<h1 class="pageTitle">EEEN20090 Electrical Energy Systems</h1>
<h2>Academic Year 2018/2019</h2>

Single-phase AC circuit analysis using phasors. Power, power factor and power factor correction. Basic concepts of magnetic circuits and energy conversion. Basic concepts of three-phase systems; Development of the equivalent circuit of a power transformer and its applications; Development of the equivalent circuit of the induction and synchronous machines and its applications in energy conversion; Power system structure, function and operation.

Curricular information is subject to change

What will I learn?

Learning Outcomes:
An ability to analyse AC electric circuits with basic components of inductance, capacitance and resistance using the phasor method; An ability to understand mathematical models for devices where iron forms part or all of the circuit; An ability to develop circuit models for the basic devices including transformers, induction machines and synchronous machines. An understanding of the operation of basic power systems.

How will I learn?

Student Effort Hours:

Student Effort Type	Hours
Lectures	30
Laboratories	12
Autonomous Student Learning	64
Total	**106**

Am I eligible to take this module?

Requirements, Exclusions and Recommendations

Learning Requirements:

Ability to analyse dc and ac circuits. EEEN20020 or equivalent

Module Requisites and Incompatibles

Equivalents:

Electrical Engineering (EEEN20080), Electrical Engineering (ELEN20010)

How will I be assessed?

Description	% of Final Grade	Timing
Examination: Final exam	60	2 hour End of Trimester Exam
Lab Report: Laboratory reports	20	Varies over the Trimester
Class Test: Class quizzes	20	Varies over the Trimester

What happens if I fail?

<u>Compensation</u>
This module is not passable by compensation

<u>Resit Opportunities</u>
End of Semester Exam

<u>Remediation</u>
If you fail this module you may repeat, resit or substitute where permissible

Reading List

<nav class="white-box no-left-arrow zero-top-margin">
<h1 class="printOnly"><img src="https://www.ucd.ie/t4cms/ucdcollegesandschools_logo.png"> UCD Course Search
Electrical Energy Systems (EEEN20090) </h1><h3 class="printOnly">Academic Year 2018/2019</h3> The information contained in this document is, to the best of our knowledge, true and accurate at the time of publication, and is solely for informational purposes. University College Dublin accepts no liability for any loss or damage howsoever arising as a result of use or reliance on this information.
  <h4 class="noPrint">Electrical Energy Systems (EEEN20090)</h4>
  <dl>
    <dt>Subject:</dt>
    <dd>Electronic & Electrical Eng</dd>
    <dt>College:</dt>
    <dd>Engineering & Architecture</dd>
    <dt>School:</dt>
    <dd>Electrical & Electronic Eng</dd>
    <dt>Level:</dt>
    <dd>2 (Intermediate)</dd>
    <dt>Credits:</dt>
    <dd>5.0</dd>

    <dt>Semester:</dt>
    <dd>Semester Two</dd>
    <dt>Module Coordinator:</dt>
    <dd>Professor Federico Milano</dd>
    <dt>Mode of Delivery:</dt>
    <dd>N/A</dd>

<dt>How will I be graded?</dt>
 <dd>40% </dd>

  </dl>
<button class="menubutton" onclick="window.print()"><i class="fa fa-print fa-fw"> Print Page</button>
(Google Chrome is recommended when printing this page)

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