

# COMPUTER SCIENCE, B.S. (CAPITAL)

**Begin Campus:** Any Penn State Campus

**End Campus:** Harrisburg

## Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2025-26 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 Harrisburg 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

Fall	Credits	Spring	Credits
CMPSC 121 or 131 <sup>*#</sup>	3	CMPSC 122 or 132 <sup>*#</sup>	3
MATH 140 <sup>*#†</sup>	4	MATH 141 <sup>*#†</sup>	4
ENGL 15S, 30T, or ESL 15 <sup>‡</sup>	3	PHYS 211 <sup>†</sup>	4
General Education Course	3	CAS 100A or 100S <sup>‡</sup>	3
General Education Course	3	General Education Course (GHW)	1.5
		<b>16</b>	<b>15.5</b>

#### Second Year

Fall	Credits	Spring	Credits
CMPSC 221	3	CMPSC 330 <sup>*</sup>	3
CMPSC 312	3	CMPSC 360 <sup>*</sup>	3
MATH 220	2	ENGL 202C <sup>‡</sup>	3
General Education Course	3	General Education Course	3
General Education Course	3	General Education Course	3
General Education Course (GHW)	1.5		
		<b>15.5</b>	<b>15</b>

#### Third Year

Fall	Credits	Spring	Credits
CMPSC 469	3	CMPSC 430	3
MATH/STAT 318 or STAT 414	3	CMPSC 462	3
CMPSC/MATH/STAT elective chosen from department list <sup>1</sup>	3	CMPSC/MATH/STAT elective chosen from department list <sup>1</sup>	3
General Education Course	3	CMPSC/MATH/STAT elective chosen from department list <sup>1</sup>	3

100-400 Level Elective	3	General Education Course	2
		<b>15</b>	<b>14</b>

#### Fourth Year

Fall	Credits	Spring	Credits
CMPSC 463	3	CMPSC 460	3
CMPSC 472	3	CMPSC 470	3
CMPSC 487W	3	CMPSC 488	3
CMPSC/MATH/STAT elective chosen from department list <sup>1</sup>	3	CMPSC/MATH/STAT elective chosen from department list <sup>1</sup>	3
300-400 level elective	3	100-400 Level Elective	2
		<b>15</b>	<b>14</b>

#### 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

<sup>1</sup> 9 credits should be in CMPSC.

<sup>2</sup> Courses listed as "General Education" total 23 credits and should include 3 credits of GA, 3 credits of GH, 2 credits of GN, 3 credits of GS, 6 credits of Inter-Domain, and 6 credits of Exploration. PHYS 212 is recommended to satisfy the 2 credits of GN. The remaining 2 credits can be applied to the Exploration category or the 100-400 level general electives.

<sup>3</sup> 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.

<sup>4</sup> Students in the Computer Science (COMP\_BS) major are required to complete 21 of the 27 credits of 400-level prescribed courses for the major, including the senior capstone course, at Penn State Harrisburg. This is in compliance with Faculty Senate Policy 83-80.5.

<sup>5</sup> CMPSC/MATH/STAT electives should be chosen from the following lists:

- CMPSC 313, CMPSC 412, CMPSC 413, CMPSC 438, CMPSC 441, CMPSC 444, CMPSC 445, CMPSC 446, CMPSC 455, CMPSC 457, CMPSC 475, CMPSC 496, CMPSC 497
- MATH 401, MATH 411, MATH 412, MATH 425, MATH 430, MATH 431, MATH 435, MATH 445, MATH 449, MATH 450, MATH 455, MATH 465, MATH 468, MATH 496, MATH 497
- STAT 401, STAT 415, STAT 462, STAT 463

#### 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.

### General Option (3-Year Fast-Track): Computer Science, B.S. at Harrisburg 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

Fall	Credits Spring	Credits Summer	Credits
CMPSC 121 or 131 <sup>*#</sup>	3 CMPSC 122 or 132 <sup>*#</sup>	3 4 General Education Courses (GA, GH, GN, GS, Inter-Domain, Exploration, Recommended to pair 2 General Education Courses with US and/or IL Cultures.)	12
MATH 140 <sup>*#†</sup>	4 MATH 141 <sup>*#†</sup>	4	
ENGL 15S, 30T, or ESL 15 <sup>‡</sup>	3 CMPSC 312	3	
PHYS 211 (GN) <sup>†</sup>	4 CAS 100A or 100S (GWS) <sup>‡</sup>	3	
100-400 level elective	3 MATH 220	3	
	<b>17</b>	<b>16</b>	<b>12</b>

#### Second Year

Fall	Credits Spring	Credits Summer	Credits
CMPSC 221	3 CMPSC 430	3 4 General Education Courses (GA, GH, GN, GS, Inter-Domain, Exploration, Recommended to pair 2 General Education courses with US and/or IL Cultures.)	12
CMPSC 330 <sup>*</sup>	3 CMPSC 462	3	
CMPSC 360 <sup>*</sup>	3 CMPSC 469	3	
MATH/STAT 318 or STAT 414	3 ENGL 202C (GWS) <sup>‡</sup>	3	
300-400 level elective	3 CMPSC/MATH/STAT elective chosen from department list <sup>1</sup>	3	

General Education Course (GHW)	1.5 General Education Course (GHW)	1.5	
			<b>12</b>
<b>16.5</b>		<b>16.5</b>	
<b>Third Year</b>			
Fall	Credits Spring	Credits	
CMPSC 463	3 CMPSC 460	3	
CMPSC 472	3 CMPSC 470	3	
CMPSC 487W	3 CMPSC 488	3	
CMPSC/MATH/STAT electives chosen from department list <sup>1</sup>	3 CMPSC/MATH/STAT elective chosen from department list <sup>1</sup>	3	
CMPSC/MATH/STAT electives chosen from department list <sup>1</sup>	3 CMPSC/MATH/STAT elective chosen from department list <sup>1</sup>	3	
	<b>15</b>	<b>15</b>	

#### 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

- <sup>1</sup> 9 credits should be in CMPSC.
- <sup>2</sup> Courses listed as "General Education" total 24 credits and should include 3 credits of GA, 3 credits of GH, 2 credits of GN, 3 credits of GS, 6 credits of inter-domain, 6 credits of exploration, and 1 credit of 100-400 level electives.
- <sup>3</sup> MATH 220 is offered as either a 2- or 3- credit class. If taken as a 3-credit class, the extra credit satisfies 1 credit of 100-400 level electives. If taken as a 2-credit class, an additional 100-400 level elective credit is required.
- <sup>4</sup> 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.
- <sup>5</sup> Students in the Computer Science (COMP\_BS) major are required to complete 21 of the 27 credits of 400-level prescribed courses for the major, including the senior capstone course, at Penn State Harrisburg. This is in compliance with Faculty Senate Policy 83-80.5.
- <sup>6</sup> CMPSC/MATH/STAT electives should be chosen from the following lists:
  - CMPSC 313, CMPSC 412, CMPSC 413, CMPSC 438, CMPSC 441, CMPSC 444, CMPSC 445, CMPSC 446, CMPSC 455, CMPSC 457, CMPSC 475, CMPSC 496, CMPSC 497
  - MATH 401, MATH 411, MATH 412, MATH 425, MATH 430, MATH 431, MATH 435, MATH 445, MATH 449, MATH 450, MATH 455, MATH 465, MATH 468, MATH 496, MATH 497
  - STAT 401, STAT 415, STAT 462, STAT 463

#### 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.

## Data science Option: Computer Science, B.S. at Harrisburg 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

Fall	Credits Spring	Credits
CMPSC 131 <sup>*#</sup>	3 CMPSC 132 <sup>*#</sup>	3
MATH 140 <sup>*#†</sup>	4 MATH 141 <sup>*#†</sup>	4
ENGL 15S, 30T, or ESL 15 <sup>‡</sup>	3 PHYS 211 <sup>†</sup>	4
General Education Course	3 CAS 100A or 100S <sup>‡</sup>	3
General Education Course	3 General Education Course (GHW)	1.5
	<b>16</b>	<b>15.5</b>

### Second Year

Fall	Credits Spring	Credits
CMPSC 312	3 CMPSC 330 <sup>*</sup>	3
DS 220	3 CMPSC 360 <sup>*</sup>	3
MATH 220	2 ENGL 202C <sup>‡</sup>	3
General Education Course	3 STAT 401	3
General Education Course	3 General Education Course	3
General Education Course (GHW)	1.5	
	<b>15.5</b>	<b>15</b>

### Third Year

Fall	Credits Spring	Credits
CMPSC 469	3 CMPSC 430	3
MATH/STAT 318 or STAT 414	3 CMPSC 445	3
STAT 462	3 CMPSC 462	3
General Education Course	3 CMPSC/MATH/STAT elective chosen from department list	3
General Education Course	3 General Education Course	2
	<b>15</b>	<b>14</b>

### Fourth Year

Fall	Credits Spring	Credits
CMPSC 441	3 CMPSC 446	3
CMPSC 463	3 CMPSC 460	3
CMPSC 472	3 CMPSC 488	3
CMPSC 487W	3 100-400 Level Elective	3
CMPSC/MATH/STAT elective chosen from department list	3 100-400 Level Elective	2
	<b>15</b>	<b>14</b>

### 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

<sup>1</sup> Courses listed as "General Education" total 23 credits and should include 3 credits of GA, 3 credits of GH, 2 credits of GN, 3 credits of GS, 6 credits of Inter-Domain, and 6 credits of Exploration. PHYS 212 is recommended to satisfy the 2 credits of GN. The remaining 2 credits can be applied to the Exploration category or the 100-400 level general electives.

<sup>2</sup> Students must earn a 2.5 or higher grade point average in the following courses: DS 220, CMPSC 312, CMPSC 330, CMPSC 360, CMPSC 430, CMPSC 441, CMPSC 460, CMPSC 445, CMPSC 446, CMPSC 462, CMPSC 463, CMPSC 469, CMPSC 472, CMPSC 487W, and CMPSC 488.

<sup>3</sup> Students in the Computer Science (COMP\_BS) major are required to complete 27 of the 33 credits of 400-level prescribed courses for the major, including the senior capstone course, at Penn State Harrisburg. This is in compliance with Faculty Senate Policy 83-80.5.

<sup>4</sup> CMPSC/MATH/STAT electives should be chosen from the following lists:

- CMPSC 313, CMPSC 412, CMPSC 413, CMPSC 438, CMPSC 444, CMPSC 455, CMPSC 457, CMPSC 470, CMPSC 475, CMPSC 496, CMPSC 497
- MATH 401, MATH 411, MATH 412, MATH 425, MATH 430, MATH 431, MATH 435, MATH 445, MATH 449, MATH 450, MATH 455, MATH 465, MATH 468, MATH 496, MATH 497
- STAT 415, STAT 463

### University Requirements and General Education Notes:

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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.