Renewal Energy Minor – Catalog description (https://www.esf.edu/catalog/current/minors.php)

Renewable Energy Minor
Coordinator: Dr. Tim Volk

The development of sustainable sources of energy has become a critical national and global issue due to concerns about the quality and quantity of the different potential resources, energy security, and potential impacts of each on the environment and human health. It is essential that our society and energy professionals ~~gain an~~ understand the~~ing of~~ production and conversion of different forms of energy, their current and future supplies, the markets and policy mechanisms that regulate their supply, and the associated impacts on the environment for each fuel. In the past both traditional and renewable energy sources have been studied one resource at a time and usually from the perspective of a single discipline. This minor ~~will~~ provide~~s~~ students an opportunity to examine different sources of traditional and renewable energy simultaneously in the context of our total energy use using a systems perspective. Students are ~~will be~~ exposed to views from a variety of disciplines which allows them to consider ~~as they wrestle with~~ a wide array of issues related to current and future energy supply and use.

The Renewable Energy minor is available to all ESF and Syracuse University undergraduate students (except students who are in the Sustainable Energy Management Major and Environmental Science's ~~or the~~ Renewable Energy option ~~in Environmental Science~~) who have a GPA of 2.70 or better by the end of their sophomore year. The minor ~~will~~ require~~s~~ a minimum of 15 credits, 12 of which are required courses. The remaining 3 credits can be selected from a list of suggested courses.

~~Fifteen credit hours of courses are required.~~
~~Specified courses: SRE 325 Energy Systems (3); SRE 335 Renewable Energy SRE 337 Energy Resources Assessment (3); SRE 479 Life Cycle Assessment (3); Either CME 305 Sustainable Energy Systems for Buildings (3) or SRE 441 Biomass Energy (3) and a minimum of three credits from the following list of suggested courses (other courses may be used to meet this requirement with approval of minor coordinator): CME 305 Sustainable Energy Systems for Buildings (3) OR SRE 441 Biomass Energy; PSE 370 Principles of Mass and Energy Balance (3).; PSE 361 Engineering Thermodynamics (3); ERE 351 Basic Engineering Thermodynamics (2); ERE 380 Energy Systems Engineering;ERE 519 Green Entrepreneurship (3); EST 427 Environmental and Energy Auditing (3)FCH 360 Physical Chemistry I (3); SRE 416 Sustainable Energy Policy (3); SRE 419 Policy Assessment Methodologies (3); SRE 422 Energy Markets and Regulation (3); SRE 454 Renewable Sustainable Energy Finance and Analysis (3); SRE 481 Advanced Life Cycle Assessment~~

Required Courses

Course Number	Course	Codes *	Credits
SRE 325	Energy Systems		3
~~SRE 335~~	~~Renewable Energy~~	~~-~~	~~3~~
SRE 337	Energy Resources Assessment		3
SRE 479	Life Cycle Assessment		3
CME 305 **OR** SRE 441	Sustainable Energy Sys/Bldgs Biomass Energy		3 3

Suggested Courses

(other courses may be used to meet this requirement with approval of minor coordinator)

Course Number	Course	Codes *	Credits
CME 305 OR SRE 441	Sustainable Energy Sys/Bldgs Biomass Energy		3 3
~~PSE 361~~ECH 202	Principles of Mass and Energy Balance		3
~~PSE 370~~ECH 212	Engineering Thermodynamics		3
ERE 380	Energy Systems Engineering		3
EST 427	Environmental and Energy Auditing		3
FCH 360	Physical Chemistry I		3
SRE 416	Sustainable Energy Policy		3
SRE 422	Energy Markets and Regulation		3
SRE 454	Sustainble Energy Fin&Analysis		3
SRE 481	Advanced Life Cycle Assessment		3
~~SRE 416~~	~~Sustainable Energy Policy~~		~~3~~
~~SRE 419~~	~~Energy Pol Assessmnt Methodlgs~~		~~3~~
~~ERE 351~~	~~Basic Engr Thermodynamics~~		~~3~~
~~ERE 380~~	~~Energy Systems Engineering~~		~~3~~
~~ERE 519~~	~~Green Entrepreneurship~~		~~3~~
~~FCH 360~~	~~Physical Chemistry I~~		~~3~~

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