



UNIVERSITÀ  
degli STUDI  
di CATANIA

**Dipartimento di Chirurgia Generale e Specialità Medico-Chirurgiche**  
Corso di Laurea Magistrale in “Medicine and Surgery”

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Professionalizing activities

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# **INTERNSHIP REGULATIONS**

## **NURSING TRAINING ACTIVITIES AND PROFESSIONAL INTERNSHIPS**

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# DIDACTIC REGULATIONS

## Training Internships

The training internships aim to provide students with practical experiences that enhance their professional competence, prepare them for real-world challenges, and foster their growth in both medical and technological domains.

1. Professionalizing Training: As an integral part of the curriculum, students are required to undergo training internships to acquire specific professionalism in the fields of Internal Medicine, General Surgery, Pediatrics, Gynecology and Obstetrics, as well as various medical-surgical specialties. Additionally, students are expected to develop specific knowledge and professionalism in the application of technologies within the medical field. In order to fulfill these requirements, students must engage in professional training activities by attending designated facilities identified by the CdLM-MS (Master's Degree Course in Medicine and Surgery) during specified periods, accumulating a minimum of 60 credits (CFU).
2. Coordinator Responsibility: The CdLM-MS appoints a Coordinator who is responsible for organizing all practical training activities, including nursing internships.
3. Tutorial Teaching Activity: The mandatory training internship represents a form of tutorial teaching activity wherein students are actively involved in practical tasks that simulate professional-level activities.
4. Supervision and Tutorship: Throughout each phase of the mandatory training internship, students must operate under the direct supervision of an assigned tutor. The tutor's role encompasses the same didactic functions as those involved in tutorial instruction within the academic courses.
5. Assessment and Suitability: At the conclusion of each internship period, students will undergo assessment to determine their suitability for progression. They will be evaluated based on their performance and professional development during the internship.
6. Non-University Care Structures: The CdLM-MS has the right to identify non-university structures, specifically identified on the basis of agreements stipulated with the structures of the National Health Service where the internship can be carried out, in whole or in part.
7. Agreements with Hospitals and Healthcare Companies: In accordance with the guidelines provided by the CdLM-MS, the School of Medicine will initiate the necessary procedures to establish agreements with hospitals and healthcare companies. These agreements are intended to facilitate the execution of professionalizing and qualifying internships, as well as the preparation of the final thesis required for degree completion.

## Pre-Graduation Practical-Evaluative Internship

As part of the 60 CFU required throughout the entire academic program for professionalizing training, 15 CFU are dedicated to the completion of a quarterly practical-evaluative internship within the Study Program, as referred to in Article 3 of the Minister of Education, University and Research Decree of May 9, 2018, No. 58 and subsequent amendments. This internship aims to achieve professional qualification. The internship comprises a specific number of hours equivalent to at least 5 CFU per month and is organized in the following periods, which may not be consecutive: one month in the Surgical Area, one month in the Medical Area, and one month, to be completed not earlier than the sixth year of the course, in the specific field of General Medicine.

For each individual CFU assigned to the practical-evaluative internship, a minimum of 20 hours of professionalizing didactic activities and no more than 5 hours of individual study should be provided.

The pre-graduation practical-evaluative internship is organized in collaboration with the State Examination Office and the Medical Boards. The medical and surgical internships can also be carried out abroad as part of the University's international mobility programs, in accordance with the regulations governing the practical-evaluative internship, subject to approval by the CdLM-MS.

## FIGURES INVOLVED IN THE INTERNSHIP

### Internship Coordinator

The Internship Coordinator is the President of the CdLM-MS or one of his/her delegates and is the contact person responsible for the organization of internships, the issuance of authorizations for any shift changes or recoveries, and the communications with the Tutors. Together with the Presidency Secretariat, it deals with the verbalization of Professional and Qualifying Internships.

### Internship Commission

It is composed of:

- Internship Coordinator
- President of the CdLM-MS
- Vice-President of the CdLM-MS
- Staff of the Presidency Secretariat
- Teachers representing the medical, surgical, services and general medicine areas (at least 1 for each area)
- Student representatives (up to 2)

The Internship Commission is responsible for the organization of professional internships. A specific subcommittee deals with qualifying internships with the collaboration of the State Examination Office and at least two members designated by the Order of Doctors.

The Internship Commission is responsible for the following tasks:

- Establishing the training objectives for each individual internship in alignment with the core curriculum.
- Organizing internship activities based on the availability of facilities and tutors, including monitoring departments to ensure suitable placements.
- Proposing new agreements and overseeing the renewal of existing agreements for the implementation of internships.
- Collaborating with local doctors to facilitate qualifying internships in the field of general medicine.
- Identifying any critical issues and proposing improvements to be shared with the Steering Committee.
- Ensuring that health surveillance visits and other obligations related to risk prevention and protection are carried out.

The Internship Commission meets at least 4 times a year or when deemed necessary. The work carried out by the Internship Commission is discussed and approved by the Board of CdLM-MS.

### Tutorship

Tutors play a critical role in facilitating a fruitful learning experience during the internships. Their guidance, support, and continuous assessment contribute to the overall professional development of the students, ensuring they gain valuable practical skills and knowledge in their respective fields.

The selection of Tutors within the Internship Commission includes both university and hospital staff members who possess the necessary expertise. For nursing activities, a Nursing Coordinator is assigned to oversee students' progress. In the case of qualifying internships, General Practitioners, and if required, chosen Pediatricians, serve as Tutors for medical placements.

Each Tutor is provided with a letter of assignment, a schedule, and the names of assigned students (up to a maximum of 3) no later than one week prior to the start of the internship. The Internship Coordinator will share the activity calendar with the Health Directors and Training Offices of the hospitals, as agreed upon.

Tutors bear the responsibility for guiding and mentoring the interns. They welcome students on their first day and collaborate with them to plan activities within the designated timeframe. Tutors have the authority to assign students to relevant department/laboratory/unit staff and postgraduate trainees.

The Tutor, and/or the staff to whom students are entrusted, monitor their attendance and track their activities by maintaining a daily record in the trainee's register, which must be endorsed regularly.

In exceptional circumstances (such as holidays, illness, conferences, etc.), if the Tutor is unable to personally oversee the student for the entire internship period, they must ensure that an alternative Tutor is assigned to continue the planned training activities. The change in supervision must be communicated to the Internship Coordinator promptly.

The Tutor holds the responsibility for assessing the trainee's progress and completing the Evaluation Form. This assessment takes into account both the trainee's self-evaluation and the feedback provided by the individuals with whom they have been working closely.

## Trainee

The trainee, as a student pursuing the Master's Degree in Medicine and Surgery, is required to undertake the compulsory internship activity in order to fulfill the requirements of the program.

The trainee has the right to receive practical training essential for acquiring the necessary professional skills and also has the responsibility to maintain appropriate behavior in accordance with the professional role they are preparing for.

As a trainee, the student is expected to:

- Adhere to the designated entry and exit times and promptly inform both the Tutor and the Coordinator in case of absences due to justified reasons. It is crucial to make up for any missed hours to fulfill the required number of hours.
- Notify the Coordinator without delay if the assigned Tutor is unavailable or if issues arise concerning the frequency of attending the designated department, laboratory, or operating unit.
- Follow the instructions provided by the managers of the hosting structure and the assigned Tutors.
- Arrive for the internship with a valid identification document and in appropriate attire.
- Comply with the regulations of the host company structure, including rules pertaining to hygiene, safety, health in the workplace, and confidentiality of patient data.
- Abide by the instructions outlined by the CdLM-MS, which are available online, regarding the frequency of the emergency medical service (e.g., regulations, clothing requirements, schedules).

It is important to emphasize that any falsification of documents, such as health clearances or booklets, will lead to the initiation of complaint procedures to the relevant authorities.

## ORGANIZATION

### Health Surveillance and Course on Health and Safety in the Workplace

Before being able to attend the training activities of Nursing and internship, the student is required to undergo Health Surveillance, to attend the mandatory Information Course for all newly enrolled students and the specific Training Course on "Health and Safety in the workplace" of 12 hours (pursuant to art. 37 paragraph 2, Legislative Decree 81/08 and ss.mm. and ii., State-Regions Agreement of 22.12.2011 n. 223).

Health Surveillance involves a series of health checks carried out by the Competent Doctor to protect the health and safety status of workers and equivalent students in relation to the work environment, risk factors, work carried out and the health conditions of the worker.

The Competent Doctor plans and carries out health surveillance through the appropriate health protocols and will have to express a judgment of suitability that will be issued to the student.

The student, as an equivalent worker, is obliged to undergo Health Surveillance.

The dates of convocation, agreed with the Office of the Competent Doctor, will be published on the website of the CdLM-MS at least one month before the start of the activities. The student may be absent exclusively for certified health reasons or international mobility, communicating it in advance and asking to schedule the visit on another date. In case of unjustified absence, the student will no longer be summoned for the academic year of reference and will not be able to attend health facilities and / or research, thus delaying the training.

The planned Health Surveillance process consists of:

- First meeting: Medical history, verification of vaccination coverage, blood sampling, Mantoux test.
- Second meeting: Mantoux test outcome check.
- Third meeting: Medical examination and release of the judgment of suitability.

The specific Training Course on "Health and Safety in the workplace" is carried out by specialized personnel and organized by the RSPP Manager of the University in agreement with the Internship Coordinator and the Presidency of the CdLM-MS.

As per regulations, the course lasts 12 hours and a maximum number of 35 students is admitted. The student, as an equivalent worker, is obliged to attend the Course.

The dates of convocation, agreed by the person responsible for the organization of the courses, will be published on the CdLM-MS website at least one month before the start of the activities. The student may be absent exclusively for certified health reasons or international mobility, communicating it in advance and asking to schedule the course on other dates. In case of unjustified absence, the student will no longer be summoned for the academic year of reference and will not be able to attend health and / or research facilities, thus delaying his training course.

On the days provided for Health Surveillance and for Information and Training Courses, students are exempted from participating in educational activities and, in the event that exam sessions are scheduled, the teacher is required to take the exam on a different date.

### Calendars and assignment to the Tutor

Internship activities can be carried out throughout the academic year, every day and including holidays. Each internship shift can have a maximum duration of 8 hours and it is possible to attend night shifts.

All information concerning the organization of the Internship for the individual years of the Course will be published on the website of the CdLM-MS one week before the start of the activities. In particular, the following will be available to students and tutors: calendar, list of students, trainee's booklet, list of tutors based in the health facility.

### Internship methods

The student, following the instructions on the website, will present to the Tutor on the first day marked on the calendar to plan the activities. The days and times of attendance will be agreed between the Tutor and the trainee in order to achieve the amount of time and the expected training objectives within the assigned period of time. If in the assigned period the trainee fails to achieve the expected objectives, the attendance of the department, laboratory, operating unit can be extended at the discretion of the Tutor.

In relation to the characteristics of the Operating Unit, the activities can be carried out in hospital wards, clinics, operating rooms, and laboratories.

Attendance of the internship is 100% mandatory. Absences up to 30% of the total time can be recovered by making arrangements with the Tutor. Absences of more than 30% and postponements for health or educational reasons can be recovered only after authorization issued by the Internship Coordinator.

### Trainee's booklet

The Trainee's Booklet can be downloaded from the CdLM-MS website on the Internships page and must be completed in its entirety.

The Tutor or the designated doctor must validate every day the frequency booklet that shows the activities carried out. The tutor must also fill in the Evaluation Form of the trainee by entering both the partial marks and the final grade, and at the bottom affix his signature and the stamp of the Structure.

Incomplete booklets will not be considered for the purposes of the record.

### Registration of the internship

In order to verbalize, the student must:

1. Book through the internship exam portal using the correct code (as per the study plan);
2. Fill in an evaluation questionnaire relating to the attendance of the internship (available online at the training internships page);
3. Send the trainee's booklet completed in its entirety and signed by the Tutor, accompanied by a certificate of copy conforming to the original (Art. 47 of the D.P.R. n. 445/2000) to the address [mas.training@unict.it](mailto:mas.training@unict.it) clearly indicating in the subject of the e-mail: Surname, Name, code, year and semester of the internship for which the verbalization is requested;
4. Copy of valid health surveillance clearance.

Only after these obligations, the training activity will be registered by the Internship Commission which will register the positive conclusion of the Internship in the student's career.

## EDUCATIONAL OBJECTIVES

### Thematic areas

The educational objectives of the medical internship are carefully outlined through a comprehensive study plan that guides the students' academic journey. This plan encompasses the selection of departments, laboratories, and units, along with the prescribed number of hours students must dedicate to each academic year. Throughout their internship, students will have the opportunity to delve into specific thematic areas, aligning their studies with the designated study plan. By doing so, they will gain a profound understanding of the intricacies of medical practice and acquire invaluable hands-on experience.

The rotation within the internship program aims to ensure the completeness of the educational journey and its alignment with the concurrent classroom teachings. It takes into account the specific stage of the students' academic progression and strives to provide a well-rounded learning experience. In certain years of the course, the distribution of rotations will be organized across different departments/laboratories/units based on broader thematic areas, such as medical, surgical, technological, and service-oriented fields. The following scheme elaborates on the specific articulation and distribution of the medical internship.

Year	Semester	Credits	Area	Internship	Site
First	Second	2	Tech	Health informatics	Città Universitaria - viale Andrea Doria, 6 - c/o Dipartimento di Matematica e Informatica  Aula Multimediale nord – Torre Biologica - via S. Sofia 89
Second	Second	3	Pre-clinical	Biochemistry	Laboratorio n° 3 "Biochimica metabolica e cellulare" – Torre Biologica Torre Nord - via S. Sofia 97
			Pre-clinical	Physiology	Laboratorio "Translational sciences - Torre Biologica - via S. Sofia 89
			Tech	Bioengineering	Laboratorio didattico stampa 3D – Clinica Ortopedica – Policlinico – Presidio "G. Rodolico", via S. Sofia 78 – Comparto 1
Third	First	6	Pre-clinical	Nursing	Nursing Coordinators Policlinico – Presidio "G. Rodolico", via S. Sofia 78 – e Presidio "S. Marco", viale Carlo Azeglio Ciampi
			Clinical	Cardiovascular diseases	Unità Operative di Cardiologia e UTIC – Policlinico – Presidio "G. Rodolico", via S. Sofia 78 – Comparto 8  Unità Operativa di Cardiologia UTIC – Policlinico – Presidio "S.



Year	Semester	Credits	Area	Internship	Site
					Marco”, viale Carlo Azeglio Ciampi – Blocco 2, piano 5
			Clinical	Endocrinology	Unità Operativa di Malattie endocrine, del ricambio e della nutrizione – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 4
			Surgical	Vascular surgery	Unità Operativa di Chirurgia Vascolare – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 8  Unità Operativa di Chirurgia Vascolare – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B, piano 4
			Surgical	Cardiac surgery	Unità Operativa di Chirurgia Cardiaca – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 8
			Tech	Artificial intelligence, machine learning and big data	Città Universitaria - viale Andrea Doria, 6 - c/o Dipartimento di Matematica e Informatica  Aula Multimediale nord – Torre Biologica - via S. Sofia 89
Third	Second	6	Clinical	Respiratory diseases	Unità Operativa di Pneumologia – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 4
			Clinical	Kidney diseases and transplantation	Unità Operativa di Nefrologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B, piano 2
			Clinical	Odontostomatological diseases	Clinica Odontoiatrica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 2
			Clinical	Ophthalmological diseases	Unità Operativa di Oftalmologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B, piano 3
			Clinical	Otorhinolaryngological diseases	Unità Operativa di Otorinolaringoiatria – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 3

Year	Semester	Credits	Area	Internship	Site
			Surgical	Thoracic surgery	Unità Operativa di Chirurgia Toracica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 8  Unità Operativa di Urologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B4, piano 3
			Surgical	Urology	Unità Operativa di Urologia – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 1  Unità Operativa di Urologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio A, piano 3
			Surgical	Maxillofacial surgery	Unità Operativa di Chirurgia Maxillo-Facciale – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B, piano 4
Fourth	First	6	Clinical	Gastroenterology	Unità Operativa di Gastroenterologia – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 1, piano -2
			Surgical	Orthopedics	Clinica Ortopedica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 1, piano 1  Unità Operativa di Ortopedia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B1, piano 4
			Services	Laboratory medicine	Laboratorio Analisi – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 7  Unità Operativa di Laboratorio Analisi I e Patologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B, piano 5
			Services	Imaging diagnostics	Unità Operativa di Radiologia diagnostica ed interventistica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 1, piano -1

Year	Semester	Credits	Area	Internship	Site
					Unità Operativa di Radiologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B, piano terra
			Tech	Surgical robotics	Unità Operativa di Chirurgia Generale – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 8
Fourth	Second	7	Clinical	Rheumatology	Unità Operativa di Reumatologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B
			Clinical	Infectious disease	Unità Operativa di Malattie Infettive – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B, piano 6
			Clinical	Dermatology	Unità Operativa di Dermatologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B, piano 3
			Services	Public health	Unità Operativa di Igiene Pubblica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 87 – Comparto 10
			Tech	Advanced medical therapy products	Policlinico – Presidio “G. Rodolico”, via S. Sofia 87 – Torre Biologica – c/o Dipartimento di Scienze Biomediche e Biotecnologiche
Fifth	First	5	Clinical	Psychiatry	Unità Operativa di Psichiatria – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B, piano 4
			Clinical	Child neuropsychiatry	Unità Operativa di Neuropsichiatria infantile – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 2
			Clinical	Neurology	Clinica Neurologica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 2
			Clinical	Internal medicine	Clinica Medica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 4
			Surgical	Neurosurgery	Unità Operativa di Neurochirurgia –

Year	Semester	Credits	Area	Internship	Site
					Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B, piano 3
			Surgical	General surgery	Clinica Chirurgica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 8  Unità Operativa di Chirurgia Generale – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B, piano 4
			Tech	Digital health	Città Universitaria - viale Andrea Doria, 6 - c/o Dipartimento di Matematica e Informatica  Aula Multimediale nord – Torre Biologica - via S. Sofia 89
Fifth	Second	5	Clinical	Pediatrics	Unità Operativa di Pediatria e Pronto Soccorso Pediatrico – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio A, piano 3
			Clinical	Obstetrics and gynecology	Unità Operativa di Ostetricia e Ginecologia – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio A, piano 3
			Clinical	Medical oncology	Unità Operativa di Oncologia – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 2
			Clinical	Blood diseases	Unità Operativa di Ematologia – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 8, c/o Dipartimento di Chirurgia Generale e Specialità Medico-Chirurgiche
			Surgical	Pediatric and child surgery	Unità Operativa di Cardiologia Pediatrica – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco A, piano 3  Unità Operativa di Chirurgia Pediatrica – Policlinico – Presidio “S. Marco”, viale Carlo

Year	Semester	Credits	Area	Internship	Site
					Azeglio Ciampi – Edificio A, piano 2
			Services	Anatomopathology	Unità Operativa di Anatomia Patologica – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B, piano 5
Sixth	First	5	Clinical	Emergency medicine	Unità Operativa di Anestesia e Rianimazione – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Edificio B, piano 3
					Unità Operativa di Accettazione e di Urgenza – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B1, piano 0
			Clinical	Internal medicine	Clinica Medica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 4
			Surgical	Plastic surgery	Unità Operativa di Chirurgia Plastica - A.O. per l'emergenza "Cannizzaro" - monoblocco F3, piano 8
			Surgical	General surgery	Clinica Chirurgica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 8
					Unità Operativa di Chirurgia Generale – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B, piano 4
			Services	Forensic medicine	Unità Operativa di Medicina Legale – Policlinico – Presidio “G. Rodolico”, via S. Sofia 87 – Comparto 10
Services	Occupational medicine	Unità Operativa di Medicina del Lavoro – Policlinico – Presidio “G. Rodolico”, via S. Sofia 87 – Comparto 10			
Sixth	Second	15	Clinical	Qualifying internship as per specific regulations	Clinica Medica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 4  Unità Operativa di Medicina Generale – Policlinico – Presidio “S. Marco”, viale Carlo

Year	Semester	Credits	Area	Internship	Site
					Azeglio Ciampi – Edificio B, piano 5
			Surgical	Qualifying internship as per specific regulations	Clinica Chirurgica – Policlinico – Presidio “G. Rodolico”, via S. Sofia 78 – Comparto 8  Unità Operativa di Chirurgia Generale – Policlinico – Presidio “S. Marco”, viale Carlo Azeglio Ciampi – Blocco B, piano 4
			General medicine	Qualifying internship as per specific regulations	General medicine clinics in the Catania area as per agreement with the University of Catania and the School of Medicine

### Integrated Medical Sciences Internship (first and second year)

In this internship program, students will embark on a transformative educational experience that integrates the realms of health informatics, biochemistry, physiology, and bioengineering. By immersing themselves in the world of health informatics, students will unlock the potential of technology and data, discovering how to harness these tools to elevate patient care, optimize treatment outcomes, and revolutionize healthcare delivery systems. Through the study of biochemistry, students will delve into the intricate molecular intricacies underlying diseases, equipping them with the ability to make precise diagnoses and develop targeted therapeutic interventions. Exploring the depths of physiology, students will gain a comprehensive understanding of the human body, learning to interpret patient symptoms and identify underlying physiological dysfunctions. Embracing the principles of bioengineering, students will be at the forefront of medical innovation, leveraging cutting-edge advancements in medical devices, imaging technologies, and regenerative medicine to pioneer new approaches in diagnostics, treatments, and patient care. With this integrated knowledge and skill set, students will emerge as future doctors empowered to deliver personalized, evidence-based care, spearhead medical breakthroughs, and contribute to the ever-evolving landscape of healthcare practices.

### Nursing (third year)

Nursing is the first experience that the student of the CdLM-MS performs within a health facility. The main objective is to provide a first orientation on the organization of the health facility, hygiene rules to be respected and patient management, with particular reference to nursing practice. The student will also have to learn the execution of some nursing procedures. Nursing can only be carried out after a Health Surveillance Visit and attendance of the 12-hour Training Course.

For Nursing the student is entrusted to a nursing coordinator Tutor. During the Nursing, the student will have to acquire the following skills:

- Familiarize with the hospital's organization and the roles of various healthcare professionals within it.
- Understand the responsibilities of nurses and their interactions with doctors, patients, families, and the multidisciplinary healthcare team.
- Acquire knowledge about different types of hospitalization and how to properly admit patients into the facility.

- Implement comprehensive principles of hygiene and safety to minimize the risk of infections and safeguard patient well-being.
- Master the documentation process, including accurately filling out the Nursing Diary.
- Demonstrate proficiency in essential procedures and their management, such as peripheral and central venous catheterization, bladder catheterization, administration of oxygen therapy (including the operation of equipment like dispensers, flow meters, and pressure gauges), execution of evacuative or medicinal enteroclistisms, and management of nasogastric tubes.
- Understand the proper handling and transportation of biological materials, from collection to delivery to the laboratory.
- Learn appropriate patient positioning techniques, including in bed, on a stretcher, and in an armchair.
- Recognize patients at risk of immobilization syndrome and acquire knowledge of preventive, curative, and rehabilitative measures for the management of bedsores.

### Medicine, Surgery and Advanced Technologies (third and fourth year)

Students will delve into clinical disciplines including cardiovascular diseases, endocrinology, respiratory diseases, kidney diseases and transplantation, odontostomatological diseases, ophthalmological diseases, otorhinolaryngological diseases, gastroenterology, rheumatology, infectious disease, dermatology, and public health. They will gain a comprehensive understanding of diagnosis, treatment, and management strategies in these areas. In the surgical realm, students will witness the intricacies of vascular surgery, cardiac surgery, thoracic surgery, urology, maxillofacial surgery, and orthopedics. They will learn about surgical techniques, explore innovative approaches, and develop initial skills in managing diverse conditions. The internship will also introduce students to technological advancements in healthcare. They will delve into the realms of artificial intelligence, machine learning, big data, laboratory medicine, imaging diagnostics, surgical robotics, and advanced medical therapy products. By embracing these technologies, students will discover their potential to revolutionize medical research, diagnostics, treatments, and patient care. This immersive experience will equip students with a multidimensional skill set, deep knowledge in specialized fields, and the adaptability to thrive in the dynamic landscape of medical practice.

### Clinical Expertise, Surgical Proficiency, and Services-Oriented Skills (fifth and sixth year)

In this internship, students will immerse themselves in a diverse range of medical disciplines, enabling them to develop comprehensive clinical expertise, surgical proficiency, and essential skills in healthcare services. They will explore the complexities of psychiatry, neurology, internal medicine, pediatrics, obstetrics and gynecology, blood diseases and oncology, gaining a deep understanding of various medical conditions, diagnostic approaches, and patient care strategies. Students will also delve into surgical specialties such as neurosurgery, general surgery, plastic surgery, and orthopedics, witnessing advanced surgical techniques and post-operative care. Additionally, they will acquire crucial services-oriented skills in health informatics, digital health, laboratory medicine, imaging diagnostics, anatomopathology, forensic medicine, occupational medicine, and public health. By combining these clinical, surgical, and services-oriented learnings, students will be equipped with a well-rounded skill set, enabling them to excel as future doctors and contribute to the advancement of healthcare practices.

## Professional internship in the medical, surgical, service-oriented and technological areas (third to sixth year) – general skills

During the third-year internship, students will have the opportunity to delve deeper into patient care by actively participating in Medical and Surgical Area departments. This experience aims to equip students with the necessary skills to conduct comprehensive patient visits and navigate the diagnostic and therapeutic processes effectively.

Throughout the Internship, students will develop the following essential skills:

- Establishing effective doctor-patient relationships: Students will learn the fundamentals of building rapport with patients and their families. They will also gain insight into the collaborative dynamics between different healthcare professionals, enabling them to comprehensively evaluate patients' overall well-being.
- Understanding clinical methodology: Students will become proficient in the general clinical methodology employed in both medical and surgical fields. This includes mastering the art of taking a thorough medical history, conducting physical examinations, and formulating diagnostic hypotheses.
- Interpreting diagnostic tools: Students will grasp the indications and limitations of first-level instrumental and laboratory diagnostics. This knowledge will empower them to utilize these tools appropriately in patient assessment.
- Conducting comprehensive medical examinations: Students will learn how to perform a comprehensive medical examination and accurately document the findings in the medical record. Areas covered will include the Medical History, General Conditions, Psyche and Sensorial, Skin and Appendages, Head and Neck, Eyes, Oropharynx, Thorax, Cardiovascular System, Abdomen, Urogenital System, Locomotor and Walking System, Nervous System, Endocrine System, Lymph Nodes, as well as assessing vital signs such as Blood Pressure, Pulse, Breath, Urine Output, and Bowel Movements.
- Performing physical examinations: Students will acquire the skills necessary to conduct physical examinations with precision, ensuring a comprehensive evaluation of the patient's condition.
- Semeiological maneuvers: Students will become proficient in the main semeiological maneuvers used in the medical and surgical field, enhancing their ability to assess patients effectively.
- Evaluating signs and symptoms: Students will learn to evaluate the primary signs and symptoms of various diseases. This includes analyzing symptoms such as fever, cough, dyspnea, cyanosis, asthenia, anorexia, vomiting, diarrhea, constipation, bloating, jaundice, edema, ascites, chest pain, abdominal pain, headache, vertigo, lipothymia and syncope, dysuria, oliguria, anuria, polyuria, hematuria, pruritus, dermatosis, malnutrition, hypertension, and hypotension.

By gaining proficiency in these skills, students will develop a strong foundation in patient care and diagnosis, enabling them to provide comprehensive and effective medical support.

## Professional internship in the preclinical, clinical, surgical, service-oriented and technology areas (first to sixth year) - specific skills

During the Internship, the student will acquire the following specific skills:

Year	Semester	Internship	Skills
First	Second	Health informatics	<ul style="list-style-type: none"> <li>• Electronic health record (EHR) navigation: The student will gain proficiency in navigating electronic health record systems, learning how to search for patient information, input data accurately, and understand the basic functionalities of EHR platforms.</li> </ul>



Year	Semester	Internship	Skills
			<ul style="list-style-type: none"> <li>Health data entry and management: The internship will provide the student with skills in accurately entering and managing health data. They will learn how to input patient demographics, medical history, and other relevant information into health information systems.</li> <li>Basic knowledge of health informatics standards: The student will develop a foundational understanding of health informatics standards, such as HL7 and SNOMED-CT. They will learn how these standards facilitate interoperability and effective communication in healthcare settings.</li> </ul>
Second	Second	Biochemistry	<ul style="list-style-type: none"> <li>Laboratory techniques: The student will acquire basic laboratory techniques commonly used in biochemistry, such as pipetting, measuring solutions, and conducting simple experiments. They will learn to handle lab equipment safely and follow protocols accurately.</li> <li>Data recording and analysis: During the internship, the student will develop skills in accurately recording experimental procedures, observations, and results. They will also learn basic data analysis techniques, such as calculating concentrations or performing simple statistical analyses.</li> <li>Understanding of biomolecules: The student will gain a basic understanding of key biomolecules, including proteins, carbohydrates, lipids, and nucleic acids. They will learn their structures, functions, and basic biochemical properties.</li> </ul>
		Physiology	<ul style="list-style-type: none"> <li>Translational laboratory techniques: The students will gain practical skills in conducting physiological experiments using commonly available laboratory equipment. They will learn techniques such as measuring vital signs, performing basic tissue and organ dissections, and using physiological recording instruments. These hands-on experiences will emphasize the application of these techniques in real-world scenarios, highlighting their translational nature.</li> <li>Translational data collection and analysis: During the internship, the students will develop proficiency in accurately collecting physiological data, including heart rate, blood pressure, and respiratory measurements. They will also learn to analyze and interpret the collected data using basic statistical methods and graphing techniques. This practical training will enable them to effectively translate data into meaningful insights, emphasizing the importance of practical applications.</li> <li>Translational experimental design and protocol development: The students will gain knowledge and experience in designing physiological experiments and developing experimental protocols. They will learn to identify research questions, define variables, and plan step-by-step procedures for conducting experiments in a controlled lab environment. Emphasizing the translational aspect, they will acquire skills to bridge the gap between theoretical concepts and feasible experimental setups, highlighting the importance of practical implementation in their research endeavors.</li> </ul>
		Bioengineering	<ul style="list-style-type: none"> <li>Biomedical device prototyping: The student will gain hands-on experience in designing and prototyping biomedical devices. They will learn how to use specialized software and tools to create 3D models, perform rapid prototyping techniques, and iterate designs based on feedback.</li> <li>Biocompatibility assessment: During the internship, the student will develop skills in assessing the biocompatibility of materials used in biomedical engineering. They will learn about various testing methods and standards to evaluate the safety and compatibility of materials with biological systems.</li> <li>Data analysis and interpretation in bioengineering: The student will acquire proficiency in analyzing and interpreting data generated in bioengineering experiments. They will learn to use statistical analysis techniques, visualize data, and draw conclusions to inform the design and optimization of biomedical systems.</li> </ul>
Third	First	Nursing	<ul style="list-style-type: none"> <li>Patient assessment and monitoring: The student will develop skills in conducting comprehensive patient assessments, including vital signs measurement, physical examination, and health history collection. They will learn to monitor and document patient responses to interventions and identify changes in health status.</li> <li>Medication administration and management: During the internship, the student will gain proficiency in safe and accurate medication administration. They will learn about different medication routes, dosage calculations, and the importance of medication reconciliation and documentation.</li> <li>Collaborative healthcare teamwork: The internship will provide opportunities for the student to work collaboratively in healthcare teams. They will learn effective communication, teamwork, and coordination with interdisciplinary healthcare professionals to provide comprehensive patient care.</li> </ul>
		Cardiovascular diseases	<ul style="list-style-type: none"> <li>Cardiac assessment skills: The student will develop practical skills in performing cardiac assessments, including auscultation of heart sounds, palpation of pulses, and measurement of blood pressure. They will learn to identify abnormal findings and recognize signs of cardiovascular disease.</li> <li>Basic cardiac life support (BCLS): During the internship, the student will acquire BCLS skills, including cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) usage. They will learn the steps to</li> </ul>

Year	Semester	Internship	Skills
			<p>respond to cardiac emergencies and provide immediate care to patients in critical situations.</p> <ul style="list-style-type: none"> <li>Medication administration and management for cardiovascular diseases: The student will gain practical knowledge of commonly used medications for cardiovascular diseases. They will learn proper medication administration techniques, dosage calculations, and potential side effects, ensuring safe and effective medication management.</li> </ul>
		Endocrinology	<ul style="list-style-type: none"> <li>Hormone assessment and interpretation: The student will develop practical skills in assessing hormone levels through laboratory tests and interpreting the results. They will learn to analyze hormone profiles, understand their implications, and correlate them with clinical conditions.</li> <li>Diabetes management: During the internship, the student will acquire practical knowledge and skills in diabetes management. They will learn about blood glucose monitoring, insulin administration, dietary considerations, and lifestyle modifications for patients with diabetes.</li> <li>Patient education on endocrine disorders: The student will develop effective communication and patient education skills specific to endocrine disorders. They will learn how to explain complex endocrine conditions, treatment options, and self-care practices to patients, empowering them to actively manage their health.</li> </ul>
		Vascular surgery	<ul style="list-style-type: none"> <li>Operating room skills: The student will develop practical skills specific to the operating room environment in vascular surgery. They will learn proper sterile techniques, instrument handling, and suturing techniques used in vascular procedures.</li> <li>Vascular assessment and diagnostic techniques: During the internship, the student will acquire skills in assessing vascular conditions and performing diagnostic tests. They will learn to evaluate arterial and venous circulation, use Doppler ultrasound for vascular imaging, and interpret imaging results.</li> <li>Wound care and postoperative management: The student will gain practical knowledge and skills in wound care and postoperative management for vascular surgery patients. They will learn about dressing changes, monitoring wound healing, managing complications, and providing appropriate patient education for optimal recovery.</li> </ul>
		Cardiac surgery	<ul style="list-style-type: none"> <li>Operating room skills in cardiac surgery: The student will develop practical skills specific to the operating room environment in cardiac surgery. They will learn sterile techniques, instrument handling, suturing techniques, and other surgical procedures commonly performed in cardiac surgery.</li> <li>Perioperative patient care: During the internship, the student will acquire skills in providing perioperative care to cardiac surgery patients. They will learn about preoperative assessments, anesthesia management, intraoperative monitoring, and postoperative care including pain management and monitoring for complications.</li> <li>Cardiopulmonary bypass (CPB) management: The student will gain practical knowledge and skills in managing cardiopulmonary bypass during cardiac surgery procedures. They will learn about the setup and management of the CPB machine, monitoring parameters, and the safe conduct of CPB during surgical procedures.</li> </ul>
		Artificial intelligence, machine learning and big data	<ul style="list-style-type: none"> <li>Data preprocessing and cleaning: The student will gain practical skills in preprocessing and cleaning large datasets for analysis. They will learn techniques for handling missing data, outliers, and noise, ensuring data quality and reliability in machine learning and big data projects.</li> <li>Machine learning algorithms and models: During the internship, the student will acquire knowledge of various machine learning algorithms and models. They will learn how to apply and evaluate algorithms such as linear regression, decision trees, support vector machines, and neural networks for predictive modeling and data analysis tasks.</li> <li>Big data analytics and visualization: The student will develop skills in analyzing and visualizing big data using appropriate tools and techniques. They will learn to leverage big data platforms, such as Hadoop and Spark, to process and analyze large datasets, and use visualization tools to present insights and patterns effectively.</li> </ul>
Third	Second	Respiratory diseases	<ul style="list-style-type: none"> <li>Patient assessment and respiratory examination: The student will develop practical skills in assessing patients with respiratory diseases. They will learn to perform thorough respiratory examinations, including auscultation of lung sounds, assessing respiratory effort, and evaluating oxygen saturation.</li> <li>Respiratory therapy techniques: During the internship, the student will acquire skills in respiratory therapy techniques used in the management of respiratory diseases. They will learn about administering inhalation medications, performing chest physiotherapy, and teaching patients techniques for effective coughing and breathing exercises.</li> <li>Oxygen therapy and ventilation support: The student will gain practical knowledge and skills in providing oxygen therapy and ventilation support for patients with respiratory diseases. They will learn about different oxygen</li> </ul>

Year	Semester	Internship	Skills
			delivery systems, including nasal cannulas and masks, and basic principles of non-invasive and invasive ventilation.
		Kidney diseases and transplantation	<ul style="list-style-type: none"> <li>• Kidney function assessment: The student will develop practical skills in assessing kidney function through laboratory tests and clinical assessments. They will learn to interpret kidney function markers such as creatinine levels, glomerular filtration rate (GFR), and urinalysis results.</li> <li>• Dialysis procedures and management: During the internship, the student will acquire knowledge and skills related to dialysis procedures. They will learn about hemodialysis and peritoneal dialysis techniques, including machine setup, vascular access care, and monitoring patients during dialysis sessions.</li> <li>• Transplantation evaluation and care: The student will gain practical knowledge of the transplantation process. They will learn about patient evaluation for kidney transplantation, immunosuppressive medication management, post-transplant care, and monitoring for complications or rejection.</li> </ul>
		Odontostomatological diseases	<ul style="list-style-type: none"> <li>• Dental examination and diagnosis: The student will develop practical skills in performing dental examinations and diagnosing odontostomatological diseases. They will learn to assess oral health, identify dental caries, periodontal diseases, and oral infections, and develop treatment plans accordingly.</li> <li>• Dental treatments and procedures: During the internship, the student will acquire knowledge and skills related to common dental treatments and procedures. They will learn about dental fillings, root canal therapy, tooth extractions, and dental prosthesis placement, among other essential dental procedures.</li> <li>• Patient education and oral hygiene promotion: The student will gain practical knowledge on patient education and promoting good oral hygiene practices. They will learn how to effectively communicate oral health instructions, educate patients on proper brushing and flossing techniques, and provide guidance on preventive measures to maintain oral health.</li> </ul>
		Ophthalmological diseases	<ul style="list-style-type: none"> <li>• Ophthalmic examination and diagnostics: The student will develop practical skills in conducting ophthalmic examinations and diagnosing various ophthalmological diseases. They will learn to assess visual acuity, perform slit-lamp examinations, measure intraocular pressure, and identify common eye conditions such as cataracts, glaucoma, and macular degeneration.</li> <li>• Ophthalmic procedures and treatments: During the internship, the student will acquire knowledge and skills related to ophthalmic procedures and treatments. They will learn about techniques such as refraction, tonometry, and funduscopy, as well as the use of medications, eye drops, and surgical interventions for managing ophthalmological diseases.</li> <li>• Patient education and vision care: The student will gain practical knowledge in providing patient education and promoting vision care practices. They will learn how to communicate effectively with patients, educate them on proper eye care, emphasize the importance of regular eye examinations, and provide guidance on preventive measures for maintaining good eye health.</li> </ul>
		Otorhinolaryngological diseases	<ul style="list-style-type: none"> <li>• Otorhinolaryngological examination and diagnostics: The student will develop practical skills in conducting otorhinolaryngological examinations and diagnosing various diseases in the field. They will learn to assess ear, nose, and throat health, perform otoscopy, rhinoscopy, and laryngoscopy, and identify common conditions such as otitis media, sinusitis, tonsillitis, and vocal cord disorders.</li> <li>• Otorhinolaryngological procedures and treatments: During the internship, the student will acquire knowledge and skills related to otorhinolaryngological procedures and treatments. They will learn about techniques such as ear irrigation, nasal endoscopy, foreign body removal, and basic audiological assessments.</li> <li>• Patient education and self-care practices: The student will gain practical knowledge in providing patient education and promoting self-care practices for otorhinolaryngological conditions. They will learn how to effectively communicate with patients, educate them on proper ear, nose, and throat hygiene, emphasize the importance of regular check-ups, and provide guidance on preventive measures for maintaining good otorhinolaryngological health.</li> </ul>
		Thoracic surgery	<ul style="list-style-type: none"> <li>• Thoracic surgical procedures: The student will develop practical skills in assisting and performing various thoracic surgical procedures. They will learn about techniques such as thoracotomy, video-assisted thoracoscopic surgery (VATS), and robotic-assisted thoracic surgery (RATS), gaining hands-on experience in surgical approaches for lung resections, thoracic tumor removal, and other thoracic procedures.</li> <li>• Surgical patient management: During the internship, the student will acquire knowledge and skills related to the preoperative, intraoperative, and postoperative management of thoracic surgical patients. They will learn about patient preparation, anesthesia considerations, intraoperative monitoring, pain management, and postoperative care specific to thoracic surgery.</li> <li>• Thoracic drainage and chest tube management: The student will gain practical knowledge and skills in thoracic drainage and chest tube management. They will learn how to appropriately insert and manage chest tubes, monitor drainage</li> </ul>

Year	Semester	Internship	Skills
			output, recognize complications, and ensure proper functioning to facilitate postoperative recovery.
		Urology	<ul style="list-style-type: none"> <li>• Urological patient assessment: The student will develop practical skills in assessing urological patients. They will learn to obtain detailed urological histories, perform physical examinations, and interpret diagnostic tests such as urinalysis and imaging studies to evaluate urological conditions.</li> <li>• Urological procedures and interventions: During the internship, the student will acquire knowledge and skills related to urological procedures and interventions. They will learn about techniques such as catheterization, cystoscopy, prostate biopsies, and urinary stone removal.</li> <li>• Urological patient management: The student will gain practical knowledge in the management of urological conditions. They will learn about treatment options for urological diseases, including medical management, surgical interventions, and minimally invasive procedures. They will also develop skills in postoperative care, patient counseling, and follow-up monitoring.</li> </ul>
		Maxillofacial surgery	<ul style="list-style-type: none"> <li>• Maxillofacial surgical procedures: The student will develop practical skills in assisting various maxillofacial surgical procedures. They will learn about techniques such as orthognathic surgery, facial trauma repair, dental implant placement, and reconstructive surgeries.</li> <li>• Preoperative evaluation and planning: During the internship, the student will acquire knowledge and skills related to the preoperative evaluation and planning of maxillofacial surgeries. They will learn to assess patients' oral and facial structures, interpret radiographic images, plan surgical approaches, and collaborate with multidisciplinary teams for comprehensive treatment.</li> <li>• Postoperative care and management: The student will gain practical knowledge in the postoperative care and management of maxillofacial surgery patients. They will learn about wound care, pain management, dietary considerations, and potential complications, as well as how to provide patient education and support during the recovery process.</li> </ul>
Fourth	First	Gastroenterology	<ul style="list-style-type: none"> <li>• Gastrointestinal diagnostic procedures: The student will develop practical skills in performing and assisting with gastrointestinal diagnostic procedures. They will learn techniques such as upper gastrointestinal endoscopy, colonoscopy, and biopsy collection, gaining hands-on experience in evaluating and diagnosing gastrointestinal conditions.</li> <li>• Gastrointestinal disease management: During the internship, the student will acquire knowledge and skills related to the management of gastrointestinal diseases. They will learn about treatment options for conditions such as gastritis, peptic ulcers, inflammatory bowel disease, and liver diseases, including the use of medications, lifestyle modifications, and dietary recommendations.</li> <li>• Patient education and counseling: The student will gain practical knowledge in providing patient education and counseling for gastrointestinal health. They will learn how to communicate effectively with patients, educate them about gastrointestinal conditions, discuss treatment plans, and provide guidance on preventive measures and healthy lifestyle habits for maintaining good gastrointestinal health.</li> </ul>
		Orthopedics	<ul style="list-style-type: none"> <li>• Orthopedic assessment and diagnosis: The student will develop practical skills in assessing orthopedic patients and diagnosing musculoskeletal conditions. They will learn to perform thorough orthopedic examinations, interpret imaging studies such as X-rays and MRIs, and identify common orthopedic conditions like fractures, ligament injuries, and joint disorders.</li> <li>• Orthopedic procedures and interventions: During the internship, the student will acquire knowledge and skills related to orthopedic procedures and interventions. They will learn about techniques such as casting and splinting, joint injections, closed reduction of fractures, and postoperative wound care, gaining hands-on experience under supervision.</li> <li>• Orthopedic rehabilitation and patient care: The student will gain practical knowledge in the rehabilitation and postoperative care of orthopedic patients. They will learn about physical therapy techniques, assistive devices, and exercises for promoting recovery and functional mobility. They will also develop skills in patient education regarding home care instructions, pain management, and prevention of further injuries.</li> </ul>
		Laboratory medicine	<ul style="list-style-type: none"> <li>• Laboratory techniques and equipment: The student will develop practical skills in various laboratory techniques used in diagnostic testing. They will learn about sample collection, handling, and processing, as well as operating laboratory equipment such as microscopes, centrifuges, spectrophotometers, and automated analyzers.</li> <li>• Clinical chemistry and hematology: During the internship, the student will acquire knowledge and skills in clinical chemistry and hematology. They will learn to perform and interpret common laboratory tests for assessing blood chemistry, blood cell counts, coagulation profiles, and other hematological parameters.</li> <li>• Microbiology and infectious disease testing: The student will gain practical knowledge in microbiology and infectious disease testing. They will learn about specimen culturing, identification of microorganisms, and performing</li> </ul>

Year	Semester	Internship	Skills
			antimicrobial susceptibility testing, as well as molecular diagnostic techniques for detecting pathogens and analyzing genetic material.
		Imaging diagnostics	<ul style="list-style-type: none"> <li>• Radiographic imaging techniques: The student will develop practical skills in performing and interpreting radiographic imaging techniques. They will learn about X-ray imaging, including positioning patients correctly, adjusting exposure settings, and obtaining high-quality images for various anatomical regions.</li> <li>• Computed Tomography (CT) scanning: During the internship, the student will acquire knowledge and skills in CT scanning. They will learn about CT machine operation, patient preparation, and image acquisition protocols, as well as the interpretation of CT images for diagnostic purposes.</li> <li>• Magnetic Resonance Imaging (MRI): The student will gain practical knowledge in MRI imaging. They will learn about MRI scanner operation, patient positioning, image acquisition techniques, and the interpretation of MRI images for evaluating different anatomical structures and pathologies.</li> </ul>
		Surgical robotics	<ul style="list-style-type: none"> <li>• Introduction to robotic surgical systems: The student will gain exposure to robotic surgical systems commonly used in modern healthcare. They will learn about the basic components and functionalities of these systems, including robotic arms, instrument manipulation, and visualization technology.</li> <li>• Familiarization with robotic surgical procedures: During the internship, the student will become familiar with various robotic-assisted surgical procedures. They will observe robotic surgeries performed by experienced surgeons, gaining an understanding of the workflow, setup, and role of the surgical team.</li> <li>• Robotic system troubleshooting and maintenance: The student will acquire knowledge and skills in troubleshooting and basic maintenance of robotic surgical systems. They will learn to identify common issues, perform routine checks, and understand the importance of system safety and reliability in surgical settings.</li> </ul>
Fourth	Second	Rheumatology	<ul style="list-style-type: none"> <li>• Rheumatologic patient assessment: The student will develop practical skills in assessing patients with rheumatologic conditions. They will learn to obtain detailed medical histories, perform musculoskeletal examinations, interpret laboratory tests, and identify common rheumatologic diseases such as rheumatoid arthritis, systemic lupus erythematosus, and osteoarthritis.</li> <li>• Rheumatologic treatment approaches: During the internship, the student will acquire knowledge and skills related to the treatment of rheumatologic conditions. They will learn about pharmacological interventions, including the use of disease-modifying antirheumatic drugs (DMARDs), nonsteroidal anti-inflammatory drugs (NSAIDs), and biologic agents. They will also gain an understanding of non-pharmacological approaches, such as physical therapy, occupational therapy, and lifestyle modifications.</li> <li>• Patient education and self-management: The student will gain practical knowledge in providing patient education and supporting self-management strategies for individuals with rheumatologic conditions. They will learn how to effectively communicate with patients, explain treatment plans, teach joint protection techniques, and encourage adherence to medication regimens. They will also provide guidance on managing pain, maintaining mobility, and improving overall quality of life.</li> </ul>
		Infectious disease	<ul style="list-style-type: none"> <li>• Infectious disease assessment and diagnosis: The student will develop practical skills in assessing and diagnosing infectious diseases. They will learn to obtain thorough patient histories, perform physical examinations, interpret laboratory tests (such as blood cultures and serological assays), and identify common infectious diseases such as bacterial, viral, fungal, and parasitic infections.</li> <li>• Infectious disease treatment and management: During the internship, the student will acquire knowledge and skills related to the treatment and management of infectious diseases. They will learn about appropriate antimicrobial therapy, including the selection of antibiotics, antivirals, and antifungals based on microbiological sensitivity and clinical guidelines. They will also gain an understanding of infection control measures, including isolation protocols and antimicrobial stewardship.</li> <li>• Infection prevention and public health measures: The student will gain practical knowledge in infection prevention and public health measures to control the spread of infectious diseases. They will learn about vaccination strategies, epidemiological surveillance, outbreak investigation, and the importance of public health interventions in preventing and managing infectious disease outbreaks.</li> </ul>
		Dermatology	<ul style="list-style-type: none"> <li>• Dermatological patient assessment: The student will develop practical skills in assessing dermatological patients. They will learn to obtain detailed dermatological histories, perform skin examinations, and identify common skin conditions such as eczema, psoriasis, acne, and skin infections.</li> <li>• Dermatological treatment approaches: During the internship, the student will acquire knowledge and skills related to the treatment of dermatological conditions. They will learn about pharmacological interventions, including topical creams, oral medications, and systemic therapies. They will also gain an understanding of non-pharmacological approaches, such as lifestyle modifications, phototherapy, and surgical interventions for skin lesions.</li> </ul>

Year	Semester	Internship	Skills
			<ul style="list-style-type: none"> <li>• Dermatological procedures and techniques: The student will have the opportunity to learn and practice various dermatological procedures and techniques. This may include performing skin biopsies, cryotherapy for wart removal, suture techniques for wound closure, and minor surgical procedures under supervision.</li> <li>• Patient education and skin care management: The student will gain practical knowledge in providing patient education and promoting proper skin care management. They will learn how to educate patients on sun protection, skin hygiene, and self-examination for early detection of skin cancers. They will also provide guidance on managing chronic skin conditions and addressing patient concerns.</li> </ul>
		Public health	<ul style="list-style-type: none"> <li>• Epidemiological surveillance and data analysis: The student will develop practical skills in conducting epidemiological surveillance and data analysis. They will learn to collect, analyze, and interpret public health data, including disease incidence, prevalence, and demographic information. They will also gain knowledge of statistical methods used in public health research and reporting.</li> <li>• Health promotion and disease prevention strategies: During the internship, the student will acquire knowledge and skills related to health promotion and disease prevention strategies. They will learn about designing and implementing public health campaigns, creating educational materials, and conducting community outreach programs. They will also gain an understanding of behavior change theories and techniques for promoting healthy lifestyles and preventing diseases.</li> <li>• Public health policy and program evaluation: The student will gain practical knowledge in public health policy and program evaluation. They will learn about the development and implementation of public health policies, as well as strategies for evaluating the effectiveness and impact of public health programs. They will also explore ethical considerations and equity issues in public health practice.</li> </ul>
		Advanced medical therapy products	<ul style="list-style-type: none"> <li>• Regulatory framework and quality assurance: The student will gain an understanding of the regulatory framework governing advanced medical therapy products, such as cell-based therapies, gene therapies, and tissue-engineered products. They will learn about regulatory requirements, quality control, and compliance standards to ensure the safety and efficacy of these products.</li> <li>• Manufacturing and production processes: During the internship, the student will acquire knowledge and skills related to the manufacturing and production processes of advanced medical therapy products. They will learn about cell culture techniques, gene delivery methods, biomaterials, and tissue engineering principles. They will also gain insight into good manufacturing practices (GMP) and quality management systems specific to these products.</li> <li>• Research and development in advanced therapies: The student will have the opportunity to engage in research and development activities related to advanced medical therapy products. They will learn about preclinical testing, clinical trial design, data analysis, and regulatory submissions. They will also gain experience in the interpretation of scientific literature and the exploration of novel therapeutic approaches.</li> </ul>
Fifth	First	Psychiatry	<ul style="list-style-type: none"> <li>• Psychiatric assessment and diagnosis: The student will develop practical skills in conducting psychiatric assessments and diagnosing mental health conditions. They will learn to obtain comprehensive psychiatric histories, conduct mental status examinations, and apply diagnostic criteria from the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). They will also gain an understanding of different psychiatric disorders, such as depression, anxiety disorders, schizophrenia, and bipolar disorder.</li> <li>• Psychopharmacology and medication management: During the internship, the student will acquire knowledge and skills related to psychopharmacology and medication management in psychiatry. They will learn about commonly prescribed psychiatric medications, their mechanisms of action, therapeutic indications, and potential side effects. They will also gain an understanding of medication selection, dosing strategies, and monitoring for optimal patient care.</li> <li>• Psychotherapy and counseling techniques: The student will have the opportunity to learn and practice various psychotherapy and counseling techniques used in psychiatry. They will learn about evidence-based therapies, such as cognitive-behavioral therapy (CBT), interpersonal therapy (IPT), and dialectical behavior therapy (DBT). They will also develop skills in establishing therapeutic relationships, conducting psychotherapeutic interventions, and promoting patient resilience and self-care.</li> <li>• Mental health crisis intervention and management: The student will gain practical knowledge in mental health crisis intervention and management. They will learn about suicide risk assessment, de-escalation techniques, crisis stabilization, and referral to appropriate resources. They will also develop skills in collaborating with multidisciplinary teams to provide comprehensive care for individuals in psychiatric crises.</li> </ul>
		Child neuropsychiatry	<ul style="list-style-type: none"> <li>• Developmental assessments: The student will develop practical skills in conducting developmental assessments for children. They will learn to</li> </ul>

Year	Semester	Internship	Skills
			<p>administer standardized tests and assessment tools to evaluate cognitive, social, and emotional development in children of different age groups. They will also gain an understanding of normal developmental milestones and red flags for potential neuropsychiatric disorders.</p> <ul style="list-style-type: none"> <li>• Diagnostic evaluation and formulation: During the internship, the student will acquire knowledge and skills in diagnostic evaluation and formulation in child neuropsychiatry. They will learn to conduct comprehensive clinical interviews with children and their families, gather relevant information, and synthesize findings to formulate accurate diagnoses. They will also gain an understanding of neurodevelopmental disorders, such as attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder (ASD), and intellectual disabilities.</li> <li>• Evidence-based interventions and treatment planning: The student will learn about evidence-based interventions and treatment planning for children with neuropsychiatric disorders. They will gain knowledge of various therapeutic approaches, such as behavioral interventions, parent training programs, and cognitive-behavioral therapy (CBT). They will also develop skills in formulating individualized treatment plans and collaborating with families and multidisciplinary teams to support the child's development and well-being.</li> <li>• Neurological and psychiatric assessment integration: The student will have the opportunity to integrate neurological and psychiatric assessments in child neuropsychiatry. They will learn about the interplay between neurological conditions and psychiatric symptoms, such as epilepsy and mood disorders. They will develop skills in recognizing signs of comorbidity, interpreting neuroimaging findings, and collaborating with neurologists and other specialists in the management of complex cases.</li> </ul>
		Neurology	<ul style="list-style-type: none"> <li>• Neurological patient assessment: The student will develop practical skills in assessing patients with neurological conditions. They will learn to obtain detailed neurological histories, perform comprehensive neurological examinations, and interpret diagnostic tests such as electroencephalograms (EEGs) and magnetic resonance imaging (MRI). They will gain an understanding of common neurological disorders such as stroke, epilepsy, Parkinson's disease, and multiple sclerosis.</li> <li>• Neurological treatment approaches: During the internship, the student will acquire knowledge and skills related to the treatment of neurological conditions. They will learn about pharmacological interventions, including the use of medications to manage symptoms and slow disease progression. They will also gain an understanding of non-pharmacological approaches, such as physical therapy, occupational therapy, and rehabilitation techniques specific to neurological rehabilitation.</li> <li>• Neurological case management and follow-up: The student will have the opportunity to participate in the management and follow-up of neurological cases. They will learn how to develop comprehensive treatment plans, monitor patient progress, and make necessary adjustments to optimize outcomes. They will also gain experience in collaborating with multidisciplinary teams and providing ongoing support to patients and their families.</li> </ul>
		Internal medicine	<ul style="list-style-type: none"> <li>• Patient evaluation and medical history taking: The student will develop practical skills in conducting patient evaluations and taking comprehensive medical histories. They will learn to gather relevant information, assess patients' overall health, and identify risk factors and medical conditions that require further investigation.</li> <li>• Diagnostic reasoning and interpretation: During the internship, the student will acquire knowledge and skills in diagnostic reasoning and interpretation of clinical data. They will learn to analyze laboratory results, imaging studies, and other diagnostic tests to reach accurate diagnoses and formulate appropriate treatment plans.</li> <li>• Disease management and treatment: The student will gain practical knowledge in managing a wide range of medical conditions commonly encountered in internal medicine. They will learn about evidence-based treatment guidelines, pharmacological interventions, and non-pharmacological approaches for conditions such as cardiovascular diseases, respiratory disorders, gastrointestinal disorders, and endocrine disorders.</li> <li>• Multidisciplinary collaboration and patient care coordination: The student will have the opportunity to collaborate with various healthcare professionals and participate in multidisciplinary care teams. They will learn effective communication and teamwork skills to ensure coordinated and comprehensive patient care.</li> </ul>
		Neurosurgery	<ul style="list-style-type: none"> <li>• Surgical patient assessment: The student will develop practical skills in assessing patients requiring neurosurgical intervention. They will learn to obtain detailed neurosurgical histories, perform neurological examinations, and interpret diagnostic imaging, such as CT scans and MRI scans. They will gain an understanding of various neurosurgical conditions, including brain tumors, spinal disorders, vascular abnormalities, and traumatic brain injuries.</li> <li>• Surgical techniques and procedures: During the internship, the student will acquire knowledge and skills related to neurosurgical techniques and procedures. They will learn about different surgical approaches, instrument</li> </ul>

Year	Semester	Internship	Skills
Fifth	Second		<p>handling, and suturing techniques specific to neurosurgery. They will also gain an understanding of intraoperative monitoring, anesthesia considerations, and postoperative care for neurosurgical patients.</p> <ul style="list-style-type: none"> <li>• Patient management and postoperative care: The student will have the opportunity to participate in the management and postoperative care of neurosurgical patients. They will learn to develop treatment plans, manage pain, monitor neurological status, and recognize and manage complications. They will also gain experience in collaborating with the healthcare team to ensure optimal patient outcomes.</li> </ul>
		General surgery	<ul style="list-style-type: none"> <li>• Preoperative patient assessment: The student will develop practical skills in assessing patients prior to undergoing general surgery procedures. They will learn to obtain detailed surgical histories, perform physical examinations, and interpret diagnostic tests to determine the patient's fitness for surgery and identify any potential risks or contraindications.</li> <li>• Surgical techniques and procedures: During the internship, the student will acquire knowledge and skills related to various general surgery techniques and procedures. They will learn about principles of aseptic technique, wound closure methods, and proper instrument handling. They will also gain an understanding of common general surgery procedures such as appendectomy, cholecystectomy, hernia repair, and gastrointestinal surgeries.</li> <li>• Perioperative patient care: The student will have the opportunity to participate in perioperative patient care, including preoperative preparation, intraoperative assistance, and postoperative management. They will learn about anesthesia considerations, surgical site preparation, sterile draping, and infection prevention protocols. They will also gain experience in monitoring patients during surgery, assisting in the operating room, and providing postoperative care and pain management.</li> </ul>
		Digital health	<ul style="list-style-type: none"> <li>• Health technology assessment: The student will develop skills in evaluating and assessing health technologies used in digital health. They will learn to analyze the effectiveness, usability, and safety of digital health tools, such as mobile applications, wearable devices, and telemedicine platforms. They will gain an understanding of regulatory considerations and standards in digital health.</li> <li>• Data analysis and interpretation: During the internship, the student will acquire knowledge and skills in analyzing and interpreting health data generated through digital health platforms. They will learn about data management, data privacy and security, and techniques for extracting meaningful insights from large datasets. They will also gain experience in data visualization and reporting to facilitate decision-making and improve patient outcomes.</li> <li>• Digital health implementation and integration: The student will have the opportunity to learn about the implementation and integration of digital health technologies in healthcare settings. They will gain knowledge of project management principles, change management strategies, and user adoption considerations. They will also develop skills in collaborating with healthcare professionals and stakeholders to facilitate the successful adoption and integration of digital health solutions.</li> </ul>
		Pediatrics	<ul style="list-style-type: none"> <li>• Pediatric patient assessment: The student will develop practical skills in assessing pediatric patients. They will learn age-appropriate history taking techniques, conduct physical examinations specific to pediatrics, and interpret growth and development charts. They will gain an understanding of normal child development, milestones, and age-related variations in pediatric health.</li> <li>• Pediatric disease management: During the internship, the student will acquire knowledge and skills in managing common pediatric diseases and conditions. They will learn about evidence-based guidelines for the diagnosis and treatment of pediatric illnesses, such as respiratory infections, gastrointestinal disorders, allergies, and common childhood chronic conditions. They will also gain an understanding of vaccination schedules and preventive healthcare in pediatrics.</li> <li>• Pediatric patient communication and family-centered care: The student will have the opportunity to develop effective communication skills when interacting with pediatric patients and their families. They will learn to explain medical information in a child-friendly manner, address parental concerns, and promote family-centered care. They will also gain skills in building rapport, establishing trust, and fostering a supportive and caring environment for pediatric patients and their families.</li> </ul>
		Obstetrics and gynecology	<ul style="list-style-type: none"> <li>• Prenatal care and assessment: The student will develop practical skills in providing prenatal care to pregnant women. They will learn to conduct prenatal visits, perform obstetric examinations, and interpret prenatal tests and ultrasounds. They will gain an understanding of antenatal risk assessment, monitoring fetal development, and identifying high-risk pregnancies.</li> <li>• Labor and delivery management: During the internship, the student will acquire knowledge and skills related to labor and delivery management. They will learn about the stages of labor, obstetric emergencies, and techniques for monitoring maternal and fetal well-being during childbirth. They will also gain experience in observing vaginal deliveries, cesarean sections, and postpartum care.</li> <li>• Gynecological examinations and procedures: The student will have the opportunity to observe and practice gynecological examinations and procedures.</li> </ul>



Year	Semester	Internship	Skills
			They will develop skills in performing pelvic examinations, Pap smears, and breast examinations. They will also gain knowledge of common gynecological conditions, such as menstrual disorders, contraceptive methods, and common gynecological surgeries.
		Medical oncology	<ul style="list-style-type: none"> <li>• Cancer patient evaluation: The student will develop practical skills in evaluating cancer patients. They will learn to obtain detailed oncological histories, perform physical examinations with a focus on cancer-specific findings, and interpret diagnostic tests such as imaging studies and laboratory investigations. They will gain an understanding of different cancer types, staging systems, and prognostic factors.</li> <li>• Treatment planning and management: During the internship, the student will acquire knowledge and skills related to the planning and management of cancer treatments. They will learn about various treatment modalities, including chemotherapy, targeted therapy, immunotherapy, and radiation therapy. They will also gain an understanding of treatment regimens, supportive care strategies, and side effect management.</li> <li>• Multidisciplinary collaboration and patient support: The student will have the opportunity to collaborate with multidisciplinary teams involved in cancer care, including surgical oncologists, radiation oncologists, and palliative care specialists. They will learn effective communication and teamwork skills to ensure coordinated and comprehensive patient care. They will also gain experience in providing emotional support to patients and their families, addressing their concerns, and facilitating access to supportive services.</li> </ul>
		Blood diseases	<ul style="list-style-type: none"> <li>• Diagnostic Proficiency: Students will develop expertise in the accurate diagnosis of various blood disorders. They will learn to interpret blood tests, analyze bone marrow samples, and utilize diagnostic imaging techniques relevant to hematological conditions. Through hands-on experience, they will gain confidence in identifying specific abnormalities and understanding their implications for patient care.</li> <li>• Treatment Strategies: Students will familiarize themselves with a range of treatment modalities used in the management of blood diseases. They will learn about the principles and indications of chemotherapy, targeted therapies, immunotherapies, and stem cell transplantation. They will also gain insight into supportive care measures, including transfusion medicine and infection prevention, which play crucial roles in optimizing patient outcomes.</li> <li>• Multidisciplinary Collaboration: Students will understand the importance of a multidisciplinary approach in the care of patients with blood diseases. They will have the opportunity to collaborate with hematologists, oncologists, pathologists, and other healthcare professionals, learning effective communication and teamwork skills. This collaborative environment will enhance their ability to provide comprehensive and holistic care to patients, considering both medical and psychosocial aspects.</li> </ul>
		Pediatric and child surgery	<ul style="list-style-type: none"> <li>• Pediatric patient assessment: The student will develop practical skills in assessing pediatric surgical patients. They will learn to obtain detailed pediatric surgical histories, perform age-appropriate physical examinations, and interpret diagnostic imaging specific to pediatric surgical conditions. They will gain an understanding of anatomical and physiological differences in pediatric patients and their implications for surgical management.</li> <li>• Pediatric surgical procedures: During the internship, the student will acquire knowledge and skills related to various pediatric surgical procedures. They will learn about common pediatric surgical conditions, such as congenital anomalies, appendicitis, hernias, and gastrointestinal disorders requiring surgical intervention. They will also gain an understanding of surgical techniques and considerations specific to pediatric patients, including minimally invasive surgery and postoperative care in children.</li> <li>• Perioperative care and family-centered support: The student will have the opportunity to participate in perioperative care and provide family-centered support to pediatric surgical patients and their families. They will learn about preoperative preparation, anesthesia considerations, pain management, and postoperative monitoring. They will also develop skills in communicating with pediatric patients and their families, addressing their concerns, and providing age-appropriate explanations and support.</li> </ul>
		Anatomopathology	<ul style="list-style-type: none"> <li>• Tissue specimen processing and gross examination: The student will develop practical skills in the processing and gross examination of tissue specimens in anatomical pathology. They will learn techniques for tissue fixation, embedding, sectioning, and staining. They will also gain an understanding of macroscopic examination to identify abnormalities and prepare specimens for further microscopic analysis.</li> <li>• Microscopic examination and diagnosis: During the internship, the student will acquire knowledge and skills in microscopic examination of tissue sections to make accurate diagnoses. They will learn to use light microscopy and other specialized techniques to analyze cellular structures and identify pathological changes indicative of various diseases and conditions. They will also gain an understanding of histological patterns, tumor grading, and ancillary tests used in anatomical pathology.</li> </ul>

Year	Semester	Internship	Skills
			<ul style="list-style-type: none"> <li>• Interpretation and reporting: The student will have the opportunity to interpret microscopic findings and prepare comprehensive pathology reports. They will learn to effectively communicate their observations, diagnoses, and recommendations to healthcare providers involved in patient care. They will also gain experience in quality assurance, data management, and adherence to standard operating procedures in anatomical pathology.</li> </ul>
Sixth	First	Emergency medicine	<ul style="list-style-type: none"> <li>• Emergency patient assessment: The student will develop practical skills in assessing and triaging patients in the emergency department. They will learn to obtain focused and efficient histories, perform rapid physical examinations, and prioritize care based on the severity of conditions. They will gain an understanding of emergency protocols, including initial stabilization and resuscitation techniques.</li> <li>• Acute care management: During the internship, the student will acquire knowledge and skills related to the management of acute medical and traumatic conditions in the emergency setting. They will learn about common emergency presentations, such as chest pain, shortness of breath, trauma, and altered mental status. They will also gain an understanding of diagnostic approaches, treatment algorithms, and emergency procedures relevant to emergency medicine.</li> <li>• Emergency procedures and interventions: The student will have the opportunity to learn and practice essential emergency procedures and interventions. They will develop skills in venous access, airway management, wound care, fracture immobilization, and basic resuscitation techniques. They will also gain experience in interpreting basic diagnostic tests, such as electrocardiograms (ECGs) and imaging studies, to aid in patient management decisions.</li> </ul>
		Internal medicine	<ul style="list-style-type: none"> <li>• Comprehensive patient assessment: The student will develop practical skills in conducting comprehensive assessments of adult patients in the field of internal medicine. They will learn to obtain detailed medical histories, perform thorough physical examinations, and interpret diagnostic tests and laboratory results. They will gain an understanding of age-related variations in disease presentation and the importance of patient-centered care.</li> <li>• Diagnosis and treatment planning: During the internship, the student will acquire knowledge and skills related to the diagnosis and management of common medical conditions seen in internal medicine. They will learn to apply evidence-based guidelines and clinical reasoning to formulate accurate diagnoses and develop appropriate treatment plans. They will also gain an understanding of medication management, lifestyle modifications, and preventive healthcare strategies.</li> <li>• Continuity of care and interdisciplinary collaboration: The student will have the opportunity to participate in the continuity of care for patients with chronic medical conditions. They will learn effective communication and collaboration skills to work alongside specialists, nurses, pharmacists, and other healthcare professionals involved in the care of internal medicine patients. They will also gain experience in coordinating follow-up care, managing transitions of care, and facilitating patient education and self-management.</li> </ul>
		Plastic surgery	<ul style="list-style-type: none"> <li>• Patient evaluation and consultation: The student will develop practical skills in evaluating and consulting with patients seeking plastic surgery procedures. They will learn to obtain detailed aesthetic and medical histories, perform focused physical examinations, and assess patient expectations and goals. They will gain an understanding of patient selection criteria, informed consent processes, and ethical considerations in plastic surgery.</li> <li>• Surgical procedures and techniques: During the internship, the student will acquire knowledge and skills related to various plastic surgery procedures. They will learn about aesthetic and reconstructive surgical techniques, including breast augmentation, facelifts, rhinoplasty, liposuction, and tissue reconstruction. They will also gain an understanding of wound closure techniques, suturing methods, and postoperative care specific to plastic surgery.</li> <li>• Interdisciplinary collaboration and patient care: The student will have the opportunity to collaborate with multidisciplinary teams involved in plastic surgery care. They will learn effective communication and teamwork skills to ensure coordinated patient care, particularly in cases requiring reconstructive procedures after trauma or cancer treatment. They will also gain experience in preoperative and postoperative patient management, including wound care, pain management, and patient education.</li> </ul>
		General surgery	<ul style="list-style-type: none"> <li>• Surgical patient assessment: The student will develop practical skills in assessing patients requiring general surgery interventions. They will learn to obtain comprehensive surgical histories, perform thorough physical examinations, and interpret relevant diagnostic tests and imaging studies. They will gain an understanding of surgical indications, patient risk stratification, and preoperative assessment protocols.</li> <li>• Surgical procedures and techniques: During the internship, the student will acquire knowledge and skills related to various general surgical procedures. They will learn about common procedures such as appendectomy, cholecystectomy, hernia repair, and bowel resection. They will also gain an understanding of surgical techniques, wound closure methods, and intraoperative decision-making in general surgery.</li> </ul>

Year	Semester	Internship	Skills
			<ul style="list-style-type: none"> <li>• Perioperative care and postoperative management: The student will have the opportunity to participate in perioperative care and postoperative management of surgical patients. They will learn about preoperative optimization, anesthesia considerations, intraoperative monitoring, and postoperative complications. They will also gain experience in postoperative wound care, pain management, and patient education for discharge planning.</li> </ul>
		Forensic medicine	<ul style="list-style-type: none"> <li>• Forensic autopsy and examination: The student will learn the proper techniques for handling and examining deceased individuals, including the collection of relevant samples and documentation of findings. They will gain an understanding of the medicolegal aspects of autopsies, including the determination of cause and manner of death.</li> <li>• Forensic evidence collection and analysis: During the internship, the student will acquire knowledge and skills related to the collection and analysis of forensic evidence. They will learn about techniques for gathering and preserving evidence from crime scenes, including biological samples, fingerprints, and trace evidence. They will also gain an understanding of laboratory analysis methods used in forensic medicine, such as DNA profiling and toxicology testing.</li> <li>• Medicolegal documentation and reporting: The student will have the opportunity to develop skills in documenting and reporting forensic findings. They will learn the proper methods for preparing medicolegal reports, including accurate and concise descriptions of autopsy findings and evidence analysis. They will also gain an understanding of the role of forensic medicine in legal proceedings and court testimony.</li> </ul>
		Occupational medicine	<ul style="list-style-type: none"> <li>• Workplace assessment and hazard identification: The student will develop skills in assessing workplace environments and identifying potential occupational hazards. They will learn to conduct inspections, analyze work processes, and evaluate ergonomic factors. They will gain an understanding of occupational safety regulations and the importance of hazard prevention and control.</li> <li>• Occupational health screening and surveillance: During the internship, the student will acquire knowledge and skills related to occupational health screening and surveillance. They will learn about various screening methods, such as medical history reviews, physical examinations, and diagnostic tests, to identify work-related health conditions. They will also gain an understanding of the principles of health surveillance and its role in monitoring and preventing occupational illnesses.</li> <li>• Occupational health promotion and education: The student will have the opportunity to participate in occupational health promotion initiatives. They will learn about strategies to promote employee well-being, prevent occupational injuries and illnesses, and improve workplace safety culture. They will also gain experience in developing educational materials and conducting training sessions on occupational health topics.</li> </ul>
Sixth	Second	Qualifying internship in internal medicine as per specific regulations	<ul style="list-style-type: none"> <li>• Comprehensive patient assessment: The student will develop proficiency in conducting thorough patient assessments, including obtaining detailed medical histories, performing comprehensive physical examinations, and ordering and interpreting relevant diagnostic tests. They will learn to identify common signs and symptoms of various medical conditions and develop differential diagnoses.</li> <li>• Diagnosis and treatment planning: During the internship, the student will enhance their diagnostic skills and gain experience in formulating accurate diagnoses based on clinical findings and diagnostic test results. They will learn to develop evidence-based treatment plans, including medication management, lifestyle modifications, and referrals to specialists when necessary.</li> <li>• Patient management and continuity of care: The student will have the opportunity to participate in the management of patients with various medical conditions. They will learn to monitor patients' progress, adjust treatment plans as needed, and provide ongoing care and support. They will also gain experience in coordinating with other healthcare professionals to ensure continuity of care, including effective communication and collaboration within interdisciplinary teams.</li> </ul>
		Qualifying internship in general surgery as per specific regulations	<ul style="list-style-type: none"> <li>• Surgical patient assessment and management: The student will develop proficiency in evaluating surgical patients, obtaining comprehensive medical histories, performing focused physical examinations, and ordering appropriate diagnostic tests. They will learn to assess surgical risks, develop preoperative management plans, and make decisions regarding surgical interventions.</li> <li>• Surgical procedures and techniques: During the internship, the student will gain hands-on experience in various general surgical procedures. They will learn about common surgeries, such as appendectomy, cholecystectomy, hernia repair, and bowel resection, and become familiar with surgical techniques, instrument handling, and suturing methods. They will also participate in the perioperative care of surgical patients.</li> <li>• Postoperative care and follow-up: The student will have the opportunity to be involved in postoperative care, including wound care, pain management, and monitoring patients' recovery. They will learn to recognize and manage postoperative complications, perform routine postoperative assessments, and educate patients on postoperative instructions and follow-up care.</li> </ul>

Year	Semester	Internship	Skills
		Qualifying internship in general medicine as per specific regulations	<ul style="list-style-type: none"> <li>Comprehensive patient assessment and diagnosis: The student will develop skills in conducting thorough patient assessments, including obtaining detailed medical histories, performing comprehensive physical examinations, and interpreting diagnostic tests. They will learn to formulate accurate diagnoses based on clinical findings and evidence-based medicine principles.</li> <li>Disease management and treatment planning: During the internship, the student will gain experience in managing patients with a wide range of medical conditions. They will learn to develop and implement evidence-based treatment plans, including medication management, lifestyle modifications, and referrals to specialists when necessary. They will also learn to monitor patients' progress and make appropriate adjustments to the treatment plan.</li> <li>Continuity of care and patient education: The student will have the opportunity to provide ongoing care to patients and ensure continuity of care across different healthcare settings. They will learn to communicate effectively with patients and their families, educate them about their conditions and treatment options, and involve them in shared decision-making. They will also gain experience in coordinating care with other healthcare professionals and engaging in interdisciplinary teamwork.</li> <li>Please note that the specific tasks and responsibilities within a qualifying internship in general medicine may vary depending on the program, institution, and the student's level of training and expertise.</li> </ul>

## MINIMUM SKILLS SET

### Integrated Medical Sciences Internship (first and second year)

At the end of the period, the student must possess the following minimum skills set:

- EHR Familiarity and Data Entry:** Students should be comfortable with navigating electronic health record systems, searching for patient information, and accurately inputting data. They should understand the basic functions of EHR platforms and know how to enter patient demographics and medical history into health information systems.
- Basic Laboratory Skills:** Students should acquire fundamental laboratory skills used in biochemistry, such as pipetting, measuring solutions, and conducting simple experiments. They should learn to handle lab equipment safely, follow protocols accurately, and record experimental procedures, observations, and results.
- Practical Physiology Techniques:** Students should develop practical skills for conducting simple physiological experiments using commonly available laboratory equipment. This includes measuring vital signs, performing basic tissue and organ dissections, and using physiological recording instruments.
- Introduction to Biomedical Device Design:** Students should gain introductory knowledge and experience in designing and prototyping biomedical devices. They should learn how to use specialized software and tools to create basic 3D models and gain an understanding of rapid prototyping techniques. Additionally, they should be introduced to the concept of assessing the biocompatibility of materials used in biomedical engineering.

### Nursing (third year)

At the end of the period, the student must possess the following minimum skills set:

- Vital Sign Measurement:** Students should be proficient in measuring blood pressure, heart rate, respiratory rate, and temperature.
- Blood Glucose Measurement:** Students should learn how to perform fast blood glucose measurements.
- Application of Topical Therapies:** Students should acquire skills in applying topical therapies for various conditions.
- Injections and Blood Sampling:** Students should be able to administer intramuscular, intradermal, and subcutaneous injections, as well as perform venous blood sampling.

5. Wound Care: Students should gain knowledge and practice in wound cleaning and/or post-surgical dressings.
6. Bladder Catheter Bag Replacement: Students should learn how to replace bladder catheter bags.
7. Patient Cleansing: Students should develop skills in assisting with patient cleansing.
8. Intravenous Line Maintenance: Students should be able to replace intravenous lines and prepare medications for administration.
9. Swab Collection: Students should become familiar with collecting tonsillar and/or rhinopharyngeal swabs.

### Medicine, Surgery and Advanced Technologies (third and fourth year)

At the end of the period, the student must possess the following minimum skills set:

1. Medical History Taking: Students should be proficient in eliciting comprehensive medical histories from patients, including relevant past medical, surgical, and family history, as well as gathering information about present illness and chief complaints.
2. Physical Examination Techniques: Students should be familiar with and able to perform key physical examination techniques, such as inspection, palpation, percussion, and auscultation for various body systems, including cardiovascular, respiratory, gastrointestinal, and neurological.
3. Medical Documentation and Charting: Students should have a solid understanding of medical documentation principles and be able to accurately record patient encounters, including relevant findings, assessments, and treatment plans, using appropriate medical terminology and standardized formats.
4. Basic Laboratory Interpretation: Students should be able to interpret common laboratory tests, such as complete blood counts, basic metabolic panels, and urinalysis, and understand their implications for patient diagnosis and management.
5. Medication Knowledge: Students should possess a fundamental understanding of commonly used medications, including their indications, contraindications, dosages, routes of administration, and potential side effects.
6. Infection Control and Universal Precautions: Students should have a thorough understanding of infection control principles, including hand hygiene, personal protective equipment (PPE) usage, and standard precautions to prevent the transmission of infectious diseases.
7. Ethical and Legal Considerations: Students should have a solid foundation in medical ethics and legal principles, including patient confidentiality, informed consent, and understanding the boundaries of their professional responsibilities.
8. Effective Communication Skills: Students should be able to communicate effectively with patients, families, and colleagues, demonstrating empathy, active listening, and clear and concise expression of medical information.

### Clinical Expertise, Surgical Proficiency, and Services-Oriented Skills (fifth and sixth year)

At the end of the period, the student must possess the following minimum skills set:

1. Understanding of diagnostic approaches and patient care strategies specific to each discipline.
2. Exposure to advanced surgical techniques and post-operative care in specialties such as neurosurgery, general surgery, plastic surgery, and orthopedics.
3. Skills in health informatics and digital health tools for managing patient data and conducting remote consultations.

4. Familiarity with laboratory medicine, imaging diagnostics, and anatomopathology for diagnostic interpretation.
5. Knowledge of occupational medicine, forensic medicine, and public health principles.
6. Ability to integrate clinical, surgical, and services-oriented learnings to provide comprehensive patient care.
7. Effective communication and collaboration skills with interdisciplinary healthcare teams.