Computer Science

This comprehensive program equips students with the foundational and advanced skills necessary to develop, design, document, test, and analyze software solutions using modern programming tools, primarily focusing on the Python programming language. Through a hands-on, project-driven curriculum, students will engage in every course by proposing and completing an original programming project each semester, fostering creativity, problem-solving, and accountability. Emphasis is placed not only on technical proficiency but also on the broader understanding of how software can solve real-world problems and enhance user experience. Students will gain insight into human-computer interaction, algorithmic thinking, and the ethical dimensions of computing, preparing them for further study or entry into the tech industry.

The computer science program at Lee College is designed to provide a solid academic foundation for students planning to transfer to a four-year university. With coursework aligned to university requirements, students are well-prepared to pursue a bachelor's degree in computer science and continue their path toward a career in the tech industry.

Graduates who continue their studies and enter the workforce can expect a strong job outlook and competitive salaries. Alumni often find opportunities across a wide range of industries such as technology, healthcare, finance, education, and government, reflecting the versatility and high demand for computer science professionals.

Many careers require education beyond the associate degree. Students should work with their advisor to tailor course selections to align with their chosen transfer university. The transfer plan(s) on this page show a tailored example for a university commonly chosen by Lee College students. However, students may choose to continue their education at any university.

What Will I Learn?

Upon successful completion of the Computer Science degree program, graduates will be equipped with the following skills:

Programming Proficiency

- Develop and implement Python software, focusing on writing precise, efficient, and maintainable code.

Problem Solving and Algorithmic Thinking

- Apply logical reasoning and algorithm design techniques to solve complex computational problems.

Software Development Lifecycle Understanding

- Gain experience in planning, developing, testing, debugging, and maintaining software applications

Project Management

- Propose, plan, and execute a programming project, mirroring real-world development environments.

Data Analysis and Processing

- Use programming tools to collect, organize, and interpret data, supporting data-driven decision-making.

Ethical and Responsible Computing

- Recognize technology's societal and ethical implications, and develop responsible practices in software development and data handling.

View Program Learning Outcomes

"What Can I Do With This Course of Study?"

Computer Science program graduates are well-positioned to pursue various in-demand roles across multiple industries. Entry-level computer science positions typically offer starting salaries ranging from $55,000 to $75,000 annually, depending on location, specialization, and experience.

Here are some common career paths:

Software Developer

- Design, build, and maintain software applications using Python for desktop, mobile, and web platforms.

Data Analyst

- Interpret and visualize data to help organizations make informed decisions.

Web Developer

- Create and manage websites and web applications, focusing on front-end design, back-end development, or both (full stack).

IT Support Specialist

- Provide technical assistance and troubleshoot hardware, software, and network issues within organizations.

Systems Analyst

- Evaluate an organization’s IT systems and recommend solutions to improve efficiency and effectiveness through technology.

Freelance Developer or Consultant

- Work independently on various client projects, including website development, data processing, automation scripts, or custom software solutions, offering flexibility and entrepreneurial experience.

Computer Science UHCL Transfer Plan

Please note that MATH 1314 & MATH 2412 are pre-requisites for MATH 2413. The remainder of the plan includes course options for transferring into the COMPUTER SCIENCE BS program at the University of Houston-Clear Lake. The plan includes more than the 60 hours required for an Associate of Science and allows students to complete additional bachelor's degree requirements prior to transfer.

Foundations: These are the courses students need in order to progress in their career/college pathway, as they either provide a certificate or lay the groundwork for moving to the next set of courses.

Lee College		UHCL
Course	**Course Title**	**Counts Toward**
EDUC 1200	Learning Frameworks	PSYC 1100
ENGL 1301	English Composition 1	WRIT 1301
MATH 2413	Calculus 1	MATH 2413
COSC 1436	Programming Fundamentals 1; Lecture and lab	CSCI 1470
CHEM 1411	General Chemistry 1; Lecture and lab	CHEM 1111/ 1311
ARTS 1303 or 04	Art History 1 OR Art History 2	ARTS 1303 or 1304

Knowledge Building: These courses further the students' knowledge in the area of study and increase their preparation for the degree completion.

Lee College		UHCL
Course	**Course Title**	**Counts Toward**
ENGL 1302	English Composition 2	WRIT 1302

MATH 2414	Calculus 2	MATH 2414
COSC 1437	Programming Fundamentals 2; Lecture and lab	CSCI 1471
PHYS 2425	University Physics 1; Lecture and lab	PHYS 2125/2325
GOVT 2305	Federal Government	POLS 2305
HIST 1301	History of the United States to 1877	HIST 1301
PSYC 2301 or SOCI 1301	Introduction to Psychology or Introductory Sociology	PSYC 2301 or SOCI 1301

Completion: These are the courses the student needs in order to complete the degree plan and prepare to enter the workforce.

Lee College		UHCL
Course	**Course Title**	**Counts Toward**
MATH 2318	Linear Algebra	MATH 2318
COSC 2325	Computer Organization	CSCI 2331
HIST 1302	History of the United States since 1877	HIST 1302
GOVT 2306	Texas Government	POLS 2306
SPCH 1315	Principles of Public Speaking	COMM 1315
HUMA 1301	Introduction to Humanities	HUMN 1301
PHYS 2426	University Physics 2; Lecture and lab	PHYS 2126/2326

CAREERS IN COMPUTER SCIENCE
My Next Move

Live Chat

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