BACHELOR OF SCIENCE [BSc] GRADUATION CHECKLIST

* Environmental Science Major
  * Environmental Earth Systems Concentration

**Name:** ________________________  **Student #:** ______________

**Required Units**

*To graduate from the Environmental Science Program (Major)*

- □ approval in the Environmental Earth Systems Concentration (see back)
- □ at least 120 units
- □ at least 44 upper division units (within the 120 units)

Residency Requirements and Transfer Units: The University’s residency requirement stipulates that, in most cases, total transfer and course challenge units may not exceed 60 units, and may not include more than 15 units as upper division work.

**WQB Requirements**

* 6 units of Writing (“W”) including at least 3 units taken at SFU
  - 3 units of W □ ________
  - 3 units of 300- or 400-level W within major □ ________
  - 6 units of Quantitative “Q” □ ________ □ ________
  - 18 units of Designated Breadth “B”
    - 6 units of B-Soc (Social Science) □ ________ □ ________
    - 6 units of B-Hum (Humanities) □ ________ □ ________
    - 6 units of B-Sci (Science) □ ________ □ ________
  - 6 units of Undesignated Breadth □ ________ □ ________

Notes: A minimum grade of C- is required to earn WQB unit.
A single course can count for W, Q, and B unit (however, only one B where two are possible).
See [http://www.sfu.ca/ugcr.html](http://www.sfu.ca/ugcr.html) for more details.
*Any required courses from this major may be used to fulfill these requirements.

**GPA Requirements**

*To graduate from the Environmental Science Program (Major)*

- □ CGPA must be 2.00 or higher and UDCGPA must be 2.00 or higher

**Advising**

Contact your academic advisor, **Sandy Goettler** at envadv@sfu.ca or 778-782-9396 or in TASC2 8800 during drop-in advising hours as posted on [www.fenv.sfu.ca/advising](http://www.fenv.sfu.ca/advising).

Each student is responsible for ensuring that his or her academic choices meet the requirements for graduation. All requirements are outlined in the SFU Calendar. Advisors are available to provide guidance. However, the student has ultimate responsibility for compliance with and completion of the program and degree requirements and for observing regulations and deadlines.
Course requirements for the Environmental Science Major

* Environmental Earth Systems Concentration

** Lower Division Requirements

Students complete all of
- BISC 101-4-General Biology (B-Sci)
- BISC 102-4-General Biology (B-Sci)
- CHEM 121-4-General Chemistry and Laboratory I (Q, B-Sci)
- CHEM 122-2-General Chemistry II [Q]
- EASC 101-3-Dynamic Earth (B-Sci)
- EVSC 100-3-Introduction to Environmental Science (B-Sci)
- EVSC 205-3-Methods in Environmental Science
- GEOG 111-3-Earth Systems (B-Sci)
- And one of
  - GEOG 100-3-Society, Space, Environment: Introducing Human Geography (B-Soc)
  - REM 100-3-Global Change (B-Soc)
and two of
- GEOG 213-3-Introduction to Geomorphology (Q, B-Sci)
- GEOG 214-3-Weather and Climate [Q]
- GEOG 215-3-Biogeography
- And one of
  - GEOG 253-3-Introduction to Remote Sensing (Q, B-Sci)
  - GEOG 255-3-Geographical Information Science I (Q)
And one of
- MATH 150-4-Calculus I With Review [Q]
- MATH 151-3-Calculus I (Q)
- MATH 154-3-Calculus I for the Biological Sciences [Q]
- And one of
  - MATH 152-3-Calculus II (Q)
  - MATH 155-3-Calculus II for the Biological Sciences [Q]
- And one of
  - PHYS 101-3-Physics for the Life Sciences I (Q, B-Sci)
  - PHYS 120-3-Mechanics and Modern Physics (Q, B-Sci)
- And one of
  - PHYS 102-3-Physics for the Life Sciences II (Q, B-Sci)
  - PHYS 121-3-Optics, Electricity and Magnetism (Q, B-Sci)
- And one of
  - STAT 201-3-Statistics for the Life Sciences [Q]
  - STAT 270-3-Introduction to Probability and Statistics [Q]

** Upper Division Requirements

Students complete all of
- EVSC 399-1-Environmental Science Seminar I
- EVSC 499-1-Environmental Science Seminar II
and two of
- ENV 319-3-Environmental Law *
- ENV 320W-3-Ethics and the Environment [W]*
- REM 321-4-Ecological Economics*
- And one of **
- CMNS 347-4-Communication in Conflict and Intervention*
- ENV 319-3-Environmental Law*
- ENV 320W-3-Ethics and the Environment [W]*
- FNST 301-3-Issues in Applied First Nations Studies Research
- FNST 332-3-Ethnobotany of British Columbia First Nations (B-Sci)
- FNST 443W-4-Aboriginal Peoples, History and the Law [W]
- GEOG 322-4-World Resources
- GEOG 325-4-Geographies of Consumption
- GEOG 363-4-Urban Planning and Policy
- GEOG 381-4-Political Geography
- GEOG 389W-4-Nature and Society [W]
- REM 321-4-Ecological Economics*
- REM 356-3-Institutional Arrangements for Sustainable Environmental Management
- SA 326-4-Ecology and Social Thought [S]
- SA 371-4-The Environment and Society [SA]

** Note: occasionally 300 or 400 division Special Topics courses may be offered that can fulfill this requirement; check the EVSC website for information: http://www.sfu.ca/evsc

and six of, with at least two from the 400-division
- BISC 414-3-Limnology
- EASC 209W-3-Environmental Geoscience [W]**
- EASC 304-3-Hydrogeology [Q]
- EASC 314-3-Principles of Glaciology [Q]
- GEOG 310-4-Physical Geography Field Course
- GEOG 311-4-Hydrology [Q]
- GEOG 313-4-River Geomorphology [Q]
- GEOG 314-4-The Climate System [Q]
- GEOG 315-4-World Ecosystems
- GEOG 316-4-Global Biogeochmechanical and Water Cycles [Q]
- GEOG 317-4-Soil Science
- GEOG 411-4-Advanced Hydrology [Q]
- GEOG 412W-4-Glacial Processes and Environments (W)
- GEOG 413-4-Advanced River Geomorphology
- GEOG 414-4-Climate Change [Q]
- GEOG 415-4-Conservation Biogeography
- GEOG 417W-4-Advanced Soil Science (W)
- And one of
  - BISC 309-3-Conservation Biology
  - BISC 494W-3-Plant Ecology
  - BISC 434-3-Paleoecology and Palynology
- REM 311-3-Applied Ecology and Sustainable Environments (Q)
- REM 445-3-Environmental Risk Assessment
- REM 471-3-Forest Ecosystem Management
- And one of
  - EASC 305-3-Quantitative Methods for the Earth Sciences
  - GEOG 351-4-Multimedia Cartography [Q]
  - GEOG 352-4-Spatial Analysis [Q]
  - GEOG 353-4-Advanced Remote Sensing [Q]
  - GEOG 355-4-Geographical Information Science II [Q]
  - GEOG 356-4-3D Geovisualization
  - REM 412-3-Environmental Modeling [Q]
  - STAT 302-3-Analysis of Experimental and Observational Data [Q]

* Note: the following courses are listed under two requirements:
  - ENV 319-3, ENV 320W-3, REM 321-4. However, each course can only fulfill one requirement.

** Students who select this course may be required to complete additional upper division units to meet their degree and upper division "W" requirements. Please see the Environmental Science Advisor.