

The Hong Kong University of Science and Technology
UG Course Syllabus Template ([Simplified version uploading to SENG website](#))

Integrated Power Electronics

ELEC 4430

3 credits

Pre-requisites: ELEC 3400

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Course Description

Power computation, diodes and rectifier circuits, power factor correctors, switch mode power converters, magnetic components, switch capacitor power converters, linear regulators, and integrated circuit techniques for controller design.

Assessments:

Assessment Task	Contribution to Overall Course grade (%)
Homework	10%
Project	15%
Midterm Examination	25%
Final Examination	50%

Required Texts and Materials

No textbook is required.

Useful reference text: Daniel W. Hart, Power Electronics, McGraw-Hill International Edition, 2011.

Extensive lecture notes will be distributed.

Lectures will be recorded in zoom and made available after class.

Instructor's class written notes will be distributed after class.

Additional Resources

N/A