

# COURSE GUIDE – extended form

Academic year 2026 – 2027

## 1. Program information

1.1 University	<i>Université de Rouen Normandie (URN)</i>
1.2 Faculty	
1.3 Department	<i>UFR Sciences et Techniques – Department of Biology</i>
1.4 Field	
1.5 Study level	<i>Master</i>
1.6 Specialization	<i>Chemical and Biochemical Process Technology - CBPT</i>

## 2. Course information

2.1.1 Course name	<b>Engineering project</b>						
2.1.2 Course code	2.1.3. Course category Fundamental/Specialized/Complementary)						
2.2 Course instructor	Instructors from the Semester 3 program may be invited to participate in this course						
2.3 Course instructors for applied activities (S, L, P, Pr)	n/a						
2.4 Year of study <sup>2</sup>	2	2.5 Semester <sup>3</sup>	3	2.6 Evaluation type <sup>4</sup>	A	2.7 Course type <sup>5</sup>	Lab

## 3. Amount of time estimated for course activities (hours / term)

3.1 Hours /week	4	3.2 course		3.3a sem.	3.3b laboratory	2	3.3c project	2	3.3.d. practice	
3.4 Total hours from curriculum <sup>6</sup>	56	3.5 course		3.6a sem.	3.6b laboratory	28	3.6c project	28		
Time spent for related activities <sup>7</sup>										Hours
Study of recommended books, course support, scientific papers and course notes										20
Study in library and practical skills development										20
Preparation of seminars / laboratory works / project phases / home works / presentations										12
Evaluation <sup>8</sup>										
Other activities:										
3.7 Total hours of individual study <sup>9</sup>	52									
3.8 Total hours per semestre <sup>10</sup>	108									
3.9 Number of credits	4									

## 4. Prerequisites (optional)

4.1 curriculum <sup>11</sup>	
4.2 learning outcomes	

## 5. Requirements

5.1 Conditions for course delivery <sup>12</sup>	Host laboratory environment
5.2 Seminar / Laboratory / Project delivery requirements <sup>13</sup>	Blackboard, video projector, optimization software (EXCEL, GAMS or similar)

## 6. Overall objective of the course

*The course aims to provide students with a foundational understanding of laboratory based research works in the field of microbiology, cellular biology, biocompatibility and biomaterials*

## 7. Learning outcomes

<b>Knowledge</b>	<p>The student / graduate:</p> <ul style="list-style-type: none"> <li><i>explains the scientific questions he/she wants to answer</i></li> <li><i>compares various potential approaches</i></li> <li><i>evaluates the results of his experiments</i></li> <li><i>defines the design of the needed experiments</i></li> <li><i>describes the realization of the experiments</i></li> <li><i>uses all appropriate techniques and materials for its realization</i></li> <li><i>applies his/her basic knowledge in science and technology</i></li> </ul>
<b>Skills</b>	<p>The student / graduate:</p> <ul style="list-style-type: none"> <li><i>Learns laboratory skills for the design, realization and read-out of a scientific experiment</i></li> </ul>
<b>Responsibility and autonomy</b>	<p>The student / graduate:</p> <ul style="list-style-type: none"> <li><i>respects ethical principles, standards, and values in the correct and timely completion of professional tasks, by adopting a rigorous, efficient, and responsible work strategy in decision-making and problem-solving;</i></li> <li><i>assumes responsibility for contributing to professional knowledge and practices and/or for reviewing the strategic performance of teams;</i></li> <li><i>engages in continuous professional development in their field by appropriately using effective lifelong learning methods and techniques.</i></li> </ul>

## 8. Teaching methods

*Laboratory immersion*

## 9. Course content

## 10. Evaluation

Activity type	10.1 Evaluation criteria	10.2 Evaluation method	10.3 Percentage of the final grade <i>(recommended to be proportional to the number of hours allocated to each type of activity)</i>
10.4 Type of evaluation: Final Exam / Assessment	<p><i>Completeness and correctness of knowledge.</i></p> <p><i>Logical coherence, fluency, strength of argumentation.</i></p> <p><i>Capacity for analysis, personal interpretation, originality, creativity.</i></p> <p><i>Degree of mastery of specialized terminology and communication skills.</i></p> <p><i>Ability to apply acquired skills.</i></p> <p><i>Ability to process data and solve given problems.</i></p>	<p><i>Formative assessment test (ongoing evaluations throughout the semester).</i></p>	30%
10.5b Laboratory	<p><i>Laboratory activity – Ability to work in a team, ability to apply learned knowledge in practice, in different contexts.</i></p> <p><i>Capacity for analysis, personal interpretation, originality, and creativity.</i></p>	<p><i>Completion of laboratory sheets (all lab works must be completed, allowing the makeup of only one missed lab work);</i></p> <p><i>Assessment test (laboratory colloquium).</i></p>	50%

10.5c Project	<i>Participation in the design activity, ability to conduct research, application of knowledge in the design process.</i>	<i>Carrying out the design activity; Completion of the project; Project presentation/defense.</i>	20%
10.6 Conditions for passing			
A minimum grade of ECTS' E or up is the minimal learning outcomes required for the course and the awarding of the corresponding study credits (present the study results and answer clarifying questions regarding to experiments and data interpretation)			

Date:

Course instructor: All instructors involved in the third semester.

Course instructors for applied activities: All instructors involved in the third semester.

Date of approval by the department:

Head of Department: Anthony Delaune

Date of approval by the Faculty Council:

Dean,