COMPUTER SCIENCE, B.S. (BEHREND)

Begin Campus: Any Penn State Campus

End Campus: Erie

Degree Requirements
For a Bachelor of Science degree in Computer Science, a minimum of 122-123 credits is required:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>45</td>
</tr>
<tr>
<td>Electives</td>
<td>1</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>97-98</td>
</tr>
</tbody>
</table>

21 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 6 credits of GQ courses, 6 credits of GWS courses, 9 credits of GN courses.

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of coursework in the major to be taken at the location or in the college or program where the degree is earned.

Requirements for the Major
A student enrolled in this major must earn at least a grade of C in each 300- and 400-level course in the major field.

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44).

Code | Title                        | Credits
-----|------------------------------|---------
MATH 220 | Matrices                     | 2       |

Prescribed Courses: Require a grade of C or better

CAS 100A | Effective Speech             | 3       |
CMPSC 121 | Introduction to Programming Techniques | 3       |
CMPSC 122 | Intermediate Programming     | 3       |
CMPSC 312 | Computer Organization and Architecture | 3       |
CMPSC 335 | Fundamentals of Communication Networks | 3       |
CMPSC 360 | Discrete Mathematics for Computer Science | 3       |
CMPSC 421 | Net-centric Computing        | 3       |
CMPSC 431W | Database Management Systems  | 3       |
CMPSC 461 | Programming Language Concepts | 3       |
CMPSC 465 | Data Structures and Algorithms | 3       |
CMPSC 474 | Operating System & Systems Programming | 3       |
CMPSC 484 | Computer Science Senior Project I | 2       |
CMPSC 485W | Computer Science Senior Project II | 3       |
ENGL 202C | Effective Writing: Technical Writing | 3       |
MATH 140C | Calculus With Analytic Geometry I | 4       |

Select one of the following sequences:

MATH 141 | Calculus with Analytic Geometry II | 4       |
STAT/MATH 318 | Elementary Probability | 3       |

Additional Courses
Select at least 15 additional science credits from department approved list

Supporting Courses and Related Areas
Select 6 credits from the school approved list

Select 9 additional credits from department approved courses in CMPSC, CMPEN, or SWENG

1 Students may apply 6 credits of ROTC and/or 6 credits of internship CMPSC 495.

General Education
Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/) section of the Bulletin and consult your academic adviser.
The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

**Foundations (grade of C or better is required.)**
- **Quantification (GQ):** 6 credits
- **Writing and Speaking (GWS):** 9 credits

**Knowledge Domains**
- **Arts (GA):** 6 credits
- **Health and Wellness (GHW):** 3 credits
- **Humanities (GH):** 6 credits
- **Social and Behavioral Sciences (GS):** 6 credits
- **Natural Sciences (GN):** 9 credits

**Integrative Studies (may also complete a Knowledge Domain requirement)**
- **Inter-Domain or Approved Linked Courses:** 6 credits

**University Degree Requirements**

**First Year Engagement**
All students enrolled in a college or the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan.

Other Penn State colleges and campuses may require the First-Year Seminar; colleges and campuses that do not require a First-Year Seminar provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult their academic adviser for these requirements.

**Cultures Requirement**
6 credits are required and may satisfy other requirements
- **United States Cultures:** 3 credits
- **International Cultures:** 3 credits

**Writing Across the Curriculum**
3 credits required from the college of graduation and likely prescribed as part of major requirements.

**Total Minimum Credits**
A minimum of 120 degree credits must be earned for a baccalaureate degree. The requirements for some programs may exceed 120 credits. Students should consult with their college or department adviser for information on specific credit requirements.

**Quality of Work**
Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

**Limitations on Source and Time for Credit Acquisition**
The college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80)). For more information, check the Suggested Academic Plan for your intended program.