

**Simulation I**

Code: 106116  
ECTS Credits: 3

Degree	Type	Year	Semester
2500891 Nursing	OB	2	A

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

**Contact**

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**Use of Languages**

Principal working language: catalan (cat)  
Some groups entirely in English: No  
Some groups entirely in Catalan: Yes  
Some groups entirely in Spanish: No

**Teachers**

Miguel Jiménez Pera  
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Carolina Watson Badia  
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**Prerequisites**

There is no prerequisite for taking the course.

**Objectives and Contextualisation**

Simulation is an innovative teaching methodology that enables advanced clinical skills to be practiced in a simula

The objectives of the course are for students to be able to:

- To demonstrate technical and non-technical skills to apply the most frec
- To establish effective communication with patients, healthcare team and
- To act, plan and prioritize action in accordance with the situation of the
- To demonstrate the use of critical reasoning in decision-making and res
- To demonstrate teamwork skills to achieve a common goal.

## Competences

- "Demonstrate an understanding of people without prejudice: consider physical, psychological and social aspects, as independent individuals; ensure that their opinions, values and beliefs are respected and guarantee their right to privacy, through trust and professional secrecy."
- Carry out basic curative actions based on holistic health care, involving multiprofessional cooperation, the integration of processes and continuity of health care.
- Demonstrate knowledge of the ethical and deontological code of Spanish nursing and what is understood by ethical health implications in a changing world context.
- Develop critical thinking and reasoning and communicate ideas effectively, both in the mother tongue and in other languages.
- Generate innovative and competitive proposals for research and professional activities.
- Offer technical and professional health care and that this adequate for the health needs of the person being attended, in accordance with the current state of scientific knowledge at any time and levels of quality and safety established under the applicable legal and deontological rules.
- Promote and respect the right to participation, information, autonomy and informed consent in decision-making by the patient, in accordance with the way they are experiencing the health-illness process.
- Protect the health and welfare of people or groups attended guaranteeing their safety.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Use scientific methodology in interventions.

## Learning Outcomes

1. Acquire and use the necessary instruments for developing a critical and reflective attitude.
2. Apply the ethical and deontological code of nursing in all areas of nursing activity.
3. Assess and treat receivers of care in a tolerant holistic manner without making value judgements.
4. Communicate using non-sexist and non-discriminatory language.
5. Demonstrate skill in carrying out manoeuvres of basic and advanced life support.
6. Demonstrate skill in performing nursing procedures and techniques.
7. Identify the psychosocial components of individuals as well as the values and beliefs that identify them as autonomous and independent people.
8. Respect the principles of the right to privacy, confidentiality and professional secrecy in all care given.
9. Respect the right to participation in the decision making process by people for their own care, in accordance with the way in which they are experiencing the health process.
10. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
11. Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
12. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
13. Use methods of protection and safety to ensure wellbeing and minimise risk associated with health care.
14. Use scientific evidence in care practice.

## Content

In the context of health sciences, there are constantly changes and new challenges associated with constant re-evaluation and the existence of more complex situations. These changes have generated in educational

institutions generating new tools that allow students to acquire different levels of training and knowledge, and apply safe action plans for patients. Simulation has allowed the development of new learning paths thanks to the recreation of clinical scenarios similar to the real one. Therefore, simulation encompasses a variety of educational techniques in which students have the opportunity to practice an active learning process in an environment that mimics the clinical setting and to experience experiences similar to real ones but without endangering the safety of the patient.

Different types of simulators can be found in the simulation. Those that will be used in the subject will be: part task trainers, static mannequins that do not interact with the students but imitate different parts of a patient's body; Human Patient Simulators, which are computer-controlled mannequins that interact with students to mimic patient care in their corresponding clinical environment; and finally, use will be made of the standardized patient represented by trained actors who will seek to behave in a pre-established way. Depending on the use of the type of simulator (one or a combination of different ones) and the recreation of the more or less realistic environment in the classroom, low, medium and high fidelity simulation will be carried out, always seeking the acquisition of certain learning objectives present in the different cases.

- Low fidelity simulation (PHCA)

Simulation experiences that include role-playing games or case studies, which are usually focused on the practice of a specific skill and which tend to influence the use of static mannequins or task trainers.

- Medium fidelity simulation (PHCA)

Experiences in simulation in which learning systems generally self-directed by screen are used, or else, the use of medium fidelity mannequins, the use of medium fidelity mannequins, which may have physiological sounds or other characteristics that allow interaction with itself; However, this simulation is usually oriented towards decision making, perfecting a skill or working on problem solving.

- High fidelity simulation (PSCA)

Experiences that include the use of standardized patients or extremely realistic integrated mannequins and that guarantee students the possibility of interacting. This simulation, given the realistic reproduction and the use of advanced technology to represent real situations, usually focuses on the prey of decisions, solving problems in a contextualized way, learning to prioritize, etc.

Taking this into account, the contents of the subject are distributed in different work blocks with different practices, which include low, medium and high fidelity, in different cases to work:

- Carrying out different hand washes, creating a sterile field and treating different types of wounds.
- Administration of drugs by different routes.
- Assessment and taking vital signs. Application of measurement scales.
- Continuous infusion systems.
- Performing hygiene in bedridden patient.
- Carrying out venous extractions, handling of the peripheral catheter, blood cultures and blood gases.
- Evaluation of pressure ulcers and management of the ostomy.
- Administration of oxygen therapy and respiratory physiotherapy.
- Detection and management of the different types of isolates.
- Carrying out mobilizations for patients.
- Basic CPR and AED protocol.
- Conducting catheters (nasogastric, PEG, enteral, bladder).

- Carry out bandages and sutures.
- Knowledge of the well child program and its vaccines.
- Knowledge of the PAPPS.

## Methodology

The main objective of the Human Advanced Clinical Skills Practices (PHCA) and Advanced Clinical Simulation Practices (PSCA) is to acquire clinical skills, more or less complex, through the simulated manipulation of techniques and procedures. Both types of practices will be carried out with the presence of teachers who will supervise, guide and lead the training activity.

In order to carry out these practices and prior to the training sessions, the students have to work on the theoretical contents of each procedure, which is why they require autonomous work outside the classroom.

The PSCA will require the video recording to be able to carry out the dynamics of the simulation, so the students must authorize this recording in order to carry out the activity. At the end of the sessions, the recordings will be deleted.

The content of the subject will be done in 14 sessions of low-medium fidelity and 3 sessions of 4h of high fidelity.

Likewise, different training activities will be carried out during the practices:

- Resolution of practical clinical cases.
- Group reflection of the case carried out.

The sessions are based on an interactive work between the teacher and the students. The active participation of the students in the proposed activities is considered essential.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

## Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Advanced Clinical Simulation Practices	12	0.48	1, 2, 4, 5, 6, 7, 12, 11, 10, 9, 8, 14, 13, 3
Advanced clinical skills practices in humans	36	1.44	1, 2, 4, 5, 6, 7, 12, 11, 10, 9, 8, 14, 13, 3
Type: Autonomous			
Personal work/ Reading articles	23	0.92	1, 12, 10, 14

## Assessment

1. Written evaluation using objective tests: multiple-choice questions

Its objective is to evaluate the acquisition of knowledge of the subject worked through the different training activities (skills practices and high fidelity simulated practices).

A test will be carried out prior to the training sessions (with a value of 15% of the final grade) and another test once the entire teaching of the subject has been completed (with a value of 35% of the final grade). They may be presented in various formats. One option: multiple choice questions with 4 answer options. Errors are subtracted according to the following formula:  $x = \text{hits} - (\text{errors} / n - 1)$ , where n is the number of answer options. Another option: questions with dichotomous answers (yes / no). They will be carried out through the MOODLE platform, always in virtual mode.

Both tests account for 50% of the final grade.

## 2. Attendance and active participation in class

Its objective is to evaluate the active participation of the students in the dynamics proposed in class, either during the development of the cases or during the reflection carried out after the practice. It will be evaluated using an evaluation tool in which aspects such as: active participation, teamwork, resolution of the case, prior preparation, etc. will be assessed.

This evaluative part accounts for 50% of the final grade.

A minimum grade of 5 out of 10 is required to pass the course, in all evaluative tests.

Attendance at the PHCA / PSCA and adherence to the schedule are two mandatory aspects. Take attendance will be held before each session. Given the characteristics of this teaching typology, its recovery is not contemplated. Students who present a total of more than two absences will not be evaluated and will not be able to take the final exam. Students who are absent from a practice session will be deducted 0.5 points from the final grade; If they miss two practices, 1 point will be deducted from the final grade.

It will be essential that the students carry out the sessions fully uniformed (practice pajamas and clogs).

Obtaining the final grade:

The final grade for the course is the sum of the grades from the proposed evaluation activities. The requirement to be able to make this sum is to have obtained the minimum score required in each part. Failure to pass any or all of these parts implies failure to pass the subject.

Not assessable will be understood and a zero will be given to any student who has not attended any or all of the evaluation activities.

The assessment of special and particular situations will be studied by an evaluation commission set up for this purpose, in order to design, where appropriate, a final recovery test. Students who have not passed the subject may take a final exam or a final recovery test. To qualify for the final make-up test, it is necessary to have taken all the assessment tests.

Students have the right to review the assessment tests. For this purpose, the date will be specified in the Virtual Campus.

According to agreement 4.4 of the Governing Council 11/17/2010 of the evaluation regulations, the qualifications will be:

- From 0 to 4.9 = Fail
- From 5.0 to 6.9 = Approved
- From 7.0 to 8.9 = Notable
- From 9.0 to 10 = Excellent
- When students do not attend any or any of the planned evaluation activities, they will receive the grade of not assessable

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Attendance and active participation in class	Attendance and active participation in class	2	0.08	1, 2, 4, 5, 6, 7, 12, 11, 10, 9, 8, 14, 13, 3
Written evaluation using objective tests: multiple response items.	Written evaluation using objective tests: multiple response items.	1	0.04	12, 11, 10, 14
Written evaluation using objective tests: multiple response items.	Written evaluation using objective tests: multiple response items.	1	0.04	1, 12, 11, 10, 14, 3

## Bibliography

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## Software

No specific software is required to complete the course.