Upon successful completion of the ENSC M01 course, a student should be able to:

1. explain the concept of sustainability and apply it to systems and processes.
2. apply the laws of thermodynamics to energy production and consumption and identify basic organic and inorganic molecules, write the equation for photosynthesis, identify basic parts of atoms and molecules, and describe the creation of isotopes and ions.
3. diagram the cycling of water or elements (carbon or nitrogen cycle) through the atmosphere, lithosphere, hydrosphere, and biosphere.
4. describe water consumption, sanitation, and pollution.
5. describe the formation, qualities, and conservation of agricultural soil.
6. discuss the agricultural “green revolution” and explain how modern mechanized agriculture impacts biodiversity, air and water quality, and how pesticide and chemical fertilizer use have impacted non-target species.
7. describe the formation of coal, oil, and natural gas, and describe environmental problems associated with their extraction.
8. diagram or describe how fossil fuels are converted to electricity in a power plant.
9. describe the fission process and the benefits and environmental problems associated with nuclear power.
10. discuss various renewable and sustainable energy methods.
11. diagram a municipal landfill and discuss modern methods for regulating waste disposal.
12. discuss sources and types of air pollution including the formation of photochemical smog.
13. identify pieces of environmental legislation and describe how they have helped improve water or air quality.
14. integrate a cost benefit analysis into the discussion of implementing environmental policy.
15. list characteristics of urban sprawl and smart growth.