ASSOCIATE IN SCIENCE TRANSFER DEGREE
TRACK 1 AND TRACK 2
Summary of Requirements

Complete the departmental requirements of the institution to which the student intends to transfer. All courses taken at Grays Harbor College should be transfer courses.

- Complete an approved ninety credit program containing pre-professional and general education coursework
- Complete three PE requirement credits
- Maintain an overall GPA of at least 2.0
- Fulfill all obligations to the college, financial or otherwise

and

- Fulfill general requirements for all degrees as described on page 41.

Completion of all required courses in these programs satisfies Intercollege Relations Commission (ICRC) Associate in Science transfer degree requirements. A student transferring with a transfer Associate in Science degree enters all Washington public and some private four-year institution with junior-level standing. Completing these degrees does not guarantee students admission to the major. Where courses are sequenced (ie. 121,122,123) students are strongly advised to complete the sequence from one institution.

Students interested in pursuing a 4-year degree are strongly encouraged to complete the requirements for Associate in Science Transfer Degree #1 (AS-T #1) - Environmental/resource sciences, chemistry, geology, and earth science **or** Associate in Science Transfer Degree #2 (AS-#2) - Engineering, computer science, physics, and atmospheric sciences. Students who do not complete all Track #1 or Track #2 course requirements may still be eligible to receive an Associate of Science (AS) degree from Grays Harbor College. Consult your advisor for more information.

Associate in Science Transfer

Track 1

Associate in Science Transfer Track 1 is designed to prepare students for upper division study in the areas of environmental/resources sciences, chemistry, geology, and earth science.

Chemistry

Chemistry is the study of matter and the manner in which it changes and reacts as well as the laws governing those reactions. Chemists develop models and theories and perform research in chemical, medical and several related sciences. Qualified graduates find employment in teaching or in virtually every industry.

	Credits
CHEM& 161, 162, 163	17
CHEM& 261, 262, 263	15
ENGL& 101	5
PHYS& 221, 222, 223	15
MATH& 142, 151, 152, 163	20
Humanities and Social Science (at least 5 credits in each area)	15
Electives	3
PE requirement credits	3

Fisheries

Fisheries is the science of harvesting, culture, and management of finfish and shellfish. Fisheries scientists serve as culturists, researchers, and managers for state and federal natural resource agencies, tribes and private industry in the Pacific Northwest. A degree in fisheries science usually requires four years of college training. The first two years are spent completing lower-division courses required of all majors. During the last two years, a student majors in core areas such as aquaculture, seafood technology, habitat protection, management or enforcement.

The following list of courses is typical of the first two years of a fisheries program. Due to a wide choice and variation in bachelor degree programs, consultation with an academic advisor or counselor is necessary.

	Credits
BIOL 114, BIOL& 221, 222, 223	15
CHEM& 161, 162, 163	17
ECON& 201, 202	10
ENGL& 101, 235	10
MATH& 141, 142, 151, 152, 163	25
PHYS& 121, 122, 123, or 221, 222, 223	15
Electives: (include at least five hours each in Humanities and Social Science)	10
PE requirement credits	3

Geology

Geology is the study of the earth, its materials, and the processes that shape those materials into the familiar forms of mountains, oceans, plains and valleys. An understanding of geology is fundamental to the development of mineral and energy resources in a resource poor world; to the appropriate handling of environmental concerns, like hazardous waste disposal and water pollution in an increasingly polluted world; and to the understanding of the nature of violent events like floods, volcanic eruptions, and earthquakes. Consequently, geologists are employed by a variety of state and federal agencies, oil and mineral exploration firms, construction and engineering firms, and, of course, colleges and universities.

	Credits
CHEM& 161, 162, 163	17
ENGL& 101	5
GEOL& 101	5
MATH& 142, 151, 152, 163	20
PHYS& 121, 122, 123, or 221, 222, 223	15
Humanities and Social Science (at least 5 credits in each area)	15
Electives	13
PE requirement credits	3

Natural Resources
Natural resource science includes a systematized, yet holistic study of both the natural and physical worlds. Well developed communication, leadership, and teamwork skills will be of equal value to sound scientific knowledge and skills, since much of the work natural resource scientists do (watershed analysis, water quality monitoring, and development of habitat management plans) is done collaboratively with individuals from non-natural resource backgrounds (i.e. engineers, sociologists, economists, and legislators). A bachelor degree in natural resources requires four to five years of training. The first two to three years are usually spent meeting science, mathematics, and general education requirements. The last two years are spent majoring in core specific, natural resources areas (i.e. environmental studies, fish and wildlife management, conservation ecology and range management).

The following list of courses is typical of the first two years of a natural resources program. Due to a wide choice and variation in bachelor degree programs, consultation with an academic advisor or counselor is necessary.

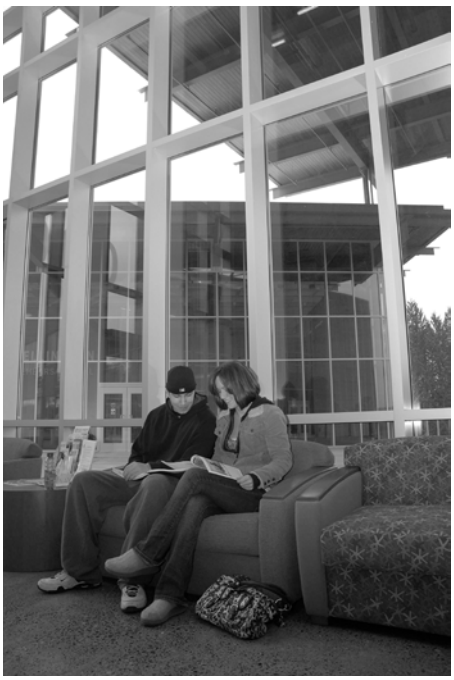
	Credits
BIOL 114, BIOL& 221, 222, 223	20
CHEM& 161, 162, 163	17
ECON& 201, 202	10
ENGL& 101, 235	10
MATH& 141, 142, 151, 152, 163	25
PHYS& 121, 122, 123, or 221, 222, 223	15
Electives: (include at least five hours each in Humanities and Social Science)	10
PE requirement credits	3

Associate in Science Transfer Track 2

Associate in Science Transfer Track 2 is designed to prepare students for upper division study in the areas of Engineering, Computer Science, Physics, and Atmospheric Sciences. Some institutions require Physics with calculus to meet the Physics lab sequence.

Physics
Physics inquires into the nature of the physical world and the laws governing our universe and is thus basic to the physical sciences, engineering, technology and life sciences. The career opportunities are broad, including scientific research, teaching, business, law, health and related fields.

	Credits
CHEM& 161, 162, 163	17
ENGL& 101 and 102 or 235	10
MATH& 142, 151, 152, 163; MATH 241	25
PHYS& 221, 222, 223	15
Humanities and Social Science (at least 5 credits in each area)	15
Electives	8
PE requirement credits	3



Pre-Engineering
Engineers apply theories and principles of science and mathematics to practical technical problems. They design machinery, products, systems and processes for efficient and economical performance. Engineers work for manufacturing industries, public utilities, engineering and architectural services, construction firms, and business and management consulting services. A degree in engineering generally requires four years of college training. The first two years are usually spent meeting science, mathematics and general education requirements. The last two years are spent majoring in a specific area such as civil, mechanical, electrical, or aeronautical engineering.

The following courses are recommended to meet the lower-division requirements for a major in pre-engineering:

	Credits
CHEM& 161, 162	11
ENGL& 101 and 102 or 235	10
MATH& 142, 151, 152, 163; MATH 241	25
PHYS& 221, 222, 223	15
Humanities and Social Science (at least 5 credits in each area)	15
Electives	14
PE requirement credits	3