ENST2001 - Fundamentals of Utilities

Credits:	4 (4/0/0)
Description:	This course provides a general overview of the electric, gas and telecommunications industries. The course will cover fossil fuel and renewable energy sources for electric power generation, its history and projected needs for the future. The course also covers the natural gas utility from the ground to the consumers, its history and projected needs for the future. Also covered are the telecommunications industry and how the land phone and cell phone systems operate.
Prerequisites:	
Corequisites:	
Pre/Corequisites*:	
Competencies:	1. Describe existing gas distribution system. 2. Identify components of cost analysis and metering of end users. 3. Describe the basics of piping and pressure regulation for gas distribution. 4. Describe gas usage. 5. Identify methods of power generation and current capacity. 6. Demonstrate knowledge of power grid operation and interaction between power plants. 7. Describe power transmission and distribution systems. 8. Identify control areas and metering of the distribution system. 9. Describe the fundamentals of end use billing, power factor, peak demand, large, medium and residential users. 10. Identify basic substation components and construction. 11. Describe basic power plant operation. 12. Identify the principles of fiber, coax, and twisted pairs data transmission. 13. Identify the basics of telephone and cell phone technology. 14. Identify current and future trends in energy consumption.
MnTC goal areas:	None

**Can be taking as a Prerequisite or Corequisite.*

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