Green Building Maintenance and Mgmt (GRB)

(Interdisciplinary Studies Department)

GRB 1100—Introduction to Green Buildings
3 cr.
In this course, students study the principles, methods, and equipment associated with sustainable building systems and design. Topics include ecological design, energy efficiency, passive and renewable energy, water conservation and treatment, sustainable site selection, green building materials, indoor and outdoor environmental quality, and building assessment tools.

GRB 1200—Introduction to Renewable Energy Systems
3 cr.
In this course, students study the principles, methods, and equipment associated with renewable energy systems. Topics include solar, wind, biomass and biofuels, fuel cells, hydropower, oceanic energy, geothermal, and energy storage. Nonrenewable energy sources, climate change, and the economics and politics of energy are also discussed.

GRB 2100—Building Automation and Controls
3 cr.
In this course, students learn the basic principles of building automation and controls for energy management. Topics include control devices, signals, logic, and applications for various systems, such as electrical, lighting, HVAC, plumbing, fire protection, security, access control, voice-data-video, and elevator systems.

GRB 2200—Solar and Wind Systems
3 cr.
In this course, students learn the basic principles of photovoltaic and wind generated power, with an emphasis on how to maintain and manage these technologies, as well as the buildings with which they are associated. The key components and principles, site issues, and economic considerations of solar and wind systems are covered.
Prerequisite: GRB 1100

GRB 2300—Commercial Electrical
3 cr.
In this course, students learn about the essential components of the electrical systems of commercial buildings. Topics include reading commercial building plans and specifications, computing electrical loads, branch circuits and components, and electronic service equipment. Electrical considerations specific to renewable energy systems are also covered.