

330096 - TN - Nuclear Technology

Coordinating unit:	330 - EPSEM - Manresa School of Engineering
Teaching unit:	750 - EMIT - Department of Mining, Industrial and ICT Engineering
Academic year:	2019
Degree:	BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2016). (Teaching unit Optional) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2016). (Teaching unit Optional) BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2016). (Teaching unit Optional) BACHELOR'S DEGREE IN ELECTRICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN INDUSTRIAL ELECTRONICS AND AUTOMATIC CONTROL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN MECHANICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional) BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Optional)
ECTS credits:	6
Teaching languages:	Catalan

Teaching staff

Coordinator:	ENRIQUETA FERRERES SOLER
Others:	RAMON TARRUELLA BOIXADERA

Degree competences to which the subject contributes

Specific:

1. (ENG) Capacitat per conèixer, entendre i utilitzar els principis fonamentals en els quals es basen l'aprofitament de l'energia nuclear i la protecció radiològica.

Transversal:

2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.
3. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.

Learning objectives of the subject

330096 - TN - Nuclear Technology

Study load

Total learning time: 150h	Hours large group:	60h	40.00%
	Hours medium group:	0h	0.00%
	Hours small group:	0h	0.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

Content

(ENG) Títol del contingut 1: FONAMENTS DE FÍSICA NUCLEAR	Learning time: 60h Theory classes: 24h Self study : 36h
(ENG) Títol del contingut 2: CENTRALS NUCLEARS	Learning time: 60h Theory classes: 24h Self study : 36h
(ENG) Títol del contingut 3: PROTECCIÓ RADIOLÒGICA	Learning time: 30h Theory classes: 12h Self study : 18h

330096 - TN - Nuclear Technology

Planning of activities

(ENG) TÍTOL DE L'ACTIVITAT 1: PROVA INDIVIDUAL D'AVUACIÓ CONTÍNUA (CONTINGUT 1,3)	Hours: 7h Theory classes: 2h Self study: 5h
(ENG) TÍTOL DE L'ACTIVITAT 2: PROVA INDIVIDUAL D'AVUACIÓ CONTÍNUA (CONTINGUT 2)	Hours: 7h Theory classes: 2h Self study: 5h
(ENG) TÍTOL DE L'ACTIVITAT 3: PROVA FINAL (CONTINGUT 1, 2 I 3)	Hours: 10h Theory classes: 3h Self study: 7h
(ENG) TÍTOL DE L'ACTIVITAT 4: TREBALL DE RECERCA (CONTINGUT 1, 2 I 3)	Hours: 25h Theory classes: 1h Self study: 24h

Bibliography

Basic:

Hore-Lacy, I. Nuclear energy in the 21st century [on line]. 2nd ed. London: World Nuclear University Press, 2010 [Consultation: 11/07/2017]. Available on: <https://discovery.upc.edu/iii/encore/record/C__Rb1321834?lang=cat>. ISBN 9780955078415.

Glasstone, Samuel; Sesonske, Alexander. Nuclear reactor engineering: reactor design basics. New Delhi: CBS, 1998. ISBN 8123906471.

Glasstone, Samuel; Sesonske, Alexander. Nuclear reactor engineering: reactor systems engineering. 4th ed. New York: Chapman & Hall, 1994. ISBN 0412985314.

Ortega Aramburu, Xavier; Jorba, Jaume, eds. Radiaciones ionizantes: utilización y riesgos [on line]. 2ª ed. Barcelona: Edicions UPC, 1996-2001 [Consultation: 25/01/2016]. Available on: <<http://hdl.handle.net/2099.3/36551>>. ISBN 8483011700.

Tipler, Paul Allen; Mosca, Gene. Física per a la ciència i la tecnologia [on line]. Barcelona: Reverté, 2010 [Consultation: 18/06/2019]. Available on: <https://discovery.upc.edu/iii/encore/record/C__Rb1510154?lang=cat>. ISBN 9788429144314.

Others resources: