

(For all students in the Program)

## Undergraduate Minor Program in Sustainable Energy Engineering

The Minor Program in Sustainable Energy Engineering is designed mainly for engineering students, but also open to students from other Schools with knowledge in foundation Calculus (e.g. MATH 1012, MATH 1013, MATH 1020, or MATH 1023. Students who have not taken one of these courses but obtained grade A- or above in MATH 1003 may also be considered). Any undergraduate students with an overall CGA of 2.5 or above may enroll in this Minor Program. Students must declare their intention to enroll in the Minor Program no earlier than the first regular term of their second year of study but no later than the last day of the add/drop period in the first regular term of their final year of study. Students who wish to withdraw from the Minor Program should apply before the last day of the add/drop period in the first regular term of their final year of study.

### Minor Requirements

To graduate with a minor in Sustainable Energy Engineering, students must have enrolled in the Minor Program and complete a minimum total of 18 credits and all of its requirements, as well as the requirements of the major program of study.

For credit transfer, students can transfer a maximum total of 6 credits to the Minor Program

Out of the total credits required by the minor program, at least 9 credits should be single-counted within the minor and are not used to fulfill any other requirements for graduation except the 120-credit degree requirement.

Students may use no more than 6 credits earned from courses offered in self-paced online delivery mode to satisfy the graduation requirements of a degree program. This 6-credit limit does not apply to credits obtained through the credit transfer procedures of the University.

### Required Course(s)

			Credit(s) attained
ELEC/MECH		Note: ELEC 3450 <u>OR</u> MECH 1902	3
ELEC	3450	Introduction to Smart Electric Power Systems	3
MECH	1902	Energy Systems in a Sustainable World	3
CENG/MECH/ PHYS		Note: CENG 2210 <u>OR</u> MECH 2310 <u>OR</u> PHYS 4050	3
CENG	2210	Chemical and Biological Engineering Thermodynamics	3
MECH	2310	Thermodynamics	3
PHYS	4050	Thermodynamics and Statistical Physics	3
SOSC/SUST		Note: SOSC 1170 <u>OR</u> SUST 1000	
SOSC	1170**	Environmental and Energy Governance in China	3
SUST	1000	Introduction to Sustainability	3

<b>Elective(s)</b>	<b>Minimum credit(s) required</b>
SENG/SSCI/ IPO	9
Sustainable Energy Engineering Electives (3 courses from the specified elective list, out of which at least 6 credits must be at 3000-level or above. Course(s) taken as required course(s) of the program may not be counted towards this elective requirement.)	
<b>Energy and Environmental Sustainability</b>	
CIVL 1170	3
MECH 1902	3
ENVR 3110	3
ENVR 3220	3
PHYS 1003	3
SUST 1000	3
<b>Energy Conversion</b>	
ELEC 3450	3
ELEC 4430	3
CENG 4140	3
MECH 3300	3
MECH 3630	3
<b>Energy Efficiency</b>	
MECH 1905	3
ENVR 3003	3
<b>Sustainable Energy Generation</b>	
ELEC 4530	3
CHEM 4640	3

**\*\*Remarks on course(s):**

- SOSC 1170: The course was last offered in 2016-17 and was deleted subsequently.