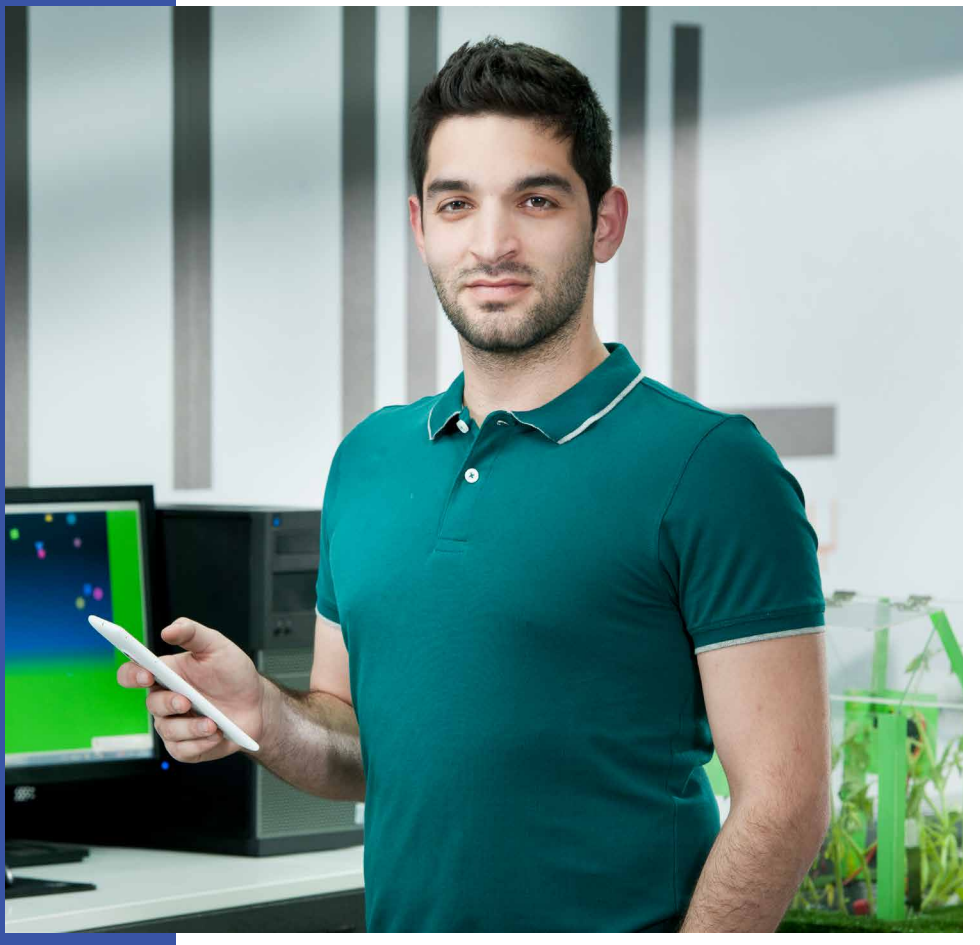
Computer Science
Computer Engineering



FREDERICK UNIVERSITY

Computer Science
Computer Engineering

The top professions of the future

Can you imagine a world without the internet? Without computers, mobile phones, or smart devices? Thanks to technology, our daily lives run smoothly. We get things done faster and easier. Technology improves every bit of our lives, and thanks to its contribution to medicine, it can even help in prolonging them. But most importantly, with the help of technology, we find solutions to some of the biggest challenges and threats facing humanity. By choosing a career path in one of the numerous fields related to computer systems technology, you can take advantage of its unlimited potential and contribute towards a better future for humankind.

Computer Science

Computer Science is the science behind every bit of programming found in our computers, smartphones, and smart devices. It is all about the software and what goes behind our screens in order to have the world seamlessly delivered on our screens. It is about the graphics and the logic of an application, a computer program, or a website. It is about the Artificial Intelligence behind the apps we use every day.

Our Computer Science program focuses on the technology of computers and other computing systems. It is a program designed to equip you with the essential skills and knowledge you will need to master programming languages, understand networks and databases, and navigate cloud computing technologies. Most importantly, you will be able to understand and solve computing problems.

Computer Engineering

Computer Engineering relates to the engineering that goes into a computer or/and any other computing system. It is the science dealing with the design of electronic circuits, such as microprocessors and microcontrollers, that are embedded into larger computing systems and harmonized with their software. Computer Engineering deals with a combination of software and hardware; it is not about the repair or maintenance of computers, but the design, implementation, and management of the material that goes into them.

Our Computer Engineering program offers in-depth knowledge and advanced skills in designing, implementing, programming, and managing computer systems. By striking a perfect balance between theory and practice, this course will transform you into a well-rounded scientist, ready to start a successful career in the public or private sector.

96% employment rate

Job prospects

The use of computing systems, new technologies, and the internet is present in every aspect of our lives, creating so many jobs that, in many cases, demand exceeds supply. In the next 15-20 years, new technologies, artificial intelligence, robotics, and big data will employ over 70% of the workforce. Employment rates in these fields are already high. Today, 96% of our graduates are employed, many of them before they even complete their studies, in high-paying jobs with great career advancement prospects.

Frederick University students participate in the Wargaming Internship Program and learn from top professionals in the video game industry.

Students of the Interactive Design course develop original interactive applications for video games. Scan to see them in action.

#Techforgood. In recent years, Frederick University's Mobile Devices Laboratory has collaborated with various organizations and institutions and has applied its know-how in new technologies for developing applications and systems that aim to tackle social problems. That is why they have won an **award in the category "Connecting With Society" at the first Cyprus Education Leaders Awards.**

Applying theory to practice
Scan to find out more!

Research programs

The Research Programs undertaken by the Department of Electrical Engineering, Computer Engineering, and Informatics vary in subject matter, scale and technologies. From developing teen games and virtual tours for tourists, to drones detecting shipwrecked persons in the open sea, you will have the opportunity to develop your knowledge and skills in a wide range of cutting-edge technologies, such as:

Augmented and virtual reality: they were used for EnterCy, a project which offers virtual guided tours of Cyprus through a device, and for the GUIDed project, which offers personal care solutions to the elderly.

Virtual Reality (VR): was used in various projects, such as DineTours, a virtual tour and online booking system for the restaurant industry.

Drones, Artificial Intelligence, and Robotics: a drone programmed to recognize emotions, thanks to the use of artificial intelligence, and a robotic system were developed for the project ARGOS, aiming at strengthening the coastguard during the refugee crisis. The drone, recognizing the emotion of panic, sends a message to the autonomous robotic system to head to the point of shipwrecked persons for rescuing. The drone won 1st Prize in Microsoft Imagine Cup 2016.

Game development: game design and development using various technologies such as augmented reality for the game AR Shooter and 3D Virtual World and Role Playing for the game Dream Fighters.

The use of sensors (such as GPS), combined with cutting-edge technologies such as **crowdsourcing:** these were used for the SaveOurFood project, a project aiming to minimize waste of edible food in Cyprus by offering it to people in need.

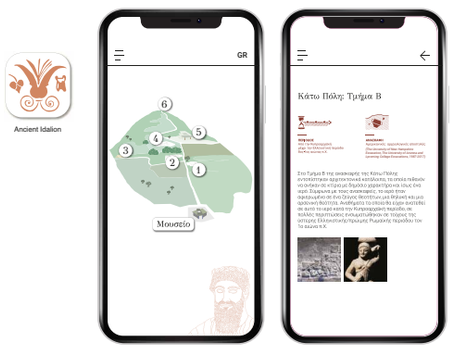
Storytelling (story narration in a virtual world): was implemented in the project JudEx+ to support a positive judicial experience for children victims of sexual violence by improving the skills of professionals involved in representing children in legal proceedings.

Mobile Devices Laboratory (MDL)

The Mobile Devices Laboratory provides exciting opportunities for students to participate in research programs and other projects that focus on developing applications related to Mobile Computing, Smart Systems, Web and Cloud Computing, Computational Intelligence and Multi-Objective Optimization.Students employed by MDL work on real projects assigned to them by large companies and organizations. Hands-on experience helps them develop their communication and teamwork skills, which are just as important as technical skills. MDL has secured over 1 million euros of funding from participating in such projects in the last four years.

Robotics and Automated Systems Laboratory (RAS Lab)

Through Frederick University's Robotics and Automated Systems Lab, students have the opportunity to work on advanced robotic technologies and develop new robotic applications as part of their dissertation. RAS Lab focuses on areas of robotics with an emphasis on mobile robot systems. Among its many projects, RAS Lab developed robotic Unmanned Marine Vehicles for shipwrecked persons' rescue; devices for sea and archaeology data collection; and state-of-the-art portable device measuring sea currents, currently used by the Olympian Pavlos Kontides and other sailing athletes.



“Our professors were exceptional. I often go back to university lectures and realize that what they were teaching us in class makes even more sense to me now.”

Eftychia Aletra,
BSc in Computer Science graduate
Senior Information Systems Consultant

“Our field requires hard work, but if you have the will, anything can happen! Our professors helped a lot with this. They were always by our side. In addition, having a female professor had a positive impact on me because I had before me a role model of a woman with a successful academic career in Computer Science. During the course, we had the opportunity to apply informatics in other fields such as biomedicine, which was extremely important. We even developed and implemented a system for rescuing shipwrecked persons. That was exciting!”

Akindyni Michael,
BSc in Computer Science graduate
Web Developer

“After four years at Frederick University, I have gained a lot. Most importantly, a solid foundation for my professional career has been laid. With the knowledge I have gained, I am ready to face the new challenges in life. My good relationship with the professors contributed to a smoother experience during my studies. Whenever I needed them, they were there to help as much as they could. Not just with my studies but also with my personal life. And this made a big difference to me.The great relations with the academic staff, but also the knowledge I have acquired, in a welcoming environment for all the students, and with all the amenities provided by the department, in class, but also in the various laboratories we had during the course.”

Stylianos Georgiou,
BSc in Computer Science graduate
MSc Web and Smart Systems student
Junior Web Developer at Frederick University’s Mobile Devices Laboratory

“A great advantage for me at Frederick University was the open student-professor communication and the friendly environment. The professors’ knowledge is extensive, and they were willing to share it with us. I would also like to highlight the employment opportunities offered by the University, especially while studying, or during the summer months, etc. For all these reasons, I would easily recommend Frederick University to friends.”

Vitaliy Vlasevych
BSc in Computer Science graduate
Game Developer

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