**Curriculum map for 2023 freshmen** 

| Grade                               | Fresh   | nmen   | Sophomore  |   | Junior   |   | Senior          |                 |
|-------------------------------------|---|--|--|---|--|---|-----------------|-----------------|
|                                     | 2023 fall   | 2024 spring  | 2024 fall  | 2025 spring   | 2025 fall  | 2026 spring   | 2026 fall       | 2027 spring     |
| Semester                            | (112-I)   | (112-II)   | (113-I)  | (113-II)  | (114-I)  | (114-II)  | (115-I)         | (115-II)        |
| Compulsory<br>courses<br>51 credits | Environmental science/環境科學(2) Communication and understanding of environmental issues/環境議題-簡報與溝通技巧(2) Natural science I: Biology/自然科學 I: 生物學(2) Sustainable development for the environment/環境承續發展(3) Experiential learning I/校園永續體驗學習 I(3) Seminars on sustainable development I/永續發展專題討論 I(2) | Natural science II: Chemistry/<br>自然科學 II: 化學 (2) Introduction to social science/<br>社會科學概論(2) Introduction to computer/<br>計算機概論(2) Experiential learning II/<br>校園永續體驗學習 II(3) | Scientific writing/<br>科學寫作(2)<br>Seminars on<br>sustainable<br>development II/<br>永續發展專題討<br>論 II(2)<br>Environmental<br>education/<br>環境教育(2)<br>Environmental<br>ethics/<br>環境倫理(2) | Exploring scientific issues: methods and practices/ 科學議題探討(3) Environmental education material and methods/ 環教材教法(2) Natural science III: Physics/ 自然科學III: 物理(2) Urban planning and sustainable development/都市計畫與永續發展(2) Urban planning and sustainable development practice/都市計畫與永續發展(2) Urban planning and sustainable development practice/都市計畫與永續發展實務(2) Green Economy/綠色經濟(2) | Seminars on sustainable development III/永續發展專題討論 III(2) Project Design and Evaluation/方案設計與評估(2) | Special topics /<br>專題實作(3)                         |                 |                 |
|                                     | total credits 14  | total credits 9  | total credits 8  | total credits 13  | total credits 4  | total credits 3                                     | total credits 0 | total credits 0 |
| Watershed<br>Management             |   | Introduction to<br>watershed<br>management/<br>流域環境管理概<br>論(2)   | Environment<br>sampling and<br>analysis/<br>環境採樣與分析<br>(2)   | Water and<br>wastewater<br>treatment and<br>reuse/<br>水與廢水處理及<br>再利用(2)   | Environmental<br>toxicology/<br>環境毒物學(2  | Environmental<br>Impact<br>Assessment/<br>環境影響評估(2) |                 |                 |

| Grade                                  | Freshmen        |   | Sophomore  |  | Junior   |  | Senior          |  |
|--|-----------------|---|--|--|--|--|-----------------|--|
|  | 2023 fall       | 2024 spring   | 2024 fall  | 2025 spring  | 2025 fall  | 2026 spring  | 2026 fall       | 2027 spring  |
| Semester                               | (112-I)         | (112-II)  | (113-I)  | (113-II)   | (114-I)  | (114-II)   | (115-I)         | (115-II)   |
|  |                 | Watershed management practice/ 流域環境管理實務(2) Introduction to geoscience and earth history/ 地球科學概論(2) Applied ecology/應用生態學(2) Applied ecology practice/應用生態學實務(2) | Site planning and design/<br>場域規劃與設計<br>(2)<br>Site planning and design practice/<br>場域規劃與設計實務(2)<br>Conservation biology/<br>保育生物學(2)<br>Conservation biology practice/<br>保育生物學實務  | Industrial pollution/工業污染(2)   |  | Recycling and waste management/ 資源回收與廢棄物管理(2) Environmental remediation/ 環境污染整治(2) |                 |  |
|  | total credits 0 | total credits 10  | total credits 10   | total credits 4  | total credits 2  | total credits 6  | total credits 0 | total credits 0  |
| Climate<br>Change<br>and<br>Adaptation |                 | Introduction to watershed management/流域環境管理概論(2) Watershed management practice/流域環境管理實務(2)  | Environment sampling and analysis/環境採樣與分析(2) Introduction to Metorology and climatology/天氣與氣候學概論(2) Clomatological practices 氣候學實務(2) Meteorological data analysism, forecasting and | Mitigation and adaptation to climate change/<br>氣候變遷減緩及<br>調適 (2)<br>Mitigation and adaptation to climate change practice /<br>氣候變遷減緩及<br>調適實務(2)<br>Coastal areas, hazards, and | Climate change: global challenges and local responses/ 氣候變遷:全球挑戰與在地因應(2) Climate change and public health/ 氣候變遷及公共健康(2) Climate change and health: From theory to practice/ 氣候變遷到實務(2) | Geographic<br>information<br>system (GIS)/<br>地理資訊系統(2)                            |                 | Climate change resilience in practice/<br>氣候變遷脆弱度<br>調查實務(2) |

| Grade                    | Freshmen             |   | Sophomore  |   | Junior   |   | Senior   |   |
|--------------------------|----------------------|---|--|---|--|---|--|---|
| Semester                 | 2023 fall<br>(112-I) | 2024 spring<br>(112-II)   | 2024 fall<br>(113-I)   | 2025 spring<br>(113-II)   | 2025 fall<br>(114-I)                                   | 2026 spring<br>(114-II)   | 2026 fall<br>(115-I)                               | 2027 spring<br>(115-II)   |
| Semester                 |                      |   | 氣候資料分析、<br>預測及實務(2)  | Affordable and Clean Energy/<br>可負擔之清潔能源(2)   |  |   |  |   |
|                          | total credits 0      | total credits 4   | total credits 8  | total credits 10  | total credits 6  | total credits 2   | total credits 0                                    | total credits 2   |
| Community<br>Development |                      | cooperation construction/   | Site planning and<br>design/<br>場域規劃與設計<br>(2)                             | Sociology of food<br>and agriculture/<br>食農社會學(2)   | Introduction to<br>Community<br>Planning/<br>社區規劃導論(2) | Community<br>Planning in<br>practice/社區規劃<br>實務(2)                    |  | Climate change<br>resilience in<br>practice/<br>氣候變遷脆弱度<br>調查實務(2)  |
|                          |                      | landscape and<br>cooperation<br>construction<br>practice/<br>永續地景與協力<br>營造實務(2) | Site planning and design practice/<br>場域規劃與設計實務(2)                         | Sociology of food<br>and agriculture<br>practice/<br>食農社會學實務<br>(2)   |  | Recycling and<br>waste<br>management/<br>資源回收與廢棄<br>物管理(2)            |  | Ecotourism:<br>challenges and<br>opportunities<br>生態旅遊之挑戰<br>與機會(2) |
|                          |                      | Globalization and<br>humanistic care/<br>全球化與人文關<br>懷(2)                        | Becoming a changemaker: Introduction to social innovation/成為創變客:談社會革新概論(2) | Indigenous<br>economic<br>development<br>strategy/<br>原住民經濟發展<br>策略(2)<br>Coastal areas,<br>hazards, and<br>society/<br>海岸地區之脆弱<br>與社會議題(2) |  | Human rights and<br>sustainable<br>development/<br>人權與永續發展<br>(2)     |  |   |
|                          | total credits 0      | total credits 6   | total credits 6  | total credits 8   | total credits 2  | total credits 6   | total credits 0                                    | total credits 4   |
|                          |                      | Environmental Law<br>and Sustainability/<br>環境法與可持續<br>性(2)                     | •  |   | Sustainability<br>marketing/<br>市場永續性(2)               | Cultural and<br>natural heritage<br>conservation/<br>文化與自然資產<br>保存(2) | Roots & Shoots<br>Internship I/<br>根與芽行動實習<br>I(9) | Green Building<br>Principles and<br>Practices/<br>綠建築原則與實<br>務(2)   |

| Grade                 | Freshmen   |   | Sophomore                            |             | Junior   |  | Senior    |             |  |  |
|-----------------------|--|---|--------------------------------------|-------------|--|--|-----------|-------------|--|--|
|                       | 2023 fall  | 2024 spring                                     | 2024 fall                            | 2025 spring | 2025 fall  | 2026 spring  | 2026 fall | 2027 spring |  |  |
| Semester              | (112-I)  | (112-II)  | (113-I)                              | (113-II)    | (114-I)  | (114-II)   | (115-I)   | (115-II)    |  |  |
|                       |  | Biostatistics/<br>生物統計學(2)                      | Computer aid<br>design/<br>電腦輔助設計(2) |             | Applied limnology<br>& wetland<br>management/<br>應用湖泊學與濕<br>地管理(2) | Plants and<br>Landscape/<br>植栽與地景(2)                                 |           |             |  |  |
|                       |  | Essential<br>mathematical<br>skills/<br>基礎數學(2) |                                      |             |  | Environmental<br>Security and<br>Sustaining Peace/<br>環境安全與和平<br>(2) |           |             |  |  |
| IPSD Elective courses |  |   |                                      |             |  | Behavior-Based<br>Safety and Life/<br>行為安全與生活<br>(2)                 |           |             |  |  |
|                       | Practice and Education for the Environment I / 環境教育國際實驗微學分 I (1)   |   |                                      |             |  |  |           |             |  |  |
|                       | Practice and Education for the Environment II / 環境教育國際實驗微學分 II (1) |   |                                      |             |  |  |           |             |  |  |
|                       | Roots & Shoots Deep Bowl credit / 根與芽深碗學分 (2)                      |   |                                      |             |  |  |           |             |  |  |
|                       | Basic Roots & Shoots Deep Bowl credit / 根與芽初階深碗課程 (1)              |   |                                      |             |  |  |           |             |  |  |
|                       | Interdisciplinary Microcredit Course I / 跨領域微學分 I (1)              |   |                                      |             |  |  |           |             |  |  |
|                       | Interdisciplinary Microcredit Course II / 跨領域微學分 II (1)            |   |                                      |             |  |  |           |             |  |  |
|                       | Interdisciplinary Microcredit Course III / 跨領域微學分 III (1)          |   |                                      |             |  |  |           |             |  |  |

Compulsory credits 51

IPSD elective credits 62-75

Non-IPSD credits 2-15 (A minimum of 2 credits and a maximum of 15 credits are required for electives from other departments)

Graduate credits 128