

4th YEAR BI INSA_SEMESTER 8

Introducing

Description

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse

Unit operations



ECTS

6 crédits



Hourly volume

97h

Introducing

Location(s)

 Toulouse

Description

Objectives

At the end of this module, the student will have understood and be able to explain (main concepts):
heat transfer phenomena: conduction, convection and radiation.

Mass transfer : principles of distillation and absorption

The student will be able to:

Size heat and mass exchangers

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Practical info

Communication in organisations with LV2



ECTS

6 crédits



Hourly volume

Introducing

Description

Objectives

Objectives:

At the end of this module, the student will have understood and be able to explain (main concepts):

- How to answer the demand of the civil society for technical and scientific information
- How to carry out critical analysis in order to give appropriate answers when questioned about such issues
- How to consider the circulation and content of information within the organizations in which they will be hired

The classes given in English will focus on the specific linguistic characteristics of the English used in scientific contexts in order for the students to understand and master them.

The students will also be made aware of the specificities of scientific English as relates to publications in his specific field of research.

Module L 2

The objectives, defined in reference to the CEFRL for the 5 language activities, are specific for the language studied : Chinese, German, Spanish and the level of

the student.

They can be consulted on :

<https://moodle.insa-toulouse.fr/course/view.php?id=44>

In certain cases, students may be authorised to follow an English module instead of another language

Necessary prerequisites

Necessary knowledge:

For classes in English : understanding of scientific English

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Practical info

Location(s)

 Toulouse

Communication in organisations



ECTS
6 crédits



Hourly volume
42h

Introducing

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Practical info

Location(s)

 Toulouse

Pluridisciplinary projects and sports



ECTS
7 crédits



Hourly volume
117h

Introducing

I1CCGE40 / I2CCGE10 / I3CCGE10 / I3BEMT10 /
Biochemical engineering/ Transfer phenomena

Description

Objectives

At the end of this module, the student will have understood and be able to explain (main concepts):

- The methods for project rational management
- The main concepts and the tools for quality
- The specific requirements for safety and environment in project management.

The student will be able to:

- Implement only and/or in a team the projects of actions,
- Manage in specialist the implementation and the follow-up of a project
- Plan actions and anticipate those of the others,
- Regulate the activity during project implementation,
- Make choices adapted to the interactions between the actors in order to be efficient,
- Communicate to obtain the wish action,
- Allocate roles between the partners by taking into account the individual skills,
- Act according to the constraints and to the adversity.

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Practical info

Location(s)

 Toulouse

Necessary prerequisites

Microbial and mammalian cell cultures



ECTS
7 crédits



Hourly volume
119h

Introducing

Description

Objectives

At the end of this module, the student will have understood and be able to explain (main concepts):

- How to establish a cell line in culture
- Mammalian cell culture specificities in terms of conditions and media
- Major uses of mammalian cells
- Various kinetic behaviours of microbial growth and production
- Several strategies from implementation of the microbial cultures in the bio-reactor

The student will be able to:

- use a vocabulary specific to cell culture
 - name major characteristics of a mammalian cell
 - manipulate a cell line
 - analyse, comment and criticize a scientific paper in the domain
 - to calculate the various kinetic and stoichiometric parameters of microbial cultures
 - to calculate the potentialities of productions for the various bio-reactors
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Necessary prerequisites

Basic knowledge of cellular Biology
Basic concepts of molecular biology
Courses of kinetics, microbiology, metabolism, reactor engineering

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Practical info

Location(s)

 Toulouse

Genetic and Enzymatic engineering



ECTS
4 crédits



Hourly volume
78h

Introducing

Description

Objectives

Become familiar with 1D, 2D, 3D bioinformatics analysis tools

Be familiar with the problems of engineering genomes, genes and their products

Know the objectives of engineering and the strategies that can be used

Know the tools of bibliographic analysis

Perform a literature review in the fields of enzymatic and genetic engineering.

Necessary prerequisites

Know the basics of structural biochemistry, molecular biology, and microbiology

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Practical info

Location(s)

 Toulouse

Political sciences semestre 2



ECTS
3 crédits



Hourly volume

Introducing

Description

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Practical info

Location(s)

 Toulouse