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University Registrar

College of Science
Department of Physics
Bachelor of Arts in Physics
Major in Physics
For students graduating in calendar year 2018

I. Curriculum for Liberal Education (40 credit hours)

All courses must be on the University's approved list for the Curriculum for Liberal Education.

Area 1 - Writing and Discourse (6 credit hours)

_____ 3 ☐ _____ 3 ☐

Area 2 - Ideas, Cultural Traditions and Values (6 credit hours)

_____ 3 ☐ _____ 3 ☐

Area 3 - Society and Human Behavior (6 credit hours)

_____ 3 ☐ _____ 3 ☐

Area 4 - Scientific Reasoning and Discovery (8 credit hours)

PHYS 2305 Foundations of Physics I 4 ☐ PHYS 2306 Foundations of Physics I 4 ☐

Area 5 - Quantitative and Symbolic Reasoning (8 credit hours)

MATH 1225 Calculus of a Single Variable 4 ☐ MATH 1226 Calculus of a Single Variable 4 ☐

Area 6 - Creativity and Aesthetic Experience (3 credit hours: College of Science requirement)

_____ 3 ☐

Area 7 - Critical Issues in a Global Context (3 credit hours)

PHYS 2074 Highlights in Contemporary Physics 3 ☐

Note: The ViEWS requirement will be met with in-major classes.

II. Foreign Language

In order to graduate, students must meet a language study requirement. The College of Science requires three units of a single foreign or classical language (or American Sign Language) during high school. Students who do not satisfy the foreign language requirement in high school may do so by taking the second semester of a college-level foreign or classical language (or American Sign Language). These credit hours do not count toward the total minimum hours required of the declared degree program.

III. Physics (29 credit hours)

PHYS 2325 Seminar for Physics Majors	1 ☐	**Two courses from the list below:**	
PHYS 2326 Seminar for Physics Majors	1 ☐	PHYS 3655 Introduction to Astrophysics	3 ☐
PHYS 2504 Mathematical Methods in Physics	3 ☐	PHYS 3656 Introduction to Astrophysics	3 ☐
PHYS 3314 Intermediate Laboratory	3 ☐	PHYS 4504 Introduction to Nuclear and Particle Physics	3 ☐
PHYS 3324 Modern Physics	4 ☐	PHYS 4554 Introduction to Solid State Physics	3 ☐
PHYS 3355 Intermediate Mechanics	3 ☐	PHYS 4564 Polymer Physics	3 ☐
PHYS 3405 Intermediate Electricity and Magnetism	3 ☐	PHYS 4574 Nanotechnology	3 ☐
PHYS 3704 Thermal Physics	3 ☐	PHYS 4614 Optics	3 ☐
PHYS 4315 Modern Experimental Physics	2 ☐	PHYS 4654 Modern Cosmology	3 ☐
		PHYS 4674 Introduction to General Relativity	3 ☐
		PHYS 4714 Introduction to Biophysics	3 ☐
		PHYS 4755 Intro to Computational Physics	3 ☐
		PHYS 4774 Intro to Physics of Galaxies	3 ☐

IV. Mathematics (9 credit hours)

MATH 2114 Introduction to Linear Algebra	3 ☐	MATH 2214 Introduction to Differential Equations	3 ☐
or MATH 2114H Introduction to Linear Algebra	3 ☐	**or** MATH 2214H Introduction to Differential Equations	3 ☐
MATH 2204 Intro to Multivariable Calculus	3 ☐		
or MATH 2204H Intro to Multivariable Calculus	3 ☐		

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V. Programming Course (3 credit hours)

One course from the list below:

CS 1044 Introduction to Programming in C	3 ☐	CS 1114 Introduction to Software Design	3 ☐
CS 1064 Introduction to Programming in Python	3 ☐	CS 1124 Introduction to Media Computation	3 ☐

VI. Free Electives (39 credit hours)

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VII. Progress Toward Degree

A student will be certified as making satisfactory progress toward the B.A. degree in Physics by satisfying the university's academic eligibility requirements as well as the following requirements:

- Upon having attempted 60 credit hours, the student will have completed the CLE Area 1 requirement (in section I), the Mathematics requirement (section IV) as well as PHYS 2305-2306, PHYS 2325-2326, PHYS 2504, and PHYS 3324.
- Upon having attempted 45 credit hours, the student must have 2.0 overall and in-major GPAs.
- Upon having attempted 72 credit hours, the student will have completed the foreign language requirement by the close of the academic year (spring semester). [College of Science requirement]
- Upon having attempted 96 credit hours, the student will have completed all credits for the Curriculum for Liberal Education. [College of Science requirement]

VIII. Minimum hours and GPA required for graduation

A minimum of 120 credit hours must be completed for graduation. A minimum overall and in-major GPA of 2.0 is required for graduation. All physics courses attempted are used in the calculation of the in-major GPA.

IX. Prerequisites and/or Corequisites

There are prerequisites not shown on this checksheet. Please see the Course Catalog or your advisor.

X. Accepted Substitutions

PHYS 3355: AOE 4134 (Astromechanics), or ESM 3124 (Dynamics II Analytical and 3-D Motion).
PHYS 3405: ECE 3105 (Electromagnetic Fields).
PHYS 3314: AOE 3054 (AOE Experimental Methods), or ECE 2204 (Electronics) & ECE 2274 (Electronic Networks Laboratory I), or ESM 3444 (Mechanics Laboratory).