Physics and Computer Science

Like all fields of endeavor in today's technology-driven world, physics relies more and more on computers. As research scientists, physicists use computers for data collection and manipulation, while a growing area of application is computational physics, which includes electronic structure calculation, statistical physics, atomic theory, and computer simulation of physical phenomena. Individuals with a sound foundation in both physics and computer science can pursue a wide variety of careers in these exciting and competitive fields.

Why Physics and Computer Science at Lawrence Tech?
Offering extensive course work in contemporary physics, math, and computer science, the Bachelor of Science in Physics and Computer Science program at Lawrence Technological University focuses on the use of computers and sensor technology to tackle real-world problems and find creative solutions. This unique program allows you to combine your interests in the natural world and computers by giving you strong preparation in both disciplines, a grasp of the overlap between them, and knowledge of computer applications in a scientific environment.

Extensive laboratory work combined with the depth of the curriculum can prepare you for immediate entry into industry, scientific study, research and development, or graduate school. The program provides a solid foundation for students interested in pursuing advanced study in physics, computer science, computer engineering, law, or medicine.

Lawrence Tech’s Bachelor of Science in Physics and Computer Science program incorporates computer technology throughout the range of courses and state-of-the-art computerized labs allow analysis of data gathered with interfaced sensors. Electives in lasers and holography, nuclear physics, biomedical engineering, geophysics, health physics and nuclear medicine, science education, patent law, and astronomy allow you to further pursue your individual interests.

As a student in the physics and computer science program, you will be given ample opportunities for hands-on experiences. You can choose to participate in internships at such well-known national facilities as the Argonne, Los Alamos, and Oak Ridge National Laboratories, Fermilab, and the National Radio Astronomy Observatory.

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CURRICULUM
Your 127-credit-hour program consists of:

- Humanities (with emphasis on leadership) 29
- Math and Computer Science 48
- Physics and Physical Science 41
- Chemistry 9
- Total 127

SAMPLE COURSES
Analytical Mechanics
Computer Science
Condensed Matter Physics
Contemporary Physics
Data Structures
Electricity and Magnetism
Math Modeling
Numerical Analysis
Optics, Lasers, and Microscopy
Quantum Mechanics
In addition, you will complete an individualized research project during your senior year. Throughout your university experience, you will work with an outstanding faculty dedicated to your success, who will give you the one-on-one advising and encouragement needed to help you reach your individual goals.

The University’s signature “theory and practice” approach enables you to understand how the real world works, and the program’s emphasis on critical thinking, logic, and problem-solving skills provides the competitive edge you need to stay at the forefront of any fast-moving field.

**Getting Started**

For more information, visit ltu.edu/arts_sciences/physics_computer_science or contact Lawrence Tech’s Office of Admissions at 800.CALL.LTU or admissions@ltu.edu.