



# **MSc MEDICINE AND SURGERY CLINICAL INTERNSHIP PROGRAMME GUIDE**

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# **MSc Medicine and Surgery Clinical Internship Programme Guide**

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## Article 1 Introduction and scope

The purpose of this document is to describe and share with all stakeholders the internship process, the mentoring process and the methods and tools used to organise clinical internships in UniCamillus-affiliated institutions. This document also aims to provide students with a real and practical guide that can be consulted whenever necessary.

The recipients of this document are the MSc in Medicine and Surgery Internship Office, the UniCamillus-affiliated institutions tutors and students.

This document applies to all UniCamillus MSc Medicine and Surgery programmes.

## Article 2 Definition and purpose of the clinical internship

Internships are the irreplaceable method of learning professional technical skills through practical experimentation and integration of theoretical-scientific knowledge with professional and organisational operational practice.

The aim of the clinical internship is to enable students to achieve, maintain and develop quality learning and a sense of responsibility through the targeted support of one or more experienced professionals. It aims to enable students to acquire specific skills of professional interest as well as professional technical skills through practical experimentation and the integration of theoretical-scientific knowledge with professional and organisational operational practice.

In accordance with current regulations, the UniCamillus MSc in Medicine and Surgery offers a total of **60 university ECTS credits** dedicated to clinical internships, of which 15 are for the Practical Internship needed to take the State Licensing Examination (TPVES). Please note that one ECTS credit corresponds to 25 hours. Specifically, these credits are understood as the total commitment required for students to achieve the expected objectives and skills. Table 1 shows the number of ECTS credits and the corresponding internship hours per academic year.

<b>Table 1: ECTS credits and number of internship hours per academic year</b>					
	<b>First year</b>	<b>Fourth year</b>	<b>Fifth year</b>	<b>Sixth year</b>	<b>Total</b>
<b>Internship ECTS credits</b>	5	18	20 of which 5 towards the TPVES	17 of which 10 towards the TPVES	<b>60</b>
<b>Number of internship hours</b>	125	450	500 of which 125 towards the TPVES	425 of which 250 towards the TPVES	<b>1500</b>

## Practical internship

According to the current regulations, the practical internship, which is aimed at obtaining the qualification to practise the profession of medical practitioner and surgeon (in accordance with Legislative Decree no. 18 of 17/03/2020) and which must be carried out during the pre-graduation period:

- has a duration of three months and must be completed no earlier than the fifth year, provided that all the basic examinations relating to the first four years have been successfully passed, as required by the course regulations;
- must be carried out for a number of hours equivalent to at least 5 ECTS credits per month and is divided into the following periods, even if not consecutive: one month in the surgical field, one month in the medical field, one month in the specific field of General Medicine, the latter to be carried out in a GP practice no earlier than the sixth year of the course;
- each ECTS credit allocated to the practical internship must include at least 20 hours of professional training activities and no more than 5 hours of individual study;
- The 15 ECTS credits of the practical internship contribute to the acquisition of the 60 ECTS credits dedicated to the activities indicated in the programme's teaching regulations;
- a certification of attendance and an evaluation of the practical internship are provided and carried out under the direct responsibility and supervision of the university tutors, or the medical director of the institution attended by the trainee and a GP, who will both issue a formal certification of attendance and, after evaluating the student's results in terms of the skills demonstrated, a judgment of suitability;
- the internship is passed successfully only if a positive opinion is given for each of the three periods.

In relation to the academic year, the educational objectives of the internship programme are stated as follows:

- The **first-year internship** aims to provide students with an understanding of the basic norms of hygiene and health education, as well as an understanding of the role and dynamics of interaction and communication within the multidisciplinary team, with patients and their families.
- The **fourth-year internship** has the following objectives:

**Medical field:** to provide students with an initial practical preparation in general medicine. By the end of the course, students will have the skills to independently perform a general physical examination, fill in a medical record, apply general principles for writing a patient's discharge letter, and have developed learning skills for initial orientation in the management of some common chronic treatments.

**Surgical field:** to provide students with an initial practical preparation in general surgery. By the end of the course, students will be able to apply sterilisation standards in the operating theatre, recognise the main surgical instruments and perform pre- and post-operative prophylaxis.

- The **fifth-year internship** has the following objectives:

**Medical field:** students will participate in all clinical activities of the allocated department. In the final period, students will be directly involved in patients' management, from admission to discharge: welcoming patients to their department, informing them and obtaining consent for the diagnostic and therapeutic pathway to be undertaken, accurately completing a medical record (history, physical examination and diary),

establishing a differential diagnostic pathway, communicating the diagnosis and prognosis to the patient and their family, developing a therapeutic plan, being aware of the risk of pharmacological interactions, participating in the discharge summary and writing a patient's discharge letter.

**Surgical field:** students will participate in all clinical activities of the allocated department. In the final period, students will be directly involved in patients' management, from admission to discharge: welcoming patients to their department, accurately completing a clinical record (history, physical and diary), establishing the diagnostic pathway, informing patients and obtaining consent for the diagnostic and therapeutic pathway to be undertaken, participating in the discharge summary and writing a patient's discharge letter. Objectives include being able to perform dressings in a sterile field, inserting and removing stitches, and assisting in at least one surgical procedure.

**Obstetrics-gynaecology field:** ability to take a gynaecological history. Clinical and therapeutic approach to menstrual irregularities in adolescence, fertility, and menopause. Knowledge of techniques for performing physical examinations and colposcopy, acquisition of the basics for interpreting normal and pathological conditions. Acquire knowledge of strategies for the prevention of gynaecological tumours. Knowledge of the techniques for performing a smear test, understanding the criteria for correct performance and interpretation. Ability to take a patient's history and learn the techniques of obstetric examination and gestational age assessment. Knowledge of changes in clinical and laboratory parameters in normal and abnormal pregnancy.

**Paediatric field:** acquisition of practical skills in paediatrics. Students will have gained the necessary skills to carry out a physical examination of the newborn, infant or child, to assess vital signs in children, to apply theoretical or practical principles of proper nutrition, to assess regular growth and use percentile tables, to assess sexual maturation and pubertal stages, and to carry out laboratory tests in paediatrics. They will also have gained the necessary skills to recognise pathological conditions in relation to different stages of development/growth, to evaluate specific therapeutic indications, dosage and the main routes of administration of drugs in paediatric patients and to advise in diagnosis.

- The **sixth-year internship** has the following objectives:

**Medical field:** to enhance practical preparation in general medicine. Students will have the skills to prescribe/propose/require/certify in accordance with the National Health Service (NHS) and implement methods to promote compliance. They will also have gained the necessary skills to manage the issues typical of medical disciplines.

**Surgical field:** to enhance practical preparation in general surgery. Students will be able to use and interpret imaging studies and develop learning skills for initial orientation to emergency conditions. They will gain an understanding of therapeutic indications for major surgical conditions.

**General Emergency field:** to enhance practical preparation in emergency medicine. Students will be able to apply theoretical and practical principles for the presentation and management of acute clinical syndromes. They will also have gained an understanding of the theoretical and practical application of trauma management and first aid principles.

### Article 3 Clinical internship requirements

Students can only have access to the clinical internship programme if:

- They have correctly completed the enrolment procedure by submitting all the required documents to the relevant offices in accordance with the application call;
- They are up to date with the payment of tuition fees;
- They have obtained a fitness certificate issued by the UniCamillus doctor in charge. For further details, please refer to the University's Health Documentation Regulations.

In addition, students will only be admitted to the internship programme described in the MSc in Medicine and Surgery regulations if:

- They have attended the compulsory training in health and safety at work course;
- They have passed the Italian language test. This only applies to students who do not have an adequate knowledge of the Italian language (see point 3.2).

A student who does not meet one or more of the above requirements will not be admitted to the internship programme.

If a student is already doing the clinical internship and, following an assessment, an irregularity is found in relation to the above requirements, they will be suspended and all hours accumulated during the period deemed irregular will be invalidated. The internship is resumed once the situation has been regularised.

### **3.1 Training in health and safety at work course**

The training in health and safety at work course, in accordance with Legislative Decree 81/2008 and subsequent amendments, highlights aspects related to the specific risks involved where internships take place. It is compulsory for all students regularly enrolled in the MSc in Medicine and Surgery, and a certificate must be obtained before participating in the first internship cycle scheduled for the first year of the course.

The course structure and the methods for obtaining the certificate are outlined in the student's WebApp.

### **3.2 Knowledge of Italian language (only applicable to the MSc Medicine and Surgery taught in English)**

Students who are not native speakers of Italian and who are regularly enrolled in the MSc in Medicine and Surgery must demonstrate a level of knowledge of the Italian language suitable before the start of the clinical internship. This is necessary because during the internship students will have to work in an Italian setting,

interacting with Italian patients and health professionals. The ability to understand what is decided and

agreed on in this setting is therefore of paramount importance, not just for the successful completion of the student's training and the internship itself, but also for the protection of patients and persons in need of health care.

The UniCamillus Language Centre (UCLC) is responsible for language skills assessment. To this end, the UCLC organises a compulsory Italian language exam for all non-native students enrolled in the MSc in Medicine and Surgery, except in the cases of exemption listed below:

1. Students who have obtained an Italian Language certificate at a level not lower than B1, issued by the Council of Europe within the framework of the CLIQ (Certificazione Lingua Italiana di Qualità) system, which brings together the current certifying bodies (Università per Stranieri di Perugia, Università per Stranieri di Siena, Università Roma Tre, Società Dante Alighieri) or issued by the Università per Stranieri Dante Alighieri of Reggio

Calabria, also in agreement with Italian cultural institutes abroad or other recognised bodies. Such certificates can be obtained in the country of origin and at examination centres throughout the world.

2. Students with a four-year or five-year secondary school diploma obtained in Italian schools in Italy and in Italian or equivalent schools abroad.

Students who fall under the exceptions mentioned in points 1 and 2 above must submit the above-mentioned certificates and/or secondary school diplomas (the University reserves the right to request the original

documents at any time if it deems it necessary) to the UCLC, following the procedures explained by the Centre itself in communications to students.

Students who do not have the documents described in points 1 and 2 above must instead sit an **Italian language exam**, which consists of a validated placement test/questionnaire designed to verify a level of Italian language knowledge of at least B1, sufficient to deal with patient care in hospital settings. The test date, time and method will be communicated to the students in advance by the UCLC. The date, time and method of the test will be communicated to the students in advance by the University Language Centre.

Students who, after the exam, do not obtain a score corresponding to level B1 (according to the indications given by the UCLC) or have not submitted any suitable certificate or secondary school diploma as mentioned in points 1 and 2, will be required to **attend free Italian language courses** offered by UniCamillus, on the basis of their level of knowledge as determined by the placement test/questionnaire, or to attend other language courses, after which they will receive a certificate corresponding to at least level B1.

The Italian language requirement is considered to have been met if students can prove, by means of the UniCamillus language test or other certificate or documentation as per points 1 and 2, that they have reached the B1 level required.

Only in those cases where students are enrolled in a UniCamillus A1 or A2 Italian language course and need to pass two or more levels before reaching the B1 level, may they be admitted to the clinical internship without having reached the B1 level if, within the same academic year, they have obtained, by passing a UniCamillus end-of-course Italian language exam, a certificate indicating that they have reached at least one level higher than that indicated by the placement test/questionnaire or by the final exam of the previous academic year.

If students do not pass the final exam, they will not have access to the clinical internship for that academic year and will be required to attend a UniCamillus language course at the same level and take the final test again during the following academic year. This mechanism will be repeated each academic year until the language requirements are met.

#### **Article 4 Clinical internship planning and allocation criteria**

On the basis of the educational objectives of the clinical internship planned for each academic year, as well as the progression of the theoretical content provided for in the Programme's Regulations, each student will be allocated by the Programme Director to an Operational Unit (OU) among those listed in the following Table 2:



**Table 2: Operational Units (OUs) where the internship takes place per academic year**

	Fourth year	Fifth year	Sixth year
<b>OUs</b>	General Medicine	Dermatology	
	General Surgery	Neurosurgery	
	Vascular Surgery	Neurology	Emergency
	Thoracic Surgery	Orthopaedics	Department
	Angiology	Traumatology	Resuscitation
	Cardiology	Ophthalmology	Intensive
	Pneumology	Otorhinolaryngology	Care
	Haematology	Plastic Surgery	Highly specialised
	Gastroenterology	Obstetrics and gynaecology	OU
	Nephrology	Psychiatry	Critical Care
	Psychiatry	Paediatrics	Oncology
	Urology	Neonatology	General
	Rheumatology	General Surgery	Surgery
	Infectious Diseases	Diagnostic Imaging	
	Geriatrics		

The planning of the internship and the allocation of the student to the internship site and OU is published on the WebApp by the Internship Office within 7 days of the start of the activities. In order to ensure the quality of the training experience, students will rotate through different units affiliated with the University. No change of allocation to an OU is permitted.

If a student is unable to attend the entire internship period, they must inform the Internship Office immediately before the start of the internship.

## Article 5 Clinical internship attendance

Clinical internship attendance is compulsory for all students enrolled on the MSc in Medicine and Surgery. The location, period and shifts of the internship activities are established by the Programme Director, together with the Internship Office, and clinical tutors.

The scheduled hours in the clinical internship, visible on the WebApp, **must be strictly adhered to**. Any changes must be duly requested in writing to and approved by the clinical tutor as well as by the Internship Office.

Unscheduled attendances not agreed with the clinical tutor or the Internship Office will not be counted and must be made up. Students are not allowed to work double shifts.

A student who wishes not to take part in the clinical internship for a short period of time must immediately inform the clinical tutor as well as the OU coordinator where the internship is being carried out, in accordance with the procedures established at the beginning of the academic year.

A student who wishes not to take part in the clinical internship for a longer period of time for serious and/or justified reasons must inform the Internship Office in order to agree on a personalised make-up plan.



A make-up plan is not provided for isolated days. It is possible to make up for a minimum period of one week. The student must make up the hours in the unit where attendance was lower. Internship make-up normally takes place in August, subject to favourable opinion of the clinical tutor and the Internship Office.

Students must document the hours of attendance using an attendance sheet, which must be signed and countersigned by the OU coordinator and validated by the clinical tutor and the Internship Office.

## Article 6 Documentation and forms

Clinical internships require a training agreement to be drawn up between the clinical tutor/Internship Office and the student, as well as other necessary documents to certify the completion or results of the internship.

The main documents held by the MSc in Medicine and Surgery are listed below. All the documents listed are archived in the University.

### ➤ Attendance sheet

Internship activity is recorded by completing a specific attendance sheet that the student must submit each day they attend the internship. For each day of internship activity, students must record the times at which they enter and leave the OU. This will be countersigned by the clinical tutor of the OU for each day of the internship.

The attendance sheet is a legal document certifying the student's presence on internship days:

- It may be requested by the judicial authority if deemed appropriate.
- It is designed to record internship daily attendance.
- It must be signed daily by the student and countersigned at the beginning and end of the shift by the clinical tutor (or by his/her deputy in their absence).

Given the legal value of the attendance sheet, the student undertakes to carefully maintain the integrity of the document. In addition, the formative nature of the attendance sheet is emphasised, as its proper maintenance encourages a tendency towards correctness and punctuality. The student's attendance is certified by the clinical tutor, who evaluates and documents the level of competence progressively achieved by the student.

Before the start of the internship, the student must download their attendance form from their personal area on the UniCamillus WebApp and upload it again, complete with signatures and certified by the student, at the end of the internship period. Any corrections or comments on the attendance sheet must be legible and countersigned.

The attendance sheet must first be digitally uploaded to the UniCamillus WebApp and then submitted in its original form to the University's Internship Office by appointment. The procedure of first uploading the form to the UniCamillus WebApp and then submitting the original must be completed **within 10 working days of the last hour recorded on the attendance sheet** to allow the relevant office to carry out all the necessary checks. Failure to comply with the protocol for delivery and uploading of the attendance sheet will result in the cancellation of the student's hours.

### ➤ Evaluation form

The aim of the evaluation form is to follow the student through all the stages of learning and to prepare appropriate reinforcing interventions in case of failure so that the student can achieve the expected educational objectives. The student must download the evaluation form from their personal area on the WebApp at the beginning of each internship and present it to their clinical tutor on the first day of their clinical internship.

## Article 7 Student Code of Conduct

During clinical internship activities, students are required to adhere strictly to professional and corporate ethical standards and to maintain professional decorum. Students must maintain their personal and professional image by complying with the following rules of conduct:

- At internship sites, it is mandatory to comply with hospital hygiene standards and professional ethics.
- During the internship in the host hospital, students must wear their university uniform with the UniCamillus logo on. This uniform must be kept clean and tidy, complete with identification badge and appropriate footwear. The uniform should only be worn in areas designated for clinical internship activities. Wearing a uniform outside of internship hours is prohibited. The University will inform all students in advance about how to obtain a uniform and logo. All communications will be sent to the student's institutional email address.
- Students are not allowed to leave the hospital during the internship.
- It is not permitted to be outside the OUs during the internship.
- Wearing jewellery (including watches) and piercings in contact areas with patients is prohibited.
- Personal hygiene must be maintained: hair should be kept short or tied at the back; beards should be short and well groomed; and nails should be short.
- The use of PPE is mandatory in laboratories, on wards and in practices, in accordance with the regulations of the affiliated healthcare facility.
- Procedures relating to accidents, pregnancy or any other harmful condition affecting students or patients during the internship must be followed.
- Students should only undertake clinical training activities if they believe they have acquired the necessary theoretical knowledge to protect patients and facilities from hazardous behaviours.
- It is forbidden to pass on specific information (e.g. by e-mail or fax) acquired directly or indirectly during the internship or to disseminate data, audio or video recordings or photographic material (e.g. through publication on websites) relating to places or persons encountered during the course activities.
- The use of mobile phones is **prohibited** or at least restricted and must be switched to silent mode. Students should also comply with the internal rules of the healthcare facility regarding their use in certain departments.
- Professional secrecy must be respected to ensure maximum confidentiality of patient information. It is therefore **forbidden** to photograph or videotape places and people, to exchange private information or to disseminate it in any way (text messages, Internet, social networking sites).

- Eating in laboratories is forbidden. Students must behave in a manner that does not hinder or disrupt their own learning or that of others in the classroom, laboratory, or internship.

Communication using information technology must respect confidentiality, privacy, and data protection rules. Communications with clinical tutors and the Internship Office regarding specific clinical internship experiences must respect individual privacy and should not disclose patient information.

For all matters not covered above, students must comply with the rules and policies of the host healthcare facility. Preceptors will inform students of the rules during each internship.

Violations of these behaviours are not permitted. Any deviation from the prescribed obligations will not be tolerated and will be referred to the University's Disciplinary Board for assessment.

## **Article 8 Internship cessation and disciplinary measures**

The clinical internship may be subject to immediate cessation, cessation pending evaluation by the University's Disciplinary Board and disciplinary action.

### **8.1 Immediate cessation from clinical internship**

Immediate cessation from the internship will be decided by the Internship Office in the following cases:

- Pregnancy status according to Legislative Decree 151 of 2000 and Art. 28 of Legislative Decree 81 of 2008 and subsequent amendments, in accordance with the regulations in force. In this case, a certificate must be submitted to the Internship Office by the University's medical practitioner in charge;
- Students with psychophysical problems that may cause stress or harm to themselves, the patients of the hospital facility or the health care team of the internship site. Such problems may also interfere with the acquisition of core professional skills. If this is the case, a certificate from the University's medical practitioner in charge is required to be submitted to the Internship Office;
- The student is not in compliance with the medical fitness certificate;
- The student is not up to date with the payment of university fees.

The University's doctor in charge may call for an extraordinary medical examination to assess individual cases. The student will be reinstated as soon as the conditions that led to the cessation are no longer present.

### **8.2 Cessation following evaluation by the University Disciplinary Board**

If a student fails to comply with the code of conduct of the MSc in Medicine and Surgery and referred to in the previous art. 8 above, or fails to comply with the general obligations laid down in these regulations, the Internship Office may suggest to the University Disciplinary Board, by means of a detailed report documenting the case and reasons, that the student be temporarily suspended from the clinical internship. The Disciplinary Board will decide whether to confirm such cessation from clinical activities for a period deemed appropriate. At the end of the cessation period, the student will be reinstated into the internship programme and the hospital facility of the current academic year, if

that is deemed possible as per educational plan, or in the following academic year. Reasons that may lead the Internship Office to propose the cessation of a student from the internship include, but are not limited to the following:

- The student does not meet the requirements for access to the hospital facility and/or needs to fulfil basic learning objectives prior to the internship;
- Students attending the clinical internship sporadically without any valid reason;
- Students repeatedly making errors that endanger the psychological or physical well-being of patients or cause biological damage;
- Other documented reasons evaluated by the Clinical Training Committee and Programme Director.

If the challenges that led to the student's cessation from the internship continue or if the above scenarios are repeated, the Programme Director and the Internship Office may propose to the University Disciplinary Board the permanent suspension of the student from the internship, supported by a detailed report documenting the reasons. The University Disciplinary Board may decide on the permanent suspension of the student, which may result in the student's exclusion from the MSc programme, given that it is impossible to continue studying without completing the mandatory clinical internship. The decision of the University Disciplinary Board is binding and must be forwarded to the Teaching Office for the purpose of exclusion.

### 8.3 Disciplinary measures

The University Disciplinary Board may impose disciplinary action in the following cases:

- Students whose behaviour may endanger the safety of users and/or other professionals;
- Students who fail to comply with the standards of conduct and rules set forth in these regulations or the standards set forth in the regulations and policies of the host healthcare facility;
- Students tampering with internship documentation (attendance sheets, health records, etc.);
- Students disappearing from the host healthcare facility during the internship period without prior
- Notification to the allocated clinical tutor, even though their presence is recorded on their attendance sheet;
- Other documented reasons evaluated.

Such behaviour should be identified by the clinical tutor and reported to the Programme Director, who will then prepare a detailed report to be submitted to the University Disciplinary Board. On the basis of the offence committed, the Board has the power to suspend the student temporarily or permanently and/or to order the resumption of clinical training activities with hours to be made up.

Further details can be found in the Student's Disciplinary Regulations.

## Article 9 Injury

Students are covered by an insurance policy against professional injuries during all educational activities carried out in the UniCamillus buildings and internship sites.

In the event of injury, it is the student's responsibility to follow the procedure below.

For injuries due to trauma or infectious risks, the student must follow the procedure of the hospital facility where the internship is taking place, details of which are given there.

In all cases students must

- immediately report the incident to their clinical tutor and OU coordinator;
- go to the Emergency Department of the internship site for a medical examination;
- obtain a paper copy of the original report from the Emergency Department detailing the diagnosis, prognosis, tests carried out and any diagnostic follow-up planned;
- obtain an INAIL form: "Medical Examination and Certification for Work-related Injury" (*Visita e Certificazione Medica per Infortunio sul Lavoro*), completed by the doctor at the Emergency Department, indicating Saint Camillus International University of Health and Medical Sciences (or simply UniCamillus University) as the employer;
- immediately notify the Programme Director, the Internship Office as well as the Health Documentation Office.

The student must write a detailed, dated and signed report of the incident, attaching a copy of the Emergency Department report and the INAIL report **within the following 24 hours**. **The report must be sent by e-mail to the Programme Director, the Internship Office and the Health Documentation Office**, who will conduct the necessary insurance procedures.

## Article 10 Educational objectives

### RESPIRATORY SYSTEM DISEASES

- Clinical approach to the respiratory patient: history and physical examination;
- Perform and interpret arterial haemogasanalysis;
- Perform and interpret respiratory function tests: simple spirometry, global spirometry, alveolar-capillary diffusion test, gait test;
- Interpret chest imaging: Chest X-ray, chest CT (HRCT, CT with mdc), PET/CT, lung scintigraphy;
- Indication and principles of interventional pneumology: video-fibrobronchoscopy, EBUS, interventional pneumology;
- Thoracic oncology;
- Assessment and clinical management of the acute and chronic respiratory patient;
- Outpatient examination for the diagnosis and treatment of respiratory diseases.

## **CARDIOLOGY**

- Take a medical history in the cardiac patient;
- Interpret laboratory tests related to cardiovascular diseases;
- Cardiovascular semiology (general physical examination with special focus on cardiac auscultation);
- Read the ECG with the ability to recognise brady and tachyarrhythmic diseases and ischaemic changes (chronic ischaemia and acute coronary syndromes);
- Elementary interpretation of echocardiography: cardiac contractility and valvular diseases;
- Elementary interpretation of coronary angiography;
- Formulation of a cardiological diagnosis and setting up the corresponding therapy.

## **THORACIC SURGERY**

- Assist and learn to take the proximate and remote history of patients with respiratory/thoracic diseases;
- Assist and learn to perform the physical examination of patients with respiratory/thoracic diseases, with special focus on chest percussion and auscultation;
- Learn how to communicate with cancer patients and their families, paying attention to the communication mode and the request for information of this particular patient setting;
- Assist and help operators in the preparation of endoscopic examinations (Fibrobronchoscopy, EBUS, EUS) and when performing thoracentesis;
- Assist in the operating theatre in lung resection, lobectomy, thymectomy, apicoectomy for pneumothorax, talc pleurodesis, mediastinal biopsies and removal of mediastinal masses, using both thoracotomy and thoracoscopic and robotic techniques.

## **VASCULAR SURGERY**

- Take a vascular history (history of intermittent claudication or rest pain, symptoms of cerebral ischaemia, symptoms of venous stasis in the lower limbs);
- Carry out vascular semiology (assessment of peripheral arterial pulses and puffs, palpation of the abdominal aorta and popliteal space);



- Carry out carotid endarterectomy, carotid stenting, endovascular exclusion of aortic aneurysm, aortic aneurysm resection, percutaneous aorto-iliac, femoro-popliteal and tibial angioplasty, varicectomy.

## HEART SURGERY

- Take the patient's cardiovascular history at the time of admission (Previous illnesses. History of the disease for which admission is being made. Symptoms and signs of the disease. Diagnostic tests performed).
- Bedside patient examination. Palpation, auscultation, blood pressure control and frequency, verification of laboratory tests.
- Visit to intensive care unit. Monitor vital signs, pressure, frequency, saturation, diuresis and check blood parameters.
- Visit to the operating department and understanding of the principles of extracorporeal circulation.
- Attend coronary bypass surgery, heart valve repair, and aortic aneurysm resections.

## GASTROENTEROLOGY

The Gastroenterology course module provides the student with the opportunity to systematically learn the pathological pictures of the entire digestive system, including related organs, supported by clinical practice through the ability to perform anamnesis - physical examination - necessary investigations.

1. Define the meaning and severity of different symptoms (e.g. alarm symptoms);
2. Know the most important signs and symptoms in the field of gastroenterology and be able to make differential diagnoses between diseases, e.g:
  - Differential diagnosis between acid-related and extradigestive pathologies;
  - Understand malabsorption syndromes;
  - Identify infectious and non-infectious diarrhoea;
  - Deficiency syndromes;
  - Understand the different types of hepatitis: diagnostic suspicion, aetiology, staging, complex therapy from simple hepatitis to severe and fulminant hepatitis;
  - Recognise advanced fibrotic hepatopathies, prevention and treatment of complications;
  - Biliary pathology: differential diagnosis between colic-colangitis-cholecystitis;
  - Jaundiced patients: differential diagnosis between benign and malignant pathology;
3. Propose a symptom-based diagnostic flow chart to formulate a diagnostic hypothesis;  
This diagnostic hypothesis must be supported by clinical and pathophysiological elements;

4. For each clinical picture observed, the student must apply the main therapeutic schemes, both pharmacological and instrumental, and indicate the elements of a differential diagnosis;
5. To be able to relate the clinical pictures observed to the principles of anatomy, physiology, pathophysiology and biochemistry.

## ENDOCRINOLOGY AND DIABETOLOGY

- Collect the patient's family and personal history in a timely and accurate manner;
- Acquire the ability to perform a physical examination with special attention to endocrine pathologies: thyroid palpation, cardiac auscultation, inspection of the face, skin, oral cavity;
- Recognise the presence of signs and symptoms of major pituitary disorders: acromegaly, hypopituitarism, hyperprolactinemia, pituitary adenoma, diabetes insipidus;
- Recognise the signs and symptoms of the main thyroid disorders: goiter, hypothyroidism, hyperthyroidism;
- Recognise the presence of signs and symptoms of the main adrenal disorders: Cushing's disease, Addison's disease, endocrine hypertension;
- Interpret laboratory tests, including dynamic tests, which are essential for the diagnosis and differential diagnosis of the main pituitary, thyroid and adrenal disorders;
- Interpret imaging studies (including medico-nuclear diagnostics) essential to the diagnosis and differential diagnosis of the main pituitary, thyroid and adrenal disorders;
- Acquire the basics of the ultrasound anatomy of the thyroid gland, know how to detect the presence of nodular thyroid pathology, hyperplastic parathyroid glands or pathological lymph nodes in the laterocervical region. Recognise the ultrasound elements of increased risk of malignancy;
- Know the technique for performing thyroid needle aspiration; Know how to interpret the results of cytology;
- Propose a correct therapeutic approach (lifestyle, medical, surgical) to the main pathologies of the pituitary, thyroid and adrenal glands;
- Acquire the theoretical and practical knowledge necessary to diagnose the different forms of diabetes mellitus (in particular: type 1 diabetes mellitus, type 2 diabetes mellitus and gestational diabetes mellitus);
- Acquire the theoretical and practical knowledge necessary for the correct management (pharmacological and non-pharmacological) of different forms of diabetes mellitus (in particular: type 1 diabetes mellitus, type 2 diabetes mellitus and gestational diabetes mellitus);
- Acquire the theoretical and practical knowledge necessary for the management of diabetes mellitus using modern technologies (subcutaneous sensors for continuous glucose monitoring, insulin pumps and artificial pancreas);
- Acquire the theoretical and practical knowledge necessary for the diagnosis and correct (pharmacological and non-pharmacological) management of metabolic syndrome and dyslipidaemia;

- Acquire the theoretical and practical knowledge necessary for the diagnosis and correct management (pharmacological and non-pharmacological) of osteopenia and osteoporosis.

## **NEPHROLOGY**

- Supervise haemodialysis and peritoneal dialysis treatments on an out-patient basis;
- Nephrology units for renal transplantation and combined transplantation with all the different modalities, from the evaluation of the transplant candidate to the subsequent follow-up;
- Supervise critical care haemodialysis treatments;
- Supervise nephrology consultations in the different wards;
- Supervise nephrology outpatient clinics;
- Supervise interventional nephrology procedures (such as arteriovenous fistula packing, peritoneal catheter placement, temporary or permanent vascular catheter placement for haemodialysis, performing renal biopsy).

## **UROLOGY**

- Acquire the main urological surgical techniques;
- Manage clinical cases;
- Acquire the rudiments of ward management.

## **HAEMATOLOGY**

- Assist clinical tutors on wards and outpatient clinics;
- Acquire practical knowledge to carry out a focused clinical examination of haematology patients;
- Assist and observe clinical tutors during diagnostic and therapeutic procedures performed in a haematology department: bone marrow aspiration, bone biopsy and lumbar puncture;
- Acquire practical knowledge of the clinical significance of the main laboratory tests for haematological disorders;
- Acquire basic knowledge of light microscopy for morphological identification of blood cells;
- Acquire practical knowledge of the diagnostic, prognostic and therapeutic pathway of the haematological patient;
- Acquire practical knowledge of the influence of chemotherapy on the clinical course of the patient during haematological reconstitution.

## **REUMATOLOGY**

- Take a rheumatological medical history and physical examination.

## OTOLARYNGOLOGY

Medical students should demonstrate knowledge of the anatomy and physiology of ENT and related structures:

- Be able to collect the patient's medical history aimed at identifying the cause of the reported symptomatology.
- Be familiar with the clinical instrumentation required to perform an ENT outpatient examination and acquire practical competence in performing common clinical procedures such as observation, semeiotics, otoscopy and pharyngoscopy.
- Be familiar with the diagnostic instrumentation so as to be able to indicate a valid investigation for diagnosis.
- Have the opportunity to attend the performance of the Audiology Pure-Tone testing and vestibular examination and be able to read and understand the results.
- To be familiar with Audiology Pure-Tone testing (tympanotomy impedance testing, otoacoustic emissions (OAE) test, auditory responses to electric and infrared neutral stimulation of the rat cochlear nucleus, Electronystagmography) these are useful for examine in depth the diagnosis and evaluating both adult and uncooperative patients and children.
- Have assisted in performing rhinofibrolaryngoscopy.
- To have observed otorhinolaryngologically relevant surgery.
- It is essential to be able to prepare suitable treatment plans for a range of therapeutic indications, including pharmacological, physical, surgical and rehabilitative options.

## INFECTIOUS DISEASES

- Clinical infectious diseases: Localised infections, sepsis and septic shock; infectious endocarditis; acute infectious enteritis and food poisoning;
- Infectious hepatitis; Urinary tract infections; Infectious osteomyelitis; Meningitis and meningoencephalitis;
- Diseases caused by bacteria and viruses;
- Diseases caused by mycetes, protozoa and helminths;
- Principles of therapy: antibacterial, antiviral, antifungal and antiparasitic.

## GERIATRICS

- Take a correct history and make a clinical assessment of the older patient;
- Apply and interpret the principles of evidence-based medicine in the reference population and key guidelines;
- Use multidimensional geriatric assessment tools;
- Recognise the main pathological conditions that may be observed in the older patient;
- Appropriately manage the complexity and vulnerability of the patient.

## **OBSTETRICS AND GYNAECOLOGY**

- Assistance with obstetric diagnostic techniques: non-invasive (obstetric ultrasound, nuchal translucency, bitest) and invasive obstetric techniques (amniocentesis, cordocentesis, villocentesis, etc.);
- Clinical cases of patients with high-risk pregnancies (gestational diabetes, pre-eclampsia, hepatitis, etc.);
- Assessment of patients in labour;
- Assistance with vaginal deliveries;
- Assisting in caesarean section deliveries;
- Evaluation of post-partum patients;
- Assisting in pap smear and colposcopy clinics;
- Gynaecological ultrasound scans;
- Assessment of gynaecological patients (clinical cases of benign and oncological gynaecology);
- Assisting in benign and/or oncological gynaecology surgery;
- Assisting gynaecological patients after surgery;
- Assistance in obstetric and gynaecological emergencies.

## **PSYCHIATRY**

- Use psychopathological terms commonly used in psychiatry;
- Identify key psychiatric signs and symptoms in individual patients and carry out the psychiatric examination;
- Evaluate psychometric and projective test results;
- Compile psychiatric medical records;
- Criteria for compulsory medical treatment, completion of the relevant form and knowledge of application practice;
- Knowledge of the most commonly used classes of psychotropic medication.

## **PAEDIATRICS**

- Obtain a complete personal, family and obstetric (maternal, perinatal and neonatal) history, establish a pedigree diagram;
- Measure the main auxological parameters (weight, length/height, head circumference) and use auxometric charts to assess general and district somatic development;
- Identify and interpret vital signs and know their normal ranges in neonates and children (heart rate, respiratory rate, blood pressure);
- Carry out a physical examination of the infant and child: assessment of the cardiovascular and respiratory systems, assessment of hypochondriac organs and explorable lymph nodes, and otoscopy;
- Collect data on the infant's nutritional history and neuro-motor, cognitive and relational development;
- Perform venous and arterial blood sampling at different paediatric ages;
- Perform peripheral venous cannulation; collect a sterile urine sample for urine culture; perform PBLS manoeuvres; perform in/out balance monitoring and diuresis calculation;
- Be able to interpret the results of the most common laboratory tests (reading and interpretation of the haemogram with formula, stix and urine test, culture

tests and antibiogram of blood, urine, cerebrospinal fluid, faeces, in the different age groups) by relating them to the physiological variations of the values observed in the neonatal period and in the age of development;

- Be able to read the medical record and, under the guidance of the facility's medical practitioner, to fill in the following: the medical record, a request for specialist advice, a request for instrumental examination (histological, cytological, radiological, etc.);
- Diagnostic and therapeutic approach to the child with fever, acute asthma, dehydration, head trauma;
- Application of specific therapeutic indications, contraindications, dosages and main routes of administration of the most commonly used drugs in paediatric patients (rehydration solutions, antibiotics, cortisone, antihistamines, antipyretics, analgesics, etc.).

## **PAEDIATRIC SURGERY**

- Acquire a basic knowledge of the pathologies of surgical interest, their management and long-term clinical follow-up;
- Know the main paediatric pathologies requiring surgery; to know the main paediatric surgical techniques and their risks; to know the procedures to prepare the child for surgery; to know the consequences of paediatric surgery.
- Attendance at meetings and discussion of clinical cases; attendance at the departmental out-patient clinic for the diagnosis and management of patients with surgical pathology; management of therapy.
- Operating theatre: surgical preparation (sterile dressing), surgical approach to the patient and knowledge of sutures and techniques.
- Basic knowledge of the importance of the Diagnosis Related Group (D.R.G.) of surgical pathologies, basic concept of clinical risk and the importance of informed consent.

## **PEDIATRIC NEUROPSYCHIATRY**

- Gather information and take a specific and detailed neuropsychiatric history in infancy, childhood and adolescence;
- Perform an appropriate neurological examination in children;
- Perform an appropriate neuropsychological (cognitive, executive, etc.), adaptive, emotional, affective, behavioural and social assessment using clinical interviews, clinical observations and standardised instruments;
- Identify clinical signs and symptoms to guide decisions about genetic testing and neuroimaging;
- Collect clinical signs and symptoms in neurodevelopmental, psychiatric and neurological disorders, make an appropriate diagnosis and correctly use the diagnostic classification systems (ICD, ICF and DSM);
- Apply their knowledge, understanding and problem-solving skills in clinical and rehabilitation settings, within a broader (or multidisciplinary) context related to the discipline;



- Integrate knowledge and manage complexity by making judgements with incomplete or limited information;
- Apply basic skills in observation, clinical interviewing and clinical relationships;
- Begin to use professional skills to provide evidence-based treatment (pharmacological and rehabilitative) to patients;
- Learn to communicate their judgements (and the knowledge and reasoning behind those judgements) clearly and unambiguously to medical and non-medical audiences.

## NEUROLOGY

- Triage of the stroke patient;
- Biomarkers in neurodegenerative diseases: how to perform rachicentesis; evaluation of immediate and late responses (amyloid, tau proteins); comparison with plasma biomarker testing (NFL);
- Modern diagnostics with neuroimaging; an outline of the contribution of nuclear medicine and 3 Tesla MRI (as well as an introduction to functional MRI);
- New therapeutic frontiers, with a focus on biological immunotherapies and rare diseases;
- Bedside patient examination and semiology by medical practitioners, specialists and nurses; changes in clinical scores during hospitalisation;
- Knowledge of the parameters used both on admission from emergency departments and on transfer of non-independent patients (NIHSS; Rankin; Barthel; GCS; ASIA; TOAST; plus art 56 & 75).

## NEUROSURGERY

- *Anamnesis, neurological status and general profile of the patient suffering from neurosurgical pathology.*
- *Management of patients with acute, no time, pathologies, requiring urgent treatment.*
- *Management of the patient with elective or chronic pathology, not requiring urgent treatment.*
- *Knowledge of the evolution of the clinical pictures: rapid neurological deterioration.*
- *Knowledge of the diagnostic process: elements of neuroradiology, principles of invasive diagnostics, use of monitoring.*
- *The neurosurgical operating room: the concept of sterility, the approach to micro-surgery, pre-intra- and post-operative technology, image-guided surgery.*
- *Post-operative complications.*

- *Ethical and medico-legal concerns: iatrogenic brain and spinal cord damage; therapeutic persistence; resilience*

## MUSCULOSKELETAL SYSTEM DISEASES

- Be able to take an accurate patient history in order to identify the possible causes of the reported symptoms and their temporal relationships;
- Carry out an accurate physical examination with reference to specific diagnostic tests, interpreting them in the light of a detailed knowledge of anatomy, physiology and pathophysiology;
- Know how to interpret functional deficits and painful sites to arrive at a correct diagnosis;
- Identify the essential, most useful and significant imaging and supporting investigations to confirm a diagnostic suspicion;
- Identify the correct treatment, taking into account the following determining factors:
  - Patient age
  - Comorbidities
  - Patient compliance with the specific treatment
  - Possible complications
  - Assessment of pathologies related to the orthopaedic one in this specific case
- Capacity to manage patients at risk or at risk of death

## VISUAL APPARATUS DISEASES

The student must have studied:

- Ophthalmological examination;
- Visual acuity test;
- Lens prescription;
- Tonometry;
- Ocular fundus examination and interpretation of key findings;
- Perimetry;
- Semiology of conjunctivitis;
- Semiology of cataract;
- Semiology of glaucoma;
- Glaucoma of tear duct.

## GENERAL SURGERY

Learning how to communicate and interact with patients and staff;

Improving some technical aspects of the patient interview (managing the relationship, developing basic skills);

- Know to the most common surgical pathologies in adults;
- Perform a thorough physical examination and take a well-structured history;
- Perform a complete physical examination specific to the organ and system concerned;
- Explore the diagnostic and therapeutic pathway of surgical pathologies in emergencies;
- Explore the diagnostic and therapeutic pathway of specific surgical pathologies;
- Explain the indications for the most common tests and know how to analyse the results;
- Present a clinical case by selecting the medical history, signs and symptoms most relevant to the admission in question and discuss any differential diagnoses;
- Interpret the results of common diagnostic tests such as: Rx chest and abdomen, blood gas analysis, routine biohumoral investigations, Tc abdomen;
- Indications for surgical therapy, including attendance in the operating theatre;
- Perform simple technical manoeuvres such as: taking pulse and blood pressure; performing ECG and venous sampling; removing sutures and dressing surgical and non-surgical wounds.

## **SKIN AND VENEREAL DISEASES**

- Collection of family and personal history for diagnostic framing;
- Clinical dermatological examination of the patient with classification and description of the lesions found;
- Clinical and dermoscopic examination of subjects with multiple pigmented lesions;
- Video-dermatoscopy of pigmented lesions, suspected neoplasms and skin precancerous lesions;
- Analysis of recorded images; Discussion of the features found;
- Clinical examination of patients with erythematous desquamative manifestations and discussion of possible diagnoses and therapies;
- Clinical examination of patients with eczematous manifestations and discussion of possible diagnoses and therapies;
- Clinical assessment of patients with exanthematous manifestations and discussion of possible diagnoses and therapies;
- Skin biopsy: purpose and procedure;
- Methods of local anaesthesia;
- Cryotherapy of skin lesions;
- Diathermy of skin lesions;
- Clinical examination of patients with sexually transmitted diseases; Analysis and description of lesions; Discussing possible diagnoses and therapies.

## **PLASTIC SURGERY**

- Reception, medical history, physical examination of the patient;
- Clinical assessment of patient, discussion of clinical diary and post-operative daily treatment sheet, assessment of pre-operative examinations, pre-operative drawings and measurements;
- Attendance at major surgery session (inpatient and day-care surgery);
- Attend outpatient surgery sessions;
- Attendance at outpatient plastic surgery: initial examinations, post-operative checks, surgical wound dressings, removal of stitches);
- Attendance at multidisciplinary meetings;
- Attendance at special outpatient clinics (post-bariatric, ulcer, breast reconstruction, skin tumours).

### **DIAGNOSTIC IMAGING AND RADIOTHERAPY**

- Techniques and methods of study in diagnostic imaging in the main pathological changes of organs and apparatuses;
- Criteria of selection and progressive order of radiological examinations in diagnostic problems;
- Knowledge of: Indications for radiotherapy in the main malignant diseases;
- Acute and late toxicity of radiotherapy;
- Equipment used in the delivery of radiotherapy;
- Technical aspects of the different types of radiotherapy (3D-CRT, IMRT, IGRT, IORT, radiosurgery and stereotactic radiotherapy, hadrontherapy, brachytherapy) and volumes of radiotherapy interest (GTV-CTV-PTV) in radiotherapy planning.

### **ANESTHESIOLOGY AND PAIN RELIEF TREATMENT**

- Describe the main techniques of anaesthesia and the medications used;
- Recognise the main signs and symptoms that may underlie life-threatening conditions;
- Identify the most appropriate investigations and key elements in the immediate management of a medical surgical emergency;
- Describe the basic aspects of oxygen therapy and methods of administration;
- Describe the main aspects of shock management and therapy monitoring;
- Diagnose and manage patients with acute and chronic, benign or neoplastic pain;
- The pathologies of competence are: Neoplastic pain; Neuropathic pain; chronic musculoskeletal pain; ischaemic pain; headache.

### **CLINICAL INTERNSHIP IN MEDICAL ONCOLOGY AND PALLIATIVE CARE**

- Therapeutic programmes designed to minimise suffering in terminally ill patients.
- A set of diagnostic, therapeutic and nursing interventions aimed at both the patient, to control symptoms and pain through appropriate and personalised care that respects the dignity and wishes of patients and their families.

## **EMERGENCY MEDICINE AND FIRST AID**

- Recognise the main signs and symptoms that may underlie life-threatening conditions;
- Identify the most appropriate investigations and key elements in the immediate management of a medical surgical emergency;
- Describe the basic aspects of oxygen therapy and methods of administration;
- Describe the main aspects of shock management and therapy monitoring;
- Take a medical history, interpret data from physical examination, laboratory tests and instrumental studies;
- Carry out an epicrisis and establish a course of treatment.

## **METHODS IN GENERAL SURGERY**

- Meaning and importance of taking the family, physiological and social history, remote pathological history, immediate pathological history;
- Specific medical history: asthenia, dizziness, syncope, convulsions, itching, thirst, diuresis and urination, hunger, alvus, libido and sexual activity, fever, sweating changes;
- General physical examination, thoracic and cardiovascular examination;
- Main pathophysiological pictures of semiological interest: cyanosis, jaundice, hydro-electrolyte imbalance, acid-base imbalance, oedema, syncopal syndromes, coma, cough, dyspnoea, fever, fever in surgical patients;
- Recognition of symptoms indicating the presence of a surgical emergency;
- Semiology of primary and secondary shock;
- Edema: definition, physical examination;
- Physical examination of the axillary and thoracic regions;
- The acute abdomen;
- Acute pancreatitis;
- Circumscribed masses and tumefactions of the abdomen;
- Ascites;
- Jaundice and cholestasis: clinical, radiological and instrumental semiology;
- Constipation and diarrhoea;
- Intestinal obstruction.

## **Article 11 Final provisions**

For legal and interpretation purposes, the document written in Italian and deposited at the University's Regulations Office shall prevail. For all matters not covered by these Regulations, reference is made to the Statute, the University's Teaching Regulations and the Regulations governing the functioning of the University's activities.