312	Calculus II	3
MATH 1411	Calculus I	4
University Core Curriculum		
Complete the University Core Curriculum requirements. (p. 8)		42
Pre-Med Concentration		
Required Courses:		
BIOL 3314 & BIOL 3115	Molecular Cell Biology and Molecular Cell Biol Laboratory	4
BIOL 3320	Genetics	3
CHEM 2324 & CHEM 2124	Organic Chemistry and Lab for Organic Chemistry 2324 ^C	4
CHEM 2325 & CHEM 2125	Organic Chemistry and Lab for Organic Chemistry 2325 ^C	4
CHEM 3330 or CHEM 3332	Biochem I: Struc & Function Biochem II: Metabol & Bioenerg	3
MATH 2313	Calculus III ^C	3
MATH 2326	Differential Equations ^C	3
MATH 3335	Applied Analysis I	3
PHYS 2230	Thermal and Fluid Physics	2
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
PHYS 2325	Survey of Modern Physics ^C	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3351	Analytical Mechanics I	3
PHYS 4177	Undergrad Resrch Probs Physics	1
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 4370	Health Physics I	3
PHYS 4371	Health Physics II	3

¹ Although the UTEP choice is larger, these choices satisfy the requirements of both the core and the major.

² A total of thirty-seven hours of upper division coursework is required for all Bachelor of Science degrees.

^C Course requires a grade of C or better.

University Core Curriculum (A program may recommend specific courses. All courses require a C or better.)

I. Communication (six hours)

Code	Title	Hours
Courses in this category focus on developing ideas and expressing them clearly, considering the effect of the message, fostering understanding, and building the skills needed to communicate persuasively. Courses involve the command of oral, aural, written, and visual literacy skills that enable people to exchange messages appropriate to the subject, occasion, and audience. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Teamwork, and Personal Responsibility.		
Select six hours of the following:		6
For students whose secondary education was in English:		
COMM 1611	Written and Oral Communication	
ENGL 1313	Writing About Literature	
RWS 1301	Rhetoric & Composition I	
RWS 1302	Rhetoric & Composition 2	
RWS 1601	Rhetoric, Composition & Comm	
For students whose secondary education was not in English:		
ESOL 1311	Expos Engl Compos-Spkr Esl	
ESOL 1312	Res & Crit Writng Spkr Esl	
TOTAL HOURS		6

II. American History (six hours)

Code	Title	Hours
Courses in this category focus on the consideration of past events and ideas relative to the United States, with the option of including Texas History for a portion of this component area. Courses involve the interaction among individuals, communities, states, the nation, and the world, considering how these interactions have contributed to the development of the United States and its global role. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Social Responsibility, and Personal Responsibility.		
HIST 1301	History of U.S. to 1865	3
HIST 1302	History of U.S. Since 1865	3
TOTAL HOURS		6

III. Language, Philosophy & Culture (three hours)

Code	Title	Hours
Courses in this category focus on how ideas, values, beliefs, and other aspects of culture express and affect human experience. Courses involve the exploration of ideas that foster aesthetic and intellectual creation in order to understand the human condition across cultures. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Social Responsibility, and Personal Responsibility.		
Select one of the following:		3
AFST 2300	Intro-African Amer Studies	
CHIC 2302	Latina/o Presence in the U.S.	
ENGL 2311	English Literature	
ENGL 2312	English Literature	
ENGL 2313	Intro to American Fiction	
ENGL 2314	Intro to American Drama	
ENGL 2318	Intro to American Poetry	
FREN 2322	Making of the "Other" Americas	
HIST 2301	World History to 1500	
HIST 2302	World History Since 1500	
PHIL 1301	Introduction to Philosophy	
PHIL 2306	Ethics	
RS 1301	Introduct to Religious Studies	
SPAN 2340	Seeing & Naming: Conversations	
WS 2300	Introduction to Womens Studies	

WS 2350	Global Feminisms	
TOTAL HOURS		3

IV. Mathematics (three hours)

Code	Title	Hours
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Courses in this category focus on quantitative literacy in logic, patterns, and relationships. Courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience. Course objectives for this component are: Critical Thinking Skills, Communication Skills, and Empirical & Quantitative Skills.

Select one of the following: 3

MATH 1309	College Algebra	
MATH 1310	Trigonometry and Conics	
MATH 1319	Math in the Modern World	
MATH 1320	Math for Social Sciences I	
MATH 1411	Calculus I	
MATH 1508	Precalculus	
MATH 2301	Math for Social Sciences II	
STAT 1380	Statistical Literacy	
STAT 2480	Elementary Statistical Methods	

TOTAL HOURS 3

V. Life & Physical Sciences (six hours)

Code	Title	Hours
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Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on experiences. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Empirical & Quantitative Skills, and Teamwork.

Select one of the following:

ASTR 1107	Astronomy Lab I	
ASTR 1307	Elem Astronomy-Solar System	
ASTR 1308	Elem Astr Stars & Galaxies	
BIOL 1103	Introductory Biology Lab	
BIOL 1104	Human Biology Laboratory	
BIOL 1107	Topics in Study of Life I	
BIOL 1108	Organismal Biology Laboratory	
BIOL 1203	Introductory Biology	
BIOL 1304	Human Biology	
BIOL 1305	General Biology	
BIOL 1306	Organismal Biology	
BIOL 2111	Human Anat/Physio Lab I	
BIOL 2113	Human Anat/Physio Lab II	
BIOL 2311	Human Anat/Physiology I	
BIOL 2313	Human Anat/Physiology II	
CHEM 1105	Laboratory for CHEM 1305	
CHEM 1106	Laboratory for CHEM 1306	
CHEM 1107	Intro General Chemistry Lab	
CHEM 1108	Intro Organic & Biochem Lab	
CHEM 1305	General Chemistry	
CHEM 1306	General Chemistry	
CHEM 1307	Intro to General Chemistry	
CHEM 1308	Intro Organic & Biochemistry	
ESCI 1101	Environmental Sci. Lab	
ESCI 1102	Non-major Lab for ESCI 1301	
ESCI 1301	Intro to Environmental Sci	
GEOG 1106	Laboratory for GEOG 1306	

GEOG 1306	Physical Geography
GEOL 1103	Lab for GEOL 1313
GEOL 1104	Lab for GEOL 1314
GEOL 1111	Principles of Earth Sci - Lab
GEOL 1112	Laboratory for Geology 1212
GEOL 1211	Principles of Earth Sciences
GEOL 1212	Principles of Earth Science
GEOL 1230	The Blue Planet
GEOL 1231	Natural Hazards
GEOL 1313	Intro to Physical Geology
GEOL 1314	Intro to Historical Geol
HSCI 2302	Fundamentals of Nutrition
HSCI 2303	Wellness Dynamics
MICR 2330	Microorganisms and Disease
PHYS 1403	General Physics I
PHYS 1404	General Physics II
PHYS 2120	Laboratory for PHYS 2320
PHYS 2121	Laboratory for PHYS 2321
PHYS 2320	Introductory Mechanics
PHYS 2321	Introductory Electromagnetism
TOTAL HOURS	6

VI. Political Science (six hours)

Code	Title	Hours
Courses in this category focus on consideration of the Constitution of the United States and the constitutions of the states, with special emphasis on that of Texas. Courses involve the analysis of governmental institutions, political behavior, civic engagement, and their political and philosophical foundations. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Social Responsibility and Personal Responsibility.		
Required Courses:		
POLS 2310	Introduction to Politics	3
POLS 2311	American Gover & Politics	3
TOTAL HOURS		6

VII. Social & Behavioral Sciences (three hours)

Code	Title	Hours
Courses in this category focus on the application of empirical and scientific methods that contribute to the understanding of what makes us human. Courses involve the exploration of behavior and interactions among individuals, groups, institutions, and events, examining their impact on the individual, society, and culture. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Empirical & Quantitative Skills, and Social Responsibility.		
Select one of the following:		
ANTH 1301	Intro-Phys Anth/Archeolog	3
ANTH 1302	Intro-Cultural Anthropology	
ANTH 1310	Cultural Geography	
ANTH 2320	Intro to Linguistics	
ASIA 2300	Asian American Studies	
CE 2326	Econ for Engrs & Scientists	
CHIC 2311	Intro to Chicano Studies	
COMM 2350	Interpersonal Communication	
COMM 2372	Mass Media and Society	
ECON 2303	Principles of Macroeconomics	
ECON 2304	Principles of Microeconomics	
EDPC 1301	Introduction to Ed Psychology	
EDU 1342	Action Research in Classrooms	

ENGL 2320	Introduction to Linguistics	
GEOG 1310	Cultural Geography	
LEAD 2300	Leadership in Action	
LING 2320	Introduction to Linguistics	
LING 2340	Lang. Inside & Out: Sel Topics	
PSYC 1301	Introduction to Psychology	
SOCI 1301	Introduction to Sociology	
SOCI 1310	Cultural Geography	
TOTAL HOURS		3

VIII. Creative Arts

Code	Title	Hours
Courses in this category focus on the appreciation and analysis of creative artifacts and works of the human imagination. Courses involve the synthesis and interpretation of artistic expression and enable critical, creative, and innovative communication about works of art. Course objectives for this component are: Critical Thinking Skills, Communication Skills, Teamwork, and Social Responsibility.		
Select one of the following:		
ART 1300	Art Appreciation	
ARTH 1305	History of Art I	
ARTH 1306	History of Art II	
CHIC 1311	Chicana/o Fine Arts Appreciat	
DANC 1304	Introduction to Dance	
FILM 1390	Intro-Art of Motion Pict.	
MUSL 1324	Music Appreciation	
MUSL 1327	Jazz to Rock	
MUSL 2321	Music, Culture, and Society	
THEA 1313	Introduction to Theatre	
TOTAL HOURS		3

IX. Component Area Option (six hours)

Code	Title	Hours
a. A minimum of 3 SCH must meet the definition and corresponding Core Objectives specified in one of the foundational component areas. b. As an option for up to 3 semester credit hours of the Component Area Option, an institution may select course(s) that: (i) Meet(s) the definition specified for one or more of the foundational component areas; and (ii) Include(s) a minimum of three Core Objectives, including Critical Thinking Skills, Communication Skills, and one of the remaining Core Objectives of the institution's choice.		
BUSN 1301	Intro to Global Business	
COMM 1301	Public Speaking	3
COMM 1302	Business/Profession Comm	
CS 1310	Intro-Computational Thinking	
CS 1320	Computer Programming Sci/Engr	
EL 1301	Eng Innovation and Leadership	
ENGR 1302	Engineering Design Experience	
ENGR 1303	Applied Engineering Analysis	
LEAD 1300	Introduction to Leadership	
SCI 1301	Inquiry in Math & Science	
SPLP 1312	Comm. Var. Across the Lifespan	
UNIV 1301	Seminar/Critical Inquiry	
TOTAL HOURS		6

4-Year Sample Degree Plan

BS in Physics (Starting with Calculus)

Code	Title	Hours
BS IN PHYSICS		
FRESHMAN		

Fall

MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
RWS 1301	Rhetoric & Composition I	3
Component Area		3
Language, Philosophy, & Culture Core Component		3

Spring

MATH 1312	Calculus II	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
RWS 1302	Rhetoric & Composition 2	3
Social & Behavioral Sciences Core Component		3
Creative Arts Core Component		3

SOPHOMORE**Fall**

MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
PHYS 2230	Thermal and Fluid Physics	2
POLS 2310	Introduction to Politics	3
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4

Spring

CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
MATH 3323 or MATH 4329 or MATH 4336	Matrix Algebra Numerical Analysis Applied Analysis II	3
PHYS 2210	Vibrations and Waves	2
PHYS 2325	Survey of Modern Physics	3

JUNIOR**Fall**

MATH 3323 or MATH 4329 or MATH 4336	Matrix Algebra Numerical Analysis Applied Analysis II	3
MATH 3335	Applied Analysis I	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3351	Analytical Mechanics I	3
Component Area		3

Spring

HIST 1301	History of U.S. to 1865	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3280	Physics Seminar	2
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3352	Analytical Mechanics II	3

SENIOR**Fall**

HIST 1302	History of U.S. Since 1865	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS Elective		3
PHYS Elective		3

Spring

PHYS 4342	Electromagnetics II	3
PHYS 4356	Atoms, Molecules, & Solids	3
POLS 2311	American Gover & Politics	3
PHYS Elective		3
PHYS Elective		3

Total Hours**120****BS in Physics (Starting with Pre-Calculus)**

Code	Title	Hours
BS IN PHYSICS		
FRESHMAN		
Summer		
MATH 1508	Precalculus	5
Fall		
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
RWS 1301	Rhetoric & Composition I	3
Component Area		3
Language, Philosophy, & Culture Core Component		3
Spring		
MATH 1312	Calculus II	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
RWS 1302	Rhetoric & Composition 2	3
Social & Behavioral Sciences Core Component		3
Creative Arts Core Component		3
SOPHOMORE		
Fall		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
MATH 2313	Calculus III	3
MATH 2326	Differential Equations	3
PHYS 2230	Thermal and Fluid Physics	2
POLS 2310	Introduction to Politics	3
Spring		
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
MATH 3323 or MATH 4329 or MATH 4336	Matrix Algebra Numerical Analysis Applied Analysis II	3
PHYS 2210	Vibrations and Waves	2
PHYS 2325	Survey of Modern Physics	3
JUNIOR		
Fall		
MATH 3323 or MATH 4329 or MATH 4336	Matrix Algebra Numerical Analysis Applied Analysis II	3
MATH 3335	Applied Analysis I	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3351	Analytical Mechanics I	3
Component Area		3

Spring		
HIST 1301	History of U.S. to 1865	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3280	Physics Seminar	2
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3352	Analytical Mechanics II	3
SENIOR		
Fall		
HIST 1302	History of U.S. Since 1865	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS Elective		3
PHYS Elective		3
Spring		
PHYS 4342	Electromagnetics II	3
PHYS 4356	Atoms, Molecules, & Solids	3
POLS 2311	American Govern & Politics	3
PHYS Elective		3
PHYS Elective		3
Total Hours		125

BS in Physics with a Concentration in 7-12 Physics/Math (Starting with Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN 7-12 PHYSICS/MATH		
FRESHMAN		
Fall		
RWS 1301	Rhetoric & Composition I	3
HIST 1301	History of U.S. to 1865	3
MATH 1411	Calculus I	4
ASTR 1307 & ASTR 1107	Elem Astronomy-Solar System and Astronomy Lab I	4
Spring		
RWS 1302	Rhetoric & Composition 2	3
HIST 1302	History of U.S. Since 1865	3
COMM 1301	Public Speaking	3
ASTR 1308	Elem Astr Stars & Galaxies	3
MATH 1312	Calculus II	3
SOPHOMORE		
Fall		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
POLS 2310	Introduction to Politics	3
Math Elective		3
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
Math Elective		3
Spring		
ART 1300	Art Appreciation	3
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
PSYC 1301	Introduction to Psychology	3

PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
MATH 2313	Calculus III	3
RED 3342	Content Area Literacy	3
JUNIOR		
Fall		
POLS 2311	American Gover & Politics	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 2230	Thermal and Fluid Physics	2
MATH 3323	Matrix Algebra	3
MATH 2326	Differential Equations	3
EDPC 3300	Intro to Youth Dev & Spec Ed	3
Spring		
PHIL 2306	Ethics	3
PHYS Elective		3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 2325	Survey of Modern Physics	3
SCED 3311	Curriculum Plan-Secondary Schl	3
SCED 4368	Teaching Science in Sec School	3
SENIOR		
Fall		
Component Area Option		3
PHYS Elective		3
PHYS Elective		3
PHYS 3243	Advanced Laboratory Practice	2
PHYS Elective		3
SCED 3317	Multicultural Ed in Sec School	3
Spring		
SCED 4691	Student Teaching in Sec School	6
Total Hours		122

BS in Physics with a Concentration in 7-12 Physics/Math (Starting with Pre-Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN 7-12 PHYSICS/MATH (TARTING WITH PRE-CALCULUS)		
FRESHMAN		
Summer		
MATH 1508	Precalculus	5
Fall		
RWS 1301	Rhetoric & Composition I	3
HIST 1301	History of U.S. to 1865	3
ASTR 1307 & ASTR 1107	Elem Astronomy-Solar System and Astronomy Lab I	4
MATH 1411	Calculus I	4
Spring		
RWS 1302	Rhetoric & Composition 2	3
HIST 1302	History of U.S. Since 1865	3
COMM 1301	Public Speaking	3
ASTR 1308	Elem Astr Stars & Galaxies	3
MATH 1312	Calculus II	3
SOPHOMORE		
Fall		
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4

POLS 2310	Introduction to Politics	3
Math Elective		3
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
Math Elective		3
Spring		
ART 1300	Art Appreciation	3
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
PSYC 1301	Introduction to Psychology	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
MATH 2313	Calculus III	3
RED 3342	Content Area Literacy	3
JUNIOR		
Fall		
POLS 2311	American Gover & Politics	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 2230	Thermal and Fluid Physics	2
MATH 3323	Matrix Algebra	3
MATH 2326	Differential Equations	3
SCED 3317	Multicultural Ed in Sec School	3
Spring		
PHIL 2306	Ethics	3
PHYS Elective		3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 2325	Survey of Modern Physics	3
SCED 3311	Curriculum Plan-Secondary Schl	3
EDPC 3300	Intro to Youth Dev & Spec Ed	3
SENIOR		
Fall		
Component Area Option		3
PHYS Elective		3
PHYS Elective		3
PHYS 3243	Advanced Laboratory Practice	2
PHYS Elective		3
SCED 4368	Teaching Science in Sec School	3
Spring		
SCED 4691	Student Teaching in Sec School	6
Total Hours		127

BS in Physics with a Concentration in Applied Physics (Starting with Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN APPLIED PHYSICS		
FRESHMAN		
Fall		
RWS 1301	Rhetoric & Composition I	3
HIST 1301	History of U.S. to 1865	3
ART 1300	Art Appreciation	3
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
Spring		

RWS 1302	Rhetoric & Composition 2	3
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
MATH 1312	Calculus II	3
Elective		3
SOPHOMORE		
Fall		
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
CS 1301	Intro to Computer Science	3
PHYS 2325	Survey of Modern Physics	3
PHYS 2230	Thermal and Fluid Physics	2
MATH 2313	Calculus III	3
Spring		
Component Area Option		3
PHYS 3323	Physical Optics	3
Elective		2
Math Elective		3
MATH 2326	Differential Equations	3
JUNIOR		
Fall		
COMM 1301	Public Speaking	3
PSYC 1301	Introduction to Psychology	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3351	Analytical Mechanics I	3
MATH 3335	Applied Analysis I	3
Spring		
HIST 1302	History of U.S. Since 1865	3
PHYS 3331	Thermal Physics	3
PHYS 3243	Advanced Laboratory Practice	2
Elective		3
Math Elective		3
SENIOR		
Fall		
POLS 2310	Introduction to Politics	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
Open Elective		3
Elective		3
Spring		
POLS 2311	American Govern & Politics	3
Upper Division PHYS Elective		3
Upper Division PHYS Elective		3
Upper Division PHYS Elective		3
Open Elective		2
Total Hours		120

BS in Physics with a Concentration in Applied Physics (Starting with Pre-Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN APPLIED PHYSICS (STARTING WITH PRE-CALCULUS)		
FRESHMAN		

Summer

MATH 1508	Precalculus	5
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Fall

RWS 1301	Rhetoric & Composition I	3
HIST 1301	History of U.S. to 1865	3
ART 1300	Art Appreciation	3
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4

Spring

RWS 1302	Rhetoric & Composition 2	3
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
Elective		3
MATH 1312	Calculus II	3

SOPHOMORE**Fall**

CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
CS 1301	Intro to Computer Science	3
PHYS 2325	Survey of Modern Physics	3
PHYS 2230	Thermal and Fluid Physics	2
MATH 2313	Calculus III	3

Spring

Component Area Option		3
PHYS 3323	Physical Optics	3
Open Elective		2
Elective		2
Math Elective		3
MATH 2326	Differential Equations	3

JUNIOR**Fall**

COMM 1301	Public Speaking	3
PSYC 1301	Introduction to Psychology	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3351	Analytical Mechanics I	3
MATH 3335	Applied Analysis I	3

Spring

HIST 1302	History of U.S. Since 1865	3
PHYS 3331	Thermal Physics	3
PHYS 3243	Advanced Laboratory Practice	2
Elective		3
Math Elective		3

SENIOR**Fall**

POLS 2310	Introduction to Politics	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
Open Elective		3
Elective		3

Spring

POLS 2311	American Govern & Politics	3
Upper Division-PHYS Elective		3
Upper Division PHYS Elective		3
Upper Division PHYS Elective		3
Total Hours		125

BS in Physics with a Concentration in Atmospheric Physics (Starting with Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN ATMOSPHERIC PHYSICS		
FRESHMAN		
Fall		
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
ART 1300	Art Appreciation	3
RWS 1301	Rhetoric & Composition I	3
Spring		
MATH 1312	Calculus II	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
RWS 1302	Rhetoric & Composition 2	3
UNIV 1301	Seminar/Critical Inquiry	3
SOPHOMORE		
Fall		
HIST 1301	History of U.S. to 1865	3
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
Social & Behavioral Sciences		3
PHYS 2230	Thermal and Fluid Physics	2
MATH 2313	Calculus III	3
Spring		
POLS 2310	Introduction to Politics	3
HIST 1302	History of U.S. Since 1865	3
Component Area Option		3
PHYS 3280	Physics Seminar	2
MATH 2326	Differential Equations	3
JUNIOR		
Fall		
Language, Philosophy, and Culture		3
PHYS 2325	Survey of Modern Physics	3
PHYS 3351	Analytical Mechanics I	3
PHYS 3243	Advanced Laboratory Practice	2
MATH 3335	Applied Analysis I	3
Spring		
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3352	Analytical Mechanics II	3
PHYS 2210	Vibrations and Waves	2
Math Elective		3
SENIOR		

Fall		
POLS 2311	American Gover & Politics	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 4341	Electromagnetics I	3
PHYS 4327	Atmospheric Physics	3
Math Elective		3
Spring		
PHYS 4356	Atoms, Molecules, & Solids	3
PHYS 4342	Electromagnetics II	3
PHYS 4355	Intro Quantum Mechanics	3
GEOP 4306	Meteorology	3
PHYS 4329	Atmospheric Radiation	3
Total Hours		120

BS in Physics with a Concentration in Atmospheric Physics (Starting with Pre-Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN ATMOSPHERIC PHYSICS (STARTING WITH PRE-CALCULUS)		
FRESHMAN		
Summer		
MATH 1508	Precalculus	5
Fall		
RWS 1301	Rhetoric & Composition I	3
ART 1300	Art Appreciation	3
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
Spring		
RWS 1302	Rhetoric & Composition 2	3
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
UNIV 1301	Seminar/Critical Inquiry	3
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
MATH 1312	Calculus II	3
SOPHOMORE		
Fall		
HIST 1301	History of U.S. to 1865	3
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
Social & Behavioral Sciences		3
PHYS 2230	Thermal and Fluid Physics	2
MATH 2313	Calculus III	3
Spring		
POLS 2310	Introduction to Politics	3
HIST 1302	History of U.S. Since 1865	3
Component Core Option		3
PHYS 3280	Physics Seminar	2
PHYS 3243	Advanced Laboratory Practice	2
MATH 2326	Differential Equations	3
JUNIOR		
Fall		
Language Philosophy and Culture		3
PHYS 2325	Survey of Modern Physics	3

PHYS 3351	Analytical Mechanics I	3
MATH 3335	Applied Analysis I	3
Spring		
PHYS 3323	Physical Optics	3
PHYS 3331	Thermal Physics	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3352	Analytical Mechanics II	3
PHYS 2210	Vibrations and Waves	2
Math Elective		3
SENIOR		
Fall		
POLS 2311	American Gover & Politics	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 4341	Electromagnetics I	3
PHYS 4327	Atmospheric Physics	3
Math Elective		3
Spring		
PHYS 4356	Atoms, Molecules, & Solids	3
PHYS 4342	Electromagnetics II	3
PHYS 4355	Intro Quantum Mechanics	3
GEOP 4306	Meteorology	3
PHYS 4329	Atmospheric Radiation	3
Total Hours		125

BS in Physics with a Concentration in Medical Physics (Starting with Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN MEDICAL PHYSICS		
FRESHMAN		
Fall		
COMM 1301	Public Speaking	3
BIOL 1305 & BIOL 1107	General Biology and Topics in Study of Life I	4
MATH 1411	Calculus I	4
RWS 1301	Rhetoric & Composition I	3
Spring		
BIOL 2311 & BIOL 2111	Human Anat/Physiology I and Human Anat/Physio Lab I	4
MATH 1312	Calculus II	3
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
RWS 1302	Rhetoric & Composition 2	3
SOPHOMORE		
Fall		
HIST 1301	History of U.S. to 1865	3
PHIL 2306	Ethics	3
PHYS 2230	Thermal and Fluid Physics	2
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
MATH 2313	Calculus III	3
Spring		
HIST 1302	History of U.S. Since 1865	3
MATH 2326	Differential Equations	3
PHYS 3243	Advanced Laboratory Practice	2

PHYS 3331	Thermal Physics	3
PHYS 2210	Vibrations and Waves	2
Component Area		3
JUNIOR		
Fall		
MATH 3335	Applied Analysis I	3
PHYS 2325	Survey of Modern Physics	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3351	Analytical Mechanics I	3
POLS 2310	Introduction to Politics	3
PSYC 1301	Introduction to Psychology	3
Spring		
ART 1300	Art Appreciation	3
MATH 3323	Matrix Algebra	3
or MATH 4329	Numerical Analysis	
or MATH 4336	Applied Analysis II	
PHYS 3323	Physical Optics	3
PHYS 3352	Analytical Mechanics II	3
POLS 2311	American Gover & Politics	3
SENIOR		
Fall		
MATH 4336	Applied Analysis II	3
or MATH 4329	Numerical Analysis	
or MATH 3323	Matrix Algebra	
PHYS 3360	Comp Methods-Physics Problems	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 4370	Health Physics I	3
Spring		
PHYS 3280	Physics Seminar	2
PHYS 4342	Electromagnetics II	3
PHYS 4356	Atoms, Molecules, & Solids	3
PHYS 4371	Health Physics II	3
Elective		3
Total Hours		120

BS in Physics with a Concentration in Medical Physics (Starting with Pre-Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN MEDICAL PHYSICS		
FRESHMAN		
Summer		
MATH 1508	Precalculus	5
Fall		
COMM 1301	Public Speaking	3
BIOL 1305 & BIOL 1107	General Biology and Topics in Study of Life I	4
MATH 1411	Calculus I	4
RWS 1301	Rhetoric & Composition I	3
Spring		
BIOL 2311 & BIOL 2111	Human Anat/Physiology I and Human Anat/Physio Lab I	4
MATH 1312	Calculus II	3

PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
RWS 1302	Rhetoric & Composition 2	3
SOPHOMORE		
Fall		
HIST 1301	History of U.S. to 1865	3
PHIL 2306	Ethics	3
PHYS 2230	Thermal and Fluid Physics	2
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
MATH 2313	Calculus III	3
Spring		
HIST 1302	History of U.S. Since 1865	3
MATH 2326	Differential Equations	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3331	Thermal Physics	3
PHYS 2210	Vibrations and Waves	2
Component Area		3
JUNIOR		
Fall		
MATH 3335	Applied Analysis I	3
PHYS 2325	Survey of Modern Physics	3
PHYS 3243	Advanced Laboratory Practice	2
PHYS 3351	Analytical Mechanics I	3
POLS 2310	Introduction to Politics	3
PSYC 1301	Introduction to Psychology	3
Spring		
ART 1300	Art Appreciation	3
MATH 3323	Matrix Algebra	3
or MATH 4329	Numerical Analysis	
or MATH 4336	Applied Analysis II	
PHYS 3323	Physical Optics	3
PHYS 3352	Analytical Mechanics II	3
POLS 2311	American Govern & Politics	3
SENIOR		
Fall		
MATH 4336	Applied Analysis II	3
or MATH 4329	Numerical Analysis	
or MATH 3323	Matrix Algebra	
PHYS 3360	Comp Methods-Physics Problems	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 4370	Health Physics I	3
Spring		
PHYS 3280	Physics Seminar	2
PHYS 4342	Electromagnetics II	3
PHYS 4356	Atoms, Molecules, & Solids	3
PHYS 4371	Health Physics II	3
Elective		3
Total Hours		125

BS in Physics with a Concentration in Physics Pre-Med (Starting with Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN PRE-MED		
FRESHMAN		
Fall		
RWS 1301	Rhetoric & Composition I	3
CHEM 1305 & CHEM 1105	General Chemistry and Laboratory for CHEM 1305	4
MATH 1411	Calculus I	4
PHYS 2320 & PHYS 2120	Introductory Mechanics and Laboratory for PHYS 2320	4
Spring		
RWS 1302	Rhetoric & Composition 2	3
CHEM 1306 & CHEM 1106	General Chemistry and Laboratory for CHEM 1306	4
PHYS 2321 & PHYS 2121	Introductory Electromagnetism and Laboratory for PHYS 2321	4
MATH 1312	Calculus II	3
SOPHOMORE		
Fall		
HIST 1301	History of U.S. to 1865	3
Component Area		3
PHYS 2325	Survey of Modern Physics	3
PHYS 2230	Thermal and Fluid Physics	2
BIOL 1305 & BIOL 1107	General Biology and Topics in Study of Life I	4
MATH 2313	Calculus III	3
Spring		
HIST 1302	History of U.S. Since 1865	3
PHIL 2306	Ethics	3
PHYS 3243	Advanced Laboratory Practice	2
BIOL 1306 & BIOL 1108	Organismal Biology and Organismal Biology Laboratory	4
MATH 2326	Differential Equations	3
JUNIOR		
Fall		
Component Area		3
PSYC 1301	Introduction to Psychology	3
PHYS 3351	Analytical Mechanics I	3
CHEM 2324 & CHEM 2124	Organic Chemistry and Lab for Organic Chemistry 2324	4
Spring		
ART 1300	Art Appreciation	3
PHYS 3331	Thermal Physics	3
CHEM 2325 & CHEM 2125	Organic Chemistry and Lab for Organic Chemistry 2325	4
PHYS 3323	Physical Optics	3
MATH 3335	Applied Analysis I	3
SENIOR		
Fall		
POLS 2310	Introduction to Politics	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3

PHYS 4370	Health Physics I	3
BIOL 3320	Genetics	3
Spring		
POLS 2311	American Gover & Politics	3
PHYS 4177	Undergrad Resrch Probs Physics	1
CHEM 3330	Biochem I:Struc & Function	3
or CHEM 3332	Biochem II: Metabol & Bioenerg	
PHYS 4371	Health Physics II	3
BIOL 3314	Molecular Cell Biology	4
& BIOL 3115	and Molecular Cell Biol Laboratory	
Total Hours		120

BS in Physics with a Concentration in Physics Pre-Med (Starting with Pre-Calculus)

Code	Title	Hours
BS IN PHYSICS WITH A CONCENTRATION IN PRE-MED		
FRESHMAN		
Summer		
MATH 1508	Precalculus	5
Fall		
RWS 1301	Rhetoric & Composition I	3
CHEM 1305	General Chemistry	4
& CHEM 1105	and Laboratory for CHEM 1305	
MATH 1411	Calculus I	4
PHYS 2320	Introductory Mechanics	4
& PHYS 2120	and Laboratory for PHYS 2320	
Spring		
RWS 1302	Rhetoric & Composition 2	3
CHEM 1306	General Chemistry	4
& CHEM 1106	and Laboratory for CHEM 1306	
PHYS 2321	Introductory Electromagnetism	4
& PHYS 2121	and Laboratory for PHYS 2321	
MATH 1312	Calculus II	3
SOPHOMORE		
Fall		
HIST 1301	History of U.S. to 1865	3
Component Area		3
PHYS 2325	Survey of Modern Physics	3
PHYS 2230	Thermal and Fluid Physics	2
BIOL 1305	General Biology	4
& BIOL 1107	and Topics in Study of Life I	
MATH 2313	Calculus III	3
Spring		
HIST 1302	History of U.S. Since 1865	3
PHIL 2306	Ethics	3
PHYS 3243	Advanced Laboratory Practice	2
BIOL 1306	Organismal Biology	4
& BIOL 1108	and Organismal Biology Laboratory	
MATH 2326	Differential Equations	3
JUNIOR		
Fall		
PSYC 1301	Introduction to Psychology	3
Component Area		3
PHYS 3351	Analytical Mechanics I	3

CHEM 2324 & CHEM 2124	Organic Chemistry and Lab for Organic Chemistry 2324	4
Spring		
ART 1300	Art Appreciation	3
PHYS 3331	Thermal Physics	3
CHEM 2325 & CHEM 2125	Organic Chemistry and Lab for Organic Chemistry 2325	4
PHYS 3323	Physical Optics	3
MATH 3335	Applied Analysis I	3
SENIOR		
Fall		
POLS 2310	Introduction to Politics	3
PHYS 4341	Electromagnetics I	3
PHYS 4355	Intro Quantum Mechanics	3
PHYS 4370	Health Physics I	3
BIOL 3320	Genetics	3
Spring		
POLS 2311	American Gover & Politics	3
PHYS 4177	Undergrad Resrch Probs Physics	1
CHEM 3330 or CHEM 3332	Biochem I:Struc & Function Biochem II: Metabol & Bioenerg	3
PHYS 4371	Health Physics II	3
BIOL 3314 & BIOL 3115	Molecular Cell Biology and Molecular Cell Biol Laboratory	4
Total Hours		125