# COMPUTER SCIENCE


When you think about computers, you most likely think about that PC or laptop that allows you to prepare that term paper or remove the red-eye from that picture of your grandmother. In reality, computers have infiltrated almost every area of our world. Every form of communication today uses a computer in some way from email to the phone systems to the distribution of Christmas cards. Computers control how modern cars, trains, and aircraft work and are used to guide their safety on the roads, rails or in the air. Most goods today are produced by robots which are computers themselves in automated plants. Even the production and distribution of our food supply relies on computers.

The study of Computer Science teaches you how to use a computer to make the world work as it does. You learn how to make a computer do what you want it to do – whether that be creating a whole new world out of pictures or sounds or building a car that can drive itself. As a computer science major, you will learn how computers work, how computers work together to build networks like the Internet, and how teams of people build systems worth hundreds of millions of dollars. The possibilities are endless.

## Career Opportunities

With a degree in Computer Science, you will be equipped with lifelong skills that you can use in a whole variety of jobs from management to consulting; from programming to information systems administration; from IT companies to any company, large or small. Read on for a few examples:

- Software developer who design and implement software for businesses and scientists alike.
- Game programmer who is working on the hottest new game for the Xbox.
- Computer scientists who design the hardware required to run systems.
- Computer and information systems analysts who manage databases and organize information
- Information technology specialists who set up and run computer and network systems

## Job and Graduate School Placement

Many people who have earned a degree in computer science from King's have flourished in the workforce and in graduate school. Listed below are just a few of the places where our alumni have found success:

- The Vanguard Group, software engineer
- Northrup Grumman, software developer
- Blue Cross of Northeast PA, programmer analyst
- Thomas Education Direct, web developer
- Intellacom, Inc., network engineer
- Drexel University, graduate studies

To learn more about majoring in Computer Science at King's College, please contact the Office of Admission at 1-888-KINGS PA or admissions@kings.edu.

# Computer Science (121 Credit Hours - General Track)

## Suggested Sequence

- Use the information below as a guide when selecting courses.
- Consult your Academic Advisor prior to course registration.
- Refer to the King's College Catalog and/or website for course titles and descriptions.
- Choose one course from each CORE category as listed for Computer Science Majors
  - ➢ CORE courses may be taken in any order approved by the academic advisor with the following conditions:
    - CORE 100 and CORE 110 should be taken in the first year.
    - CORE 115 (or 116) should be taken within the first two years.
    - For students selecting a Foreign Language (CORE 14x), every effort should be made to register for that language in the first semester at King's.

| 1st Year - Fall | cr. | 1st Year - Spring | cr. |
|---|---|---|---|
| CS 116 Fund. of Programming I *(fall only)* | 3 | CS 117 Fund. of Programming II *(spring only)* | 3 |
| CS 116L Fund. of Program. I Lab *(fall only)* | 0 | CS 117L Fund. of Program. II Lab *(spring only)* | 0 |
| MATH 127 Logic & Axiomatics *(fall only)* | 3 | MATH 130 Analytical Geometry & Calculus II | 4 |
| MATH 129 Analytical Geometry & Calculus I | 4 | CORE | 3 |
| CORE or CIS 106 | 3 | CORE | 3 |
| CORE 090 First Year Experience | 1 | CORE | 3 |
| | 14 | | 16 |
| **2nd Year – Fall** | | **2nd Year – Spring** | |
| CS 232 Data Structures *(fall only)* | 3 | CS 233 Adv. Data Structures *(spring only)* | 3 |
| CS 232L Data Structures *(fall only)* | 1 | CS 233 Adv. Data Structures Lab *(spring only)* | 1 |
| CS 256 Database Management Systems | 3 | CS 270 Computer Organization | 3 |
| CS 256L Database Management Systems Lab | 1 | CS 270L Computer Organization Lab | 1 |
| MATH 235 Discrete Mathematics | 3 | CORE | 3 |
| CORE | 3 | CORE | 3 |
| CORE | 3 | CORE | 3 |
| | 17 | | 17 |
| **3rd Year – Fall** | | **3rd Year – Spring** | |
| CS Elective | 3 | CS Elective | 3 |
| CS Elective | 3 | CS Elective | 3 |
| CORE | 3 | CORE | 3 |
| CORE | 3 | CORE | 3 |
| Free Elective | 3 | Free Elective | 3 |
| | 15 | | 15 |
| **4th Year – Fall** | | **4th Year – Spring** | |
| CS 480 Software Engineering | 3 | CS 481 Applied Software Engineering OR | 3 |
| CS Elective | 3 | CS 499 CS Internship | 3 |
| CORE | 3 | CORE | 3 |
| CORE | 3 | Free Elective | 3 |
| Free Elective | 3 | *(CORE or Free Elective – if needed)* | *(3)* |
| | 15 | | 12-15 |
| Total Credits Required for Graduation = 121 | | | |

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