

**Module Code: ESU22002**

**Module Name: Team Design – Sustainability & Nature Based Solutions**

**ECTS: 5 ECTS**

**Semester Taught: Semester 1**

**Module Coordinators:**

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**Module Content:**

Team Design in Sustainability & Nature-based Solutions is an E3 module that brings together expertise from the Schools of Engineering and Natural Sciences with Tangent – Trinity’s Ideas Workspace. The module aims to deepen students understanding that Earth’s resources are finite and that future development must be sustainable. Students will work in small teams co-supervised by professors in Engineering and Natural Sciences to develop technological, engineered and/or nature-based solutions to specific local environmental problems in a classroom based setting. For example, student will be challenged to quantify the impacts of passive hydrological solutions (wetlands etc.) with respect to flood attenuation or to do a life cycle analysis on different household sustainable energy retrofits. Project topics will be strongly aligned with seven of the UN Sustainable Development Goals. These include Goal 6. Clean Water and Sanitation, Goal 7. Affordable and Clean Energy, Goal 11. Sustainable Cities and Consumption, Goal 12. Responsible Consumption and Production, Goal 13. Climate Action, Goal 14. Life Below Water and Goal 15. Life on Land.

**Learning Outcomes:**

LO1. Demonstrate a full comprehension of nature and natural systems as engineering technologies

LO2. Demonstrate a rounded knowledge of the human-nature interface and the concept of co-benefits

LO3. Competently discuss the interactions between the Sustainable Development Goals and the realities of designing, planning, building and managing urban and rural landscapes;

LO4. Demonstrate an ability to communicate effectively with peers and to a non-academic audience

LO5. Develop and apply critical analysis skills.

LO6. Develop and apply transferable skills

**Recommended Reading:**

Peer reviewed literature on student chosen topic

Blackboard resources

**Exam Details:** 100% Continuous Assessment

**Contact Hours:**

<b>Contact hours: 25</b>
<b>Independent Study (preparation for course and review of materials): 45</b>
<b>Independent Study (preparation for assessment, incl. completion of assessment): 45</b>