

The following table outlines how transfer credits will be applied to the Bachelor of Science in Chemistry degree at Cleveland State University for students who completed an Associate of Science degree via the Ohio Guaranteed Chemistry Transfer Pathway. The OGTP designation guarantees the transfer and applicability of credits, but does not guarantee admission to a program. Some bachelor-degree granting programs may be competitive, and students should check with individual institutions for their program admission requirements.

| COURSE EQUIVALENCIES FROM THE ASSOCIATE DEGREE   | Course Number   | Credit Hours |
|--|---|--------------|
| <b>GENERAL EDUCATION REQUIREMENTS/OHIO TRANSFER 36</b>   |   |              |
| Any Ohio Transfer 36 approved First Writing (TME001) course  | ENG 100 or ENG 101  | 3            |
| Calculus I (TMM005)  | MTH 181   | 4            |
| Any Ohio Transfer 36 approved Arts and Humanities course   | Ohio Transfer 36 Elective*  | 3            |
| Any Ohio Transfer 36 approved Arts and Humanities course   | Ohio Transfer 36 Elective*  | 3            |
| Any Ohio Transfer 36 approved Social and Behavioral Sciences course  | Ohio Transfer 36 Elective*  | 3            |
| Any Ohio Transfer 36 approved Social and Behavioral Sciences course  | Ohio Transfer 36 Elective*  | 3            |
| General Chemistry I with lab (OSC008)  | CHM 261 and CHM 266 (to be submitted) <sup>1</sup>                    | 4            |
| General Chemistry II with lab (OSC009)   | CHM 262 and CHM 267 (to be submitted) <sup>1</sup>                    | 4            |
| Any Ohio Transfer 36 approved Second Writing (TME002) course   | ENG 102   | 3            |
| Calculus II (TMM006)   | MTH 182   | 4            |
| Up to 3-4 additional hours of Ohio Transfer 36 approved courses  | Ohio Transfer 36 Elective*  | 0-4          |
| <b>PRE-MAJOR/BEGINNING MAJOR</b>   |   |              |
| Calculus-based Physics I with lab (OSC016)   | PHY 241 or PHY 243  | 5            |
| Calculus-based Physics II with lab (OSC017)  | PHY 242 or PHY 244  | 5            |
| Full-Year Sequence of Organic Chemistry with lab (OSC010)  | CHM 331, CHM 336, CHM 332, and CHM 337 (to be submitted) <sup>1</sup> | 8            |
| <b>OTHER RECOMMENDATIONS</b>   |   |              |
| Electives  | Varies*   | 0-2          |
| <b>TOTAL HOURS FROM ASSOCIATE DEGREE:</b>  |   | <b>60-65</b> |
| Advising Notes:<br>(*) Indicates that coursework will be evaluated for applicable equivalency upon transfer at the university. If a Transfer Assurance Guide (TAG) course is taken, the approved course equivalency will be awarded.<br><sup>1</sup> "To be submitted" indicate that the course does not currently carry the statewide course equivalency guarantee. However, the institution is working toward this goal and will act in good faith to ensure the appropriate equivalency is given that counts toward the degree. |   |              |

The following additional coursework will be required to complete the Bachelor of Science in Chemistry degree in the American Chemical Society Certified track at Cleveland State University after a student has completed an Associate of Science Ohio Guaranteed Chemistry Transfer Pathway degree. CSU also offers tracks in Pre-Professional Studies and in Chemistry with Secondary Teacher Licensure. If students are interested in these tracks, they should consult with their CSU advisor to determine the required coursework. Some bachelor-degree granting programs may be competitive and admission into the program is not guaranteed. Students should check with individual institutions for their program admission requirements.

| REMAINING COURSEWORK TO COMPLETE BACHELOR'S DEGREE  |                                  | Course Number | Credit Hours |
|---|----------------------------------|---------------|--------------|
| Major Requirement:  | Multivariable Calculus           | MTH 281       | 4            |
| Major Requirement:  | Research Methods in Chemistry    | CHM 301       | 2            |
| Major Requirement:  | Physical Chemistry I             | CHM 321       | 3            |
| Major Requirement:  | Analytical Chemistry             | CHM 311       | 3            |
| Major Requirement:  | Analytical Chemistry Laboratory  | CHM 316       | 2            |
| Major Requirement:  | Instrumental Analysis            | CHM 411       | 3            |
| Major Requirement:  | Physical Chemistry Laboratory I  | CHM 426       | 3            |
| Major Requirement:  | Physical Chemistry II            | CHM 322       | 3            |
| Major Requirement:  | Advanced Instrumental Analysis   | CHM 412       | 3            |
| Major Requirement:  | Instrumental Analysis Laboratory | CHM 416       | 3            |
| Major Requirement:  | Advanced Organic Chemistry       | CHM 431       | 2            |
| Major Requirement:  | Physical Chemistry Laboratory II | CHM 427       | 3            |
| Major Requirement:  | Inorganic Chemistry              | CHM 441       | 3            |
| Major Requirement:  | Inorganic Chemistry Laboratory   | CHM 446       | 2            |
| Major Requirement:  | Biochemistry I                   | CHM 402       | 3            |
| Major Requirement:  | Faculty Colloquium               | CHM 471       | 1            |
| Major Requirement:  | Senior Research                  | CHM 489       | 2            |
| Major Requirement:  | Student Colloquium               | CHM 472       | 1            |
| Major Requirement:  | Biochemistry II                  | CHM 403       | 3            |
| Major Requirement:  | CHM Electives (300/400 level)    | Varies        | 6            |
| General Electives:  | General Electives                | Varies        | 0-5          |
| <b>REMAINING COURSEWORK TO COMPLETE BACHELOR'S DEGREE TOTAL:<sup>1</sup></b>  |                                  |               | <b>55-60</b> |
| Advising Notes:<br><sup>1</sup> CSU requires a total of 120 credits hours for the B.S. in Chemistry. The total number of hours to complete the bachelor's degree represents a range of hours that may be needed depending on the individual course selections made during the associate degree program. |                                  |               |              |

| COMPLETE BACHELOR'S DEGREE      | Total Credit Hours |
|---------------------------------|--------------------|
| <b>BACHELOR'S DEGREE TOTAL:</b> | <b>120</b>         |

### SPECIAL NOTES

For more information, please contact:  
College of Sciences and Health Professions Advising Center  
coshpadvising@csuohio.edu | (216) 687-9321  
<https://www.csuohio.edu/sciences/advising>

### SAMPLE DEGREE MAP

#### THIRD YEAR

| SEMESTER 5                              |              | SEMESTER 6                               |              |
|---|--------------|--|--------------|
| Course Name & Number                    | Credit Hours | Course Name & Number                     | Credit Hours |
| MTH 281 Multivariable Calculus          | 4            | CHM 322 Physical Chemistry II            | 3            |
| CHM 311 Analytical Chemistry            | 3            | CHM 427 Physical Chemistry Laboratory II | 3            |
| CHM 316 Analytical Chemistry Laboratory | 2            | CHM 412 Advanced Instrumental Analysis   | 3            |
| CHM 321 Physical Chemistry I            | 3            | CHM 416 Instrumental Analysis Laboratory | 3            |
| CHM 426 Physical Chemistry Laboratory I | 3            | CHM 431 Advanced Organic Chemistry       | 2            |
| CHM 411 Instrumental Analysis           | 3            |  |              |
| <b>Total Semester 5 Credit Hours</b>    | <b>18</b>    | <b>Total Semester 6 Credit Hours</b>     | <b>14</b>    |

#### FOURTH YEAR

| SEMESTER 7                             |              | SEMESTER 8                           |              |
|--|--------------|--------------------------------------|--------------|
| Course Name & Number                   | Credit Hours | Course Name & Number                 | Credit Hours |
| CHM 441 Inorganic Chemistry            | 3            | CHM 489 Senior Research              | 2            |
| CHM 446 Inorganic Chemistry Laboratory | 2            | CHM 472 Student Colloquium           | 1            |
| CHM 402 Biochemistry I                 | 3            | CHM 403 Biochemistry II              | 3            |
| CHM 471 Faculty Colloquium             | 1            | CHM 301 Research Methods             | 2            |
| CHM Elective (300/400 level)           | 3            | CHM Elective (300/400 level)         | 3            |
| General Elective                       | 0-2          | General Elective                     | 0-3          |
| <b>Total Semester 7 Credit Hours</b>   | <b>12-14</b> | <b>Total Semester 8 Credit Hours</b> | <b>11-14</b> |