



**MUĞLA SITKI KOÇMAN UNIVERSITY FACULTY of MEDICINE  
PHASE V  
ENGLISH MEDICINE PROGRAM**

**COURSE of NEUROSURGERY**  
**2022/2023 Academic Year**  
**COURSE GUIDEBOOK**

**Course Code: MED 5024**  
**Course Topic Code: MED5-BSC**

**\*This guide has been prepared by the Department of NEUROSURGERY Course Purpose, Target, Outcomes, Training and Education Contents, Methods, Educational Activities, Measurement and Evaluation Techniques, Course Logbook, Program Qualifications Matrix, Matching the Courses with NCEP 2020, Matching the Courses with the Course Objectives and Outcomes, Matching the Course Achievements with Measurement Techniques, Course Notification Form, Vertical/Horizontal Integration Status of Courses and Course Schedules were declared on 15.06.2022.**

# PREFACE

**Dear Students,**

Welcome to the **Neurosurgery** course which is an important part of your education.

In this course program, which is going to continue for 1 week, we aim to give the basic education of the course program in all aspects of theoretical courses and practical applications. This guide describes what you will learn and perform during your course, the rules you must follow in our clinic, and the working conditions. We wish you all success with the belief that this guide will guide you sufficiently through your course studies.

**Department of  
Neurosurgery**

## GENERAL INFORMATION on COURSE

<b>Course Title</b>	: Neurosurgery
<b>Main Department of Course</b>	: Surgical Sciences
<b>Department Responsible for Course</b>	: Neurosurgery
<b>Course Code</b>	: MED 5024
<b>Course Type</b>	: Required
<b>Duration of the Course</b>	: 1 week
<b>Teaching Method of the Course</b>	: Formal
<b>ECTS</b>	: 1
<b>Language</b>	: English
<b>Head of the department</b>	: <b>Assoc. Prof. Dr. Gönül Güvenç</b>
<b>Teaching Staff</b>	:

Teaching Staff	Subject area	Theoretical Course duration (Hours)
Assoc. Prof. Dr. Gönül Güvenç	Neurosurgery	6 Hours
Assist. Prof. Dr. Veli Çitişli	Neurosurgery	7 Hours
Assist. Prof. Dr. Güven Gürsoy	Neurosurgery	6 Hours

<b>Coordinator of the Department Education Program</b>	: <b>Assoc. Prof. Dr. Gönül Güvenç</b>
<b>Coordinator of the Course Education Program</b>	: Assist. Prof. Dr. Veli Çitişli Assist. Prof. Dr. Güven Gürsoy
<b>Coordinator of the Course Examinations</b>	: Assoc. Prof. Dr. Gönül Güvenç
<b>Coordinator of Course Assessment and Evaluation</b>	: <b>Assoc. Prof. Dr. Gönül Güvenç</b>

e-Mail : [velicitisli@mu.edu.tr](mailto:velicitisli@mu.edu.tr)  
[gonulguvenc@mu.edu.tr](mailto:gonulguvenc@mu.edu.tr)

## TEACHING METHODS-TECHNIQUES

1. Theoretical lessons
2. Learning Centered Teaching
  - a. Case-based discussion sessions
  - b. Student case reports,
  - c. Practical application at the bedside
  - d. Practical application at the bedside in the outpatient clinic
3. Interactive teaching

## PHYSICAL SPACES

Teaching Activity	Physical Space	Explanation
Theoretical lessons	Muğla Training and Research Hospital	2 <sup>nd</sup> floor, Classroom
Inpatient bedside practice	Muğla Training and Research Hospital	4 <sup>th</sup> floor, Neurosurgery Service
Policlinic	Muğla Training and Research Hospital	2 <sup>nd</sup> floor, Neurosurgery Polyclinic
Case analysis	Muğla Training and Research Hospital	4 <sup>th</sup> floor, Neurosurgery Service
Problem-based teaching	-	
Special audit applications	Muğla Training and Research Hospital	4 <sup>th</sup> floor, Neurosurgery Service
Private field applications	Muğla Training and Research Hospital	3 <sup>th</sup> floor, Neurosurgery Operating Room

## RELATED LEGISLATION

<http://www.tip.mu.edu.tr/tr/ilgili-mevzuat-6641>

## AIM(S) of the COURSE

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|----------|--|
| <b>1</b> | In this course, it is aimed that students gain sufficient knowledge, skills, and attitudes to evaluate the signs and symptoms of common diseases in brain and neurosurgery within the scope of the National CEP, to diagnose in primary care conditions, to create a treatment plan / to perform applications / to follow up, to make emergency interventions when necessary or to provide a referral to a neurosurgeon. |
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## OBJECTIVE(S) of the COURSE

<b>1</b>	To be able to diagnose diseases that require urgent neurosurgical intervention in the emergency department.
<b>2</b>	To be able to make the first response to neurosurgery emergencies and refer them appropriately.
<b>3</b>	To be able to recognize the clinic caused by intracranial hemorrhage, spinal injuries and intracranial space-occupying lesions, make a diagnosis and make a differential diagnosis.
<b>4</b>	To be able to explain first aid, timing of surgical treatment and emergency surgery options to the patients.
<b>5</b>	To be able to explain the formation mechanisms of neurosurgery related diseases.
<b>6</b>	To be able to explain the clinical features and clinical approach principles (diagnosis, treatment, and prevention) of the main diseases related to neurosurgery.
<b>7</b>	To be able to communicate well with the patient and their relatives, to take medical history regarding patient's health problems, personal and family history and nervous system.
<b>8</b>	To be able to perform physical examination of the nervous system.
<b>9</b>	To be able to evaluate the medical history and physical examination findings of the patient presenting with nervous system complaints, to choose the diagnostic methods/procedures that will guide the diagnosis and treatment in the appropriate order, to make a preliminary diagnosis/diagnosis by evaluating these results.
<b>10</b>	To be able to plan appropriate treatment for neurosurgical problems/diseases at primary care level and to distinguish cases that require referral in neurosurgical diseases.
<b>11</b>	To be able to comprehend the importance of multidisciplinary approach to the problems related to neurosurgery.
<b>12</b>	To be able to recognize neural tube defects in newborns and children.
<b>13</b>	To be able to plan fluid and electrolyte therapy in patient with increased intracranial pressure (ICP).

## INTENDED LEARNING OUTCOME(S)

<b>1</b>	Can diagnose diseases that require urgent neurosurgical intervention in the emergency department.
<b>2</b>	Can make the first response to neurosurgery emergencies and refer them appropriately.
<b>3</b>	Can recognize the clinic caused by intracranial hemorrhage, spinal injuries and intracranial space-occupying lesions and make a diagnosis and make a differential diagnosis.
<b>4</b>	Can explain first aid, timing of surgical treatment and emergency surgery options to the patients.
<b>5</b>	Can explain the formation mechanisms of neurosurgery related diseases.
<b>6</b>	Can explain the clinical features and clinical approach principles (diagnosis, treatment, and prevention) of the main diseases related to neurosurgery.
<b>7</b>	Can communicate well with the patient and their relatives, can take medical history regarding patient's health problems, personal and family history and nervous system.
<b>8</b>	Can perform physical examination of the nervous system.
<b>9</b>	Can evaluate the medical history and physical examination findings of the patient presenting with nervous system complaints, can choose the diagnostic methods/procedures that will guide the diagnosis and treatment in the appropriate order, can make a preliminary diagnosis/diagnosis by evaluating these results.
<b>10</b>	Can plan appropriate treatment for neurosurgical problems/diseases at primary care level and distinguish cases that require referral in neurosurgical diseases.
<b>11</b>	Can comprehend the importance of multidisciplinary approach to the problems related to neurosurgery.
<b>12</b>	Can recognize neural tube defects in newborns and children.
<b>13</b>	Can plan fluid and electrolyte therapy in patient with Increased Intracranial Pressure (ICP).

# DUTIES AND RESPONSIBILITIES OF STUDENTS

Duration of course is 1 week.

In addition to the theoretical courses, “patient practice” courses are carried out during the course.

Students are responsible for completing the course logbook for each application during the course.

In general, and local operating rooms, Neurosurgery Clinic and Polyclinic, students are assigned daily in rotation.

In outpatient clinic applications, the clinician is expected to present his/her thoughts on diagnosis and treatment by taking a history and performing physical / neurological examination.

They are expected to learn and comply with sterility and conditions and patient safety in the operating room.

Our physician candidate, who is assigned with bedside history taking and physical examination in the service rooms, is expected to present patient information, differential diagnoses and the diagnosis of the patient during the next day’s visit.

Students are responsible for completing the course report card for each application they make during the course.

Students are expected to comply with the dress code and to have a white coat, stethoscope for examination or additional equipment with them during the bedside practice hours during the course.

During the course program (if no change is notified by the relevant faculty member during the course period), students are expected to fully present for theoretical or practical application. According to the regulation, there is an attendance requirement of 70% in theoretical courses and 80% in applied courses in Phase V.



## RECOMMENDED RESOURCE(S)

### KEY RESOURCE(S)

KEY RESOURCE(S)	Matched Course Outcome(s)
Handbook of Neurosurgery, Mark S. Greenberg, 9 th Edition, Thieme, New york 2019, ISBN-978-1-68420-137-2	1,2,3,5,6,7,8,9,10
Temel Nöroşirürji , E. Korfalı, M. Zileli, Türk Nöroşirürji Derneği Yayınları, Ankara 2010, ISBN-978-605-4149-04-9.	1,2,3,5,6,7,8,9,10
Youmans Neurological Surgery, H.R.Winn, Saunders, 5. Baskı, ISBN-0-7216-8291-X.	1,2,3,5,6,7,8,9,10

### ADDITIONAL RESOURCE(S)

ADDITIONAL RESOURCE(S)	Matched Course Outcome(s)
Türk Nöroşirürji Dergisi, ISSN 1019-5157, Türk Nöroşirürji Derneği	1,2,3,5,6,7,8,9,10
Turkish Neurosurgery, ISSN 1019-5149, Turkish Neurosurgical Society	1,2,3,5,6,7,8,9,10
Lecturer Notes	1,2,3,5,6,7,8,9,10

# ASSESSMENT and EVALUATION

## Assessment and Evaluation in the End of Course Evaluation Exam

Assessment and Evaluation Method	Explanation	Role in the End of Course Evaluation	% Value for the End of Course Evaluation
Attendance to Classes		Compulsory	
Course Logbook		Compulsory	
Multiple Choice Theoretical Test Exam*	Multiple choice questions		50
Bedside Clinical Practice Exam**			
Structured Oral Examination***	Under the supervision of at least two faculty members		50
<b>Total</b>			<b>100</b>

## Availability of Course Logbook, Place of Course Report in Course Assessment and Evaluation Principles

For the right to take the written exam, the student must be evaluated as “adequate” from the criteria specified in the course report.

## Existence of Attendance Requirement and Its Place in Course Assessment-Evaluation Principles

It is stated at the beginning of the course that the student who is absent from the courses will not be taken to the written exam.

## The Effect of the Assessment and Evaluation Methods to be Applied on the Success Status at the End of the Course

In order to be successful in the course, it is required to get at least 60 points at each stage of the course exams. A student whose score is 59 and below in an assessment-evaluation technique is not allowed to participate in the other exam phase.

**1 st stage: Multiple Choice Theoretical Test Exam**

**2 nd stage: Structured Oral Examination**

<b>Assessment and Evaluation in Resit Examination</b>
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<b>Assessment and Evaluation Method</b>	<b>Explanation</b>	<b>Role in the End of Course Evaluation</b>	<b>% Value at the End of Course Evaluation</b>
<b>Multiple Choice Theoretical Test Exam*</b>	Multiple choice questions		50
<b>Structured Oral Examination**</b>	Under the supervision of at least two faculty members		50
<b>Total</b>			<b>%100</b>

<b>Assessment and Evaluation in Single Course Resit Exam</b>
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<b>Assessment and Evaluation Method</b>	<b>Explanation</b>	<b>Role in the End of Course Evaluation</b>	<b>% Value at the End of Course Evaluation</b>
<b>Multiple Choice Theoretical Test Exam*</b>	Multiple choice questions		50
<b>Structured Oral Examination**</b>	Under the supervision of at least two faculty members		50
<b>Total</b>			<b>%100</b>

# COURSE LOGBOOK

**STUDENT'S NAME AND SURNAME :**

**STUDENT'S SCHOOL NO :**

**COURSE PERIOD :**

APPLICATION	NCEP Clause	TEACHING STAFF (SIGNATURE)
<b>DATE</b>		
1.General and problem-oriented history taking	A1      4	
2.Neurological Examination	B17      3	
3.Consciousness Assessment	B4      4	
4.Evaluation of Glasgow/AVPU coma scale	E27      4	
5.Obtaining informed consent	C3      4	
6.Ability to apply cervical collar	E59      4	
7.Ensuring that the patient is transported appropriately	E30      4	
8.Hand washing	E21      4	
9.Ability to evaluate direct radiographs	D4      3	

**DECISION:**      **PASS**                      **FAIL**

**Head of Department or Coordinator:**

**Date:**

**Signature:**

**Faculty of Medicine**  
**English Medicine Program**  
**Phase V**  
**NEUROSURGERY COURSE**  
**Competence Matrix**

The Name of the Course	Po1	Po2	Po3	Po4	Po5	Po6	Po7	Po8	Po9	Po10	Po11	Po12	Po13
Neurosurgery	5	5	3	4	3	3	5	4	3	4	5	4	5

\* Completed according to the following program outcomes. (Score from 0 to 5.)

PO: Program Outcomes of Faculty of Medicine

PO Link: <https://muweb.mu.edu.tr/tr/program-yeterlilikleri-6598?site=tip.mu.edu.tr>

## TRAINING ACTIVITY AND ASSESMENT AND EVALUATION METHODS MATCHING OF COURSE GAINS

Intended Learning Outcome	TRAINING ACTIVITY MATCHING	ASSESSMENT AND EVALUATION METHODS MATCHING
1.Can diagnose diseases that require urgent neurosurgical intervention in the emergency department.	T, C	OE, TE
2.Can make the first response to neurosurgery emergencies and refer them appropriately.	T, V, C	OE, TE
3.Can recognize the clinic caused by intracranial hemorrhage, spinal injuries and intracranial space-occupying lesions and make a diagnosis and make a differential diagnosis.	L, R, T, V	OE, TE
4.Can explain first aid, timing of surgical treatment and emergency surgery options to the patients.	V, CR	OE, TE
5.Can explain the formation mechanisms of neurosurgery related diseases.	T, V	OE, TE
6.Can explain the clinical features and clinical approach principles (diagnosis, treatment, and prevention) of the main diseases related to neurosurgery.	T, CR	OE, TE
7.Can communicate well with the patient and their relatives, can take medical history regarding patient's health problems, personal and family history and nervous system.	T, V, C, CR	OE, TE
8.Can perform physical examination of the nervous system.	V, C, CR	OE
9.Can evaluate the medical history and physical examination findings of the patient presenting with nervous system complaints, can choose the diagnostic methods/procedures that will guide the diagnosis and treatment in the appropriate order, can make a preliminary diagnosis/diagnosis by evaluating these results.	T, V, C, CR	P-L, TE
10.Can plan appropriate treatment for neurosurgical problems/diseases at primary care level and distinguish cases that require referral in neurosurgical diseases.	T, CR, C	OE, TE
11.Can comprehend the importance of multidisciplinary approach to the problems related to neurosurgery.	V, C	OE
12.Can recognize neural tube defects in newborns and children.	T, VSL	OE, TE
13.Can plan fluid and electrolyte therapy in patient with Increased Intracranial Pressure (ICP).	T, V, CR	OE, TE
<p><b>Abbreviations Teaching Activity:</b> Theoretical lessons (T), Visit (V), Case report (CR), Clinical picture discussion-Outpatient clinic (C), Vocational skills lab (VSL), Radiological evaluation (R), Laboratory evaluation (L), Presentation (Pr)</p> <p><b>Assessment Method:</b> Practical - Logbook (P-L), Oral exam (OE), Theoretical exam (TE)</p>		

**INFORMATION AND MATCHING TABLE ON THE THEORETICAL AND PRACTICAL COURSES IN THE COURSE TO BE INCLUDED IN THE 2022- 2023 ACADEMIC YEAR COURSE POGRAM**

Lecture Code*	Hour	Lecture Type	Lecture Subject	Course Aim Matching	Course Learning Outcome Matching	Activity Matching**	Assessment and Evaluation Method matching **	Vertical Integration	Horizontal Integration
MED5-BSC0001	2	T	Course Introduction-Information Meeting	1	5,6,11	T,V,C	TE,OE	Phase 1,2,3,4	
MED5-BSC0002	2	T	Hydrocephalus - Neural Tube defects	1	12	T	TE,OE	Phase 1,2,3,4	
MED5-BSC0003	2	T	Intracranial space-occupying lesions- Intracranial Tumors, Non-Tumor Lesions	1	3,5,6	T,C	TE,OE		
MED5-BSC0004	2	T	Increased ICP diagnosis and treatment	1	1,2,4,13	T,V	TE,OE	Phase 1,2,3,4	Phase 5 Neurology course
MED5-BSC0005	1	T	Head Trauma Classification, Diagnosis and Treatment	1	1,2,3,4,5,6,10,11	T,V	TE,OE		
MED5-BSC0006	2	T	Spinal Cord Compression Syndromes - Spinal Cord and Spine Tumors	1	1,2,3,4,5,6,10,11	T,V,C	TE,OE		
MED5-BSC0007	1	T	Disc herniations (Thoracic, Cervical, Lumbar)	1	5,6,7,8,9,10	T,V,C	TE,OE		Phase 5 PMR course
MED5-BSC0008	1	T	Peripheral Nerve Trap Neuropathies	1	5,6,7,8,9,10	T,C	TE,OE		Phase 5 PMR and Neurology courses
MED5-BSC0009	2	T	Intracranial hemorrhages (SAH, ISH, EDH, SDH etc.)	1	1,2,3,4,5,6,10,11	T,V,R	TE,OE		Phase 5 Neurology course
MED5-BSC0010	2	T	Spine Injuries - Diagnosis and treatment	1	1,2,3,4,5,6,10,11	T,V,C R,C	TE,OE		
MED5-BSC0011	2	C	Patient history taking and physical examination Bedside application	1	7,8,9	V,C	TE,OE	Phase 1,2,3,4	
MED5-	3	C	From symptoms and	1	7,8,9	C	TE,OE	Phase	

BSC001 2			signs to differential diagnosis - outpatients					1,2,3,4	
MED5- BSC001 3	1	C	Disc herniation TL and S examination - Bedside application	1	8	V,C	TE,OE		
MED5- BSC001 4	1	C	Spine injury TL and S examination - Bedside application	1	8	V,C	TE,OE		
MED5- BSC001 5	1	C	Case resolution, Head Trauma, Radiological Examination evaluation - Bedside application	1	1,2,3,4	V,P,R	TE,OE		
MED5- BSC001 6	1	C	Case resolution, Spine Injury-Radiological Examination Evaluation-Point application	1	1,2,3,4	V,P,R	TE,OE		
MED5- BSC001 7	1	C	Case Solution, Increased ICP Diagnosis and Treatment - Bedside application	1	1,2,3,4,13	T,Pr	TE,OE		
MED5- BSC001 8	1	C	Case solution, Intracranial Hemorrhages - Bedside application	1	1,2,3,4	V,CR,R	TE,OE		
MED5- BSC001 9	3	C	Introducing sterility in the operating room - Patient safety in the operating room and positioning the patient	1	1,2,13	V,CR,R	OE	Phase 4	
MED5- BSC002 0	3	C	Structured free study hour (individual research for the analysis of inpatients / observational activity about informing patients and relatives)	1,2	9,10,11	CR,Pr	OE		
MED5- BSC002 1	1	C	Bedside application - general repetition	1,2	1,2,3,5,6,7,8	Pr	OE		
MED5- BSC002 2	1	C	Course Final Exam Questions Evaluation Meeting	1,2	1,2,3,5,6,7,8	Pr			
MED5- BSC002 3	1	C	Course End Evaluation Meeting	1,2	1,2,3,5,6,7,8	Pr			

**EXPLANATIONS:**

\* Lecture code will be formed by writing 001, 002,... at the end of the code taken from the "Codes for Phase 5 matrix" section.

**\*\*Abbreviations**

**Teaching Activity:** Theoretical lessons (T), Visit (V), Case report (CR), Clinical picture discussion-Outpatient clinic (C), Vocational skills lab (VSL), Radiological evaluation (R), Laboratory evaluation (L), Presentation (Pr)

**Assessment Method:** Practical - Logbook (P-L), Oral exam (OE), Theoretical exam (TE)