

**APPENDIX**

**Major: BA Chemistry  
Harpur College of Arts and Sciences**

**Major Requirements: courses in ( ) indicate Binghamton course equivalent**

The major in chemistry leading to the BA degree requires the following courses: CHEM 107, 108, 221, 231, 332, 341, 351 or 361, 496; MATH 221 and 222; PHYS 131 (or 121) and 132 (or 122); two lab courses taken from CHEM 335, 422, 445, 455 and 497/498; two additional courses in chemistry. BA students must take CHEM 496 and at least six other chemistry courses in the major with at least four upper-level chemistry courses, in residence at Binghamton University.

**Required courses for the major: (taking sequence with CHEM 107/108)**

- **CHM 140 & 240** (CHEM 107 & 108) / **CHM 250** (CHEM 221), **CHM 260** (CHEM 231) & **CHM 262** (CHEM 332) - (CHM 260 & 262 **together** fulfill CHEM 335)
- CHEM 341, CHEM 351 **or** 361, & CHEM 496
- **(2) CHEM lab electives** selected from the following: CHEM 335, 422, 445, 455 and/or 497/498
- **(2) additional Chemistry courses**
- **MAT 280** (MATH 224 & 225) & **MAT 281** (MATH 226 & 227)
- **PHY 280, 290 & 291** (all three must be taken for PHYS 131 & 132 credit) recommended. **PHY 186** (PHYS 121) and **PHY 286** (PHYS 122) can be taken.

A complete list of courses and requirements for the major can be found at: <http://bit.ly/1vdJihy>

It is essential that you are strategic when selecting courses at Bergen Community College (Bergen CC) in order to maximize the fulfillment of as many General Education and Harpur College requirements as possible before transferring to Binghamton.

**Harpur College Requirements**

- There are additional Harpur College requirements for General Education, Foreign Language and Writing. For more information see page #3 of this Appendix.
- Harpur College requires at least 44 credits taken in residence at Binghamton University and a total of at least 126 credits (including transfer credit) to graduate.
- Courses must have a grade of C- or better to be accepted for transfer credit. Courses for some majors may require a higher grade to be accepted as credit toward the major (noted on page #2 of this Appendix if applicable).

**Please Note:** The schedule below is only one example of how the BA major in Chemistry can be completed in eight semesters. Your academic advisor or major advisor may recommend that you take courses in a different sequence based on credits earned previously.

See specific important departmental information in the University Bulletin at: <http://bit.ly/1vdJihv>

The **BOLD** areas below indicate Bergen CC courses that fulfill the BA in Chemistry major requirements & the Binghamton equivalent course follows in ( )

Year	Fall	Spring	Key/Notes
1	<p><b>Bergen CC</b>            *CHM 140 (CHEM 107)</p> <p>*MAT 280 (MATH 224 &amp; 225)</p> <p>+ Gen Ed and other Binghamton requirements</p>	<p><b>Bergen CC</b>            *CHM 240 (CHEM 108)</p> <p>*MAT 281 (MATH 226 &amp; 227)</p> <p>+ Gen Ed and other Binghamton requirements</p>	<p>*Fulfills major requirements</p> <p>+ All other courses taken should fulfill Gen Ed, additional Foreign Language and Harpur Writing Requirements</p>
2	<p><b>Bergen CC</b>            *CHM 250 (CHEM 221)</p> <p>*CHM 260 (CHEM 231) - CHM 260 &amp; 262 <u>together</u> fulfill CHEM 335)</p> <p>*PHY 186 (PHYS 121)</p> <p>+ Gen Ed and other Binghamton requirements</p>	<p><b>Bergen CC</b>            *CHM 262 (CHEM 332) - CHM 260 &amp; 262 <u>together</u> fulfill CHEM 335)</p> <p>*PHY 286 (PHYS 122)</p> <p>+ Gen Ed and other Binghamton requirements</p>	<p>*Fulfills major requirements</p> <p>+ All other courses taken should fulfill Gen Ed, additional Foreign Language and Harpur Writing Requirements</p>
3	<p><b>Binghamton University</b></p> <ul style="list-style-type: none"> <li>• <b>Go to department to declare major</b></li> <li>• <b>Meet with your major advisor and Harpur advisor</b></li> </ul> <p>*CHEM 341</p> <p>*CHEM 351 or 361</p> <p>~ See comment in "Notes" section</p>	<p><b>Binghamton University</b></p> <p>*(1) CHEM lab elective (see list on page 1 for courses that fulfill the lab requirement)</p> <p>~ See comment in "Notes" section</p>	<p>*Fulfills major requirements</p> <p>~ Complete any Gen Ed, Harpur Writing and Harpur Language requirements not met at Bergen CC</p>
4	<p><b>Binghamton University</b>            *CHEM 496</p> <p>*(1) CHEM lab elective (if CHM 260 &amp; 262 <u>were not taken at Bergen CC</u>)</p> <p>~ See comment in "Notes" section</p>	<p><b>Binghamton University</b>            *(2) CHEM electives</p> <p>~ See comment in "Notes" section</p>	<p>*Fulfills major requirements</p> <p>~ Complete any Gen Ed, Harpur Writing and Harpur Language requirements not met at Bergen CC</p>

# It is highly recommended that the Gen Ed Laboratory Science (L), Gen Ed Mathematics (M) and additional foreign language requirement be completed at Bergen CC before transferring to Binghamton (unless they will be fulfilled by courses required for the major that must be taken at Binghamton University)

### **Additional Binghamton General Education Requirements:**

Information on Binghamton General Education requirements can be found at: <http://bit.ly/1iE0uTA>

1) AP and/or IB credit may fulfill some requirements. Bergen CC academic advising will apply any applicable fulfilled requirements.

2) In addition to the SUNY Gen Ed requirements, Binghamton also requires a minimum of two credits in physical education, wellness, or both physical education and wellness.

The 2-credit physical education requirement can be fulfilled at Bergen CC.

**The Harpur College Foreign Language requirement:** For all requirements except Foreign Language, transfer students who have been certified as meeting a SUNY-wide General Education requirement prior to matriculation at Binghamton will be certified as having met the corresponding Binghamton requirement.

- Because the SUNY-wide Foreign Language requirement is one college-level course and the Binghamton University Foreign Language requirement for students in Harpur is fulfilled by a second-semester college-level course in foreign language, transfer students in those schools who fulfilled the SUNY-wide Foreign Language requirement may need additional coursework to fulfill the Binghamton University Foreign Language requirement.

\*This additional foreign language requirement can be fulfilled at Bergen CC.

➤ **To determine if you have fulfilled the Binghamton University foreign language requirement** go to the foreign language calculator at: <http://bit.ly/1me5Wnr>

**The Harpur All College Writing Requirement:** A maximum of 3 transfer courses in English composition, rhetoric or literature (of which only 1 may count as a C/J course) may be applied to this requirement.

Harpur College establishes the following requirements in composition (C), writing (W) and/or (J) courses.

All candidates for a baccalaureate degree from Harpur College must complete one of the following combinations of C, J and W courses for completion of the writing requirement:

- two C/J and three W; or
- three C/J and one W; or
- four C/J

Students are strongly urged to take at least one four-credit (C) course within their first two semesters (32 credits) at Harpur College.

Composition (C) courses emphasize writing as a process of revision and require a minimum of 20 pages of expository prose. At least 50 percent of the course grade is based on student writing. Writing (W) courses provide considerable experience in and feedback on writing as a tool of college-level teaching and learning. Written assignments in W courses constitute 30 to 100 percent of the basis for the grade in the course and typically consist of a minimum of 10 pages of writing.

(J) courses require 20 pages and a minimum of two oral presentations.

For a complete and detailed list of **Harpur College requirements** go to: <http://bit.ly/1i5SBhH>