
Ano Letivo 2016-17

Unidade Curricular ELETROTECNIA TEÓRICA

Cursos ENGENHARIA ELETRÓNICA E TELECOMUNICAÇÕES (Mestrado Integrado)

Unidade Orgânica Faculdade de Ciências e Tecnologia

Código da Unidade Curricular 14811100

Área Científica ENGENHARIA ELETROTÉCNICA

Sigla

Línguas de Aprendizagem pt if no foreign students, en if at least one foreign student

Modalidade de ensino

Docente Responsável Peter Stallinga

DOCENTE	TIPO DE AULA	TURMAS	TOTAL HORAS DE CONTACTO (*)
Peter Stallinga	T	T1	30T

* Para turmas lecionadas conjuntamente, apenas é contabilizada a carga horária de uma delas.

ANO	PERÍODO DE FUNCIONAMENTO*	HORAS DE CONTACTO	HORAS TOTAIS DE TRABALHO	ECTS
3º	S1	30T; 30PL	168	6

* A-Anual;S-Semestral;Q-Quadrimestral;T-Trimestral

Precedências

Sem precedências

Conhecimentos Prévios recomendados

Objetivos de aprendizagem (conhecimentos, aptidões e competências)

Conteúdos programáticos

Electromagnetic field
 Electrostatic Field
 Isolators.
 Dielectrics. Electric materials
 Capacitors.
 Conductors.
 Magnetic field
 Magnetic materials
 Inductors.
 Transformation of electric-electric energy
 The power transformer
 The radiofrequency transformer
 Transformations of mechanical electrical energies
 Electrical coupling
 Magnetic coupling
 Electric machines
 DC
 AC synchronous
 AC asynchronous
 Step motors

Metodologias de ensino (avaliação incluída)

Bibliografia principal

- 1) Electromagnetism.
 - Schaum's Outline of Theory and Problems of Electromagnetics by Joseph A. Edminister
 chapters 2 to 13
- 2) Electric Machines.
 - Schaum's Outline of Theory and Problems of Electric Machines and Electromechanics by
 Syed A. Nasar
 chapters 1 to 4

Academic Year 2016-17

Course unit THEORETICAL ELECTRICAL ENGINEERING

Courses ELECTRONIC ENGINEERING AND TELECOMMUNICATIONS (Integrated Masterçs)

Faculty / School Faculdade de Ciências e Tecnologia

Main Scientific Area ENGENHARIA ELETROTÉCNICA

Acronym

Language of instruction pt if 0 foreigners, en if > 0 foreigners

Learning modality

Coordinating teacher Peter Stallinga

Teaching staff	Type	Classes	Hours (*)
Peter Stallinga	T	T1	30T

* For classes taught jointly, it is only accounted the workload of one.

Contact hours

T	TP	PL	TC	S	E	OT	O	Total
30	0	30	0	0	0	0	0	168

T - Theoretical; TP - Theoretical and practical ; PL - Practical and laboratorial; TC - Field Work; S - Seminar; E - Training; OT - Tutorial; O - Other

Pre-requisites

no pre-requisites

Prior knowledge and skills

The students intended learning outcomes (knowledge, skills and competences)

Syllabus

- 1) Electromagnetism.
 - Schaum's Outline of Theory and Problems of Electromagnetics by Joseph A. Edminister
chapters 2 to 13
 - 2) Electric Machines.
 - Schaum's Outline of Theory and Problems of Electric Machines and Electromechanics by
Syed A. Nasar
chapters 1 to 4
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Teaching methodologies (including evaluation)

Main Bibliography