Biochemistry & Molecular Biology

The Biochemistry & Molecular Biology degree provides a degree path centered on the molecular basis of living systems with training in molecular genetics, biochemistry, and cell biology, as well as in rapidly developing areas such as bioinformatics. Majors must select an option either in Advanced Molecular Biology, Computational Molecular Biology, or Pre-Medicine. The first two options are designed for students interested in careers in the biotechnology and pharmaceutical industries or graduate work in the molecular life sciences, with the second especially well-suited for students interested in computational aspects of molecular biology. The third option is ideal for students interested in careers in medicine and related health professions.

Biochemistry & Molecular Biology Options

- Advanced Molecular Biology
- Computational Molecular Biology
- Pre-Medicine

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 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

Courses for this Major (offered at Clackamas Community College)

Priority courses to complete before transferring are distinguished by

<table>
<thead>
<tr>
<th>Requirement</th>
<th>CCC Course</th>
<th>OSU Courses for Biochemistry &amp; Molecular Biology Majors</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>MTH 111, MTH 112, MTH 251, MTH 252</td>
<td>MTH 111, MTH 112, MTH 251, MTH 252</td>
<td>Math placement determines where students begin in math. Please speak to your CCC advisor.</td>
</tr>
<tr>
<td>General Chemistry</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>
</tr>
<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 CCC or OSU. Individual terms do not match between the two schools.</td>
</tr>
<tr>
<td>Physics</td>
<td>PH 201, 202, 203</td>
<td>PH 201, 202, 203</td>
<td></td>
</tr>
<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 CCC 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 Molecular Biology” at [admissions.oregonstate.edu/find-your-major](http://admissions.oregonstate.edu/find-your-major)**.
- **Option required. Select from: Advanced Molecular Biology, Computational Molecular Biology and Pre-Medicine. Other similar majors to explore: Biochemistry & Biophysics and Biology with a Genetics option.**
- **Math, Chemistry and some Baccalaureate Core are priority courses to complete before transferring to OSU.**
- **For Biochemistry & Molecular Biology 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.**
  - 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](http://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](http://partnerships.oregonstate.edu/students).**
- **Visit OSU for a campus tour and meet with an advisor; schedule your visit at [visitosu.oregonstate.edu/visit-campus](http://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/baccalaureate-core-course-equivalencies-clackamas-community-college](https://admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-clackamas-community-college).

<table>
<thead>
<tr>
<th>SKILLS COURSES</th>
<th>Math</th>
<th>Writing I</th>
<th>Writing II</th>
<th>Speech</th>
<th>Fitness</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERSPECTIVE COURSES</td>
<td>Biological Science</td>
<td>Physical Science</td>
<td>Additional Biological or Physical Science</td>
<td>Cultural Diversity</td>
<td>Literature and the Arts</td>
</tr>
<tr>
<td>DPD COURSE</td>
<td>Difference, Power, &amp; Discrimination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYNTHESIS COURSES</td>
<td>Contemporary Global Issues</td>
<td>Science, Technology, &amp; Society</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Completed as part of major.
Completed as part of major.
Completed as part of major.
Completed as part of major.
Completed as part of major.
Many options, see BaccCore link above.
Many options, see BaccCore link above.
Many options, see BaccCore link above.
Many options, see BaccCore link above.
Many options, see BaccCore link above.
Many options, see BaccCore link above.
Many options, see BaccCore link above.
Many options, see BaccCore link above.

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](http://visitosu.oregonstate.edu/visit-campus) to schedule your personalized visit.

### Advising Contacts & Resources

<table>
<thead>
<tr>
<th>Clackamas Community College</th>
<th><a href="http://www.clackamas.edu/Advising/Advising.aspx">http://www.clackamas.edu/Advising/Advising.aspx</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>OSU College of Science Transfer Advisor</td>
<td>Melissa Lee, <a href="mailto:Melissa.Lee@oregonstate.edu">Melissa.Lee@oregonstate.edu</a>, 541-737-3522</td>
</tr>
<tr>
<td>OSU Science Success Center</td>
<td><a href="mailto:sciencesuccess@oregonstate.edu">sciencesuccess@oregonstate.edu</a>, 541-737-3854</td>
</tr>
<tr>
<td>OSU Biochemistry &amp; Molecular Biology Website</td>
<td><a href="https://biochem.oregonstate.edu">https://biochem.oregonstate.edu</a></td>
</tr>
</tbody>
</table>