

REU

Residency in Neurology

(Edition 2013)

First Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4140	Clinical Ethics	1.5	0	6	1.5	6	1.8
ME4142	Quality Health Care	1.5	0	6	1.5	6	1.8
ME4214	Neurology I	3	0	12	3	12	3.5
ME4215	Medical Care in Neurology I	0	60	12	3	60	3.5
		6	60	36	9	84	10.6

Second Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4141	Health Sciences Education	1.5	0	6	1.5	6	1.8
ME4143	Research and Innovation Methods	1.5	0	6	1.5	6	1.8
ME4216	Neurology II	3	0	12	3	12	3.5
ME4217	Medical Care in Neurology II	0	60	12	3	60	3.5
		6	60	36	9	84	10.6

Third Semester

Code	Name	CL	L	U	CA	HT	UDC
ME4144	Thesis Project I	3	0	12	3	12	0
ME4218	Neurology III	3	0	12	3	12	3.5
ME4219	Medical Care in Neurology III	0	60	12	3	60	3.5
		6	60	36	9	84	7

Fourth Semester

Code	Name	CL	L	U	CA	HT	UDC
ME5190	Thesis Project II	3	0	12	3	12	
ME5267	Neurology IV	3	0	12	3	12	3.5
ME5268	Medical Care in Neurology IV	0	60	12	3	60	
		6	60	36	9	84	3.5

Fifth Semester

Code	Name	CL	L	U	CA	HT	UDC
ME5191	Elective Specialty I	0	30	6	1.5	30	
ME5269	Neurology V	3	0	12	3	12	3.5
ME5270	Medical Care in Neurology V	0	30	6	1.5	30	1.8
		3	60	24	6	72	5.3

Sixth Semester

Code	Name	CL	L	U	CA	HT	UDC
ME5192	Elective Specialty II	0	30	6	1.5	30	
ME5266	Thesis Defense	0	0	1	.3	0	
ME5271	Neurology VI	3	0	12	3	12	3.5
ME5272	Medical Care in Neurology VI	0	30	6	1.5	30	1.8
		3	60	25	6.3	72	5.3

Academic credits

- 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 and Learning Outcomes

General Program Objectives

The aim of the Residency in Neurology of Tecnológico de Monterrey is to train exceptional Neurologists, who meet the needs of patients with neurological pathologies, according to the highest quality and safety standards, in both inpatient and outpatient settings. It also seeks to prepare individuals with integrity and a humanistic outlook in their clinical, teaching and research practices, while strictly adhering to ethical principles and the standards of professional practice. Neurologists who graduate from this institution are internationally competitive leaders, who contribute to the generation of knowledge on the frontiers of Neurology and transfer this knowledge through teaching. They are also committed to lifelong learning in medicine.

Learning Outcomes

On completing the program, students will be able to:

- Diagnose, treat and promote the health of patients with neurological diseases in a comprehensive, effective manner on the basis of scientific evidence, using resources appropriately, demonstrating research- and analysis-oriented thought, with knowledge and applications specific to basic and clinical neurological sciences in the face of clinical situations;
- Respect the dignity of human beings and the ethical principles of their profession as neurologists; Effectively coordinate the healthcare team that participates in the clinical, rehabilitation and palliative care of the patient with neurological disorders;
- Apply their knowledge to the planning, design, statistical analysis, discussion, conclusion and publication of clinical studies aimed at assessing diagnostic and therapeutic effectiveness in their specialization;
- Participate in the development of clinical research and basic protocols, particularly in the areas of abnormal movements, neurodegenerative diseases and neoplasia of the central nervous system;
- Communicate their knowledge effectively to patients, family members and medical colleagues, as well as to other healthcare professionals, displaying an attitude of information, listening, caring, compassion and respect toward the patient and his or her family members, including the patient's preference in the formulation of disease management plans and practicing their specialty in a cost efficient manner, without compromising the quality of the care provided.

Target Audience

The Residency in Neurology program of Tecnológico de Monterrey is aimed at doctors who have a deep sense of social responsibility; are willing to receive new knowledge; have the capacity and the desire to acquire skills to seek knowledge in the area of neurological science and, subsequently, the capacity to generate new knowledge within this branch of neuroscience.

In order to be admitted to the Residency in Neurology of Tecnológico de Monterrey, applicants must satisfactorily meet the graduate admission requirements stipulated by ITESM and the Mexican Ministry of Health.

Program Outcomes

Justification:

Today, neurological disorders comprise a heterogeneous group of problems with the central and peripheral nervous system. The incidence of these disorders is increasing significantly in Mexico because of the inversion of the population pyramid and an increase in life expectancy. Neurodegenerative diseases present the greatest growth among the different disorders because they have age as an important risk factor. In addition, cerebral vascular disease is the third cause of death in Mexico and an important cause of morbidity. It results in high economic costs because of the rehabilitation and social reinsertion it implies (INEGI 2010). To face these challenges, Mexico needs neurological healthcare professionals who are committed to a society that demands quality medical attention and humanistic professionals, in the prevention, diagnosis and treatment of this group of pathologies. The Residency in Neurology responds to this need to train healthcare professionals with the skills and knowledge to make a real contribution. Since its origins, it has been a program focused on training, continuing education and face-to-face innovative teaching, taking into consideration that neurology is one of the branches of medicine that has grown the most over the past decade, both on a diagnostic level and with regard to new lines of basic and clinical research, in the quest to find novel treatments. The Multicentered Residency in Neurology of Tecnológico de Monterrey is staffed by academic personnel and infrastructure of the highest quality. It is an educational model based on excellence and competencies centered on the patient, offered by successful professionals who are experts in teaching, both clinical and experimental. As a result, the participants in the program have all the leading-edge humanistic, technological and methodological support they need to develop their potential and, therefore, stand out regionally, nationally and internationally. This program is directed to those healthcare professionals who wish to do post-graduate training in clinical neurology.

Program objectives

The aim of the Residency in Neurology of Tecnológico de Monterrey is to train exceptional Neurologists, who meet the needs of patients with neurological pathologies, according to the highest quality and safety standards, in both inpatient and outpatient settings. It also seeks to prepare individuals with integrity and a humanistic outlook in their clinical, teaching and research practices, while strictly adhering to ethical principles and the standards of professional practice. Neurologists who graduate from this institution are internationally competitive leaders, who contribute to the generation of knowledge on the frontiers of Neurology and transfer this knowledge through teaching. They are also committed to lifelong learning in medicine.

Learning outcomes

The Residency in Neurology program seeks to train neurologists who are able to:

- Diagnose, treat and promote the health of patients with neurological diseases in a comprehensive, effective manner on the basis of scientific evidence, using resources appropriately, demonstrating research- and analysis-oriented thought, with knowledge and applications specific to basic and clinical neurological sciences in the face of clinical situations;
- Respect the dignity of human beings and the ethical principles of their profession as neurologists; Effectively coordinate the healthcare team that participates in the clinical, rehabilitation and palliative care of the patient with neurological disorders;
- Apply their knowledge to the planning, design, statistical analysis, discussion, conclusion and publication of clinical studies aimed at assessing diagnostic and therapeutic effectiveness in their specialization;
- Participate in the development of clinical research and basic protocols, particularly in the areas of abnormal movements, neurodegenerative diseases and neoplasia of the central nervous system;
- Communicate their knowledge effectively to patients, family members and medical colleagues, as well as to other healthcare professionals, displaying an attitude of information, listening, caring, compassion and respect toward the patient and his or her family members, including the patient's preference in the formulation of disease management plans and practicing their specialty in a cost efficient manner, without compromising the quality of the care provided.

Target audience

The Residency in Neurology of Tecnológico de Monterrey is directed to doctors with a great sense of social responsibility; with a willingness to seek and understand new knowledge; and with the capacity and desire to learn and acquire their own skills in the different areas of the neurological sciences and later to have the capability to generate new knowledge in the field.

For admission to the Residency in Neurology of the School of Medicine and Health Sciences of Tecnológico de Monterrey, candidates must satisfactorily meet all the graduate admissions requirements of Tecnológico de Monterrey and of the Ministry of Health.

Research Areas

Neurodegenerative Diseases. Neurodegenerative diseases are those diseases where there is an increase in cell death processes in different regions of the central nervous system, affecting them chronically and progressively, and producing a variety of symptoms. These diseases, especially Alzheimer's Disease and Parkinson's Disease have a high prevalence in our community, they represent a serious health problem. It is estimated that the number will triple by the year 2030. Currently, they represent the main cause of disability in adults, having a great social impact.

Multiple Sclerosis and other Demyelinating Diseases of the Central Nervous System. Inflammatory demyelinating diseases of the CNS comprise a group of pathologies of autoimmune etiology, of monophasic, recurrent, or progressive

behavior that affect the central nervous system. These include multiple sclerosis, acute disseminated Encephalomyelitis, and Neuromyelitis Optica. Multiple sclerosis is the most prevalent in our country, and it is considered one of the leading causes of physical disability due to non-traumatic causes, affecting approximately 30% of patients after 10 years of suffering from the disease.

Study of Cerebrovascular Diseases. There is a high incidence of diseases that affect the cerebral blood vessels, which represent the fifth cause of disease in our country and the first cause of disability in the world. Due to this, clinical research work has been initiated to evaluate the impact of cerebrovascular disease in our population, through clinical studies of diagnosis and treatment of patients with cerebral circulation affection.

Campus that offer this program

Campus	Number of periods offered	From	Closed for new students
Monterrey	Complete	Resid Espec Mar-Aug 2013	

Last update: 07/December/2012

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.