

# RCR

## Residency in Cardiology

(Edition 2023)

### First Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4276	Research and Innovation Methodology	1.5	0	6	1.5	6	1.8
ME4277	Medical Bioethics	1.5	0	6	1.5	6	1.8
ME4312	Pathophysiological Bases in Clinical Cardiology	3	0	12	3	12	3.5
ME4313	Cardiovascular Emergency Care Clinic	0	60	12	3	60	3.5
		6	60	36	9	84	10.6

### Second Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4314	Etiopathogenic Bases in Clinical Cardiology	3	0	12	3	12	3.5
ME4315	Hospitalization and Cardiovascular Emergencies	0	60	12	3	60	3.5
OP4047	Quality Development Course	3	0	12	3	12	0
		6	60	36	9	84	7

### Third Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4283	Applied Statistics	1.5	0	6	1.5	6	1.8
ME4316	Echocardiography and Non-Invasive Studies	3	0	12	3	12	3.5
ME4317	Cardiovascular Intensive Therapy	0	60	12	3	60	3.5
OP5099	Innovation and Health Education Elective	1.5	0	6	1.5	6	0
		6	60	36	9	84	8.8

### Fourth Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4280	Applied Research Project I	1.5	0	6	1.5	6	1.8
ME5369	Advanced Cardiovascular Imaging	3	0	12	3	12	3.5
ME5370	Intensive Therapy and Coronary Unit	0	60	12	3	60	3.5
		4.5	60	30	7.5	78	8.8

### Fifth Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4286	Scientific Writing and Analysis Workshop	1.5	0	6	1.5	6	1.8
ME5333	Elective for Attention and Rotation in Subspecialty I	0	30	6	1.5	30	1.8
ME5371	Cardiac Electrophysiology	3	0	12	3	12	3.5
ME5372	High Specialty Ambulatory Consultation in Cardiology I	0	30	6	1.5	6	1.8
		4.5	60	30	7.5	54	8.9

### Sixth Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4287	Applied Research Project II	1.5	0	6	1.5	6	1.8
ME5336	Elective for Attention and Rotation in Subspecialty II	0	30	6	1.5	30	1.8
ME5373	Hemodynamics and Interventional Cardiology	3	0	12	3	12	3.5
ME5374	High Specialty Ambulatory Consultation in Cardiology II	0	30	6	1.5	6	1.8

## Academic credits

4.5 60 30 7.5 54 8.9

- CL** The letter "CL" indicates the number of class-hours per week.
- L** The letter "L" indicates the number of laboratory-hours per week.
- U** The letter "U" represents the equivalent time in courses lasting 15 weeks (semester) and 12 weeks (trimester), of weekly work that the student dedicates to the course to meet its objectives. They include the "class hours", as well as the time dedicated to the student's independent work.
- CA** The letters "CA" represents the number of semester credit hour of the course.
- HT** Total hours
- UDC** Load Units

## **Program Outcomes**

### **Justification**

Cardiovascular diseases are the main cause of death in the Mexican population, and it is one of the main causes of work disability and economic loss. For this reason, specialists who are experts in the detection of cardiovascular risk factors and who have sufficient skills for early diagnosis, risk stratification, and effective treatment are required.

High-quality cardiological medical care requires, in addition to solid scientific knowledge, a commitment to the social, political, economic, and cultural development of the community where the cardiology professional works. In accordance with the foregoing and in accordance with the Mission and Vision of the Tecnológico de Monterrey, the Specialty in Cardiology seeks to train professionals through a teaching model of assistance, medical education, and high-level research. The objective is to generate learning, generation of new knowledge, capacities, and international competences. Without losing sight of the fact that the profile of the graduated cardiologist includes a performance strictly attached to integrity, ethics and with respect for human dignity and life.

### **Program Objective**

The Specialty in Cardiology at the Tecnológico de Monterrey aims to train excellent medical specialists, who attend to the needs of cardiological health with quality and safety, in public and private settings. Likewise, train people of integrity, who exercise their clinical, teaching and research practice with a human sense and strict adherence to ethical principles and professionalism.

The Cardiology Specialists who graduate from this institution are outstanding leaders at the local and international levels, who generate innovation with new diagnostic and therapeutic methodologies and technologies, and programs for the timely detection of diseases in the population under their competence.

### **Target Audience**

The Cardiology Program of the Tecnológico de Monterrey is aimed at graduates of the Specialty in Internal Medicine, or who have accredited at least two years of Internal Medicine and who have excellent academic performance, with a vocation and express interest in the discipline, with a committed innovative spirit. with continuous learning, with a genuine interest in research and teaching.

To be admitted to the Cardiology Program, the applicant must have a Surgeon degree, average equal to or greater than 80, completed social service and have accredited at least two years of Internal Medicine.

In addition, candidates must meet the requirements for admission to master's studies at Tecnológico de Monterrey, which are:

- Logical reasoning exam PAEP (Postgraduate Studies Admission Test).
- TOEFL English exam (Test of English as a Foreign Language).
- Psychometric exam, which demonstrates characteristics of the student's profile suitable for the specialty and emotional stability.

Candidates must also have passed the ENARM (national exam for applicants to medical residencies) and undergo an interview with the academic faculty of professors. During the latter, the applicant's curriculum is evaluated, giving higher scores to those who have participated as authors or co-authors of published works, exhibition of works in congresses, leadership activities and social participation. All these are characteristics that candidates to enter the specialty must have.

### **Admission Profile**

The Cardiology Program of the Tecnológico de Monterrey is aimed at graduates of the Specialty in Internal Medicine, or who have accredited at least two years of Internal Medicine and who have excellent academic performance, with a vocation and express interest in the discipline, with a committed innovative spirit. with continuous learning, with a genuine interest in research and teaching.

To enter the program, applicants must satisfactorily meet the requirements established by the Tecnológico de Monterrey and the Secretary of Health of Nuevo León for postgraduate admission.

### **Graduate Profile**

Through this academic-care program, the graduate of the Specialty in Cardiology will be able to:

#### **KNOWLEDGE**

- Acquire the medical foundations in quality Clinical Cardiology taking into account the updated pathophysiological, biomolecular and clinical bases.

**SKILLS**

- Provide care and medical care to patients with cardiovascular diseases.
- Carry out the analysis, research and evaluation of the new evidence that emanates through clinical guidelines and phase III research studies.
- Effective and safe intervention through diagnostic and therapeutic procedures in the different subspecialties of Cardiology.

**ATTITUDES**

- Effective communication with patients, families, teachers, colleagues, and the entire multidisciplinary team for health care.
- Act with commitment and responsibility during their professional performance, strictly following the ethical principles of the profession.
- Positively influence the different health systems where they work, to improve the quality of care for patients with cardiovascular diseases.

**Research Areas**

The program has research areas whose objective is to answer research questions in relation to health problems of the first order in our country, aligned with the study plan and profile of the graduate. It seeks to obtain research results with critical scientific reasoning, clearly establishing their potential application, as well as each of their limitations and areas of opportunity. Based on these research areas, residents develop their thesis and other scientific products of the program.

The current research areas of the Specialty in Cardiology are:

- Therapeutic approach in octogenarians with acute coronary syndrome or aortic stenosis.
- Cardiovascular imaging and advanced coronary disease.
- Thrombosis in cardiovascular disease.

Campus that offer this program

<b>Campus</b>	<b>Number of periods offered</b>	<b>From</b>	<b>Closed for new students</b>
<b>Monterrey</b>	Complete	Resid Espec Mar-Aug 2023	

**Last update:** 28/June/2022

## Graduate Requirements

To obtain a specialty degree, a master's degree or Ph. D. degree at Tecnológico de Monterrey, students are required to:

1. Have completely finished the undergraduate cycle prior to passing the first course in the curriculum of the specialty, master program, medical residency, or doctoral program.
2. Have fulfilled, in compliance with existing standards, the academic prerequisites of the corresponding program, through proficiency tests or the corresponding remedial courses.
3. Have obtained a bachelor degree—with the antecedent of high school or its equivalent—that is equivalent to those offered by Tecnológico de Monterrey.
4. Have covered all the courses in the given curriculum, either by passing the courses at Tecnológico de Monterrey or by obtaining revalidation or equivalence agreements—in compliance with the standards—corresponding to part of the courses taken at other institutions, and passed the remaining courses at Tecnológico de Monterrey. Courses taken at foreign universities with which there are agreements are considered, for the effects of this article, as courses taken at Tecnológico de Monterrey, as long as they do not exceed a set percentage of the curriculum established by each graduate program.
5. In those curricula that so specify, to have prepared a research project or thesis that, having been defended before an academic committee, has been approved by said committee.
6. Have taken at least the equivalent of the second half of the corresponding curriculum at Tecnológico de Monterrey, in the case of students with revalidation or equivalence agreements at this level. Flexibility may be exercised in this standard in graduate programs that, under agreement, may be established jointly with other universities.