



Everything in the environment, whether naturally occurring or of human design, is composed of chemicals. Chemists and materials scientists search for and use new knowledge about chemicals. Chemical research has led to the discovery and development of new and improved synthetic fibers, paints, adhesives, drugs, cosmetics, electronic components, lubricants, and thousands of other products. Chemists and materials scientists also develop processes that save energy and reduce pollution, such as improved oil refining and petrochemical processing methods.

Materials scientists research and study the structures and chemical properties of various materials to develop new products or enhance existing ones. They also determine ways to strengthen or combine materials or develop new materials for use in a variety of products. Materials science encompasses the natural and synthetic materials used in a wide range of products and structures, from airplanes, cars, and bridges to clothing and household goods. Companies whose products are made of metals, ceramics, and rubber employ most material scientists. Other applications of this field include studies of superconducting materials, graphite materials, integrated-circuit chips, and fuel cells. Materials scientists, applying chemistry and physics, study all aspects of these materials.

Many chemists and materials scientists work in research and development (R&D). In basic research, they investigate properties, composition, and structure of matter and the laws that govern the combination of elements and reactions of substances. In applied R&D, they create new products and processes or improve existing ones, often using knowledge gained from basic research. For example, synthetic rubber and plastics resulted from research on small molecules uniting to form large ones, a process called polymerization.

Chemists also work in production and quality control in chemical manufacturing plants. They prepare instructions for plant workers that specify ingredients, mixing times, and temperatures for each stage in the process. They also monitor automated processes to ensure proper product yield, and test samples of raw materials or finished products to ensure that they meet industry and government standards, including the regulations governing pollution. Chemists report and document test results and analyze those results in hopes of further improving existing theories or developing new test methods.

Chemists often specialize in a subfield, some of which are: analytical chemistry, organic chemistry, inorganic chemistry, physical and theoretical chemistry, macromolecular chemistry, medicinal chemistry, biochemistry. More information about these fields can be found at the website below.

The material above is quoted and/or adapted from:
 Occupational Outlook Handbook, March 2008
<http://stats.bls.gov/oco/ocos049.htm>

GENERAL INFORMATION

Start your pursuit of Chemistry at EvCC, then transfer to a university for your bachelor's degree. Advanced degrees are usually needed to work as a professional. Study in Chemistry is also valuable to support other majors, such as biology, environmental studies, nutrition, nursing, and engineering.

EvCC offers the **Associate of Science Degree**, designed as part of a transfer agreement with a variety of universities in Washington. The degree offers qualified students priority for admission with junior status at most 4-year institutions in Washington. Students interested in colleges and universities outside of Washington may also find the requirements of this degree to be appropriate.

The **Associate of Science** degree requires that the student complete all freshman and sophomore math and science courses and a limited number of courses in English, Humanities and Social Science. Upon transfer, the student will be eligible for junior level science courses, but will need to complete the remaining distribution requirements before graduation with a baccalaureate degree.

Please discuss your interests and course selection with an advisor.

SUGGESTED PREPARATION

To begin college study in the sciences, students should have the following high school courses, or complete the equivalent course at EvCC:

High School Courses

Algebra 1 and 2
 Geometry 1 and 2
 Algebra 3 and 4
 Trigonometry
 Fourth Year Math
 Chemistry 1 and 2
 Physics 1 and 2
 Foreign Language 1-4

EvCC Courses

MATH 81 AND 82 [27 AND 28]
 MATH 95 [59]
 MATH 99 [65]
 MATH 105 [131]
 MATH& 141 and MATH 142
 CHEM& 140 [98]
 PHYS& 121, 122, 123 [117, 118, 119]
 Any language I, II, III

PROGRAM ADVISORS

To plan your course of study and discuss your interests, we strongly encourage you to contact an advisor:

- Mark Kontulis, Whitehorse Hall 318, 425-388-9136
 mkontulis@everettcc.edu
- Anne Brackett, Whitehorse Hall 309, 425-388-9039
 abrackett@everettcc.edu
- Sumita Singh, Whitehorse Hall 307, 425-388-9373
 ssingh@everettcc.edu
- Steven Powell, Whitehorse Hall 306, 425-388-9084
 spowell@everettcc.edu

GETTING STARTED AT EVCC

Our Enrollment Services Office provides information about application, advising, orientation and registration for new and continuing students. Though advising is voluntary, all prospective and current students are invited to contact the Enrollment Services Office or the Counseling Advising and Career Center (CACC) if they would like to speak one-to-one with an advisor about getting started.

Contact:

- ❑ Enrollment Services, Jackson Ctr, 425-388-9219
admissions@everettcc.edu
- ❑ CACC, Third Floor, Parks Bldg. 435-388-9263

TRANSFER INFORMATION

Preparing for transfer in the sciences requires careful attention to the requirements of the university you wish to attend. We strongly recommend that you review catalogs of a variety of schools, as well as their websites. Work with your advisor at EvCC to discuss which courses to take, and which degree option is best for you.

Websites of Chemistry departments at common transfer institutions:

University of Washington:

<http://depts.washington.edu/chem/>

Western Washington University:

<http://lightning.chem.wvu.edu/dept/wwuchem.html>

[March 2008]

SUGGESTED PLAN OF STUDY

Courses listed with an ampersand in the course number (e.g. ENGL&101) reflect the new Common Course Numbering System. Courses in [brackets] are the "old" course numbers and may be used to satisfy requirements. For more information, go to www.everettcc.edu/ccn

First Quarter

ENGL& 101 (PR)	English Composition	5
CHEM& 161 [140] (PR)	General Chem with Lab I	5.5
MATH& 151 [152] (PR)*	Calculus I	5

Second Quarter

HUMANITIES/SOCIAL SCIENCE		5
CHEM& 162 [150] (PR)	General Chemistry with Lab II	5.5
MATH& 152 [153] (PR)	Calculus II	5

Third quarter

HUMANITIES/SOCIAL SCIENCE		5
CHEM& 163 [160] (PR)	General Chem with Lab III	5.5
MATH& 153 [154] (PR)	Calculus III	5

Fourth Quarter

CHEM& 261 [200] (PR)	Organic Chemistry w/ Lab I	6
MATH& 254 [252] (PR)	Calculus IV	5
PHYS& 221/231 [121/131] or BIOL& 221 [180] (PR)	Engineering Physics I & Lab, or Majors Ecology/Evolution	5 - 5.5

Fifth Quarter

HUMANITIES/SOCIAL SCIENCE		5
CHEM& 262 [201] (PR)	Organic Chemistry w/ Lab II	6
PHYS& 222/232 [122/132] or BIOL& 222 [200] (PR)	Engineering Physics II & Lab or Majors Cell/Molecular	5 - 5.5

Sixth quarter

MATH 261 (PR) or ENGL& 102 (PR)	Differential Equations or Composition II	5
CHEM& 263 [202] (PR)	Organic Chemistry w/ Lab III	6
PHYS& 223/233 [123/133] or BIOL& 223 [220] (PR)	Engineering Physics III & Lab or Majors Organismal Physiology	5 - 5.5

* Students who are not ready to enroll in Calculus will be advised to take math courses that match their current skill level, which may delay their ability to take other courses that require higher math skills.
(PR) indicates there is a prerequisite for this course

Associate of Science

This checklist is targeted at transfer students with an interest in **Chemistry**. Students should meet with an advisor and maintain this checklist while at Everett Community College. The quarter before expected completion, this checklist should be submitted with a diploma application to the Enrollment Services Office. Note: Though courses in a foreign language are not required in the Associate of Science degree, some universities may require two or three quarters of foreign language for admission or for graduation.

Courses listed with an ampersand in the course number (e.g. ENGL&101) reflect the new Common Course Numbering System.
 Courses in [brackets] are the "old" course numbers and may be used to satisfy requirements. For more information, go to www.everettcc.edu/ccn

Student: _____ **Advisor Signature:** _____ **Date:** _____

COMPLETION of Diversity Course: _____
 (Where Completed/Course Title) (Year Completed) (Grade)

Course Number	Course Title	Credits	Quarter Completed	Grade
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COMMUNICATIONS SKILLS (5 credits)

ENGL& 101 or 101D	English Composition	5		
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MATHEMATICS (15 credits selected from MATH& 151, 152, 153, 254, [152, 153, 154, 252], Calculus. See Note 4.)

HUMANITIES AND SOCIAL SCIENCE (15 credits, in three different disciplines, selected from both the Humanities and Social Science course list for the Associate of Science – see separate guide.)

SCIENCE AND MATH (See Note 1.)

CHEM& 161 [140]	General Chemistry with Lab I	5.5		
CHEM& 162 [150]	General Chemistry with Lab II	5.5		
CHEM& 163 [160]	General Chemistry with Lab III	5.5		
CHEM& 261 [200]	Organic Chemistry with Lab I	6		
CHEM& 262 [201]	Organic Chemistry with Lab II	6		
CHEM& 263 [202]	Organic Chemistry with Lab III	6		
PHYS& 221/231, 222/232, 223/233				
[121/131, 122/132, 123/133] or BIOL& 221, 222, 223, [180, 200, 220] (See Note 2.)				

ELECTIVES (see your advisor for guidance.)

Total: minimum 90 credits required, minimum 2.0 GPA. See Note 3.

Note 1. This program of study assumes the student has college level English and math skills. All new students are required to take the EvCC English and Math placement tests. All science courses require completion of ENGL 98 or placement into ENGL& 101. Chemistry courses require completion of MATH 99 [65] or equivalent placement or higher, as well as completion of CHEM& 140 [098] or a high school chemistry course within the last three years. Some science classes are offered only in certain quarters of the year; please consult with an advisor to determine when classes are available. CHEM& 261, 262, 263 [200, 201, 202] are offered in a sequence of Fall, Winter, Spring only; students must start in the Fall. CHEM& 161, 162, 163 [140/150/160] are only offered F/W/Sp or W/Sp/Sum. Students who initially place in a high level math course do not need to take math courses below that level. The Associate of Science degree requires the completion of at least 15 credits in Math, including a third quarter of Calculus or approved statistics course.

Note 2: Students choosing the BIOL& 221, 222, 223 [180, 200, 220] sequence will choose an additional course if needed to attain 90 credits. ENGL& 102 or MATH 261 are suggested. BIOL& 222 [200] is taught Winter only. BIOL& 223 [220] is taught Spring only.

Note 3: Completion of listed and recommended courses may result in more than 90 credits being earned for the degree. The advantage is that the completion of these courses will enable you to progress more efficiently in your major at a university. Alternatively, some of the more advanced courses may be done at the university instead. Please consult with an advisor to decide the best option for you.

Note 4. MATH& 254 [252] is strongly recommended but not required. Consult an advisor. Students not completing MATH& 254 [252] at EvCC may not be able to obtain credit for the Calculus sequence at their transfer institution.



About Everett Community College

Improve your personal skills, discover new ideas, prepare for work and/or university transfer, and improve your career prospects through programs at EvCC.

Each term, about 9,800 students enroll in a wide variety of courses. Day, evening, distance, and workplace-based options are available. Students may enroll on a full-time or part-time basis. EvCC offers two-year associate degrees, short-term certificates, endorsements and industry certifications.

Student life can be active. Currently, EvCC offers athletic programs in basketball, baseball, and soccer, to name a few.

Student clubs range from Phi Theta Kappa (the Honor Society) to the United Native American Council to the International Club to the German Club, and more. Our Student Government and Programs Board are always on the go with activities that make college life fun. There are also opportunities to develop leadership skills.

Student services are designed to support students in their studies, remove barriers, and enrich student life. Financial aid services offer grant and loan opportunities, as well as scholarships. Our Counseling, Advising and Career Center has a rich array of information and personal assistance for students. The Diversity and Equity Center supports student activities and College programs that promote growth and opportunity toward cultural understanding.

Former EvCC students have found employment in business and industry, in community service agencies, in schools, and in other locales. Our transfer students are known to do very well at the UW, WWU and other schools.

**EvCC - a great place
for the sciences**



Everett Community College does not discriminate on the basis of race, religion, creed, color, national origin, age, sex, sexual orientation, marital status, the presence of any physical, sensory or mental disability, or status as a disabled or Vietnam era veteran in its program and activities, or employment. The Vice President of Student Services has been designated to handle inquiries regarding student-related non-discrimination policies and can be reached at 2000 Tower Street, Everett, WA 98201, or by phone at (425)388-9589. The Associate Vice President of Human Resources has been designated to handle employment-related inquiries regarding the non-discrimination policies and can be reached at 2000 Tower Street, Everett, WA 98201, or by phone at (425)388-9232. This publication is effective **SEPTEMBER 2008**. The College reserves the right to change courses, programs, degrees and requirements. It is the student's responsibility to be aware of correct information by routinely checking with Enrollment Services and/or the advisors listed in this publication. Requirements applicable to all certificates and degrees are published in the College Catalog. Nothing contained herein shall be construed to create any offer to contract or any contractual rights.

For more information, call 425-388-9219, Everett Community College, 2000 Tower Street, Everett, WA 98201, www.everettcc.edu