Biochemistry & Biophysics

Biochemistry & Biophysics provides a degree path centered on the chemistry and physics of life processes with training that integrates the principles of chemistry, physics, mathematics, statistics, biochemistry, cell and molecular biology, and biological sequence analysis. Biochemists explore the chemical structure of living matter and the chemical reactions occurring in living cells. Biophysicists use the methods of physical science to study the structure and function of macromolecules. Biochemistry and Biophysics majors receive excellent training for careers in medicine and related health professions, biotechnology and pharmaceutical industries, or for graduate study. Completion of an option is **required** to earn a degree in Biochemistry & Biophysics.

**Biochemistry & Biophysics Options**
- Advanced Biophysics
- Neuroscience
- Pre-Medicine

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### Your Bachelor’s Degree (BS) in the College of Science

- A minimum of 180 credits are required for graduation; 60 must be upper division (300 and 400-level courses).
- A maximum of 124 credits earned at a community college may be applied toward a bachelor's degree at OSU.
- Only courses with letter prefixes and numbers above 100 can be accepted.
- Some courses with letter prefixes and numbers above 100 can be accepted.
- Some courses can count towards your major and the Baccalaureate Core. Check with your advisor.
- Options available. See "Important Notes".
- See the OSU Catalog for a list of courses required for your major and option: [catalog.oregonstate.edu](http://catalog.oregonstate.edu)

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### Courses for this Major (offered at Central Oregon Community College)

*Priority courses to complete before transferring are distinguished by P*

<table>
<thead>
<tr>
<th>Requirement</th>
<th>COCC Course</th>
<th>OSU Courses for Biochemistry Biophysics Majors</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Mathematics P</td>
<td>MTH 111, MTH 112, MTH 251, MTH 252, MTH 254</td>
<td>MTH 111, MTH 112, MTH 251, MTH 252, MTH 254</td>
<td>Math placement determines where students begin in math. Please speak to your COCC advisor</td>
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<tr>
<td>General Chemistry P</td>
<td>CH 221, 222, 223</td>
<td>CH 231/261, 232/262, 233/263</td>
<td>Lecture &amp; lab for Chemistry have separate course numbers at OSU</td>
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<tr>
<td>Principles of Biology</td>
<td>BI 211, 212, 213</td>
<td>BI 211, 212, 213</td>
<td>Students should take the entire series at either COCC or OSU. Individual terms do not match between the two schools.</td>
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<tr>
<td>Physics</td>
<td>PH 211, 212, 213</td>
<td>PH 211, 212, 213</td>
<td></td>
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<tr>
<td>Organic Chemistry</td>
<td>CH 241, 242, 243</td>
<td>CH 331, 332, 337</td>
<td>Must pass the ACS organic exam offered as part of COCC course to receive upper division credit: <a href="https://chemistry.oregonstate.edu/content/organic-chemistry-transfer-policies#UGOCCC">https://chemistry.oregonstate.edu/content/organic-chemistry-transfer-policies#UGOCCC</a></td>
</tr>
</tbody>
</table>
Important Notes & Resources

Important Notes for the College and Major:

• Grade requirements: C- or better in all lower division math, biology, and chemistry coursework
• See a sample degree plan by searching “Biochemistry and Biophysics” at admissions.oregonstate.edu/find-your-major
• Option required. Select from: Advanced Biophysics, Neuroscience, and Pre-Medicine
• Other similar majors to explore: Biochemistry and Molecular Biology and Biology with a Genetics option
• Math, Chemistry and some Baccalaureate Core are priority courses to complete before transferring to OSU.
• For Biochemistry & Biophysics students, the best time to transfer is fall term, particularly due to the required three term science series courses. Talk with the College of Science Transfer Advisor about your specific timeline.
• It is important to speak with the College of Science Transfer Advisor early on, and often, to ensure correct course selection and sequencing.

Resources and OSU Information:

• Students do not have to complete a transfer degree in order to transfer to OSU.
  o If you’ve completed the Oregon AAOT, all requirements of the Baccalaureate Core are complete except for Synthesis Courses and Writing Intensive Courses.
• Preparing to apply to OSU? See admissions info: oregonstate.edu/admissions/transfer.html
• Want to take classes at both OSU and an Oregon community college? Check out the Degree Partnership Program: partnerships.oregonstate.edu/students
• Visit OSU for a campus tour and meet with an advisor; schedule your visit at visitosu.oregonstate.edu/visit-campus

General Education Courses (called the Baccalaureate Core)

• Complete one course in each Perspectives category with no more than two in the same department.
• For full listing of courses that fulfill Baccalaureate Core, please refer to https://admissions.oregonstate.edu/course-equivalencies-central-oregon-community-college

| SKILLS COURSES            | Math                  | Completed as part of major.
|                           | WR 121. Required to transfer. |
|                           | Many options, see BaccCore link above |
|                           | Many options, see BaccCore link above |
|                           | Fitness               |
| PERSPECTIVE COURSES       | Biological Science    | Completed as part of major
|                           | Physical Science      | Completed as part of major
|                           | Additional Biological or Physical Science | Completed as part of major
|                           | Cultural Diversity    | Many options, see BaccCore link above
|                           | Literature and the Arts | Many options, see BaccCore link above |
|                           | Social Processes and Institutions | Many options, see BaccCore link above |
|                           | Western Culture       | Many options, see BaccCore link above |
| DPD COURSE                | Difference, Power, & Discrimination | Many options, see BaccCore link above |
| SYNTHESIS COURSES         | Contemporary Global Issues | Upper division course, take through OSU |
|                           | Science, Technology, & Society | Upper division course, take through OSU |

It is important to speak with the College of Science Transfer Advisor early on, and often, to ensure correct course selection and sequencing.

Academic advisors at your community college and OSU are available to answer your questions and assist you in creating a transfer plan. See your community college advisor first and use this Transfer Guide to help you plan. Also, consider visiting OSU to take a campus tour and meet with an advisor. See visitosu.oregonstate.edu/visit-campus to schedule your personalized visit.

Advising Contacts

Central Oregon Community College  http://www.cocc.edu/cap/advising/
OSU College of Science Transfer Advisor Melissa Lee, Melissa.Lee@oregonstate.edu, 541-737-3522
OSU Science Success Center sciencesuccess@oregonstate.edu, 541-737-3854
OSU Biochemistry & Biophysics Website https://biochem.oregonstate.edu