

# COMPUTER SCIENCE



## Degrees offered

B.S. in Computer Science  
With an optional concentration  
in Cybersecurity

B.A. in Computer Science

Minor in Computer Science

## What can I do with this major?

Students with degrees in computer science currently have careers as:

- App Developer
- Application Engineer
- Business Analyst
- Computer Programmer
- Data Scientist
- Information Technology Technician
- Network Administrator
- Research Scientist
- Security Engineer

**Mid-career median pay for computer science majors:**  
**\$102,190**

*15% faster growth than the average for all occupations  
- U.S. Bureau of Labor Statistics*

## Relevant curriculum

The Department of Computer Science's primary goal is to develop the aptitudes and analytical skills required for the use and understanding of computer science. The curriculum is designed to allow exceptional students to excel in their area of interest. The professors strive to guide the students in the discovery and learning of new ideas, rather than just presenting carefully structured theories. Applications are used throughout to illustrate and create new material. Most topics are developed by means of interplay between applications, problem solving and theory. Early courses are designed to appeal to a broad audience of university students, while higher-level courses are more focused.

### Programming Environments

- C/C++, Swift and Java
- Databases: MySQL and Postgres
- Scripting languages: Perl, PHP, Python and JavaScript
- Maple and Matlab
- Cloud based AWS and GitHub
- IDEs such as Xcode, Eclipse and CLion
- VirtualBox and VMware
- Member of Apple iOS Developer Program
- Member of MSDN Academic Alliance

### Hardware Platforms

- Several dual multi-core Intel CPU servers running Red Hat Enterprise
- Computer labs containing Dell Alienware workstations with Nvidia graphic boards running Ubuntu or Fedora Core
- HPC system with 10,000+ core processors including several high end Nvidia GPUs utilizing CUDA technology
- 20+ node Linux cluster
- Classroom lab with iMac workstations
- Raspberry Pi and Arduino

## Why should I major in computer science at HPU?

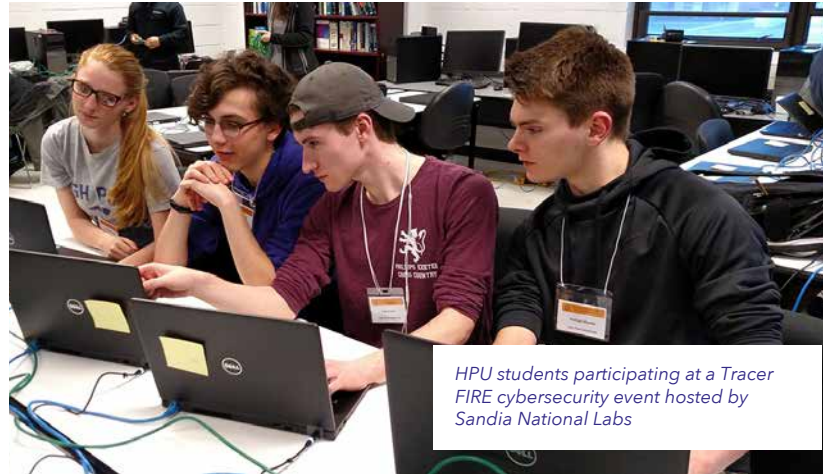
- In the age of technology, the demand for computer programmers continues to expand. According to the U.S. Bureau of Labor Statistics, demand for students with a degree in computer science is growing faster than most degrees.
- At HPU, you have the option of earning either a B.S. or a B.A. in computer science. This allows you to focus on the courses that will be most beneficial for your desired job after graduation.
- We are committed to incorporating the latest trends in technology into our curriculum. You will have access to the top software available.
- Our students invent and design new approaches to computing technology and find innovative uses for existing technology.
- Computer scientists enjoy excellent job prospects because many companies report difficulties finding these highly skilled workers.

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## Research/employment opportunities

Recent HPU graduates hold the following positions:

- Director of AI Research at Apple Inc.
- Senior Performance & Kernel Engineer at Verizon Digital Media Services
- Software Engineer at Gilbarco Veeder-Root
- Associate Software Analyst at The MathWorks, Inc.
- iOS Advanced Development Senior Engineer at Apple Inc.
- Started their own company, Cirtual LLC
- Associate Software Engineer/Developer at Fidelity Investments
- Attending graduate programs in Computer Science at schools like Clemson University and Wake Forest University



HPU students participating at a Tracer FIRE cybersecurity event hosted by Sandia National Labs

## Holistic learning

Faculty members received a \$10,500 grant to continue an iPad app program at HPU. The applications are used in class to teach key economic principles.

Six students, mentored by Roger Shore, associate professor of computer science, designed, developed, analyzed and implemented the apps as student workers with grant funds. The grant also allowed students to present their work at two conferences. This will continue to be a long-term interdisciplinary collaboration with the economics and computer science faculty.

"Through this grant, our computer science majors are gaining valuable experience developing apps that eventually will be rolled out nationally," says Shore. "The apps also make it possible for our economics students to participate in real time economic experiments. The experiments show students how their decisions and the related impacts may be affected by various economic, trading and social structures."



Students meet throughout the year with HPU Innovator in Residence and Apple Computer co-founder, Steve Wozniak

## Extraordinary outcomes

HPU students are participating in the following computer science programs:

- 1 of 10 U.S. participants in research experience at the University of Michigan REU at CERN Summer Program
- Designed and built an autonomous golf cart alongside HPU Innovator in Residence and Apple Computer co-founder, Steve Wozniak
- First place prize winner at the ACM Mid-Southeast Conference with a paper presentation titled, "Improving the Ranking System for the U.S. Census Bureau"
- Internship at Gilbarco Veeder-Root
- Research experience at the University of Central Florida funded by the National Science Foundation focused on Computer Vision

## Meet Reza

**Hometown:** Isfahan, Iran

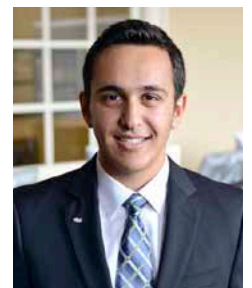
**Major:** Computer Science

**Career:** Co-founder & CEO at Cirtual LLC

**Clubs:** Catholic Ministries (HPUCCM), Tower Players, MACS Club (Math, Actuarial Science, Computer Science), Ethics Team

**Leadership Positions:** SGA Junior Class Representative, SGA Executive Council Academic Chair, co-founder of Tutor Club, Student Justice

**Why I Chose HPU:** "I chose HPU because it offers the best environment for growth, and it is a true inspiration for me to be my best at all times."



For more information about the Webb School of Engineering, contact: