

## Concentration Courses

**Data Communications and Networking** The purpose of this course is to provide the student with an in-depth exposure to the theoretical concepts, protocols, standards, topologies, design and problem solving techniques of data communications and computer networks. The course provides comprehensive coverage of network systems and infrastructure and helps students in planning, analyzing and implementing data communications LAN, MAN, WAN, and SDN technologies; switching, routing, and performance assessment; on-line applications and services in Internet / Extranets / Intranets; data security and computer networks management techniques. Assumptions about surrounding courses: Students should have an understanding of computers, database applications, along with a fundamental understanding of computer use in an organizational environment.

**Database Systems** This course covers the design and development of databases that support the activities of an organization. Data modeling and the implementation of data models will be a major component of the course, with students studying normalization and formal modeling conventions. The model will be implemented using SQL. Metadata is also covered as well as some aspects of database administration.

**Object-Oriented Programming: Java** Explore computer programming and the object-oriented language, Java. This course introduces techniques and processes that are necessary in a professional software development setting. A background in programming is not assumed. Topics include modern software development tools including debuggers; general programming techniques; object-oriented programming; maintainability; algorithm design; and event-driven, graphical interface design. Students will enhance their ability to develop software in industry.

**Business Ethics** This study is designed to facilitate an understanding of philosophy of ethics and ethical decision-making process. The study emphasizes the overall philosophies, theories, and concepts of moral reasoning in making informed ethical decisions in various areas of business and business management.

**Computer Operations & Security** As computers become ever more present and interconnected in modern society, the IT professional needs to be more and more concerned with the issues of levels of service, security and recovery. This course will cover the topics of management and security; quality of service and system performance; viruses, worms, trojan horses and denial-of-service; firewalls; and strategies for ensuring appropriate levels of security. A student project of sufficient rigor will be the core of this course. Prerequisite (must complete before registering): Introduction to Networks Highly Recommended (not required): Familiarity with the core concepts of networking, including awareness of the existence of protocols; an understanding of hardware such as routers, hubs and switches, common operating systems, basic systems and network security.

**Software Engineering** Computer scientists and software engineers need to learn formal methodologies for designing robust and reliable software systems in order to effectively and efficiently build and maintain these large and/or complex software projects. In this course, students will learn the concepts of software engineering including software processes, requirements specification, software verification and validation, and software evolution.

**Senior Project in Computer Science** Senior Project is a capstone, applied learning experience. Students work closely with the instructor on a topic of their choice to connect theory with practice and demonstrate their ability to integrate and apply the learning they have acquired over the course of their studies and experience. Depending upon the size and scope of the project, the work may be completed in one or two terms, and for differing amounts of credit. If completed in two terms, typically the first term is used for planning and research, and the second term for the final development or implementation of the project. Students should consult with their mentor and the instructor before enrolling to determine the number of credits and time needed. Prerequisites: As a capstone course, students should enroll in Senior Project during their final year of study. All lower level concentration courses should be complete, as well as at least two advanced level concentration courses or their equivalent. Corequisites: Additional concentration courses may be taken concurrently Students will be expected to apply learning from all concentration courses, including those being taken during the same term. key, however ANY student interested in doing a final capstone project on a topic related to one of these countries or regions, or with an international theme, is welcome to request the opportunity to work with one of the international faculty in these programs.

## why choose this programme

### Highly Qualified Academic Staff

Our team comprises professors from prestigious universities with extensive experience both in Greece and internationally

### Diverse Concentrations

Choose from multiple concentrations to tailor your degree to your interests

### Exploratory First Years

Sample various courses in the first two years before selecting your concentration

### Comprehensive Education

Broaden your knowledge with a diverse General Education curriculum

### Program Flexibility

with full-time or part-time studies

### Adaptable Pathways

Change your concentration during your studies to better align with your evolving career goals



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Computer Science graduates can pursue careers in computer systems programming, software engineering, network support and administration, database design and management, systems analysis and testing, internet and web design, and more. These roles are often challenging, varied, and exciting. Given the crucial role of computer systems in business applications, computer science professionals are an essential part of the technical and managerial staff in modern private and public organizations. Our Computer Science graduates have secured positions in programming, telecommunications management, software engineering, technical support and administration, and systems design, primarily within the service sector, including telecommunications providers, web development firms, and financial services.



### Apply Now!

**Athens:** 38 Amalias Ave., Syntagma  
tel.: +30 210 32 25 961  
**Thessaloniki:** 138 Egnatias & P.P. Germanou  
tel.: +30 2310 88 98 79  
**info@nyc.gr, www.nyc.gr**



NYC ATHENS CAMPUS  
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NYC THESSALONIKI CAMPUS  
THESSALONIKI



UNIVERSITY OF NEW YORK  
IN PRAGUE (UNYP)  
PRAGUE



**NEW YORK COLLEGE**  
THE INTERNATIONAL COLLEGE OF GREECE  
**The LEADING College**  
**of University Studies in Greece:**  
The **ONLY** Greek College with expertise in founding and  
operating Private Universities in Europe!

# Bachelor of Science (BS) COMPUTER SCIENCE

## Code Your Future



STATE UNIVERSITY OF NEW YORK  
**EMPIRE STATE**  
UNIVERSITY

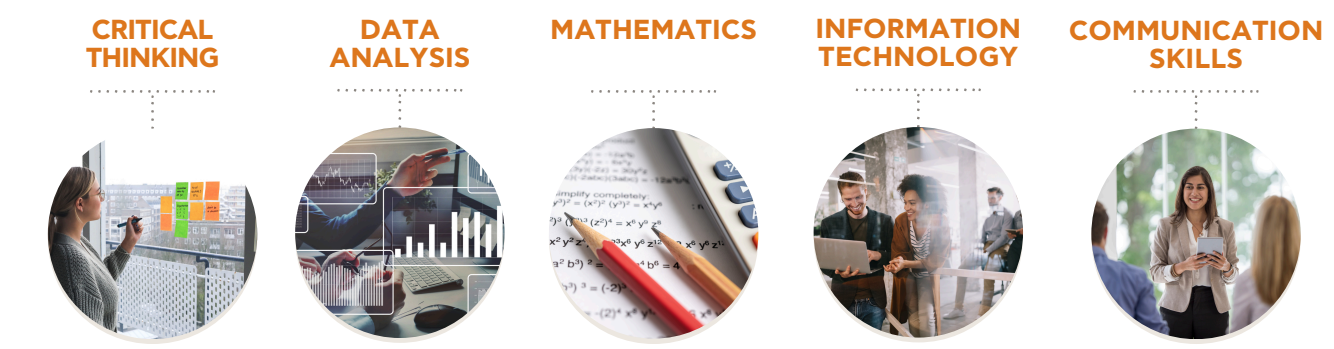


**NEW YORK COLLEGE**  
THE INTERNATIONAL COLLEGE OF GREECE



The **Bachelor of Science (BS) in Computer Science**, offered by the State University of New York - Empire State University, U.S.A. at New York College in Greece, equips students with comprehensive knowledge and skills in programming techniques, the use of programming languages, systems analysis and design, and the application of computer technologies in business. Students will also gain an understanding of abstract concepts and principles of computer science, as well as the mathematical foundations underpinning the field.

Graduates will be capable of analyzing, implementing, and managing computer systems both technically and managerially. The program includes a solid foundation in science and liberal studies through the general education curriculum. Additionally, students will learn the principles and theories of ethical decision-making and their practical implications in business and the social context of computer technology. This degree prepares graduates for postgraduate studies or professional qualifications in programming, software engineering, and IT systems support and administration.



“Dear Students,  
Welcome to the Bachelor in Computer Science program at New York College of Greece—where innovation meets excellence!

In today’s digital era, Artificial Intelligence, Machine Learning, and Computer Science are driving the future. Our program is designed to equip you with cutting-edge knowledge, hands-on experience, and the problem-solving skills needed to shape tomorrow’s technology.

With a state-of-the-art curriculum and experienced, industry-leading faculty, you will explore the depths of AI, software development, data science, and more. This is your opportunity to think big, push boundaries, and become a leader in the digital revolution.

Embrace the challenge, seize the future, and get ready to innovate, create, and transform the world through technology!

Welcome to your journey in Computer Science!

Saiti Kyriaki

BSc, MSc, MBA, PhD

Head of Informatics Department

New York College

INNOVATE  
DEVELOP  
SUCCEED

CURRICULUM

General Education - 30 credits	
You must take these 6 courses = 18 credits	
1	Intro to College Reading and Writing
2	Effective Reading & Writing
3	Math
4	US History
5	Natural Science course
6	Diversity course
Select 3 of the following 5 areas = 9 credits	
1	Social Science course
2	Western Civilization course
3	Other World Civilizations
4	Humanities course
5	Arts course
Take 1 course from any category = 3 credits	
	GenEd elective course

Empire State University Concentration Courses - 32 credits	
1	Data Communications and Networking
2	Database Systems
3	Java
4	Business Ethics
5	Computer Security
6	Software Engineering (prereq. SAD and Database Systems)
7	Final Project in Computer Science

Programme Duration:  
Full time: 4 years, Part Time: 5-6 years

New York College Concentration Prerequisites	
1	Introduction to Programming
2	Discrete & Finite Mathematics
3	Data Structures (prerequisite Intro to Programming)
4	Statistics for Business (prereq. Algebra)
5	Operating Systems
6	Principles of Management
7	Design and Analysis of Algorithms
8	Human Computer Interaction
9	Org. Behaviour (pre-req. Psych. Adj.)
10	System Analysis and Design

Elective credits - RECOMMENDED	
Intro to Digital Entertainment Technology	Open Source Development
Ethical Hacking & Digital Forensics	Contemporary Problem Analysis
Data Modeling & Analysis	Enterprise Systems Development
Software Testing	Object Oriented Programming with C#
Management Info Systems	E-government Systems (prereq. MIS)

Electives	
Artificial Intelligence	WEB Systems Dev. (Database Systems)
Design for Programming Languages	WEB Publishing w. HTML

STATE UNIVERSITY OF NEW YORK  
Empire State University, U.S.A.

The STATE UNIVERSITY OF NEW YORK is the largest university in the United States with 64 campuses and 400,000 students. Empire State University is one of the 64 colleges and universities of the STATE UNIVERSITY OF NEW YORK with approximately 20,000 students each year. STATE UNIVERSITY OF NEW YORK - Empire State University (SUNY-ESU) offers fully accredited undergraduate and graduate programs as well as professional degrees. Founded in 1971, it is internationally renowned for its flexible and innovative programs. The Department of International Programs at STATE UNIVERSITY OF NEW YORK - ESU collaborates with educational institutions around the world to serve undergraduate students. Students participate in classroom and online courses in Athens, Thessaloniki and Prague (Czech Republic).

New York College has a franchise agreement under the Greek Ministry of Education legislation and the degree you will receive at the end of your studies is awarded by the University itself.

