

# Clackamas Community College Transfer Guide for Chemistry and Biochemistry & Biophysics Majors

**Oregon State**  
UNIVERSITY

**College of Science**

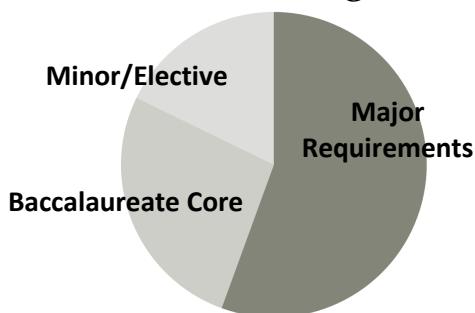
## Chemistry

The Chemistry major (CH) provides a solid foundation for many professions including teaching, forensics, biotechnology, medicine, materials science and nanotechnology, chemical processing, electronics, agricultural and food science, oceanography, and environmental science. Chemistry students choose from among the 10 different options in the major including advanced chemistry, biochemistry, business, chemistry education, chemical engineering, environmental chemistry, forensic science, materials science, & pre-medicine.

## Biochemistry & Biophysics

The Biochemistry & Biophysics major (BB) involves life science, quantitative work, and physical science training. Graduates of the BB major are well-prepared for postgraduate work in other biological fields including medicine, pharmacology, physiology, neurosciences, microbiology, immunology, dentistry, genetics, cell biology, entomology, agricultural science, biological oceanography, fisheries and wildlife, toxicology, food science and technology, environmental sciences, forensics, marine biology, and nutrition.

## Your Bachelor's Degree in the OSU 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.
- See OSU Catalog for a list of courses required for your major and option: <http://catalog.oregonstate.edu/DegreeSearcher.aspx?bluestate=undermajors>

## Courses for these Majors: (offered at the community college)

**Mathematics and General Chemistry are priority courses to complete before transferring.**

CH and BB majors must complete MTH 254, Physics, & Organic Chemistry (if offered) before transferring in order to graduate in 4 years.

Requirement	CCC Equivalent	OSU Courses Chemistry Majors	OSU Courses Biochemistry/Biophysics Majors
<b>Mathematics</b>	MTH 251, MTH 252 MTH 253, MTH 254	MTH 251, MTH 252 MTH 253, MTH 254	MTH 251, MTH 252 MTH 253, MTH 254
<i>Depending on math placement, students may need to take math courses prior to MTH 251 (e.g., MTH 111, 112, or others). Please speak to your CCC advisor. The OSU Math Department enforces prerequisites of C- or better for all Math courses in order to move on to higher level Math courses.</i>			
<b>General Chemistry</b>	CH 221, 222, 223	CH 231/261, 232/262, 233/263 ^	CH 231/261, 232/262, 233/263 ^
<i>Students need a C- or higher in the Chemistry 200-series (OSU or transfer) before moving on to upper division (300-400 level) Chemistry courses.</i>			
<b>Physics</b>	PHY 201, 202, 203 or PHY 211, 212, 213	PH 201, 202, 203 or PH 211/221, 212/222, 213/223*^  <i>*The calculus-based series (PH 21x/22x) is required for only some CH majors (depending on option selected).</i>	PH 211/221, 212/222, 213/223^
<b>Principles of Biology</b>	BI 211, 212, 213**	BI 211, 212, 213** <i>(Required for some CH majors depending on option selected).</i>	BI 211, 212, 213**
<i>**Students should take the entire series at either CCC or OSU. Do not split series between schools. Students need a C- or higher in BI 211, 212, &amp; 213 (OSU or transfer) before moving on to upper division (300-400 level) Biology &amp; Zoology courses.</i>			
<b>Organic Chemistry</b>	CH 241, 242, 243 lower division credit**	CH 331, 332, 337  <b>**Must pass ACS Organic Exam to receive upper division credit. <a href="http://chemistry.oregonstate.edu/organic_chem_transfer">http://chemistry.oregonstate.edu/organic_chem_transfer</a></b>	CH 331, 332, 337  <b>**Must pass ACS Organic Exam to receive upper division credit. <a href="http://chemistry.oregonstate.edu/organic_chem_transfer">http://chemistry.oregonstate.edu/organic_chem_transfer</a></b>

^CH 200-series and PH 21x/22x series have separate course numbers at OSU for Lecture/Lab or Lecture/Recitation.

## General Education Courses: (called the Baccalaureate Core)

- Complete one course in each Perspectives category with no more than two in the same department.
- The Oregon AAOT satisfies all lower division requirements of the Baccalaureate Core (all **but** Synthesis Courses<sup>†</sup>).
- The College of Science allows courses to double count between your major and the Baccalaureate Core.
- See Baccalaureate Core transfer guide\* for specific community college courses meeting these requirements:  
<http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies>

<b>SKILLS COURSES</b>	Math	Completed as part of major. Required to transfer.
	Writing I	WR 121. Required to transfer.
	Writing II	Many options, see transfer guide*
	Speech (Writing III)	Many options, see transfer guide*
	Fitness	HPE 295
<b>PERSPECTIVES COURSES</b>	Biological Science	Often completed as part of major
	Physical Science	Completed as part of major
	2nd Biological or Physical Science	Completed as part of major
	Cultural Diversity	Many options, see transfer guide*
	Literature and the Arts	Many options, see transfer guide*
	Social Processes and Institutions	Many options, see transfer guide*
<b>DPD COURSE</b>	Western Culture	Many options, see transfer guide*
	Difference, Power, & Discrimination	Many options, see transfer guide*
<b>SYNTHESIS COURSES<sup>†</sup></b>	Contemporary Global Issues	Upper division course, take at OSU
	Science, Technology, & Society	Upper division course, take at OSU

## Important Notes and Resources:

- For science students, the best time to transfer is fall term, particularly due to the science series courses. Talk with an OSU advisor about your specific timeline.
- Students do not have to complete a transfer degree in order to transfer to OSU. Following the sample two-year plan below can help ease the transfer.
- Preparing to apply to OSU? See admissions info: <http://oregonstate.edu/admissions/transfer.html>
- Want to take classes at both OSU and an Oregon community college? Check out the Degree Partnership Program:  
<http://oregonstate.edu/partnerships/students>

## Example Two-Year Transfer Plan:

This is one possible plan based on full-time attendance. See your community college academic advisor to create your personalized plan.

	Fall Term	Winter Term	Spring Term
<b>Year 1</b>	Math General Chemistry Principles of Biology (if required) WR 121	Math General Chemistry Principles of Biology (if required) Bacc Core	Math General Chemistry Principles of Biology (if required) Bacc Core
<b>Year 2</b>	Math (if needed) or Bacc Core Physics Organic Chemistry	Math (if needed) or Bacc Core Physics Organic Chemistry	Math (if needed) or Bacc Core Physics Organic Chemistry

## Advising Contacts:

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 <http://oregonstate.edu/visitosu/tour> to schedule your personalized visit.

<b>Clackamas Community College</b>	<a href="http://www.clackamas.edu/Advising/Advising.aspx">http://www.clackamas.edu/Advising/Advising.aspx</a>
<b>OSU Biochemistry &amp; Biophysics</b>	Dr. Kevin Ahern, 541-737-2305, <a href="mailto:ahernk@onid.orst.edu">ahernk@onid.orst.edu</a>
<b>OSU Chemistry</b>	Dr. Christine Pastorek, 541-737-6732, <a href="mailto:christine.pastorek@oregonstate.edu">christine.pastorek@oregonstate.edu</a>
<b>OSU College of Science main office</b>	541-737-4811, <a href="mailto:science@oregonstate.edu">science@oregonstate.edu</a>