ENVIRONMENTAL PROTECTION TECHNOLOGY (ENVI)

This is a list of the Environmental Protection Technology (ENVI) courses available at Kwantlen.

ENVI 1106 CR-4
Environmental Chemistry I
Students will study chemistry with a focus on environmental issues and applications. They will study concentration units, volumetric and gravimetric analysis, gases and organic chemistry with applications relevant to environmental issues.

Prerequisites: (CHEQ 1094 or Chemistry 11 [C+] or Chemistry 12 [P]) and (MATQ 1093 or ABEM 0011 or MATP 1011 or Principles of Mathematics 11 or Pre-calculus 11)
Co-requisites: MATH 1117 MATH 1117
Not Transferable

ENVI 1121 CR-3
Environmental Issues
Students will learn to identify the basic scientific and social principles that underlie the main current environmental issues. They will also examine local and global case studies and will study the effects of pollution and resource degradation on society.

ENVI 1206 CR-4
Environmental Chemistry II
Students will study chemistry with a focus on environmental issues and applications. They will study oxidation-reduction reactions, general equilibria (with applications to electrochemistry, solubility, and acids and bases), and intermolecular forces (with applications to miscibility and boiling/freezing points), with focus on environmental applications.

Prerequisites: (ENVI 1106 or CHEM 1110) and (MATH 1117 or [Principles of Mathematics 12 C+] or [Pre-calculus 12 C+])
Transferable (refer to transfer guide)

ENVI 1216 CR-4
Introduction to Earth Sciences
Students will study the basic principles of geology, hydrogeology, hydrology, and atmospheric science. They will learn the key physical mechanisms that affect the transport and transformation of pollutants released in the environment.

Prerequisites: ENVI 1121
Transferable (refer to transfer guide)

ENVI 2305 CR-3
Environmental Toxicology
Students will study the principles of toxicology and the toxicological testing of chemicals, with emphasis on environmental pollutants.

Prerequisites: (ENVI 1206 or CHEM 1210) and BIOL 1210
Transferable (refer to transfer guide)

ENVI 2307 CR-4
Environmental Physics
Students will learn the basic principles of physics that apply to environmental concerns. They will study topics in fluid mechanics and electricity and perform labs that illustrate the physical principles underlying common environmental instrumentation.

Prerequisites: (MATH 1117 or MATH 1112 or [MATH 1111 and 1113] or Principles of Math 12 with a C) and (PHYP 1011 or PHYQ 1098 or Physics 11 with a C)

ENVI 2310 CR-3
Solid Waste Management
Students will learn the principles of pollution prevention, waste minimization, recycling, landfill operation, incineration, and composting. They will study the basic concepts of environmental management systems and environmental audits.

Prerequisites: ENVI 1121

ENVI 2315 CR-4
Water and Soil Sampling
Students will gain experience with the field sampling procedures, instrumentation and analytical methods used in water, soil, and sediment assessment and control.

Prerequisites: ENVI 1121 and (ENVI 1106 OR CHEM 1110)

ENVI 2405 CR-3
Environmental Legislation
Students will study current environmental legislation at the federal, provincial, and municipal levels. They will learn the correct procedures for adhering to current legislation. Students will participate in a case study, and will identify stakeholders and relevant legislation and regulations.

ENVI 2410 CR-3
Water Resources Protection
Students will learn the principles of operation of physical, chemical, and biological treatment systems for water and wastewater. They will also learn the principles of flood control, erosion prevention, and other methods of aquatic protection.

Prerequisites: ENVI 1216 and ENVI 2307 and ENVI 2315

ENVI 2415 CR-4
Air Quality Monitoring
Students will gain experience with comprehensive sampling, instrumentation and analytical techniques used in ambient air and source monitoring, and will learn to apply the scientific principles underlying air monitoring and air quality issues.

Prerequisites: ENVI 1216 and ENVI 2307

ENVI 2420 CR-4
Contaminated Sites Management
Students will learn the basic principles of contaminated sites management, including site assessment procedures, remediation methods, and the regulatory framework. They will also study the movement of contaminants in soils and groundwater.

Prerequisites: (ENVI 1206 or CHEM 1210) and ENVI 1216

ENVI 2426 CR-3.5
Health and Safety
Students will study the dangers of hazardous materials through WHMIS and Transportation of Dangerous Goods systems and will learn safe emergency response procedures for spill incidents and the use of protective suits and respirators. They will also learn to recognize and control common contaminated sites hazards through the development of site health and safety plans

Prerequisites: (ENVI 1206 or CHEM 1210) and ENVI 2305

ENVI 2900 CR-3
Research Project
Students will engage in an intensive study of a selected topic in environmental protection technology. They will select a research topic, collect and interpret data, write a report on the results of the project, and present their results.

Prerequisites: (ENVI 1106 or CHEM 1110) and ENVI 2315 and MATH 1115

ENVI 3112 CR-3
Environment and Society
Students will analyze environmental issues within their social contexts. They will examine the origins of public perception of environmental issues, including the role of the media, activists, whistle-blowers, and the artistic community. Students will debate the respective importance of science and public perception in influencing government policy in selected case studies

Prerequisites: 60 credits of 1100-level or higher courses

ENVI 3212 CR-3
The Urban Environment
Students will analyze environmental issues within the contexts of community projects. They will conduct a local project, from initial fact-finding and community liaison to formal proposal, and will quantify its potential impacts using local case studies as a guide.

Prerequisites: 60 credits of 1100-level or higher courses