



MARMARA UNIVERSITY – EASTERN MEDITERRANEAN UNIVERSITY  
INTERNATIONAL MEDICAL SCHOOL



**NERVOUS SYSTEM AND RELATED DISORDERS**

**YEAR 3 COURSE 3**

**December 29th, 2014 – February 27th, 2015**

<b>Coordinator of the Course 3.3</b> Instructor, Dila ŞENER	<b>Coordinator of the Module 3.3</b> Asisst. Prof., Mümtaz GÜRAN
<b>Coordinator of Multidiciplinary Students' Lab.</b> Instructor, Dila ŞENER	<b>Coordinator of Clinical Skill Lab.</b> Asisst. Prof., Canan Zaimoğlu
<b>Coordinator of Assessment Unite</b> Asisst. Prof., Ayşe ÜLGEN, Asisst. Prof., Mümtaz GÜRAN, Instructor, Dila ŞENER	<b>Coordinator of ICS Res. LAB.</b> Asisst. Prof., Ayşe ÜLGEN
<b>Year 3 Coordinators</b> Assoc. Prof., Arzu Akşit İLKİ & Asisst. Prof., Pınar Mega TİBER	
<b>Module Coordinator</b> Assoc. Prof., Özlem SARIKAYA	<b>Introduction to Clinician Skills(ICS) Coordinators</b> Prof., Sibel SAKARYA, Assoc. Prof., Pemra ÜNALAN
<b>Coordinator of Multidiciplinary Students' Lab.</b> Asisst. Prof., Betül KARADEMİR	<b>Coordinator of Assessment Unite</b> Asisst. Prof., Cevdet NACAR
<b>Vice-Chief Coordinators</b>	
<b>Assessment</b> Asisst. Prof., Cevdet NACAR	<b>Students' Affairs</b> Asisst. Prof., Can ERZİK
<b>Chief Coordinator</b> Assoc. Prof., Hasan YANANLI	<b>Coordinator of Medical Education Program Evaluation and Development Commission</b> Prof., Berrak Ç. YEĞEN
<b>Educational Consultant</b> Assoc. Prof., Mehmet Ali GÜLPINAR	
<b>Dean (EMU)</b> Prof., Nahide GÖKÇORA	<b>Dean (MU)</b> Prof., Ömer GÜNAL

## LEARNING OUTCOMES / COMPETENCIES

- A. **Clinical Care: Qualified patient care and community oriented health care**
  - 1. Basic clinical skills
  - 2. The organization and management of the patient and the patient care
  - 3. The organization and the management of health care delivery services / system
  - 4. Health promotion and disease prevention
- B. **Medical Knowledge and Evidence-Based Medicine**
  - 5. Appropriate information retrieval and management skills
  - 6. The integration of knowledge, critical thinking and evidence-based decision making
  - 7. Scientific methods and basic research skills
- C. **Professional Attitudes and Values**
  - 8. Communication skills and effective communication with patients / patient relatives
  - 9. Interpersonal relationships and team working
  - 10. Ethical and professional values, responsibilities
  - 11. Individual, social and cultural values and responsibilities
  - 12. Reflective practice and continuing development
  - 13. Healthcare delivery systems, management and community oriented health care
  - 14. Education and counseling

## PHASE-1 LEARNING OBJECTIVES

- 1. Understanding the normal structures and functions of human body
- 2. Correlating the basic concepts and principles to each other that define health and disease; applying basic concepts and principles to health and disease conditions
- 3. Developing clinical problem solving, clinical reasoning and evaluation skills by integrating biomedical, clinical, social and humanities knowledge
- 4. Gaining basic clinical skills by applications in simulated settings.
- 5. Awareness of the professional values in health and disease processes (professional, individual, societal) and acquisition necessary related skills
- 6. Evaluating critically and synthesizing all the medical evidence and perform respecting scientific, professional and ethical values
- 7. Acquisition skills in reflective thinking and practicing, being open to continuous individual / professional development.

## PHASES – 1 THEMA/ORGAN SYSTEM-BASED COURSE PROGRAMS

Year 1, Course 1: Introduction to Cell and Cellular Replication

Year 1, Course 2: Cellular Metabolism and Transport

Year 1, Course 3: Development and Organization of Human Body

Year 1, Course 4: Introduction to Nervous System and Human Behavior

Year 2, Course 1: Cell and Tissue Injury I

Year 2, Course 2: Cell and Tissue Injury II

Year 2, Course 3: Hematopoietic System and Related Disorders

Year 2, Course 4: Musculoskeletal, Integumentary Systems and Related Disorders

Year 2, Course 5: Respiratory System and Related Disorders

Year 3, Course 1: Cardiovascular System and Related Disorders

Year 3, Course 2: Gastrointestinal System, Metabolism and Related Disorders

### **Year 3, Course 3: Nervous System and Related Disorders**

Year 3, Course : Growth, Development, Mental Health and Related Disorders

Year 3, Course 5: Urinary and Reproductive System and Related Disorders

## NERVOUS SYSTEM AND RELATED DISORDERS

### AIM and LEARNING OBJECTIVES of COURSE

**Aim:** At the end of this course, third year students will gain knowledge about the development, structure and physiology of the nervous system and pathogenesis of the disorders related to this system. They will also gain knowledge about the signs and symptoms of nervous system disorders, related risk factors, prevention, diagnosis and principles of treatment.

**Learning Objectives:** At the end of this course, third year students will,

- review the structure and function of the nervous system.
- define the pathologic processes in neurological disorders
- gain knowledge about microorganism that affect the nervous system and associated infections
- gain knowledge about the risk factors related to neurological disorders
- gain knowledge about the signs and symptoms of these disorders
- gain knowledge about the prevention of nervous system disorders, approach to diagnosis, principles of treatment and rehabilitation

### ASSESSMENT SYSTEM

**Module examination:** Written exam at the end of module (10 % of final score)

**Practical examination:** Practical exams at the end of course

**Course examination:** Written exam at the end of course

### PROGRAM EVALUATION

Evaluation at the end of the course, is done both orally and by using structured evaluation forms

### DEPARTMENTS PARTICIPATING IN COURSE-3.3

- Anatomy
- Anesthesiology
- Biophysics
- Emergency Medicine
- Family Medicine
- Forensic Medicine
- Histology and Embryology
- Infectious Disease
- Medical Biology
- Microbiology
- Neurology

- Neurosurgery
- Pathology
- Pharmacology
- Physical Therapy and Rehabilitation
- Physiology
- Psychiatry
- Physical Therapy and Rehabilitation Medical Education
- Public Health
- Radiology

### LECTURERS / TUTORS

Ahmet Akıcı, Assoc. Prof. of Pharmacology  
Alper Yıldırım, Assist. Professor of Physiology  
Arzu Uzuner, Assoc. Professor of Family Medicine  
Aşkın Şeker, Assist. Prof. of Neurosurgery  
Aymelek Yalın, Professor of Anatomy  
Ayşe Garip, Assoc. Professor of Biophysics  
Ayşegül Karahasan, Professor of Microbiology  
Beliz Bilgili, Assist. Prof. of Anesthesiology  
Berfu Çerçi Öngün , Instructor, General Practitioner  
Canan Zaimoğlu, Assist. Prof. of Pediatrics  
Çiğdem Apaydın, Assoc. Prof. of Family Medicine  
Dilek Akakın, Assoc. Prof. of Histology and

İnci Alican, Professor of Physiology  
İpek Midi, Assoc. Prof. of Neurology  
Kadriye Ağan Yıldırım, Assoc. Prof. of Neurology  
Kayihan Uluç, Assoc. Prof. of Neurology  
Mehmet Akman, Assoc. Prof. of Family Medicine  
Mustafa İbrahim Ziyal, Professor of Neurosurgery  
Nahide Gökçora, Professor of Nuclear Medicine  
Nurver Ülger, Professor of Microbiology  
Özgür Kasımay, Assoc. Professor of Physiology  
Önder Kayhan, Professor of Physical Theraphy  
Pelin Bağcı, Assoc. Professor of Pathology  
Pınar Ata, Assoc. Professor of Medical Biology

<p><b>Embryology</b></p> <p>Dilek Günal, Professor of Neurology  Dilşad Save, Assoc. Prof. of Public Health  Emel Lüleci, Assoc. Prof. of Public Health  Emine Neşe Tuncer Elmas, Assoc. Prof. of Neurology  Filiz Onat, Professor of Pharmacology  Gazanfer Ekici, Professor of Radiology</p>	<p>Pınar Ay, Assoc. Prof. of Public Health  Pınar Mega Tiber, Assoc. Prof. of Biophysics,  Rezzan Gühan, Assoc. Prof. of Pharmacology  Süheyla Bozkurt, Assoc. Prof. of Pathology,  Tülin Tanrıdağ, Professor of Neurology,  Ufuk Hasdemir, Professor of Microbiology  Ümit Şehirli, Professor of Anatomy  Volkan Topçuoğlu, Assoc. Prof. of Psychiatry  Zekaver Odabaşı, Assoc. Prof. of Infectious Disease</p>
--	--

#### **READING / STUDYING MATERIALS**

- Biochemistry; Stryer, 4th ed., Freeman
- Biochemistry; Zubay, 3rd ed., WCB
  - Clinical Anatomy for Medical Students; Richard S. Snell
  - Clinically Oriented Anatomy; Keith L. Moore, Arthur F. Dalley
  - Color Textbook of Histology; Gartner & Hiatt, 3rd ed., Elsevier Health Sciences, 2004
  - D.H. Hubel; Eye, Brain and Vision
  - Gray Anatomi; Çeviri Editörü: Prof. Dr. Mehmet YILDIRIM, Güneş Kitabevi, 2006
  - Gray's Anatomy for Students; Richard L. Drake, Henry Gray, Adam W.M. Mitchell
  - Guyton & Hall ; Textbook of Physiology, 11th edition, Elsevier-Saudersd, 2006.
  - Histology A Text and Atlas; Michael H Ross, Michael R. Ross, Wojciech Pawlina, 5th ed. Lippincott Williams & Wilkins, 2006
  - Histoloji ve Hücre Biyolojisi; Abraham L.Kierzenbaum; Çeviri editorü: Ramazan Demir, Palme Yayıncılık - Ankara, 2006
  - Human Histology: Alan Stevens, James Lowe, 3rd ed., Elsevier Health Sciences, 2004
  - M.F. Baer, Connors & Paradiso; Neuroscience 2nd ed.

SUMMARY OF THE COURSE 3.3			
Discipline	Lecture & Group Discussion	Multidisciplinary Lab. & Clinical Skills Lab. Practice	Total
Anatomy	35	11	46
Anesthesiology	1		1
Biophysics	1	4	5
Pediatrics	2		2
Family Medicine	5		5
Histology and Embryology	2		2
Infectious Disease	1		1
Medical Biology	1		1
Microbiology	4		4
Neurology	15		15
Neurosurgery	3		3
Nuclear Medicine	1		1
Pathology	13	2	15
Pharmacology	4		4
Physical Medicine and Rehabilitation	1		1
Physiology	11		11
Psychiatry	1		1
Public Health	3		3
Radiology	4		4
<b>Subtotal</b>	<b>108</b>	<b>17</b>	<b>125</b>
<b>PBL Module</b>	<b>8</b>		<b>8</b>
<b>ICS-3: Basic Medical Practices, Clinical Skills Lab., Students Research Activity</b>	<b>4</b>	<b>16</b>	<b>20</b>
<b>TOTAL</b>	<b>120</b>	<b>33</b>	<b>153</b>

	<b>THEORETICAL AND PRACTICAL SESSIONS</b>	<b>LECTURER/TUTOR</b>
<b>WEEK 1 (December 29, 2014-January 02, 2015)</b>		
<b>Monday</b>	<b>29 December</b>	
<b>08:40-09:30</b>	STUDY TIME	
<b>09:40-10:30</b>	Introduction to the course and Opening Lecture	Dr. İnci Alican
<b>10:40-11:30</b>	Organization of the cortex; motor cortex and corticospinal system	Dr. İnci Alican
<b>11:40-12:30</b>	Organization of the cortex; motor cortex and corticospinal system	Dr. İnci Alican
<b>13:40-14:30</b>	The basal nuclei	Dr. İnci Alican
<b>14:40-15:30</b>	Cerebellum	Dr. İnci Alican
<b>15:40-16:30</b>	Cerebellum	Dr. İnci Alican
<b>Tuesday</b>	<b>30 December</b>	
<b>08:40-09:30</b>	Meninges & dural sinuses of the brain	Dr. Aymelek Yalın
<b>09:40-10:30</b>	Meninges & dural sinuses of the brain	Dr. Aymelek Yalın
<b>10:40-11:30</b>	General structure of the spinal cord	Dr. Aymelek Yalın
<b>11:40-12:30</b>	General structure of the spinal cord	Dr. Aymelek Yalın
<b>13:40-14:30</b>	Descending pathways	Dr. Aymelek Yalın
<b>14:40-15:30</b>	Ascending pathways	Dr. Aymelek Yalın
<b>15:40-16:30</b>	Ascending pathways	Dr. Aymelek Yalın
<b>16:40-17:30</b>	STUDY TIME	
<b>Wednesday</b>	<b>31 December</b>	
<b>08:40-09:30</b>	Brain Stem	Dr. Aymelek Yalın
<b>09:40-10:30</b>	Brain Stem	Dr. Aymelek Yalın
<b>10:40-11:30</b>	Brain Stem	Dr. Aymelek Yalın
<b>11:40-12:30</b>	<b>Anatomy LAB: Meninges &amp; dural sinuses of the brain</b>	Dr. Aymelek Yalın Dr. Berfu Çerçi Öngün
<b>13:40-14:30</b>	STUDY TIME	
<b>14:40-15:30</b>	STUDY TIME	
<b>15:40-16:30</b>	STUDY TIME	
<b>Thursday</b>	<b>01 January</b>	
<b>08:40-09:30</b>	HOLIDAY	
<b>09:40-10:30</b>		
<b>10:40-11:30</b>		
<b>11:40-12:30</b>		
<b>Friday</b>	<b>02 January</b>	
<b>08:40-09:30</b>	STUDY TIME	
<b>09:40-10:30</b>	STUDY TIME	
<b>10:40-11:30</b>	STUDY TIME	
<b>11:40-12:30</b>	STUDY TIME	

WEEK 2 (January 05-09, 2015)		
<b>Monday</b>	<b>05 January</b>	
08:40-09:30	Cerebral cortex: functional areas & general topography	Dr. Ümit Şehirli
09:40-10:30	Cerebral cortex: functional areas & general topography	Dr. Ümit Şehirli
10:40-11:30	<b>Anatomy LAB:</b> Cerebral cortex: functional areas & general topography	Dr. Berfu Çerçi Öngün Dr. Ümit Şehirli
11:40-12:30	<b>Anatomy LAB:</b> Spinal cord	Dr. Berfu Çerçi Öngün Dr. Ümit Şehirli
13:40-14:30	Basal ganglia	Dr. Ümit Şehirli
14:40-15:30	Basal ganglia	Dr. Ümit Şehirli
15:40-16:30	Limbic system and pineal gland	Dr. Ümit Şehirli
16:40-17:30	Hypothalamus and pituitary gland	Dr. Ümit Şehirli
<b>Tuesday</b>	<b>06 January</b>	
08:40-09:30	ICS 3- Polyclinics Visit-4	Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
09:40-10:30	ICS 3- Polyclinics Visit-4	Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
10:40-11:30	ICS 3- Polyclinics Visit-4	Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
11:40-12:30	ICS 3- Polyclinics Visit-4	Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
13:40-14:30	STUDY TIME	
14:40-15:30	STUDY TIME	
15:40-16:30	STUDY TIME	
16:40-17:30	STUDY TIME	
<b>Wednesday</b>	<b>07 January</b>	
08:40-09:30	Basic histopathologic neuronal reaction to injury	Dr. Süheyla Bozkurt
09:40-10:30	Neurodegenerative diseases & dementia	Dr. Süheyla Bozkurt
10:40-11:30	Pathology of cerebrovascular disease	Dr. Süheyla Bozkurt
11:40-12:30	Pathology of cerebrovascular disease	Dr. Süheyla Bozkurt
13:40-14:30	Pathology of demyelinating diseases	Dr. Süheyla Bozkurt
14:40-15:30	Pathology of neurometabolic disease	Dr. Süheyla Bozkurt
15:40-16:30	Review: Cerebrum, cerebellum and spinal cord	Dr. Dilek Akakın
16:40-17:30	Review: Development of the nervous system	Dr. Dilek Akakın
<b>Thursday</b>	<b>08 January</b>	
08:40-09:30	Nervous system tumors	Dr. Süheyla Bozkurt
09:40-10:30	Nervous system tumors	Dr. Süheyla Bozkurt
10:40-11:30	<b>Pathology Lab:</b> Pathology of central nervous system	Dr. Süheyla Bozkurt
11:40-12:30	<b>Pathology Lab:</b> Pathology of central nervous system	Dr. Süheyla Bozkurt

<b>13:40-14:30</b>	Extrapyramidal system disorders	Dr. Dilek Günal
<b>14:40-15:30</b>	Demyelinating disorders	Dr. Dilek Günal
<b>15:40-16:30</b>	<b>PBL MODULE 1</b>	Dr. Dilek Günal
<b>16:40-17:30</b>		Dr. Dilek Günal Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
<b>PBL MODULE 1</b>		
<b>Friday</b>	<b>09 January</b>	
<b>08:40-09:30</b>	Brain stem review	Dr. Alper Yıldırım
<b>09:40-10:30</b>	Cerebrospinal circulation	Dr. Alper Yıldırım
<b>10:40-11:30</b>	STUDY TIME	
<b>11:40-12:30</b>	STUDY TIME	
<b>13:40-14:30</b>	Basal ganglia subthalamus	Dr. Alper Yıldırım
<b>14:40-15:30</b>	Cognitive and emotional functions	Dr. Alper Yıldırım
<b>15:40-16:30</b>	Genetic basis of neurological diseases	Dr. Pınar Ata
<b>16:40-17:30</b>	STUDY TIME FOR PBL	

### WEEK 3 (January 12-16, 2015)

<b>Monday</b>	<b>12 January</b>	
<b>09:40-10:30</b>	STUDY TIME FOR PBL	
<b>10:40-11:30</b>	STUDY TIME FOR PBL	
<b>11:40-12:30</b>	Adult patient with paresthesia, arthralgia and lethargia	Dr. Mehmet Akman
<b>13:40-14:30</b>		Dr. Mehmet Akman Dr. Berfu Çerçi Öngün
	<b>PBL MODULE-2</b>	
<b>14:40-15:30</b>		Dr. Mehmet Akman Dr. Berfu Çerçi Öngün
<b>15:40-16:30</b>	STUDY TIME FOR PBL	
<b>16:40-17:30</b>	STUDY TIME FOR PBL	
<b>Tuesday</b>	<b>13 January</b>	
<b>08:40-09:30</b>	STUDY TIME	
<b>09:40-10:30</b>	Pathology of central nervous system infections	Dr. Pelin Bağcı
<b>10:40-11:30</b>	Pathology of central nervous system infections	Dr. Pelin Bağcı
<b>11:40-12:30</b>	Slide discussion: Central nervous system infections	Dr. Pelin Bağcı
<b>13:40-14:30</b>	Nervous system malformations	Dr. Pelin Bağcı
<b>14:40-15:30</b>	Introduction to pathology of muscle diseases and peripheral nerve	Dr. Pelin Bağcı
<b>15:40-16:30</b>	STUDY TIME FOR PBL	
<b>16:40-17:30</b>	STUDY TIME FOR PBL	
<b>Wednesday</b>	<b>14 January</b>	
<b>08:40-09:30</b>	STUDY TIME FOR PBL	
<b>09:40-10:30</b>	STUDY TIME FOR PBL	
<b>10:40-11:30</b>	STUDY TIME FOR PBL	
<b>11:40-12:30</b>	STUDY TIME FOR PBL	

<b>Thursday</b>	<b>15 January</b>	
<b>08:40-09:30</b>	Thalamus	Dr. Ümit Şehirli
<b>09:40-10:30</b>	Medullary substance	Dr. Ümit Şehirli
<b>10:40-11:30</b>	<b>Anatomy LAB:</b> Brain stem	Dr. Ümit Şehirli Dr. Berfu Çerçi Öngün
<b>11:40-12:30</b>	<b>Anatomy LAB:</b> Cerebellum	Dr. Ümit Şehirli Dr. Berfu Çerçi Öngün
<b>13:40-14:30</b>	Cranial nerves	Dr. Ümit Şehirli
<b>14:40-15:30</b>	Cranial nerves	Dr. Ümit Şehirli
<b>15:40-16:30</b>	<b>Anatomy LAB:</b> Hypothalamus, pituitary, limbic system and pineal	Dr. Ümit Şehirli Dr. Berfu Çerçi Öngün
<b>16:40-17:30</b>	Basal ganglia subthalamus	Dr. Ümit Şehirli
<b>Friday</b>	<b>16 January</b>	
<b>08:40-09:30</b>	Basal ganglia subthalamus	Dr. Ümit Şehirli
<b>09:40-10:30</b>	Cranial nerves	Dr. Ümit Şehirli
<b>10:40-11:30</b>	Cranial nerves	Dr. Ümit Şehirli
<b>11:40-12:30</b>	<b>Anatomy LAB:</b> Cranial nerves	Dr. Ümit Şehirli Dr. Berfu Çerçi Öngün
<b>13:40-14:30</b>	Vessels of the central nervous system	Dr. Ümit Şehirli
<b>14:40-15:30</b>	Vessels of the central nervous system	Dr. Ümit Şehirli
<b>15:40-16:30</b>	<b>Anatomy LAB:</b> Basal ganglia, thalamus, subthalamus	Dr. Ümit Şehirli Dr. Berfu Çerçi Öngün
<b>16:40-17:30</b>	Spinal reflexes	Dr. Özgür Kasımay

<b>WEEK 4 (January 19-23, 2015)</b>		
<b>Monday</b>	<b>19 January</b>	
<b>09:40-10:30</b>	Sleep and sleep disorders	Dr. Kadriye Ağan Yıldırım
<b>10:40-11:30</b>	Epilepsy	Dr. Kadriye Ağan Yıldırım
<b>11:40-12:30</b>	Epilepsy	Dr. Kadriye Ağan Yıldırım
<b>13:40-14:30</b>	<b>PBL MODULE 3</b>	Dr. Kadriye Ağan Yıldırım Dr. Berfu Çerçi Öngün
<b>14:40-15:30</b>	<b>PBL MODULE 3</b>	Dr. Kadriye Ağan Yıldırım Dr. Berfu Çerçi Öngün
<b>15:40-16:30</b>	Slow virus infections	Dr. Ufuk Hasdemir
<b>16:40-17:30</b>	Rabies	Dr. Ufuk Hasdemir
<b>Tuesday</b>	<b>20 January</b>	
<b>08:40-09:30</b>	<b>ICS 3:</b> CSL-Neurology session	Dr. Kayihan Uluç Dr. Berfu Çerçi Öngün
<b>09:40-10:30</b>	<b>ICS 3:</b> CSL-Neurology session	Dr. Kayihan Uluç Dr. Berfu Çerçi Öngün

<b>10:40-11:30</b>	<b>ICS 3: CSL-Neurology session</b>	Dr. Kayihan Uluç Dr. Berfu Çerçi Öngün
<b>11:40-12:30</b>	<b>ICS 3: CSL-Neurology session</b>	Dr. Kayihan Uluç Dr. Berfu Çerçi Öngün
<b>13:40-14:30</b>	<b>ICS 3: CSL-Neurology session</b>	Dr. Kayihan Uluç Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
<b>14:40-15:30</b>	<b>ICS 3: CSL-Neurology session</b>	Dr. Kayihan Uluç Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
<b>15:40-16:30</b>	<b>ICS 3: CSL-Neurology session</b>	Dr. Kayihan Uluç Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
<b>16:40-17:30</b>	<b>ICS 3: CSL-Neurology session</b>	Dr. Kayihan Uluç Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
<b>Wednesday</b>	<b>21 January</b>	
<b>08:40-09:30</b>	<b>STUDY TIME</b>	
<b>09:40-10:30</b>	Brain ventricles and subarachnoid spaces	Dr. Ümit Şehirli
<b>10:40-11:30</b>	Brain ventricles and subarachnoid spaces	Dr. Ümit Şehirli
<b>11:40-12:30</b>	<b>Anatomy LAB:</b> Brain ventricles and subarachnoid spaces	Dr. Ümit Şehirli Dr. Berfu Çerçi Öngün
<b>13:40-14:30</b>	Autonomic nervous system	Dr. Ümit Şehirli
<b>14:40-15:30</b>	Autonomic nervous system	Dr. Ümit Şehirli
<b>15:40-16:30</b>	Autonomic nervous system	Dr. Ümit Şehirli
<b>16:40-17:30</b>	<b>STUDY TIME</b>	
<b>Thursday</b>	<b>22 January</b>	
<b>08:40-09:30</b>	Eye and visual pathway	Dr. Ümit Şehirli
<b>09:40-10:30</b>	Eye and visual pathway	Dr. Ümit Şehirli
<b>10:40-11:30</b>	Review of the ear	Dr. Ümit Şehirli
<b>11:40-12:30</b>	Vestibular system and auditory pathway	Dr. Ümit Şehirli
<b>13:40-14:30</b>	<b>Anatomy LAB:</b> Vessels of the central nervous system	Dr. Ümit Şehirli Dr. Berfu Çerçi Öngün
<b>14:40-15:30</b>	<b>Anatomy LAB:</b> Autonomic Nervous System	Dr. Ümit Şehirli Dr. Berfu Çerçi Öngün
<b>15:40-16:30</b>	Principles of neurological rehabilitation	Dr. Önder Kayhan
<b>16:40-17:30</b>	<b>STUDY TIME FOR PBL</b>	
<b>Friday</b>	<b>23 January</b>	
<b>08:40-09:30</b>	<b>STUDY TIME FOR PBL</b>	
<b>09:40-10:30</b>	<b>STUDY TIME FOR PBL</b>	
<b>10:40-11:30</b>	Headache in primary care	Dr. Arzu Uzuner
<b>11:40-12:30</b>	Headache in primary care	Dr. Arzu Uzuner

13:40-14:30	<b>PBL MODULE 4</b>	Dr. Arzu Uzuner Dr. Berfu Çerçi Öngün
14:40-15:30	<b>PBL MODULE 4</b>	Dr. Arzu Uzuner Dr. Berfu Çerçi Öngün
15:40-16:30	Epidemiology of neurological diseases	Dr. Emel Lüleci
16:40-17:30	STUDY TIME	

**WEEK 5 (February 09-13, 2015)**

<b>Monday</b>	<b>09 February</b>	
08:40-09:30	Local and general anesthetics	Dr. Ahmet Akıcı
09:40-10:30	Local and general anesthetics	Dr. Ahmet Akıcı
10:40-11:30	Anesthetic premedication & skeletal muscle relaxants	Dr. Ahmet Akıcı
11:40-12:30	Principles of CT and MRI	Dr. Ayşe Garip
13:40-14:30	<b>Biophysics LAB: Principles of EEG</b>	Dr. Ayşe Garip- Dr. Pınar Mega Tiber
14:40-15:30	<b>Biophysics LAB: Principles of EEG</b>	Dr. Ayşe Garip- Dr. Pınar Mega Tiber
15:40-16:30	<b>Biophysics LAB: Principles of EEG</b>	Dr. Ayşe Garip- Dr. Pınar Mega Tiber
16:40-17:30	<b>Biophysics LAB: Principles of EEG</b>	Dr. Ayşe Garip- Dr. Pınar Mega Tiber
<b>Tuesday</b>	<b>10 February</b>	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	<b>ICS 3: Combining Medical Practice Skills-1</b>	Dr. Pemra Ünalan Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
11:40-12:30	<b>ICS 3: Combining Medical Practice Skills-1</b>	Dr. Pemra Ünalan Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
13:40-14:30	<b>ICS 3: Combining Medical Practice Skills-1</b>	Dr. Pemra Ünalan Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
14:40-15:30	<b>ICS 3: Combining Medical Practice Skills-1</b>	Dr. Pemra Ünalan Dr. Canan Zaimoğlu Dr. Berfu Çerçi Öngün
15:40-16:30	Management of pain	Dr. Beliz Bilgili
16:40-17:30	STUDY TIME	
<b>Wednesday</b>	<b>11 February</b>	
08:40-09:30	Peripheral nerve disorders	Dr. Tülin Tanrıdağ
09:40-10:30	Peripheral nerve disorders	Dr. Tülin Tanrıdağ
10:40-11:30	Myopathies and myasthenia gravis	Dr. Tülin Tanrıdağ
11:40-12:30	STUDY TIME	

<b>13:40-14:30</b>	Epidemiology and control of dementias	Dr. Pınar Ay
<b>14:40-15:30</b>	Epidemiology and prevention of occupational neurological disorders	Dr. Pınar Ay
<b>15:40-16:30</b>	STUDY TIME	
<b>16:40-17:30</b>	STUDY TIME	
<b>Thursday</b>	<b>12 February</b>	
<b>09:40-10:30</b>	STUDY TIME	
<b>10:40-11:30</b>	Bacterial and aseptic meningitis	Dr. Burak Aksu
<b>11:40-12:30</b>	Increased intracranial pressure	Dr. Aşkın Şeker
<b>13:40-14:30</b>	Head and spinal cord trauma	Dr. Aşkın Şeker
<b>14:40-15:30</b>	Spinal cord compression syndrome and disc herniation	Dr. Aşkın Şeker
<b>15:40-16:30</b>	Infectious diseases of the nervous system	Dr. Canan Zaimoğlu
<b>16:40-17:30</b>	Introduction to pediatric neurology: From symptoms to signs	Dr. Canan Zaimoğlu
<b>Friday</b>	<b>13 February</b>	
<b>08:40-09:30</b>	STUDY TIME	
<b>09:40-10:30</b>	STUDY TIME	
<b>10:40-11:30</b>	STUDY TIME	
<b>11:40-12:30</b>	STUDY TIME	
<b>13:40-14:30</b>	Pharmacotherapy of Parkinson's disease	Dr. Rezzan Gülhan
<b>14:40-15:30</b>	Tetanus	Dr. Ayşegül Karahasan
<b>15:40-16:30</b>	Poliomyelitis	Dr. Ayşegül Karahasan

WEEK 6 (February 16-20, 2015)		
<b>Monday</b>	<b>16 February</b>	
<b>08:40-09:30</b>	Signs and symptoms in neurology	Dr. İpek Midi
<b>09:40-10:30</b>	Signs and symptoms in neurology	Dr. İpek Midi
<b>10:40-11:30</b>	Cerebrovascular disease	Dr. İpek Midi
<b>11:40-12:30</b>	Cerebrovascular disease	Dr. İpek Midi
<b>13:40-14:30</b>	Dementia, Alzheimer's disease and related dementias	Dr. İpek Midi
<b>14:40-15:30</b>	Organic brain disorders	Dr. Volkan Topçuoğlu
<b>Tuesday</b>	<b>17 February</b>	
<b>08:40-09:30</b>	Introduction to neuroradiology	Dr. Gazanfer Ekinci
<b>09:40-10:30</b>	Radiology of the spine and spinal cord	Dr. Gazanfer Ekinci
<b>10:40-11:30</b>	Cranial CT and MRI	Dr. Gazanfer Ekinci
<b>11:40-12:30</b>	Cranial CT and MRI	Dr. Gazanfer Ekinci
<b>13:40-14:30</b>	Headache in the emergency room	Dr. Tülin Tanrıdağ
<b>14:40-15:30</b>	Neurological emergencies	Dr. Tülin Tanrıdağ
<b>15:40-16:30</b>	Motor neuron disorders	Dr. Tülin Tanrıdağ

<b>16:40-17:30</b>	Brain perfusion scintigraphy	Dr. Nahide Gökçora
<b>Wednesday</b>	<b>18 February</b>	
<b>08:40-09:30</b>	<b>ICS 3:</b> Advanced Communication Skills	Dr. Özlem Sarıkaya Dr. Berfu Çerçi Öngün
<b>09:40-10:30</b>	<b>ICS 3:</b> Advanced Communication Skills	Dr. Özlem Sarıkaya Dr. Berfu Çerçi Öngün
<b>10:40-11:30</b>	<b>ICS 3:</b> Advanced Communication Skills	Dr. Özlem Sarıkaya Dr. Berfu Çerçi Öngün
<b>11:40-12:30</b>	<b>ICS 3:</b> Advanced Communication Skills	Dr. Özlem Sarıkaya Dr. Berfu Çerçi Öngün
<b>13:40-14:30</b>	<b>ICS 3:</b> Advanced Communication Skills	Dr. Özlem Sarıkaya Dr. Canan Zaimoğlu <sup>1</sup> Dr. Berfu Çerçi Öngün
<b>14:40-15:30</b>	<b>ICS 3:</b> Advanced Communication Skills	Dr. Özlem Sarıkaya Dr. Canan Zaimoğlu <sup>1</sup> Dr. Berfu Çerçi Öngün
<b>15:40-16:30</b>	<b>ICS 3:</b> Advanced Communication Skills	Dr. Özlem Sarıkaya Dr. Canan Zaimoğlu <sup>1</sup> Dr. Berfu Çerçi Öngün
<b>16:40-17:30</b>	<b>ICS 3:</b> Advanced Communication Skills	Dr. Özlem Sarıkaya Dr. Canan Zaimoğlu <sup>1</sup> Dr. Berfu Çerçi Öngün
<b>Thursday</b>	<b>19 February</b>	
<b>08:40-09:30</b>	STUDY TIME	
<b>09:40-10:30</b>	STUDY TIME	
<b>10:40-11:30</b>	STUDY TIME	
<b>11:40-12:30</b>	STUDY TIME	
<b>Friday</b>	<b>20 February</b>	
<b>08:40-09:30</b>	STUDY TIME	
<b>09:40-10:30</b>	STUDY TIME	
<b>10:40-11:30</b>	STUDY TIME	
<b>11:40-12:30</b>	STUDY TIME	

WEEK 7 (February 23-27, 2015)		
<b>Monday</b>	<b>23 February</b>	
<b>08:40-09:30</b>	PRACTICAL EXAMINATION	
<b>09:40-10:30</b>		
<b>10:40-11:30</b>		
<b>11:40-12:30</b>		
<b>Tuesday</b>	<b>24 February</b>	
<b>08:40-09:30</b>	PRACTICAL EXAMINATION	
<b>09:40-10:30</b>		

<b>10:40-11:30</b>		
<b>11:40-12:30</b>		
<b>Wednesday</b>	<b>25 February</b>	
<b>08:40-09:30</b>		
<b>09:40-10:30</b>		
<b>10:40-11:30</b>		
<b>11:40-12:30</b>		
<b>Thursday</b>	<b>26 February</b>	
<b>08:40-09:30</b>		
<b>09:40-10:30</b>		
<b>10:40-11:30</b>		
<b>11:40-12:30</b>		
<b>Friday</b>	<b>27 February</b>	
<b>08:40-09:30</b>	<b>THEORETICAL EXAMINATION</b>	
<b>09:40-10:30</b>		
<b>10:40-11:30</b>		
<b>11:40-12:30</b>		