3.6.3 Joint Minor Programme with University of Toronto

Leveraging on the expertise of University of Toronto (U of T), renowned for its environmental sciences, this Joint Minor Programme (JMP) offers students a comprehensive curriculum that broadens and deepens the education they receive in NUS. Unlike other short overseas studying stints, the JMP integrates the overseas study period into the student’s degree programme, allowing grades as well as credits to be transferred from U of T to NUS. The duration of the overseas studies at U of T is one semester, on an exchange basis, where NUS students continue to pay only NUS tuition fees. This first international JMP offered by NUS FoS was launched in AY2008/09, offering two minors to NUS students: Environmental Biology and Environmental Chemistry.

Joint Minor Programme in Environmental Biology

Host Departments: Department of Ecology & Evolutionary Biology (UofT) and the Department of Biological Sciences (NUS).

To be awarded the joint minor in Environmental Biology, a student is currently required to take and pass the modules as prescribed:

- LSM2252 Biodiversity
- LSM2251 Ecology and Environment
- LSM1105 Evolutionary Biology

and any four of the following U of T courses:
- EEB324H1 Environmental Biology: Structure and Function of Ecosystems
- EEB319H1 Population Ecology
- EEB321H1 Community Ecology
- EEB322H1 Behaviour and Behavioural Ecology
- EEB323H1 Evolutionary Genetics
- EEB324H1 Evolutionary Ecology
- EEB328H1 Physiological Ecology
- EEB330H1 Systematic Botany
- EEB331H1 Introduction to the Fungi
- EEB362H1 Macroevolution
- EEB365H1 Topics in Applied Conservation Biology
- EEB375H1 Organisms and Their Environment
- EEB380H1 Diversity of Insects
- EEB382H1 Diversity of Fishes
- EEB386H1 Diversity of Birds
- EEB388H1 Diversity of Mammals
- EEB403H0/1 Tropical Field Biology
- EEB405H0/1 Temperate Field Biology
- EEB407H0/1 Alpine Ecosystems
- EEB410H0/1 Lake Ecosystem Dynamics

Students who officially participate in this JMP would transfer both credits and grades for the UofT EEB
courses chosen and completed for the programme, and would not be allowed to declare a specialisation in Environmental Biology.

Life Sciences Majors who have declared a specialisation in Environmental Biology and Faculty of Science students in the Bachelor of Environmental Studies programme will be considered as regular SEP students, and would transfer credits only for all the UofT courses completed.

**Joint Minor in Environmental Chemistry**

Host Departments: Department of Chemistry (U of T), the School of the Environment (U of T), and Department of Chemistry (NUS).

To be awarded the joint minor in Environmental Chemistry, a student is required to read and pass the modules as prescribed:
- CM2121 Organic Chemistry
- ENV237H/ENV238H Physics of the Changing Environment (U of T Module)
- CHM317H Introduction to Instrumental Methods of Analysis (U of T Module) or CM3242 Instrumental Analysis II
- CM3261 Environmental Chemistry
- CHM210H Chemistry of Environmental Change (U of T module) or CHM310H Environmental Chemistry (U of T Module)
- CHM415H Topics in Atmospheric Chemistry (U of T Module)

For NUS students whose major includes the CM modules taken for this minor, not more than 8 MCs are allowed to be double-counted.

**Eligibility**

The joint minors in Environmental Biology and Environmental Chemistry are open to all NUS students, including students whose majors are Life Sciences and/or Chemistry respectively. To apply for this Joint Minor Programme, students must

1. Have a CAP of at least 3.00;
2. Have read and passed the following modules:

**For Environmental Biology**
- H2 Biology or equivalent or LSM1301 General Biology
- H2 Mathematics or equivalent or any first year NUS Mathematics module
- Any 4 MCs of NUS Statistics or Probability module
- LSM1102 Molecular Genetics
- LSM1104 General Physiology
- LSM2102 Molecular Biology

**For Environmental Chemistry**
- H2 Physics or equivalent or NUS Physics Bridging module
- H2 Mathematics or equivalent or any first year NUS Mathematics module
- CM1111 Inorganic Chemistry 1
- CM1121 Organic Chemistry 1
- CM1131 Physical Chemistry 1
- CM2142 Analytical Chemistry

For more information, please visit