

Interdisciplinary Minor in Sustainability Solutions



A Program for A Sustainable Future



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☑ This minor complements students' primary major.





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Why study sustainability?



Global urgency

Climate change, biodiversity loss and resource depletion demand graduates who understand both the science and the solutions — across every discipline.



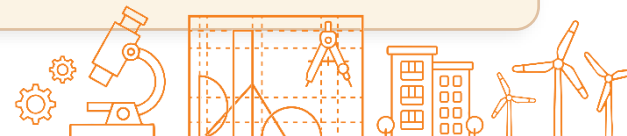
Career advantage

Sustainability expertise is now a baseline expectation across engineering, business, policy and design. This minor signals real interdisciplinary depth.



Equitable solutions

The best sustainability work combines technical rigour with social equity. This programme teaches students to design solutions that leave no one behind.

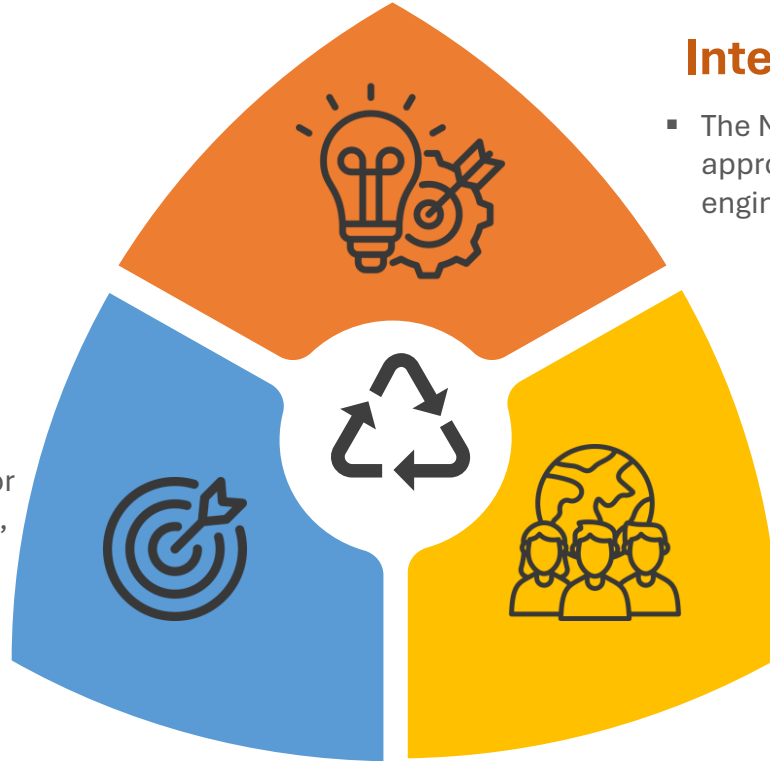




Objectives and Key Features

Objectives

- Provide students with broad exposure to the principles & practices of sustainability
- Equip them with the ability to develop innovative solutions for issues such as climate change, sustainable energy, urban resilience



Interdisciplinary approach

- The Minor is distinctive in its interdisciplinary approach, integrating perspectives from science, engineering, business, social sciences, & policy.

Broad applicability

- It enables students from diverse academic backgrounds to apply sustainability principles within their chosen fields while preparing them to contribute to a more sustainable & resilient future.



Minor in Sustainability Solutions

20 units · 2 core courses + 3 electives · Undergraduate

 Broad exposure to sustainability principles · Develop innovative and equitable solutions
 across climate change · sustainable energy · urban resilience · circular economy

Core courses — 8 units (choose 2)

GEC1040

 A Culture of Sustainability
 4 units · Core #1

Core #2 — choose one

 CDE2501 · Sustainable Systems
 GESS1014 · Built Environment
 GEN2004 · Green Communities

★ Core courses can be double-counted with General Education requirements

Elective courses — 12 units (choose 3 across 4 pillars)

Pillar 1

Decarbonisation

 CE2003
 Energy, Env & Econ
 CE4001
 Industrial Symbiosis
 CE4002
 Carbon Management
 CN4248
 Sustainable Process
 CN4252
 H2 & Low Carbon Tech
 IE4246
 Decarbonisation Cases
 6 courses
 incl. 2 with pre-req

Pillar 2

Green Energy

 PF3210
 Total Bldg Performance
 PF3504
 Sustainable Energy Mgmt
 ESE4406
 Energy & Climate
 EE4438
 Solar Cells & Modules
 EE4503
 Power Electronics
 EE4511 · MLE4210
 ME4226 · more
 8 courses
 most with pre-req

Pillar 3

Urban Systems

 ID2122
 Ecodesign
 AR3223
 Intro to Urbanism
 AR3722
 Sustainable Env System
 CDE3504
 Smart Cities
 CDE3505
 Planning Cities
 PF4502 · ESP4401
 Green Development
 7 courses
 incl. 1 with pre-req

Pillar 4

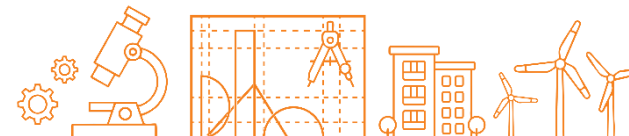
Circular Systems

 CE3001
 Water-Food-Energy Nexus
 ESE3101
 Resource Mgmt & CE
 ESE4408
 Env Impact Assessment
 EE4513
 Electric Vehicles
 IE4248
 Energy & Green Economy
 MLE4221
 Materials for Fuels
 6 courses
 incl. 3 with pre-req

 Elective strategy: pick ≥2 from one pillar for depth, or spread across pillars for breadth
 Pre-req courses require instructor approval · Click any pillar for course details


Minor in Sustainability Solutions

Curriculum Structure





Career Pathways

A Minor in “Sustainability Solutions complements engineering majors by equipping students with systems thinking, sustainability assessment, environmental policy awareness, life-cycle analysis, resource efficiency, & climate resilience perspectives. With these skillsets, graduates are well-positioned for both traditional & emerging sustainability-focused careers.



Graduates can pursue careers in:

- ✓ Sustainable infrastructure design & development
- ✓ Green buildings & sustainable construction
- ✓ Urban planning & smart cities
- ✓ ESG & sustainability consulting
- ✓ Climate change mitigation & adaptation
- ✓ Carbon management & decarbonization
- ✓ Life-cycle assessment & circular economy
- ✓ Renewable energy & energy storage
- ✓ Sustainable operations & supply chains
- ✓ Corporate sustainability management
- ✓ Net-zero & decarbonization strategies



Thank you.



Further details

<https://cde.nus.edu.sg/cee/undergraduate/minor-in-sustainability-solutions/>



For queries on the Minor in Sustainability Solutions, please contact Prof. Rajasekhar Bala,
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