Applied Science

Director, Associate Dean for Academic Affairs of the P.C. Rossin College of Engineering and Applied Science

The Applied Science Program enables students to create interdisciplinary specialties that prepare them for careers in a world that increasingly bridges academic disciplines. Students pursue subject-area concentrations that represent academic interests they wish to integrate into a meaningful program. The core offers students the intellectual tools to identify connections between the concentrations and engage in interdisciplinary problem-solving and critical thinking.

The program leads to the Bachelor of Science in Applied Science. Each student’s curriculum combines a general engineering education with a carefully customized concentration in engineering and/or science as well as another area of emphasis, which may include courses taken inside the P.C. Rossin College of Engineering & Applied Science and may also include courses taken in one or more of the other three Colleges within the University.

In order to ensure the success of this individualized approach to education, Applied Science places primary emphasis on advisement. Each student is teamed with an advisor who helps the student plan the course of study and who supervises independent study and internships. The advisor remains the student’s advisor throughout his or her undergraduate career.

Unlike students in the traditional college programs, students in the Applied Science program of individualized study do not declare a major in a particular academic department. Instead, they develop a concentration that may combine study in several areas. Students are encouraged by their advisor to develop the concentration in such a way that the student will be well prepared for further study in graduate school or for pursuing a particular career path. While the chosen concentration can be highly customized in consultation with the advisor, examples of concentrations include: Technical Communications, Digital Media, Entertainment Science, Technology/Science and Education, Technology/Science and Pre-law, Technology/Science and Pre-Medicine, Technology Management, Technology Marketing, and Engineering and Architecture. Many other combinations are possible.

The requirements for a BS in Applied Science program are a minimum of 128 credit hours including:

**First Year Courses**

- ENGL 001 Critical Reading and Composition 3
- ENGL 002 Research and Argument 3
- ENGR 005 Introduction to Engineering Practice 2
- ENGR 010 Applied Engineering Computer Methods 2
- CHM 030 Introduction to Chemical Principles 4
- PHY 011 Introductory Physics I and Introductory Physics Laboratory I 5
- MATH 021 Calculus I 4
- MATH 022 Calculus II 4

**Other Natural Science**

- CHM 031 Chemical Equilibria in Aqueous Systems 4
- BIOS 041 Introduction to Cellular and Molecular Biology 3
- EES 080 Introduction to the Earth System 4
- PHY 021 Introductory Physics II and Introductory Physics Laboratory II 5

**Other Mathematics**

- MATH 021 Calculus I 4
- MATH 022 Calculus II 4
- MATH 023 Calculus III 4
- MATH 205 Linear Methods 3
- MATH 231 Probability and Statistics 3

**Required HSS courses**

- ECO 001 Principles of Economics 4
- PHIL 128 Philosophy Of Science 4
- or HIST 008 Technology in Modern America 4
- or HIST 145 or POLS 106 Environmental Values and Ethics 4
- PSYC 001 Introduction to Psychology 4

**Humanities & Social Science electives**

- Select 13 additional credits subject to college requirements. 13

**Major electives**

- Select 24 credits 24

**Approved electives**

- Select 18 credits 18

**Total Credits** 128