**COMPUTER SCIENCE, B.S. (ABINGTON)**

Begin Campus: Any Penn State Campus

End Campus: Abington

**Suggested Academic Plan**

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2024-25 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.

**General Option: Computer Science, B.S. at Abington 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.

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<thead>
<tr>
<th>First Year</th>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
</tr>
</thead>
</table>
| ENGL 15 or 30H (GWS)
| MATH 140 (GQ)
| General Education Course (GH)
| General Education Course (GHW)
| PSU 1 |
| 3 CAS 100 (GWS)
| 4 MATH 141 (GQ)
| 3 General Education Course (GA)
| 3 PHYS 211 (GN)
| 1 |
| 3 | 4 | 3 | 4 |
| 17 | 17 |

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<tr>
<th>Second Year</th>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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</table>
| General Education Course (GS)
| General Education Course (GN)
| CMPSC 360
| CMPSC 312
| CMPSC 330 |
| 3 Integrated/Inter-domain
| 2-3 General Education Course (Exploration)
| 3 MATH 220
| 3 MATH 318, STAT 318, or STAT 414
| 3 CMPSC 462 |
| 3 | 3 | 2 | 3 |
| 14-15 | 17 |

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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</table>
| CMPSC 463
| ENGL 202C (GWS)
| CMPSC 221
| CMPSC 430 |
| 3 General Education Course (Exploration)
| 3 CMPSC 470
| 3 Additional Computer Science (Select 3 Credits)
| 3 CMPSC 460 |
| 3 | 3 | 3 | 3 |

**Additional Computer Science/Math Courses**

- 3 Supporting Courses: Select 3 credits of 100-400 level courses in consultation with an academic adviser

**Fourth Year**

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<tr>
<th>Fall</th>
<th>Credits</th>
<th>Spring</th>
<th>Credits</th>
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| CMPSC 487W
| Supporting Courses: Select 2 credits of 100-400 level courses in consultation with an academic adviser
| Supporting Courses: Select 3 credits of 300-400 level courses in consultation with an academic adviser
| 3 Additional Computer Science (Select 3 Credits)
| 3 Additional Computer Science/Math Courses (Select 3 Credits) |
| 3 | 2 | 3 | 3 |
| 15 | 15 |

**Total Credits 121-122**

* 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. Natural Sciences (GN), recommended courses
   • PHYS 212 General Physics: Electricity and Magnetism

2. Students must earn a 2.5 or higher grade point average in the following courses: CMPSC 221, CMPSC 312, CMPSC 330, CMPSC 360, CMPSC 430, CMPSC 460, CMPSC 462, CMPSC 463, CMPSC 469, CMPSC 470, CMPSC 472, CMPSC 487W, and CMPSC 488.

3. 3 credits from courses at 300-400 level and 5 credits from courses at 100-400 level are to be chosen in consultation with the adviser and with program approval.

**University Requirements and General Education Notes:**

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity 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.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of ‘C’ or better.

**Program Notes:**
1. General Education & Entrance to Major Requirements (55 credits)
   a. English (9 credits)
      i. ENGL 15S (GWS) or ENGL 30T (GWS)
      ii. ENGL 202C (GWS)
      iii. CAS 100 (GWS)
   b. Mathematics (10 credits)
      i. MATH 140 (GQ)
      ii. MATH 141 (GQ)
      iii. MATH 220 (GQ)
   c. Computer Science (6 credits)
      i. CMPSC 121/CMPSC 131 (GQ)
      ii. CMPSC 122/CMPSC 132
   d. Natural Sciences (6 credits)
      i. PHYS 211 (GN)
      ii. Additional 2 credits of any courses with a GN suffix
   e. Arts† (3 credits)
      i. 3 credits of any courses with a GA suffix
   f. Humanities† (3 credits)
      i. 3 credits of any courses with a GH suffix
   g. Social & Behavioral Sciences† (3 credits)
      i. 3 credits of any courses with a GS suffix
   h. Health & Physical Activities (3 credits)
      i. 3 credits of any courses with a GHW suffix
   i. Integrated/inter-domain courses (6 credits)
   j. 6 additional credits of exploration (GA, GH, GN, GS or inter-domain)

2. Core Requirements (65 credits)
   a. Required Computer Science Courses - Students must earn a 2.5 or higher-grade point average in the Required Computer Science Courses (39 credits):
      i. CMPSC 221
      ii. CMPSC 312
      iii. CMPSC 330
      iv. CMPSC 360
      v. CMPSC 430
      vi. CMPSC 460
      vii. CMPSC 462
      viii. CMPSC 463
      ix. CMPSC 469
      x. CMPSC 470
      xi. CMPSC 472
      xii. CMPSC 487W
      xiii. CMPSC 488
      iv. CMPSC 414
      v. CMPSC 421
      vi. CMPSC 426
      vii. CMPSC 438
      viii. CMPSC 441
      ix. CMPSC 444
      x. CMPSC 445
      xi. CMPSC 446
      xii. CMPSC 455/MATH 455
      xiii. CMPSC 457
      xiv. CMPSC 475
      xv. CMPSC 496
      xvi. CMPSC 497
      xvii. MATH 401
      xviii. MATH 410
      xix. MATH 411
      xx. MATH 412
      xxi. MATH 425
      xxii. MATH 430
      xxiii. MATH 435
      xxiv. MATH 448
      xxv. MATH 465
      xxvi. MATH 468
      xxvii. MATH 485
      xxviii. MATH 496
      xxix. MATH 497
      xxx. STAT 401
      xxxi. STAT 415/MATH 415
      xxxii. STAT 462
      xxxiii. STAT 463
   b. Required Mathematics Courses - Select one course from the following (3 credits):
      i. STAT 318/MATH 318
      ii. STAT 414/MATH 414

3. Additional Courses: Technical Electives (15 credits)
   a. Select at least 15 credits from the following. **At least 9 of these additional course credits must be from courses with a CMPSC prefix.** Other courses are to be chosen in consultation with the adviser and with program approval.
      i. CMPSC 313
      ii. CMPSC 412
      iii. CMPSC 413
   iv. CMPSC 414
   v. CMPSC 421
   vi. CMPSC 426
   vii. CMPSC 438
   viii. CMPSC 441
   ix. CMPSC 444
   x. CMPSC 445
   xi. CMPSC 446
   xii. CMPSC 455/MATH 455
   xiii. CMPSC 457
   xiv. CMPSC 475
   xv. CMPSC 496
   xvi. CMPSC 497
   xvii. MATH 401
   xviii. MATH 410
   xix. MATH 411
   xx. MATH 412
   xxi. MATH 425
   xxii. MATH 430
   xxiii. MATH 435
   xxiv. MATH 448
   xxv. MATH 465
   xxvi. MATH 468
   xxvii. MATH 485
   xxviii. MATH 496
   xxix. MATH 497
   xxx. STAT 401
   xxxi. STAT 415/MATH 415
   xxxii. STAT 462
   xxxiii. STAT 463

4. Supporting Courses (8 credits)
   a. 3 credits from courses at 300-400 level and 5 credits of unrestricted electives at 100-400 level are to be chosen in consultation with the adviser and with program approval.
Data Science Option: Computer Science, B.S. at Abington 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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<tr>
<td>3</td>
<td>ENGL 15 or 30H (GWS)‡</td>
<td>CMPSC 131 (GQ)*#</td>
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<td>CMPSC 132*#</td>
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<td>4</td>
<td>MATH 140 (GQ)†#</td>
<td>4 MATH 141 (GQ)†#</td>
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<td>3</td>
<td>General Education Course (G)</td>
<td>3 General Education Course (GA)</td>
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<td>4</td>
<td>General Education Course (GHW)</td>
<td>3 PHYS 211 (GN)†</td>
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Second Year

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<tr>
<td>3</td>
<td>Integrated/Inter-domain</td>
<td>General Education Course (GS)</td>
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<td>3</td>
<td>2-3 General Education Course (Exploration)</td>
<td>General Education Course (GN)†</td>
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<td>2</td>
<td>3 MATH 220</td>
<td>CMPSC 360 ‡</td>
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<td>3</td>
<td>3 MATH 318, STAT 318, or STAT 414</td>
<td>CMPSC 312 ‡</td>
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<tr>
<td>3</td>
<td>3 CMPSC 462 †</td>
<td>CMPSC 330 ‡</td>
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<td>3</td>
<td>DS 220 †</td>
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<tr>
<td>3</td>
<td>General Education Course (Exploration)</td>
<td>CMPSC 463 ‡</td>
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<td>3</td>
<td>CMPSC 445 ‡</td>
<td>ENGL 202C (GWS)‡</td>
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<td>3</td>
<td>3 CMPSC 469 ‡</td>
<td>STAT 401</td>
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<tr>
<td>3</td>
<td>3 CMPSC 460 ‡</td>
<td>CMPSC 430 ‡</td>
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<td>3</td>
<td>Supporting Courses: Select 3 credits of 100-400 level courses in consultation with an academic adviser ‡</td>
<td>CMPSC 441 ‡</td>
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<tr>
<td>3</td>
<td>CMPSC 472 ‡</td>
<td>CMPSC 487W ‡</td>
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<tr>
<td>3</td>
<td>2 CMPSC 488 ‡</td>
<td>Supporting Courses: Select 2 credits of 100-400 level courses in consultation with an academic adviser ‡</td>
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<tr>
<td>3</td>
<td>3 Additional Course (Select 3 Credits)</td>
<td>CMPSC 446 ‡</td>
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Program Notes:

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      i. ENGL 15S (GWS) or ENGL 30T (GWS)
      ii. ENGL 202C (GWS)
      iii. CAS 100 (GWS)
   b. Mathematics (10 credits)
      i. MATH 140 (GQ)
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3. 5 credits of unrestricted electives at 100-400 level are to be chosen in consultation with the adviser and with program approval.
h. Health & Physical Activities (3 credits)
i. 3 credits of any courses with a GHW suffix
ii. Integrated/inter-domain courses (6 credits)
j. 6 additional credits of exploration (GA, GH, GN, GS or inter-domain)

2. Core Requirements (65 credits)
   a. Computer Science/Data Science/Statistics Courses - Students must earn a 2.5 or higher grade-point average in the Required Computer Science Courses (45 credits):
      i. DS 220
      ii. CMPSC 312
      iii. CMPSC 330
      iv. CMPSC 360
      v. CMPSC 430
      vi. CMPSC 441
      vii. CMPSC 445
      viii. CMPSC 446
      ix. CMPSC 460
      x. CMPSC 462
      xi. CMPSC 463
      xii. CMPSC 469
      xiii. CMPSC 472
      xiv. CMPSC 487W
      xv. CMPSC 488
   b. Required Mathematics/Statistics Courses (9 credits):
      i. STAT 401
      ii. STAT 462
      iii. Select one course from the following:
          1. STAT 318/MATH 318
          2. STAT 414/ MATH 414

3. Additional Courses: Technical Electives (6 credits)
   a. Select at least 6 credits from the following. Other courses are to be chosen in consultation with the adviser and with program approval.
      i. CMPSC 313
      ii. CMPSC 412
      iii. CMPSC 413
      iv. CMPSC 414
      v. CMPSC 421
      vi. CMPSC 426
      vii. CMPSC 438
      viii. CMPSC 444
      ix. CMPSC 455/MATH 455
      x. CMPSC 457
      xi. CMPSC 470
      xii. CMPSC 475
      xiii. CMPSC 496
      xiv. CMPSC 497
      xv. MATH 401
      xvi. MATH 410
      xvii. MATH 411
      xviii. MATH 412
      xix. MATH 425
      xx. MATH 430

   xxi. MATH 435
   xii. MATH 448
   xiii. MATH 465
   xiv. MATH 468
   xv. MATH 485
   xvi. MATH 496
   xvii. MATH 497
   xviii. STAT 415/MATH 415
   xix. STAT 463

4. Supporting Courses (5 credits)
   a. 5 credits of unrestricted electives at 100-400 level are to be chosen in consultation with the adviser and with program approval.