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.

Requirements for the Major
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).

Common Requirements for the Major (All Options)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 200</td>
<td>Elementary Statistics</td>
<td>4</td>
</tr>
<tr>
<td>Prescribed Courses: Require a grade of C or better</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IST 110</td>
<td>Information, People and Technology</td>
<td>3</td>
</tr>
<tr>
<td>IST 210</td>
<td>Organization of Data</td>
<td>3</td>
</tr>
<tr>
<td>IST 220</td>
<td>Networking and Telecommunications</td>
<td>3</td>
</tr>
<tr>
<td>IST 230</td>
<td>Language, Logic, and Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>IST 301</td>
<td>Information and Organizations</td>
<td>3</td>
</tr>
<tr>
<td>IST 331</td>
<td>Foundations of Human-Centered Design</td>
<td>3</td>
</tr>
<tr>
<td>IST 440W</td>
<td>Information Sciences and Technology Integration and Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>IST 495</td>
<td>Internship</td>
<td>1</td>
</tr>
</tbody>
</table>

Additional Courses
Additional Courses: Require a grade of C or better
ENGL 202C  Effective Writing: Technical Writing  3
or ENGL 202D  Effective Writing: Business Writing
MATH 110  Techniques of Calculus I  4
or MATH 140  Calculus With Analytic Geometry I
Select one of the following:  3
  CMPSC 101  Introduction to Programming
  CMPSC 121  Introduction to Programming Techniques
  IST 140  Introduction to Application Development
Select one of the following:  3
  ECON 14  Principles of Economics
  ECON 102  Introductory Microeconomic Analysis and Policy
  ECON 104  Introductory Macroeconomic Analysis and Policy
Supporting Courses and Related Areas
  Attainment of third-level proficiency in a single foreign language  12
  Select 6 credits of international courses in foreign culture from College-approved list  6
Supporting Courses and Related Areas: Require a grade of C or better
  Select 3 credits at the 400 level in emerging issues and technologies from College-approved list  3
Requirements for the Option
  Select an option  24

1  Proficiency must be demonstrated by either examination or course work. See the admission section of the general information in this Bulletin for the placement policy for Penn State foreign language courses.

Requirements for the Option
Information Context: People, Organizations, and Society Option (24 credits)
Available at the following campuses: Beaver, Berks, Scranton, University Park

Code  Title  Credits
Prescribed Courses
Prescribed Courses: Require a grade of C or better
IST 431  The Information Environment and Legal and Regulatory Environment of Information Science and Technology  6
& IST 432
Additional Courses
Additional Courses: Require a grade of C or better
IST 240  Introduction to Computer Languages  3
or IST 242  Intermediate & Object-Oriented Application Development
IST 302  IT Project Management  3
or IST 413  Usability Engineering
Supporting Courses and Related Areas
Select 12 credits from College-approved list (at least 3 credits at the 400-level and no more than 6 credits below the 200-level)

Information Systems: Design & Development Option (24 credits)
Available at the following campuses: Abington, Beaver, Berks, Brandywine, Greater Allegheny, Harrisburg, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, University Park, Wilkes-Barre, World Campus, York

Code  Title  Credits
Prescribed Courses
Prescribed Courses: Require a grade of C or better
IST 242  Intermediate & Object-Oriented Application Development  3
IST 311  Object-Oriented Design and Software Applications  3
Additional Courses
Additional Courses: Require a grade of C or better
IST 261  Application Development Design Studio I  3
or IST 361  Application Development Design Studio II
Select 6 credits of the following:  6
  IST 411  Distributed-Object Computing
  IST 412  The Engineering of Complex Software Systems
  IST 413  Usability Engineering
Supporting Courses and Related Areas
Select 9 credits from College-approved list (at least 3 credits must be at the 400-level)

1  Students in the Information Systems: Design and Development Option are expected to take IST 242 prior to taking the prescribed and additional courses for that option.

Information Technology: Integration & Application Option (24 credits)
Available at the following campuses: Abington, Beaver, Berks, Brandywine, Greater Allegheny, Harrisburg, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, University Park, Wilkes-Barre, World Campus, York

Code  Title  Credits
Prescribed Courses
Prescribed Courses: Require a grade of C or better
IST 302  IT Project Management  3
IST 420  Fundamentals of Systems and Enterprise Integration  3
IST 421  Advanced Enterprise Integration: Technologies and Applications  3
Additional Courses
Additional Courses: Require a grade of C or better
IST 240  Introduction to Computer Languages  3
or IST 242  Intermediate & Object-Oriented Application Development
Supporting Courses and Related Areas
Select 12 credits from College-approved list (at least 3 credits at the 400-level and no more than 6 credits below the 200-level)  12