

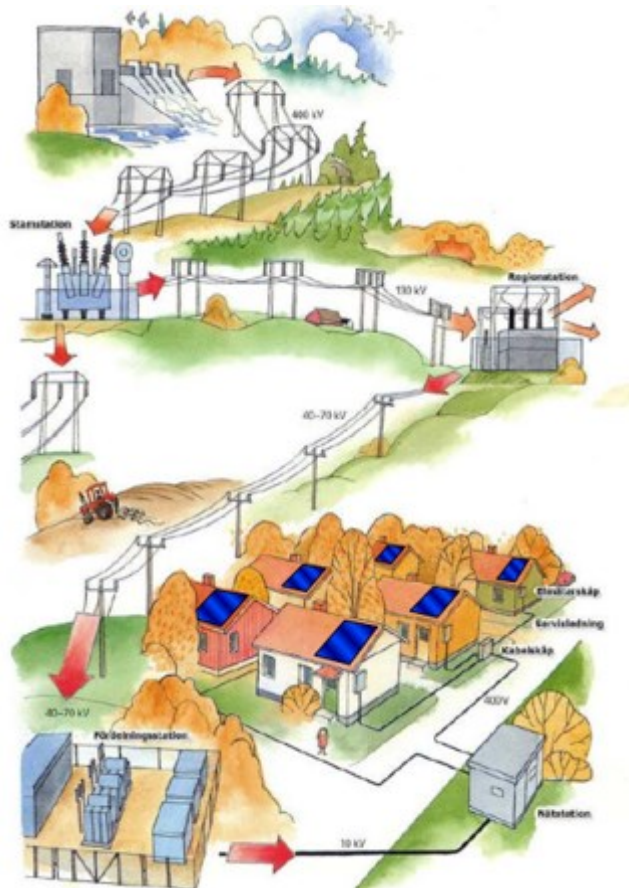
# BTE2413: Electrical Power System

## Course Information

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# Course Information

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**Course Synopsis:** This course introduces the fundamentals of essential elements of electrical power systems. The students will be exposed to electric power generation, transmission, distribution and basic power system design. It also includes operation concepts of switchgear, sub-station, and power systems protection techniques. In concurrence with this, the fundamental of power system analysis will be introduced.

# Course Outcome

**CO1:** Investigate the fundamental concept of electrical power systems. [PO1]

**CO2:** Provides a solid understanding of the theoretical and practical aspects of power system generation, transmission, distribution, and protection. [PO2]

**CO3:** Construct the per-unit system representation of a balanced three phase power system [PO5].

**CO4:** Measure and analyze the performance of power transmission lines in team [PO6].

# Course Contents

- **Chapter 1:** Introduction to Power System Engineering
- **Chapter 2:** Electric Power Generation
- **Chapter 3:** Power Transmission System
- **Chapter 4:** Modeling and Performance of Transmission Lines
- **Chapter 5:** Power Distribution System
- **Chapter 6:** Introduction to Power System Analysis

# Assessment Breakdown

Assessment	Marks	Percentage
<b>Quiz</b>	10	10%
<b>Test</b>	100	20%
<b>Final Exam</b>	100	40%
<b>Lab Report</b>	10	10%
<b>Assignment</b>	20	20%
<b>TOTAL</b>		<b>100%</b>

# References

## Recommended References:

- i. R. K. Rajput “ ***A Textbook of Power System Engineering*** ”, Laxmi Publications; 2nd Ed., 2016.
- ii. V.K. Mehta “***Principles of Power System***”, S. Chand Publisher, 3rd Ed., 2005.
- iii. Leonard L. Grigsby, “***Electric Power Generation, Transmission, and Distribution***”, CRC Press, 3rd Ed., 2012.
- iv. J. Duncan Glover, Thomas Overbye, Mulukutla S. Sarma, “***Power System Analysis and Design***”, 6th Ed, Cengage, 2017.

# Some Studying Facts

- Students should know that studying is their own activity and it is not the task of lecturers.
- The aim of a lecture is not to tell a story to students by lecturer without interruption.
- I like my students to ask and interact with lecture not only listening.
- Ask more to learn more.
- Preparing lectures before coming to the class is an effective way of studying.

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