

Sustainable Engineering Curriculum Overview

EGR 7110 Fundamentals of Sustainable Engineering
EGR 7113 Sustainable Materials and Design

Core Courses

EGR 7111 Life Cycle/Impact Assessment
EGR 7112 Econ/Social Equity Integrators

Alternate and Renewable Energy

ECE 7000 - Renewable Energy Policy (SU)

ECE-7580 – Intro to Power Electronics (F)

ECE 7800 - Renewable Energy Systems (SP)

ECE-7810-Power System Modeling (F)

EGR 7850 - Electrochemical Power Sources (SP)

EGR 8111 – Advanced Life Cycle Analysis (F)

EGR 8112 – Sustainable Supply Chain (SP)

CHE 7651-Survey of Biomass Conversion

CHE 8651-Biomass Conversion

ECE 7545-Microelectronic Fabrication

ECE 7805- Electric Machinery

ECE-8480-Intro to Cloud Computing

ECE 8525 – Sensors

ECE 8580-Power Electronics

ECE 8815-Smart Energy Systems

ECE 8820 - Power System Dynamics

EGR 7800 - Solar Thermal Energy Conversion

EGR 8301 - Control Systems Engineering

ME 7060-Multiphysics Modeling & Simulation (no data)

Information, Communication, and Energy Technologies for Development (Sp even starting 2018)

Sustainable Materials

ME 7040 – Intro to Finite Element Analysis (SP, odd)

ME 7250 Nano/Microscale Material Behavior (SP, even)

ME 7501-Reinforced Composite Materials (SP, odd)

CHE 7570 – Polymer Science & Engineering (SU)

CEE 8439 – CE Materials (F,odd)

ECE 7505 – Electrical Properties of Materials (F)

ME 7060 – Multiphysics Modeling and Simulation

ME 8206 – Experimental Stress Analysis

ME 8350 – Applied Fracture Mechanics

CHE 7511 Sustainable Industrial Chem

EGR 7200 – Biomimicry

EGR 8111 – Advanced Life Cycle Analysis

EGR 8112 - Sustainable Supply Chain

CEE 7520 – Environmental Compliance Systems

CHE 7651 – Survey of Biomass Conversion

CHE 8531 – Nano, Catalysis and Energy

CHE 8586-Biomaterials and Drug Delivery

CEE 7011-Hazardous Waste Management

CEE 7401 – Wood & Masonry Structures

ME 7201-Materials Characterization (NOT a DL course)

ME 7502-Fiber Composite Structures

ME 8302-Mech & Therm Behav of Solids

Sustainable Infrastructure & Built Environment

CEE 8601 Sustainable Infrastructure (Sp)

CEE 8303 - Urban Planning (F, even)

EGR 7515 - Building Information Modeling (F)

EGR 8113- Sustainable Building and Operations (SP)

EGR 8111 – Advanced Life Cycle Analysis (F)

EGR 8112 – Sustainable Supply Chain (SP)

EGR 7200 – Biomimicry

CEE 7300 - Railway Engineering

CEE 8201-Urban Transportation EGR

CEE 8207 - Des.of Sustainable Transportation Systems

CEE 8208 - Sustainable Pavement Systems

CEE 8439-CE Materials

CEE 8440 - Advanced Cementitious Materials

ME 7040-Intro to Finite Element Analysis (SP, odd)

ME 8200 - Elasticity and Stress Analysis

ME 8206 – Experimental Stress Analysis

ME 8350 – Applied Fracture Mechanics

Environmental Sustainability

CHE 7561 - Air Pollution Control (SU, SP)

CHE 8651-Biomass Conversion (F)

CEE 7502-Fundamentals Env Eng Processes (SU)

CEE 7513 - Fate-Transporting Contaminants (SP, odd)

CEE 8707 - Physical/Chemical Treatment Process (Sp, even)

EGR 8111 – Advanced Life Cycle Analysis (F)

EGR 8112 – Sustainable Supply Chain (SP)

EGR 7200 – Biomimicry

CHE 7511 – Sust Indust Chem

CEE 7514-Sustainable Man Indust Pollution

CEE 7011 - Hazardous Waste Management

CEE 7520 – Environmental Compliance Systems (Fall)

CEE 8706-Industrial Waste Mgmt

CEE 8104-Geoenvironmental Engineering

CEE 8311-Environmental Geology

CEE 8708-BioTreatmnt Proc

CHE 7591 - Industrial Waste Management

CHE 7651-Survey of Biomass Conversion

Water Resources Sustainability

CEE 7010 - Lake, Stream & Wetland Ecology (SU, even)

CEE 8501 - Surface Water Hydrology (F, even)

CEE 8502-Watershed Modeling (Pre-req: CEE 8501) (SP, odd)

CEE 8503-Open Channel Hydraulics (F)

CEE 8507 - Environmental Fluids (Pre-req: CEE 8503) (SP, even)

CEE 8508 - Urban Hydrology & Storm Water Management (SU, odd)

EGR 8111 – Advanced Life Cycle Analysis

EGR 8112 – Sustainable Supply Chain

CEE 7111 - Introduction to Hydraulics & Hydrology

CEE 7211 - Water Resource Planning & Management

CEE 7502-Fundamentals Env Eng Processes

CEE 7511-Microbiology Enviro EGR

CEE 7701-Aquatic Chem Environ EGR

CEE 8103 – Geosynthetics

CEE 8104 - Geoenvironmental Engineering

CEE 8311 - Environmental Geology

CEE 8510 - Groundwater Hydrology

CEE 8512 – River Mechanics & Engineering

CEE 8708-Bio Treatment Processes

CEE 8512 - River Mechanics & Engineering

EGR 7121 - Sustainable WaSH and Environmental Engineering for Development (Sp odd)

Sustainable International Development

EGR 7120 – Introduction to Sustainable Engineering for International Development (F)

EGR 7121 - Sustainable WaSH and Enviro. Engineering for Development (Sp odd)

EGR 7122 - Sustainable Product Development for Low Resource Settings (Sp odd)

Information, Comm. & Energy Technologies for Development (Sp even starting 2018)

Infrastructure for Development & Relief (Sp even starting 2018)

Boldface are primary track course offerings which will be available as noted.