

Physics BA

This program prepares students interested in physics and planning to enter professional schools in business, education, journalism, law, and medicine, and for liberal arts students desiring a strong background in physical science but with career objectives in other areas. The flexible program offers the opportunity for parallel studies in another discipline and/or pre-professional preparation. Students may choose to follow the standard B.A. or choose a specific area of emphasis: the Biophysics Concentration. Students wishing to pursue careers as professional physicists or graduate study in physics should seek the Bachelor of Science degree in physics.

Course Availability: This is when courses are typically offered and is subject to change:
F (Fall), S (Spring), SS (Summer) F = Fall, S = Spring, SS = Summer

Common Prerequisites (34 credits)

Complete all of the following with a grade of “C” or better (16 credits)

Course	Description	Pre-requisites	Term offered	Units
MAC 2311	Calculus I	Grade of “C” or higher in MAC 1147 or MAC 1140 + MAC 1114 (or placement score without prior coursework)	F, S, SS	4
MAC 2312	Calculus II	MAC 2311	F, S, SS	4
MAC 2313	Multivariable Calculus	MAC 2312	F, S, SS	4
MAP 2302	Differential Equations	MAC 2312	F, S, SS	3
PHY 1033	Physics Pathways	N/A	F,S	1

Complete all of the following with a grade of “C” or better (18 credits):

CHM 1045	General Chemistry I	“C” grade or higher in MAC 1105 or appropriate placement score (if no prior coursework in Math/Chem) Co-requisite: CHM 1045L	F, S, SS	3
CHM 1045L	General Chemistry I Lab	Co-requisite: CHM 1045	F, S, SS	1
CHM 1046	General Chemistry II	Pre-requisite: CHM 1045 Co-requisite: CHM 1046L	F, S, SS	3
CHM 1046L	General Chemistry II Lab	Co-requisite: CHM 1046	F, S, SS	1
PHY2048	Physics W/Calculus I	Pre- or Co-requisite: MAC2311	F, S, SS	4
PHY2048L	General Physics Lab I	N/A	F, S, SS	1
PHY2049	Physics W/Calculus II	Pre- or Co-requisite: MAC2312 Pre-requisite : PHY 2048	F, S, SS	4
PHY2049L	General Physics Lab II	Pre-requisite: PHY 2048L	F, S, SS	1

Required Courses (31 credits)

Complete all of the following with a grade of “C” or better (13 credits)

Course	Description	Pre-requisites	Term offered	Units
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PHY 3106	Modern Physics I	PHY 2049	F, S	3
PHY 3802L	Intermediate lab	Pre- or Co-requisite: PHY 3106	F, S	3
PHY 4221	Classical Mechanics I	PHY 2049, MAC 2313	F	4
PHY 4821L	Advanced Physics Lab	MAC 2313, PHY 3802L	F, S	3

Complete **one** of the following options with a grade of “C” or better (3 credits)

PHY 3513	Thermodynamics	PHY 2049, Pre or Co-requisite MAC 2313	F, S	3
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OR

PHZ 3113	Methods in Theoretical Physics	MAC 2313	S	3
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Complete 5 upper division (3000-4000 level) Physics electives courses with a grade of “C” or better (15 credits)
May include but not limited the courses below.

Course	Description	Pre-requisites	Term offered	Units
PHY 3107	Modern Physics II	PHY 3106	S	3
AST 3213	Modern Astrophysics	PHY 2048, PHY 2049	F	3
AST 3722	Observational Astronomy	PHY 2049, AST 3722L Recommended	S	3

Electives must be chosen in consultation with assigned academic advisor

Graduation Requirements:

- University Core Curriculum (UCC)
- Minimum of a 2.0 GPA
- 45 credits of Upper Division hours (3000-4000 level)
- 120 credit hours required for graduation
- Foreign Language requirement (FLENT/FLEX)
- Civic Literacy requirement

Students interested in Secondary Teacher Certification should contact the College of Arts, Sciences & Education Center for Advising & Student Success at (305) 348-2978.

Mathematics Progression Milestone Requirements

- Students in the BA in Physics must meet the following mathematics progression milestone:
- Students are required to enroll in a mathematics course in both the Fall and Spring terms and in the Summer term as needed to remain on track with program milestones.
- Students admitted in the Fall or Summer terms must successfully complete MAC1105 with a grade of C or better by the end of their first Spring term.
- Students admitted in the Spring term must successfully complete MAC 1105 with a grade of C or better by the end of their first Fall term.
- No more than two attempts in MAC1105 is permitted.

Students who do not meet this mathematics progression milestone will be redirected to a more appropriate academic program

Success Markers are guideposts that help students remain on track for graduation. The Physics Department has identified important courses in the major that indicate you are on track for successful degree completion.

- 30 credits - PHY 1033, PHY 2048 (4), PHY 2048L (1), MAC 2311 (4)
- 60 credits - CHM 1045 (3), CHM 1045L (1), PHY 2049 (4), PHY 2049L (1), MAC 2312 (4)
- 90 credits - CHM 1046 (3), CHM 1046L (1), PHY 3106 (3), PHY 3802L (3), PHY 4221 (3), MAC 2313 (4)
- 105 credits - PHY 3513 (3)

In cases where students are not making good progress, a change of major may be required.