The 21st century is here in full swing, and we are engulfed by new and exciting technologies. Smartphones, social media, and incredibly large storage devices all add to our already fast computers to make our home and work environments more exciting than ever before.

Computer Science, Information Systems design, software & hardware engineering, database design, security specialization, and network administration are all exciting, high-demand careers in our evolving society.

The Computer Science Department at the College of Staten Island provides the foundation to pursue opportunities for a meaningful and rewarding career in the ever-evolving field of Computer Science.

Students can choose from among several cutting-edge degrees including:

- **AAS in Computer Technology**
- **Bachelor of Science (BS) in Computer Science**
- **BS in Computer Science and Mathematics** (offered with the Mathematics Department)
- **Master of Science (MS) and PhD program in Computer Science**

**AAS in Computer Technology**
The AAS in Computer Technology program focuses on applications programming. Students have the choice of two unique concentration sequences—Programming or Information Science.

**Programming Sequence**: designed to introduce the foundations of programming to prepare for further study in the Bachelor’s degree in Computer Science.

**Information Science Sequence**: designed to teach the foundations of programming while introducing the key elements of business, marketing and management.

**BS in Computer Science**
The Computer Science Bachelor’s program is accredited by the Computer Accreditation Commission (CAC) of ABET.

The four-year Computer Science degree is a rigorous and broad-based curriculum that prepares students for careers as computer professionals and/or for graduate study. The major includes courses in software development, hardware and networks, along with electives such as database design, artificial intelligence, network security, game development and high-performance computing.

The program offers a balance of theoretical and applied software and hardware courses. Within software design, we stress an object-oriented approach with user interface development and testing. In addition to classic switching theory and architecture, students build and test hardware components. Faculty in the Computer Science department are engaged in active research and students have the opportunity to join ongoing projects and gain research experience.

**BS in Computer Science and Mathematics**
In today’s world, advanced computational modeling plays a critical role in solving many complex math problems; specialized computer scientists with training in advanced math are increasingly becoming crucial players in the development of sophisticated hardware and software. The intersection of Mathematics and Computer Science is expanding—and students who gain competence and credentials in both will undoubtedly enjoy exciting, high-demand careers in the field of Computer Science include information systems design, software and hardware development, database design, cyber-security and network administration.

The High Performance Computing Center (HPCC) operates six computer systems as described below:

- **SALK** is a Cray XE6m with a total of 2816 processor cores. Salk is reserved for large parallel jobs, particularly those requiring more than 64 cores. Emphasis is on applications in environmental sciences and astrophysics. Salk is named in honor of Dr. Jonas Salk, the developer of the first polio vaccine, and a City College alumnus.
- **PENZIAS** is a cluster with 1,152 Intel Sandy Bridge cores each with 4 Gbytes of memory. It is used for applications requiring up to 128 cores. It also supports 136 NVIDIA Kepler K20 accelerators. Penzias is named in honor of Dr. Arno Penzias, a Nobel Laureate in Physics, and a City College alumnus.
- **ANDY** is an SGI cluster with 744 processor cores and 96 NVIDIA Fermi processor accelerators. Andy is for jobs using 64 cores or fewer, for jobs using the NVIDIA Fermis, and for Gaussian jobs. Andy is named in honor of Dr. Andrew S. Grove, a City College alumnus and one of the founders of the Intel Corporation.

A new Interdisciplinary Computational Science Research Center (on right) will break ground in 2017.
Students can earn an Associate’s all the way through a Doctorate in Computer Science at the College of Staten Island.

many professional advantages.

The College of Staten Island is proud to offer a joint Bachelor’s of Science degree in Computer Science and Mathematics. The degree focuses on using applied math in Computer Science.

**Earning Potential:**
The array of occupations open to a student with a degree in Computer Science is vast and among some of the most rewarding and engaging careers available today. Whether working for a major corporation or in an entrepreneurial pursuit, Computer Science majors often have the opportunity for flexibility and to design a lifestyle of their dreams.

### 2015 MEDIAN ANNUAL SALARIES

<table>
<thead>
<tr>
<th>Position</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Administrator</td>
<td>$82,000</td>
</tr>
<tr>
<td>Software Developers</td>
<td>$100,690</td>
</tr>
<tr>
<td>Software Engineer</td>
<td>$98,000</td>
</tr>
<tr>
<td>Network Architect</td>
<td>$100,000</td>
</tr>
<tr>
<td>Web Developer</td>
<td>$65,000</td>
</tr>
<tr>
<td>Computer Programmer</td>
<td>$80,000</td>
</tr>
<tr>
<td>Information Security Analyst</td>
<td>$90,000</td>
</tr>
<tr>
<td>IT Systems Manager</td>
<td>$131,000</td>
</tr>
<tr>
<td>Research Scientist</td>
<td>$111,000</td>
</tr>
<tr>
<td>Computer and Information Technology Occupations</td>
<td>$81,430</td>
</tr>
</tbody>
</table>

* Bureau of Labor Statistics

**Graduate Studies in Computer Science**

Our Master’s degree in Computer Science is designed to teach practical yet complex technologies in this rapidly evolving and challenging discipline. It serves those who wish to increase their professional competence for business, industry, and research and development laboratories, as well as for those students who wish to enter careers in research and teaching. Students may continue in Doctoral programs in Computer Science, including the CUNY Graduate Center program.

**Department of Computer Science • Building 1N, Room 215**

To reach the Computer Science office, please call 718-982-2850 and ask to speak with an available advisor.

The HPCC computer systems (cont.)

“BOB” is a Dell cluster with 232 processor cores. Bob support users running Gaussian09; no other applications are supported on Bob. Bob is named in honor of Dr. Robert E. Kahn, an alumnus of the City College, who, along with Vinton G. Cerf, invented the TCP/IP protocol.

“KARLE” is a Dell shared memory system with 24 processor cores. Karle is used for serial jobs, Matlab, SAS, parallel Mathematica, and certain ARView jobs. Karle is named in honor of Dr. Jerome Karle, an alumnus of the City College of New York who was awarded the Nobel Prize in Chemistry in 1985.

“ZEUS” is a Dell cluster with 64 processor cores. It is used for exclusively to support classroom and training activities.

“CHIZEN” is the system that is used as a gateway to the above HPCC systems. It is not used for computations. Chizen is named in honor of Bruce Chizen, former CEO of Adobe, and a Brooklyn College alumnus.