Bachelor of Science in biological and physical sciences

Program information

College	Harriet L. Wilkes Honors College		
Department or school	Enter department or school		
Degree abbreviation	B.S.	**CIP code**	30.0101
Program website	www.fau.edu/honors/academics		

Our commitment to you

This Academic Learning Compact describes the program's mission, what students who complete the program will know and be able to do and how faculty assess that learning. Florida Atlantic University publishes a compact for every degree program and standalone certificate so students, families, employers and the community can see what each program commits to providing its graduates.

Program mission

The mission of the Wilkes Honors College is to educate students to the highest intellectual, experiential and ethical levels. The major prepares graduates to thrive and to contribute wisely to society and the planet.

Florida Atlantic University's mission

Florida Atlantic University is recognized as an opportunity university and R1 research institution dedicated to transforming lives through education, discovery, and innovation. We empower students to achieve economic mobility, advance knowledge that creates meaningful impact, and forge partnerships that drive prosperity and connection in the communities we serve.

How the program supports the university mission

The major supports the university's mission by transforming lives through education and discovery. Every student gains hands-on research experience through a senior honors thesis, plus an internship or study abroad, building career-ready skills in science and mathematics.

About the program

Honors students in this major build a deep understanding of the natural sciences and mathematics along with a strong liberal arts core. The B.S. is offered in science concentrations such as biology, biomedical science, chemistry, marine biology and neuroscience. Every student completes a senior honors thesis, an internship or study abroad, and a weekly Freshman Forum seminar. The major is a great fit for motivated students headed for science careers or graduate study.

Student learning outcomes

By graduation, students will be able to demonstrate outcomes in three core areas: content/discipline knowledge and skills (Outcome 1), communication skills (Outcome 2) and critical thinking skills (Outcome 3). Faculty assess all three core outcomes every year.

A. Content/Discipline Knowledge and Skills

What graduates will know and be able to do in their field

Areas this program addresses (check at least two)

- ☒ **Declarative knowledge:** key vocabulary, history, theories and concepts of the field
- ☒ **Research skills:** finding, gathering, analyzing and reporting information the way the field does
- ☐ **Technical skills:** hands-on tools and methods of the field, such as software, instruments, lesson plans or business reports

Graduates will be able to explain the key concepts and methods of their concentration.
Graduates will be able to draw on ideas and methods from related fields when they fit the question.
Graduates will be able to use the research methods of their concentration to complete an honors thesis or senior project.

How students show it

The senior honors thesis, and a sophomore writing portfolio with a scholarly paper and a Forum paper that responds to talks by experts in different fields.

Where it is assessed

Senior honors thesis; Sophomore Writing Portfolio

B. Communication Skills

How graduates will share ideas and work with others

Areas this program addresses (check at least two)

- ☒ **Written communication:** clear, well-organized writing suited to the audience and purpose
- ☐ **Oral communication:** well-organized presentations that connect with an audience
- ☐ **Other forms of communication:** visual, media, performance or exhibit work
- ☒ **Team/collaborative communication:** contributing to group projects and shared goals

Graduates will be able to write a clear, well-organized and persuasive argument using correct grammar and the style expected in their field.
Graduates will be able to work with faculty advisors by sharing ideas, responding to feedback, taking initiative and meeting deadlines.

How students show it

The senior honors thesis and the sophomore writing portfolio. Thesis advisors also review how well students work with them while researching and writing the thesis.

Where it is assessed

Senior honors thesis; Sophomore Writing Portfolio

C. Critical Thinking Skills

How graduates will analyze, create and solve problems

Areas this program addresses (check at least one)

- ☒ **Analytical skills:** weighing evidence, comparing ideas and judging arguments
- ☒ **Creative skills:** combining knowledge to create something new, such as a design, performance or proposal
- ☐ **Practical skills:** applying knowledge to real situations, such as a business proposal, lesson plan or grant

Graduates will be able to raise sound questions and use in-depth analysis to make an original contribution to scholarship in their field.
Graduates will be able to apply critical thinking to plan and complete a creative project, where their concentration calls for one.

How students show it

The argument and analysis in the senior honors thesis or creative project, and in the essays of the sophomore writing portfolio.

Where it is assessed

Senior honors thesis; Sophomore Writing Portfolio

Assessment approaches

Every year, faculty review samples of student work to see how well students are meeting all three outcomes, and they use what they learn to improve the program.

Two faculty readers review each senior thesis draft using shared standards for subject knowledge, writing, critical thinking and work with advisors. Students whose draft falls short revise it before they can pass.
Each summer, a panel of Honors College faculty reviews sophomore writing portfolios for knowledge, writing and critical thinking. The review shows whether each student is on track to write a thesis in the senior year.

Assessment methods may change over time.