INFORMATION TECHNOLOGY, B.S. (BERKS)

Begin Campus: Any Penn State Campus
End Campus: Berks

Program Description
This degree is a new broad based technical and theoretical degree that will prepare students to implement and use information technology to realize a variety of goals within and between all types of organizations and businesses (e.g., reliability, accessibility, efficiency, cost reduction, and revenue enhancement). The emphasis is on providing the student with the theoretical frameworks needed to use information technology to solve problems while also providing a set of applied, real-world experiences. Students will acquire a broad set of skills across many areas of information technology, including programming and systems development, networking, databases, project management, and information security. Students will consider how the implementation of information technology in organizations affects social change and the delivery of information to the consumer. Upper-level course selections allow for specific advanced options including but not limited to application development, networking, cybersecurity, and business. Project-oriented, team-based projects that include significant writing and presentation components will be integrated throughout the curriculum.

Application Development Option
Available at the following campuses: Abington, Altoona, Beaver, Berks, Brandywine, Greater Allegheny, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, York

This option prepares students for the design and development of complex object-oriented programming and technical skills to succeed in a fast-paced development and operations environment.

Business Applications Option
Available at the following campuses: Abington, Altoona, Beaver, Berks, Brandywine, DuBois, Greater Allegheny, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, York

This option prepares students to pursue careers in Information technology solving business organizational problems with an emphasis on the systems processes and business operations integration.

Custom Information Technology Option
Available at the following campuses: Altoona, Berks, Brandywine, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, Wilkes-Barre, York

This option provides the opportunity for students to pursue an approved information technology interdisciplinary or exploratory program of study.

Cybersecurity Option
Available at the following campuses: Altoona, Beaver, Berks, Brandywine, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, York

This option will provide students with the knowledge and cyber defense skills needed to critically assess and respond to modern information security threats. They will be prepared to protect information infrastructure and data from attacks and unauthorized access.

Networking Option
Available at the following campuses: Abington, DuBois, Mont Alto

This option prepares students to pursue careers in the design, development, and support of complex networks and networking infrastructure.

Security and Risk Analysis Option
Available at the following campuses: Altoona, Berks, Brandywine, Lehigh Valley, Schuylkill

This option prepares students to address the current and emerging security and risk challenges that face individuals, organizations and our nation, over a variety of domains including national/homeland security, emergency and disaster management, law and crime, and enterprise risk management.

What is Information Technology?
Information Technology offers both broad organizational problem-solving skills and in-depth knowledge in current in-demand technical skills. Using technology to leverage organizational resources and address organizational challenges are at the forefront of the B.S. degree in Information Technology. The program includes required and optional courses in cybersecurity, databases, computer programming, project management, security and risk analysis, networking, web design and development, application development, and systems analysis. This broad base of skills is ideally suited for entry-level positions in all the above content areas.

You Might Like This Program If...
- You enjoy technology and working with others to build solutions.
- You want to create high-tech solutions to organizational and societal challenges.
- You are interested in application development and programming.
- You are interested in improving computer systems and enhancing their safety for individuals and corporations.
- You want to leverage current and emerging technologies to improve business processes.

Entrance to Major
To be eligible for entrance to the B.S. in Information Technology major, students must:
- achieve a minimum cumulative grade point average of 2.00
- complete the following entrance-to-major courses with grades of C or better:
  - IST 110 or CYBER 100 or CYBER 100S
  - IST 140 or CMPSC 121 or CMPSC 131
  - IST 210
  - IST 220

Degree Requirements
For the Bachelor of Science degree in Information Technology, a minimum of 120 credits is required:
Information Technology, B.S. (Berks)

<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>7-9</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>69-70</td>
</tr>
</tbody>
</table>

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

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)

### Prescribed Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETI 461</td>
<td>Database Management and Administration</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 242</td>
<td>Intermediate &amp; Object-Oriented Application Development</td>
<td>3</td>
</tr>
<tr>
<td>IST 256</td>
<td>Programming for the Web</td>
<td>3</td>
</tr>
<tr>
<td>IST 260W</td>
<td>Introduction to Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>IST 302</td>
<td>IT Project Management</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>
<tr>
<td>SRA 111</td>
<td>Introduction to Security and Risk Analysis</td>
<td>3</td>
</tr>
<tr>
<td>SRA 221</td>
<td>Overview of Information Security</td>
<td>3</td>
</tr>
</tbody>
</table>

### Additional Courses

Select one of the following:

- ECON 102 Introductory Microeconomic Analysis and Policy 3
- ECON 104 Introductory Macroeconomic Analysis and Policy 2
- PLSC 1 American Politics: Principles, Processes and Powers 3
- PLSC 14 International Relations
- PSYCH 100 Introductory Psychology
- SOC 5 Social Problems

Select one of the following:

- ENGL 15 Rhetoric and Composition 3
- or ENGL 30H Honors Rhetoric and Composition
- 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
  - CAS 100A Effective Speech
  - CAS 100B Effective Speech
  - CAS 100C Effective Speech

Select one of the following:

- CMPSC 121 Introduction to Programming Techniques 3
- CMPSC 131 Programming and Computation I: Fundamentals
- IST 140 Introduction to Application Development

Select one of the following:

- CYBER 100 Computer Systems Literacy 3
- CYBER 100S Computer Systems Literacy
- IST 110 Information, People and Technology

Select one of the following:

- DS 200 Introduction to Data Sciences 4
- STAT 200 Elementary Statistics
- SCM 200 Introduction to Statistics for Business

Select one of the following: 3-4

- ACCTG 211 Financial and Managerial Accounting for Decision Making
- BA 100 Introduction to Business
- ECON 102 Introductory Microeconomic Analysis and Policy 2
- ECON 104 Introductory Macroeconomic Analysis and Policy 2
- MGMT 301 Basic Management Concepts
- MKTG 301 Principles of Marketing 2

Select one of the following: 3

- CYBER 262 Cyber-Defense Studio
- IST 226 Networking Essentials
- IST 451 Network Security
- IST 454 Computer and Cyber Forensics

Requirements for the Option

Select an option 18-19

- These courses may not double count with other additional or option requirements.
- Course does not require a grade of C or better.

Requirements for the Option

Application Development Option (18 credits)

Available at the following campuses: Abington, Altoona, Beaver, Berks, Brandywine, Lehigh Valley, Schuylkill, Scranton, York

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IST 261</td>
<td>Application Development Design Studio I</td>
<td>3</td>
</tr>
<tr>
<td>IST 311</td>
<td>Object-Oriented Design and Software Applications</td>
<td></td>
</tr>
<tr>
<td>IST 361</td>
<td>Application Development Design Studio II</td>
<td></td>
</tr>
<tr>
<td>IST 411</td>
<td>Distributed-Object Computing</td>
<td></td>
</tr>
<tr>
<td>IST 412</td>
<td>The Engineering of Complex Software Systems</td>
<td></td>
</tr>
<tr>
<td>IST 413</td>
<td>Usability Engineering</td>
<td></td>
</tr>
</tbody>
</table>

Additional Courses

Additional Courses: Require a grade of C or better

Select 12 credits, with at least 3 credits at the 400 level, from the following:

- Select 12 credits, with at least 3 credits at the 400 level, from the following:
- IST 261 Application Development Design Studio I
- IST 311 Object-Oriented Design and Software Applications
- IST 361 Application Development Design Studio II
- IST 411 Distributed-Object Computing
- IST 412 The Engineering of Complex Software Systems
- IST 413 Usability Engineering

Supporting Courses and Related Areas

Supporting Courses and Related Areas: Require a grade of C or better

Select 6 credits at the 300 or 400 level in Advanced IT courses from College approved list.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 100A</td>
<td>Effective Speech</td>
<td>3</td>
</tr>
<tr>
<td>CAS 100B</td>
<td>Effective Speech</td>
<td></td>
</tr>
<tr>
<td>CAS 100C</td>
<td>Effective Speech</td>
<td></td>
</tr>
</tbody>
</table>
Business Applications Option (19 credits)
Available at the following campuses: Abington, Altoona, Beaver, Berks, Brandywine, DuBois, Greater Allegheny, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, York

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 211</td>
<td>Financial and Managerial Accounting for Decision Making</td>
<td>4</td>
</tr>
</tbody>
</table>

Additional Courses
Additional Courses: Require a grade of C or better
Select one of the following: ¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 301</td>
<td>Corporation Finance</td>
</tr>
<tr>
<td>MGMT 301</td>
<td>Basic Management Concepts</td>
</tr>
<tr>
<td>MKTG 301</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>SCM 301</td>
<td>Supply Chain Management</td>
</tr>
</tbody>
</table>

Supporting Courses and Related Areas
Supporting Courses and Related Areas: Require a grade of C or better
Select 6 credits from ACCTG, BA, BLAW, EBF, ECON, ENTR, FIN, FINSV, HPA, IB, LER, MIS, MGMT, MKTG, RM, SCM, or STAT, including 3 credits at the 400-level.
Select 3 credits at the 300 or 400 level in Advanced IT Business courses from College-approved list.
Select 3 credits at the 300 or 400 level in Advanced IT courses from College-approved list.

¹ Option courses may not double count with other requirements.

Custom Information Technology Option (18 credits)
Available at the following campuses: Altoona, Berks, Brandywine, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, Wilkes-Barre, York

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</table>

Select 12 credits, with at least 3 credits at the 400 level, in consultation with an adviser that follow a coherent theme in information technology.
Select 6 credits at the 300 or 400 level in Advanced IT Business courses from College-approved list.
Select 6 credits at the 300 or 400 level in Advanced IT courses from College-approved list.

Networking Option (18 credits)
Available at the following campuses: Abington, DuBois, Mont Alto

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
</table>

Select 12 credits, with at least 3 credits at the 400 level, from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYBER 262</td>
<td>Cyber-Defense Studio</td>
</tr>
<tr>
<td>IST 225</td>
<td>PC Hardware Basics</td>
</tr>
<tr>
<td>IST 226</td>
<td>Networking Essentials</td>
</tr>
<tr>
<td>IST 227</td>
<td>Network Administration</td>
</tr>
<tr>
<td>IST 451</td>
<td>Network Security</td>
</tr>
<tr>
<td>IST 454</td>
<td>Computer and Cyber Forensics</td>
</tr>
</tbody>
</table>

Supporting Courses and Related Areas
Supporting Courses and Related Areas: Require a grade of C or better
Select 6 credits at the 300 or 400 level in Advanced IT courses from College-approved list.

Security and Risk Analysis Option (18 credits)
Available at the following campuses: Altoona, Berks, Brandywine, Lehigh Valley, Schuylkill

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
</table>

Select 12 credits, with at least 3 credits at the 400 level, from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IST 432</td>
<td>Legal and Regulatory Environment of Information Science and Technology</td>
</tr>
<tr>
<td>IST 452</td>
<td>Legal and Regulatory Environment of Privacy and Security</td>
</tr>
<tr>
<td>IST 456</td>
<td>Information Security Management</td>
</tr>
<tr>
<td>SRA 211</td>
<td>Threat of Terrorism and Crime</td>
</tr>
<tr>
<td>SRA 231</td>
<td>Decision Theory and Analysis</td>
</tr>
<tr>
<td>SRA 311</td>
<td>Risk Analysis in a Security Context</td>
</tr>
<tr>
<td>SRA 365</td>
<td>Statistics for Security and Risk Analysis</td>
</tr>
</tbody>
</table>

Supporting Courses and Related Areas
Supporting Courses and Related Areas: Require a grade of C or better
Select 6 credits at the 300 or 400 level in Advanced IT courses from College-approved list.

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.

**Academic Advising**
The objectives of the university’s academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee’s unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/)

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Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2022-23 academic year. To access previous years’ suggested academic plans, please visit the archive (https://bulletins.psu.edu/undergraduate/archive/) to view the appropriate Undergraduate Bulletin edition (Note: the archive only contains suggested academic plans beginning with the 2018-19 edition of the Undergraduate Bulletin).

Application Development Option: Information Technology, B.S. at Berks Campus

The course series listed below provides only one of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an Academic Requirements or What If report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 15 or 30H (GWS)†</td>
<td>3 CAS 100 (GWS)†</td>
<td>3</td>
</tr>
<tr>
<td>IST 110 or CYBER 100*#</td>
<td>3 MATH 110 or 140 (GQ)†</td>
<td>4</td>
</tr>
<tr>
<td>IST 140*# or CMPSC 121 (GQ) #† or CMPSC 131*#</td>
<td>3 IST 220*#</td>
<td>3</td>
</tr>
<tr>
<td>SRA 111 (GS)††</td>
<td>3 IST 242*</td>
<td>3</td>
</tr>
<tr>
<td>First-Year Seminar (IST 111S)</td>
<td>1 General Education Course (GN or GA or GH)</td>
<td>3</td>
</tr>
<tr>
<td>General Education Course (GN or GA or GH) or Elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>
### Second Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IST 210*#</td>
<td>3</td>
<td>IST 256*</td>
<td>3</td>
</tr>
<tr>
<td>IST 230*</td>
<td>3</td>
<td>SRA 221*</td>
<td>3</td>
</tr>
<tr>
<td>STAT 200‡ (GQ) or SCM 200‡ (GQ) or DS 200*</td>
<td>4</td>
<td>Business Selection*</td>
<td>3</td>
</tr>
<tr>
<td>ECON 102/ECON 104 or PSYCH 100/SOC 5 or PLSC 1/PLSC 14 (GS)$</td>
<td>3</td>
<td>ENGL 202C or 202D (GWS)‡</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective or General Education Course (GN/GA/GH) | 3 | General Education Course (GN or GA or GH) | 3

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### Third Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IST 302*</td>
<td>3</td>
<td>IST 261 (Option 2)*</td>
<td>3</td>
</tr>
<tr>
<td>IST 311 (Option 1)*</td>
<td>3</td>
<td>IST 411 (Option 3)*</td>
<td>3</td>
</tr>
<tr>
<td>IST 331*</td>
<td>3</td>
<td>Advanced IT Selection 1*</td>
<td>3</td>
</tr>
<tr>
<td>General Education Course (GN or GA or GH)</td>
<td>3</td>
<td>Networking Selection*</td>
<td>3</td>
</tr>
</tbody>
</table>
| General Education Course (GN or GA or GH) | 3 | General Education Course (GN or GA or GH) | 3

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### Fourth Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IST 260W*</td>
<td>3</td>
<td>IST 440W*</td>
<td>3</td>
</tr>
<tr>
<td>IST 495*</td>
<td>1</td>
<td>IST 413 (Option 4)*</td>
<td>3</td>
</tr>
<tr>
<td>ETI 461*</td>
<td>3</td>
<td>Advanced IT Selection 2*</td>
<td>3</td>
</tr>
<tr>
<td>General Education Course (GHW)</td>
<td>3</td>
<td>General Education Course (GN or GA or GH)</td>
<td>3</td>
</tr>
</tbody>
</table>
| Elective | 3 | Elective | 2

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**Total Credits 120**

* Course requires a grade of C or better for the major
‡ Course requires a grade of C or better for General Education
# Course is an Entrance to Major requirement
† Course satisfies General Education and degree requirement

1 For General Education Course notations, please be sure to include six (6) credits of Inter-Domain (N courses), three (3) credits of United States (US) Cultures, and three (3) credits of International (IL) Cultures. Consult advisor for details.
2 The following courses are offered Fall Semester only: IST 260W.

**University Requirements and General Education Notes:**

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GHW, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GHW, GN, GA, GH, GS, and Integrative Studies). Foundations courses (GWS and GQ) require a grade of “C” or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

**Advising Notes:**

- **Business Selection Courses (cannot double count with other Additional or Option requirements):**
  - ACCTG 211
  - BA 100
  - ECON 102
  - ECON 104
  - MGMT 301
  - MKTG 301
- **Networking Selection Courses (cannot double count with other Additional or Option requirements):**
  - CYBER 262
  - IST 226
  - IST 451
  - IST 454
- **Option Courses:**
  - **Application Development:**
    - Select 12 credits, with at least 3 credits at the 400 level from:
      - IST 261
      - IST 311
      - IST 411
      - IST 412
      - IST 413
  - **Business Applications:**
    - ACCTG 211
    - Select 3 credits from:
      - FIN 301
      - MGMT 301
      - MKTG 301
      - SCM 301
    - Select 6 credits, with at least 3 credits at the 400 level from:
      - ACCTG, BA, BLAW, EBF, ECON, ENTR, FIN, FINSV, HPA, IB, LER, MIS, MGMT, MKTG, RM, SCM, or STAT
  - **Cybersecurity:**
    - Select 12 credits, with at least 3 credits at the 400 level from:
      - CYBER 262, IST 451, IST 454, IST 456, SRA 472, or any 300 or 400 level CYBER course
    - **Security and Risk Analysis:**
      - Select 12 credits, with at least 3 credits at the 400 level from:
        - SRA 211, SRA 231, SRA 311, SRA 365, IST 432, IST 452, IST 456
**Business Applications Option: Information Technology, B.S. at Berks Campus**

The course series listed below provides only one of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an Academic Requirements or What If report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

### First Year

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### Fourth Year

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<td><strong>IST 495</strong></td>
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**Total Credits 121**

* Course requires a grade of C or better for the major
‡ Course requires a grade of C or better for General Education
# Course is an Entrance to Major requirement
† Course satisfies General Education and degree requirement

1 For General Education Course notations, please be sure to include six (6) credits of Inter-Domain (N courses), three (3) credits of United States (US) Cultures, and three (3) credits of International (IL) Cultures. Consult adviser for details.

2 The following courses are offered Fall Semester only: IST 260W.

**University Requirements and General Education Notes:**

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures). W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GHW, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GHW, GN, GA, GH, GS, and Integrative Studies). Foundations courses (GWS and GQ) require a grade of ‘C’ or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

**Advising Notes:**

- Business Selection Courses (cannot double count with other Additional or Option requirements):
  - ACCTG 211
  - BA 100
  - ECON 102
  - ECON 104
  - MGMT 301
  - MKTG 301
- Networking Selection Courses (cannot double count with other Additional or Option requirements):
  - CYBER 262
  - IST 226
  - IST 451
  - IST 454
- Option Courses:
  - Application Development:
    - Select 12 credits, with at least 3 credits at the 400 level from: IST 261, IST 311, IST 361, IST 411, IST 412, IST 413
  - Business Applications:
    - ACCTG 211
    - Select 3 credits from: FIN 301, MGMT 301, MKTG 301, SCM 301
• Select 6 credits, with at least 3 credits at the 400 level from:
  ACCTG, BA, BLAW, EBF, ECON, ENTR, FIN, FINSV, HPA, IB, LER,
  MIS, MGMT, MKTG, RM, SCM, or STAT

• Cybersecurity:
  • Select 12 credits, with at least 3 credits at the 400 level from:
    CYBER 262, IST 451, IST 454, IST 456, SRA 472, or any 300 or
    400 level CYBER course

• Security and Risk Analysis:
  • Select 12 credits, with at least 3 credits at the 400 level from:
    SRA 211, SRA 231, SRA 311, SRA 365, IST 432, IST 452,
    IST 456
Custom Information Technology Option: Information Technology, B.S. at Berks Campus

The course series listed below provides only one of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an Academic Requirements or What If report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

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Second Year

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Third Year

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Fourth Year

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Elective

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Total Credits 120

* Course requires a grade of C or better for the major
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# Course is an Entrance to Major requirement
† Course satisfies General Education and degree requirement

1 For General Education Course notations, please be sure to include six (6) credits of Inter-Domain (N courses), three (3) credits of United States (US) Cultures, and three (3) credits of International (IL) Cultures. Consult adviser for details.
2 The following courses are offered Fall Semester only: IST 260W.

University Requirements and General Education Notes:

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Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

Advising Notes:

- Business Selection Courses (cannot double count with other Additional or Option requirements):
  - ACCTG 211
  - BA 100
  - ECON 102
  - ECON 104
  - MGMT 301
  - MKTG 301

- Networking Selection Courses (cannot double count with other Additional or Option requirements):
  - CYBER 262
  - IST 226
  - IST 451
  - IST 454

- Application Development:
  - Select 12 credits, with at least 3 credits at the 400 level from:
    - IST 261, IST 311, IST 361, IST 411, IST 412, IST 413

- Business Applications:
  - ACCTG 211
  - Select 3 credits from: FIN 301, MGMT 301, MKTG 301, SCM 301
Information Technology, B.S. (Berks)

• Select 6 credits, with at least 3 credits at the 400 level from:
  ACCTG, BA, BLAW, EBF, ECON, ENTR, FIN, FINSV, HPA, IB, LER,
  MIS, MGMT, MKTG, RM, SCM, or STAT

• Cybersecurity:
  • Select 12 credits, with at least 3 credits at the 400 level from:
    CYBER 262, IST 451, IST 454, IST 456, SRA 472, or any 300 or
    400 level CYBER course

• Security and Risk Analysis:
  • Select 12 credits, with at least 3 credits at the 400 level from:
    SRA 211, SRA 231, SRA 311, SRA 365, IST 432, IST 452,
    IST 456
CyberSecurity Option: Information Technology, B.S. at Berks Campus

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**Total Credits 120**

* Course requires a grade of C or better for the major
‡ Course requires a grade of C or better for General Education
# Course is an Entrance to Major requirement
† Course satisfies General Education and degree requirement

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1. For General Education Course notations, please be sure to include six (6) credits of Inter-Domain (N courses), three (3) credits of United States (US) Cultures, and three (3) credits of International (IL) Cultures. Consult adviser for details.
2. The following courses are offered Fall Semester only: IST 260W.

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**University Requirements and General Education Notes:**

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GHW, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GHW, GN, GA, GH, GS, and Integrative Studies). Foundations courses (GWS and GQ) require a grade of ‘C’ or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

**Advising Notes:**

- Business Selection Courses (cannot double count with other Additional or Option requirements):
  - ACCTG 211
  - BA 100
  - ECON 102
  - ECON 104
  - MGMT 301
  - MKTG 301

- Networking Selection Courses (cannot double count with other Additional or Option requirements):
  - CYBER 262
  - IST 226
  - IST 451
  - IST 454

- Option Courses:
  - Application Development:
    - Select 12 credits, with at least 3 credits at the 400 level from: IST 261, IST 311, IST 361, IST 411, IST 412, IST 413
  - Business Applications:
    - ACCTG 211
    - Select 3 credits from: FIN 301, MGMT 301, MKTG 301, SCM 301
• Select 6 credits, with at least 3 credits at the 400 level from:
  ACCTG, BA, BLAW, EBF, ECON, ENTR, FIN, FINSV, HPA, IB, LER,
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• Cybersecurity:
  • Select 12 credits, with at least 3 credits at the 400 level from:
    CYBER 262, IST 451, IST 454, IST 456, SRA 472, or any 300 or
    400 level CYBER course

• Security and Risk Analysis:
  • Select 12 credits, with at least 3 credits at the 400 level from:
    SRA 211, SRA 231, SRA 311, SRA 365, IST 432, IST 452,
    IST 456
## Security and Risk Analysis Option: Information Technology, B.S. at Berks Campus

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<td>ENGL 15 or 30H (GWS)‡</td>
<td>3</td>
<td>CAS 100 (GWS)‡</td>
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<td>IST 110 or CYBER 100*#</td>
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<td>MATH 110 or 140 (GQ)‡</td>
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<td>IST 140*# or CMPSC 121 (GQ) #‡ or CMPSC 131*#</td>
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<td>IST 220*#</td>
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<tr>
<td>SRA 111 (GS)††</td>
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<td>IST 242*</td>
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<td>First-Year Seminar (IST 111S)</td>
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<td>General Education Course (GN or GA or GH)</td>
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<td>General Education Course (GN or GA or GH) or Elective</td>
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### Second Year

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<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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<tbody>
<tr>
<td>IST 210*#</td>
<td>3</td>
<td>IST 256*</td>
<td>3</td>
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<tr>
<td>IST 230*</td>
<td>3</td>
<td>SRA 221*</td>
<td>3</td>
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<tr>
<td>STAT 200‡ (GQ) or SCM 200‡ (GQ) or DS 200*</td>
<td>4</td>
<td>Business Selection*</td>
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<tr>
<td>ECON 102/ECON 104 or PSYCH 100/SOC 5 or PLSC 1/PLSC 14 (GS)†</td>
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<td>ENGL 202C or 202D (GWS)‡</td>
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<tr>
<td>Elective or General Education Course (GN/GA/GH)</td>
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<td>General Education Course (GN or GA or GH)</td>
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### Third Year

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<th>Spring</th>
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<tbody>
<tr>
<td>IST 302*</td>
<td>3</td>
<td>SRA 231 (Option 2)*</td>
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<td>IST 331†</td>
<td>3</td>
<td>Option 3*</td>
<td>3</td>
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<tr>
<td>SRA 211 (Option 1)*</td>
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<td>Networking Selection*</td>
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<tr>
<td>General Education Course (GN or GA or GH)</td>
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<td>Advanced IT Selection 1*</td>
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<tr>
<td>General Education Course (GN or GA or GH)</td>
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<td>General Education Course (GN or GA or GH)</td>
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### Fourth Year

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<tr>
<th>Fall</th>
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<th>Spring</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>IST 260W*</td>
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<td>IST 440W*</td>
<td>3</td>
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<tr>
<td>IST 495*</td>
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<td>Option 4*</td>
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<td>ETI 461*</td>
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<td>Advanced IT Selection 2*</td>
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<tr>
<td>General Education Course (GHW)</td>
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<td>General Education Course (GN or GA or GH)</td>
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<table>
<thead>
<tr>
<th>Elective</th>
<th>3 Elective</th>
<th>2</th>
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</thead>
</table>

### Total Credits 120

* Course requires a grade of C or better for the major
‡ Course requires a grade of C or better for General Education
# Course is an Entrance to Major requirement
† Course satisfies General Education and degree requirement

1 For General Education Course notations, please be sure to include six (6) credits of Inter-Domain (N courses), three (3) credits of United States (US) Cultures, and three (3) credits of International (IL) Cultures. Consult adviser for details.
2 The following courses are offered Fall Semester only: IST 260W.

### University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy University Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

GWS, GQ, GHW, GN, GA, GH, and GS are abbreviations used to identify General Education program courses. General Education includes Foundations (GWS and GQ) and Knowledge Domains (GHW, GN, GA, GH, GS, and Integrative Studies). Foundations courses (GWS and GQ) require a grade of ‘C’ or better.

Integrative Studies courses are required for the General Education program. N is the suffix at the end of a course number used to designate an Inter-Domain course and Z is the suffix at the end of a course number used to designate a Linked course.

### Advising Notes:

- Business Selection Courses (cannot double count with other Additional or Option requirements):
  - ACCTG 211
  - BA 100
  - ECON 102
  - ECON 104
  - MGMT 301
  - MKTG 301

- Networking Selection Courses (cannot double count with other Additional or Option requirements):
  - CYBER 262
  - IST 226
  - IST 451
  - IST 454

- Option Courses:
  - Application Development:
    - Select 12 credits, with at least 3 credits at the 400 level from: IST 261, IST 311, IST 361, IST 411, IST 412, IST 413
  - Business Applications:
    - ACCTG 211
    - Select 3 credits from: FIN 301, MGMT 301, MKTG 301, SCM 301
• Select 6 credits, with at least 3 credits at the 400 level from: ACCTG, BA, BLAW, EBF, ECON, ENTR, FIN, FINSV, HPA, IB, LER, MIS, MGMT, MKTG, RM, SCM, or STAT

• Cybersecurity:
  • Select 12 credits, with at least 3 credits at the 400 level from: CYBER 262, IST 451, IST 454, IST 456, SRA 472, or any 300 or 400 level CYBER course

• Security and Risk Analysis:
  • Select 12 credits, with at least 3 credits at the 400 level from: SRA 211, SRA 231, SRA 311, SRA 365, IST 432, IST 452, IST 456

Career Paths
With a B.S. degree in Information Technology (IT), students will develop an understanding of core information technologies and prepare for the practical application of IT. The combination of a strong technical foundation, well-developed communication and collaborative skills, business core competencies, and specialization in an area of choice produces graduates who are well-qualified to enter the IT workforce in a position that meets their interests and abilities as well as the needs of employers in industries including consulting, business, government, defense, entertainment, and medicine.

Additional information about IT careers can be found at:

• IS Job Index – AIS – Temple University Information Systems Job Index (https://isjobindex.com/)

Opportunities for Graduate Studies
A baccalaureate degree in Information Technology prepares students to pursue master’s degrees in programs such as information systems or information technology and obtain admission to MBA programs and law schools, among other post-graduate opportunities.

Penn State offers graduate programs related to information technology:

• Master of Science in Information Systems at Penn State Harrisburg (https://harrisburg.psu.edu/business-administration/information-systems/master-science-information-systems/)
• Graduate Education Opportunities at College of Information Sciences and Technology (https://ist.psu.edu/prospective/graduate/)

Contact
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Gaige Building
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610-396-6349
BKInfoTech@psu.edu


Abington
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1600 Woodland Road
Abington, PA 19001
267-633-3316
jxo19@psu.edu

https://www.abington.psu.edu/information-technology (https://www.abington.psu.edu/information-technology/)

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rkI5137@psu.edu

https://beaver.psu.edu/academics/it (https://beaver.psu.edu/academics/it/)

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610-892-1343
nxd13@psu.edu


DuBois
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DuBois, PA 16823
814-372-3000
jel115@psu.edu


Greater Allegheny
101 Frable Building
4000 University Drive
McKeesport, PA 15132
412-675-9140
https://greaterallegheny.psu.edu/academics/IT-4 (https://greaterallegheny.psu.edu/academics/IT-4/)

Hazleton
Kostos 117
Hazleton, PA 18202
570-450-3089
bxb30@psu.edu
https://hazleton.psu.edu/information-technology

**Lehigh Valley**
2809 Saucon Valley Road
Center Valley, PA 18034
610-285-5071
kmb6846@psu.edu

https://lehightonvalley.psu.edu/academics/degrees/information-sciences-and-technology

**Mont Alto**
1 Campus Drive
Mont Alto, PA 17237
717-749-6126
jch164@psu.edu

https://montalto.psu.edu/academics/bachelors/information-sciences-and-technology-degree

**New Kensington**
036 Theater & IST Building
3550 Seventh Street Road
New Kensington, PA 15068
724-334-6089
hhs10@psu.edu

https://newkensington.psu.edu/4-year-information-technology

**Schuylkill**
200 University Drive
Schuylkill Haven, PA 17972
570-385-6076
bkg113@psu.edu

https://schuylkill.psu.edu/academics/bacc-degrees/information-technology

**Scranton**
114B Dawson
120 Ridge View Drive
Dunmore, PA 18512
570-963-2593
dfs102@psu.edu

https://scranton.psu.edu/academics/degrees/bachelors/information-sciences-technology-degree

**Wilkes-Barre**
44 University Drive
Dallas, PA 18612
570-675-9142
weifan@psu.edu

https://wilkesbarre.psu.edu/academics/it

**York**
225 Grumbacher Building (GISTC)
York, PA 17403
717-718-6775
jzk99@psu.edu

https://york.psu.edu/academics/baccalaureate/information-technology