UNIVERSITÀ DEGLI STUDI DI PALERMO

Characteristics





Educational objectives

The 2nd cycle degree course aims at providing advanced knowledge in the area of traditional Chemical engineering, as well as advanced competences enabling graduates to interact with other advanced sectors in the field of scientific and technological innovation.
The course will therefore provide for mandatory and elective courses, related to applied kinetics and chemical reactors, safety and process optimization, equipment design, science and technology of materials, which are functional to the acquisition of useful knowledge tools for the design and management of traditional as well as innovative chemical processes.
Individual courses aim at providing basic knowledge with respect to those sectors which represent the trends in the development of chemical engineering, in close synergy with other disciplines, such as nanotechnologies, biotechnologies, energetics and environment.
Typical industrial engineering subjects, such as Machines and Machine elements will also be taught, which are in synergy with professional chemical engineering skills, and functional to job placement.
The course also provides other educational activities, with particular emphasis on advanced seminars, both in traditional chemical engineering and in innovative technologies.
The natural completion of such educational programme is an extensive work for the experimental dissertation, awarded with 24 credits.

Professional opportunities

Chemical engineers may find professional opportunities in the chemical, food, pharmaceutical industry, in material production and processing companies, industrial laboratories, technical units of the public administration and engineering companies

Final examination features

To obtain the degree, students must have acquired 180 credits including those relating to the final examination, in accordance with the Course Regulations. The final test has the objective of assessing the level of maturity and critical skills of the undergraduate, with respect to learning and to the acquired knowledge, on completion of the activities provided by the course syllabus. The final examination consists of a written or oral test, in accordance with the rules fixed every year by the Degree Course Regulations for the final examination, respecting and consistent to the calendar, the ministerial requirements and to the relevant Guidelines of the University.

Subjects 1 ° year	CFU	Sem.	Val.	Att.	SSD	TAF
22870 - BIOCHEMICAL PLANT DESIGN - INTEGRATED COURSE	9	1	V			
- BIOCHEMICAL PLANT AND OPERATIONS *Lima(RD)*	*3*	*1*			*ING-IND/25*	*C*
- REACTOR DESIGN *Li Puma(PO)*	*6*	*1*			*ING-IND/25*	*B*
21897 - INDUSTRIAL CHEMICAL AND BIOCHEMICAL PROCESSES *Galia(PO)*	9	1	V		ING-IND/27	B
21902 - SUSTAINABLE INDUSTRIAL PROCESSES - INTEGRATED COURSE	9	1	V			
- GREEN CHEMISTRY FOR SUSTAINABLE PROCESSES *Dispenza(PO)*	*3*	*1*			*CHIM/07*	*C*
- SUSTAINABLE INDUSTRIAL PROCESSES *Scialdone(PO)*	*6*	*1*			*ING-IND/27*	*B*

Legenda: Per. = periodo o semestre, Val. = Valutazione (V=voto, G=giudizio), TAF= Tipologia Attività Formativa (A=base, B=caratterizzante, C=Affine, S=stages, D=a scelta, F=altre)

Subjects 1 ° year	CFU	Sem.	Val.	Att.	SSD	TAF
21900 - CHEMICAL AND BIOCHEMICAL PROCESS CONTROL *Cipollina(PO)*	9	2	V		ING-IND/26	B
21896 - CHEMICAL AND BIOCHEMICAL REACTORS *Loddo(PA)*	9	2	V		ING-IND/24	B
07871 - MACHINES *Beccari(PA)*	9	2	V		ING-IND/08	C
21892 - PLANT DESIGN FOR PROCESS SUSTAINABILITY *Caputo(PA)*	6	2	V		ING-IND/25	B
	60					

Subjects 2 ° year	CFU	Sem.	Val.	Att.	SSD	TAF
21898 - CONCEPTUAL DESIGN OF CHEMICAL AND BIOCHEMICAL PROCESSES *Micale(PO)*	9	1	V		ING-IND/26	B
16079 - SAFETY MANAGEMENT *Grisafi(PA)*	9	2	V		ING-IND/25	B
05917 - FINAL EXAMINATION	21	2	G			E
Optional subjects	6					B
Stage and others	3					F
Free subjects	12					D
	60					

OPTIONAL SUBJECTS

Stage and others	CFU	Sem.	Val.	Att.	SSD	TAF
21167 - INTERNSHIP 2 CREDITS	2	1	G			F
11033 - INTERNSHIP 3 CREDITS	3	1	G			F
11034 - OTHER EDUCATIONAL ACTIVITIES - 1 CREDIT	1	1	G			F
11035 - OTHER EDUCATIONAL ACTIVITIES - 2 CREDITS	2	1	G			F
11036 - OTHER EDUCATIONAL ACTIVITIES - 3 CREDITS	3	1	G			F
Optional subjects	**CFU**	**Sem.**	**Val.**	**Att.**	**SSD**	**TAF**
21886 - ADVANCED CHEMICAL AND BIOCHEMICAL PLANT DESIGN *Grisafi(PA)*	6	1	V		ING-IND/25	B
23970 - ADVANCED REACTOR DESIGN *Li Puma(PO)*	6	2	V		ING-IND/25	B
01817 - APPLIED CHEMISTRY FOR ENVIRONMENTAL PROTECTION *Scaffaro(PO)*	6	2	V		ING-IND/22	B
17580 - INDUSTRIAL POLYMERIZATION PROCESSES *Galia(PO)*	6	2	V		ING-IND/27	B
18583 - MODELS FOR THERMOFLUID DYNAMICS *Tamburini(PA)*	6	1	V		ING-IND/26	B
23342 - POLYMERS AND COMPOSITES FOR SUSTAINABLE APPLICATIONS *Dintcheva(PA)*	6	1	V		ING-IND/22	B

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OPTIONAL SUBJECTS

Optional subjects	CFU	Sem.	Val.	Att.	SSD	TAF
21887 - PROCESS DYNAMICS SIMULATION AND CONTRO *Tamburini(PA)*	6	1	V		ING-IND/26	B

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