



# STARK STATE COLLEGE

## GENERAL SYLLABUS

### Course Information

**Course Name:** Power Generation & Grid Technology  
**Course Number:** EST235

### Required Materials

**Textbook(s):** Custom  
**Required Readings:** None  
**Additional Materials:** Content inside the materials folder.

### Course Outline/Calendar

The date of coverage and order of coverage may be modified based on the faculty member and events beyond the control of faculty members that interfere with class times and teaching.

Week	Chapter/Topic/Lab
1	Familiarize yourself with your classmates. Electricity Explained Assignment Quiz 1
2	Transformative Power Systems Assignment Quiz 2
3	Best Renewables for Our Area Discussion Quiz 3
4	Let's talk about Electrical Safety Discussion Hot Line Sticks Assignment Quiz 4
5	Categorize and classify types of transmission towers, conductoras and insulators used in the grid. Quiz 5
6	Identify effects of physical properties of components in power generation. Sag-Tension Assignment Quiz 6
7	Causes of failures in an underground power line. Underground Cable Repair Assignment Quiz 7

<b>Week</b>	<b>Chapter/Topic/Lab</b>
8	Discuss any course concerns or areas of improvement to content and material. Mid-Term
9	Solve for the separation distance and power requirements for electrical arrestors in a grid application. Arrestors Assignment Quiz 8
10	Discuss the nature of power generation and the fuels used to produce it. Electricity Mix Discussion Resource Exercise Assignment Quiz 9
11	Power generation mix based upon budget constraints. Purchased Power Requirements with Budget Constraint Assignment Quiz 10
12	Securing the power grid system in the USA. Quiz 11
13	Ground resistance. Ground Resistance Assignment Quiz 12
14	Storing electrical energy. WPTO Studies Assignment Quiz 13
15	Grid operations to meet customer demands Power Grid Assignment Quiz 14
16	Final Exam