

### Where does my path start?

You will complete an Associate of Science-Transfer (AS-T) Track 1 Degree at Shoreline.

**Use the AS-T Track 1 Degree Planning Guide, with this sheet, to understand the requirements for graduation.**

Once you complete your Shoreline degree, you can transfer to a four-year school to earn a Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) in Chemistry or Biochemistry.

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### Chemistry/Biochemistry – What is it?

Chemistry is a physical science involving the study of all substances and energy; biochemistry is the study of the living organisms at a molecular level. Chemistry is used to produce substances ranging from food, medicine, clothing and cosmetics, to plastics, paper and electronics; therefore knowledge of chemistry is critical to the health and safety of people and the environment.

Areas of study in Chemistry/Biochemistry: Analytical Chemistry, Inorganic and Organic Chemistry, Quantitative Analysis, Physical Chemistry, Thermodynamics, Statistical Mechanics, Kinetics, Instrumental Analysis.

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### Where can I go for help?

#### Program Faculty Advisors

Linda Kuehnert	206-546-4575	<a href="mailto:lkuehnert@shoreline.edu">lkuehnert@shoreline.edu</a>	Rm 2821
Dave Phippen	206-546-4572	<a href="mailto:dhippen@shoreline.edu">dhippen@shoreline.edu</a>	Rm 2817
Amar Yahiaoui	206-546-4738	<a href="mailto:ayahiaou@shoreline.edu">ayahiaou@shoreline.edu</a>	Rm 2820
Guy Ting	206-546-4697	<a href="mailto:gting@shoreline.edu">gting@shoreline.edu</a>	Rm 2822
Torrey Stenmark	206-546-4505	<a href="mailto:tstenmark@shoreline.edu">tstenmark@shoreline.edu</a>	Rm 2823
Tiffany Meier	206-546-6953	<a href="mailto:tmeier@shoreline.edu">tmeier@shoreline.edu</a>	Rm 5231

**For course information and entry codes, contact:**

[biologyadvising@shoreline.edu](mailto:biologyadvising@shoreline.edu)

[chemistryadvising@shoreline.edu](mailto:chemistryadvising@shoreline.edu)

[mathadvising@shoreline.edu](mailto:mathadvising@shoreline.edu)

#### General Academic Advising

FOSS (5000) Building, Rm. 5229

206-546-4559

[advising@shoreline.edu](mailto:advising@shoreline.edu)

[www.shoreline.edu/advising](http://www.shoreline.edu/advising)

#### Career Planning

[www.shoreline.edu/job-career-services](http://www.shoreline.edu/job-career-services)

#### International Student Academic Advising

9000 Building, Rm. 9302

206-546-4697

[leadvisors@shoreline.edu](mailto:leadvisors@shoreline.edu)

[www.shoreline.edu/international/advising/](http://www.shoreline.edu/international/advising/)

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### What can I do with a Bachelor's Degree in Chemistry/Biochemistry?

Graduates in Chemistry and Biochemistry develop strong critical thinking, problem solving, computational and technical skills to work in positions such as research scientist, industrial chemist, crime lab analyst, chemical/pharmaceutical salesperson, quality control specialist, environmental climate change researcher, forensic scientist, and educator.

Advanced degrees and licensures are often required to enter medical professions or for professional advancement in other areas in the physical sciences.

**Potential employers include:** Pharmaceutical companies, agriculture and biotechnology industries, government agencies, manufacturing firms, hospitals, clinics, public and private schools, colleges and universities, and businesses. For more, please visit <http://www.shoreline.edu/counseling-center/career-counseling.aspx>.

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## What courses should I take?\*

General Education Requirements (20 Credits)	<p><b>Required:</b>                      ENGL&amp; 101 (A)                      ENGL&amp; 102 (A), 230 (W,S) or CMST&amp; 101 (A)                      MATH&amp; 151 (A)                      One course in Multicultural Understanding</p>
Humanities/Social Sciences (15 Credits)	<p><b>Required:</b>                      5 credits each in Humanities and Social Sciences; an additional 5 credits in either Humanities or Social Sciences</p>
Pre-Major Requirements (54-59 Credits)	<p><b>Required:</b>                      Chemistry: CHEM 171/181 (F,W,S); CHEM 172/182 (W,S,U); CHEM 173/183 (F,S,U)                      Additional Chemistry: CHEM&amp; 241/271 (F,W), CHEM&amp; 242/272 (W,S), CHEM&amp; 243/273 (S)                      Additional Mathematics: MATH&amp; 152 (F,W,S); MATH&amp; 163 (F,W,S)</p>
Major Science Sequence (Min. 10 Credits for AS degree)	<p><b>Take one of the following course sets*:</b>                      Biology: BIOL&amp; 211 (A), 212 (W,S), 213 (S,U)                      Algebra-based Physics: PHYS&amp; 114 (F), 115 (W), 116 (S)                      Calculus-based Physics: PHYS&amp; 221 (F,W), 222 (S,U), 223 (W,S)</p>

\* **Chemistry Majors:** Choose a physics sequence. Calculus-based physics (PHYS& 221, 222, 223) is usually required for Bachelor of Science degrees. Chemistry usually does not require biology unless preparing for a health professional program.  
**Biochemistry Majors:** Choose biology or physics, or both. The biology sequence prepares students for biochemistry classes in the junior year. Physics can be taken after transfer.

F=Fall, W=Winter, S=Spring, U=Summer, A=All- indicates quarter(s) in which class is offered.

## Where can I transfer and what does my chosen four-year school require?

Before choosing classes, become familiar with the four-year program where you want to apply: visit the website, email the department, and/or speak with a Shoreline advisor. Institutions in Washington State that offer chemistry (C) and biochemistry (BC) majors are listed below. Check with the school for world language requirements. (Non-native speakers of English are often exempt from this requirement.)

School	Transfer Information	School	Transfer Information
Central Washington University (C, BC)	<a href="http://tinyurl.com/jdpira6">http://tinyurl.com/jdpira6</a>	University of Washington-Bothell (C)	<a href="http://tinyurl.com/j9r7so5">http://tinyurl.com/j9r7so5</a>
Eastern Washington University (C, BC)	<a href="http://tinyurl.com/gqpzhnq">http://tinyurl.com/gqpzhnq</a>	University of Washington-Seattle (C, BC)	<a href="http://tinyurl.com/hm3uecl">http://tinyurl.com/hm3uecl</a>
Gonzaga University (C, BC)	<a href="http://tinyurl.com/7c9d6xh">http://tinyurl.com/7c9d6xh</a>	Walla Walla University (C)	<a href="http://tinyurl.com/z5a4h8p">http://tinyurl.com/z5a4h8p</a>
Heritage University (C)	<a href="http://tinyurl.com/jpqnflm">http://tinyurl.com/jpqnflm</a>	Washington State University (C, BC)	<a href="http://tinyurl.com/jk3a2v2">http://tinyurl.com/jk3a2v2</a>
Pacific Lutheran University (C, BC)	<a href="http://tinyurl.com/zygoljk">http://tinyurl.com/zygoljk</a>	Western Washington University (C, BC)	<a href="http://www.wvu.edu/vtc/">http://www.wvu.edu/vtc/</a>
Seattle Pacific University (C, BC)	<a href="http://tinyurl.com/z46xxxr">http://tinyurl.com/z46xxxr</a>	Whitman College (C, BC)	<a href="http://tinyurl.com/z8vuwn9">http://tinyurl.com/z8vuwn9</a>
Seattle University (C, BC)	<a href="http://tinyurl.com/z3kipcm">http://tinyurl.com/z3kipcm</a>	Whitworth University (C, BC)	<a href="http://tinyurl.com/zcdww66">http://tinyurl.com/zcdww66</a>
The Evergreen State College (C, BC)	<a href="http://tinyurl.com/zhyjv3s">http://tinyurl.com/zhyjv3s</a>		
University of Puget Sound (C, BC)			

\*\* This unofficial guide is intended to support you as you prepare for your major. Please consult with an advisor and your chosen four-year school(s), as program and admissions requirements vary and may change without notice.