Peer Revision

Reviewers	University	Date of Revision
- Prof. Dawlat Salem	Cairo	10/12/2011
- Prof. Ahmad K. Mansur	Mansura	28/11/2011

Program Specification of Master degree in Neurosurgery

Sohag University Faculty of medicine

A. Basic Information

1- Program Title: Master Degree in Neurosurgery

2- Program Type: Single

3- faculty: Faculty of Medicine

4- Department : Neurosurgery

5- Coordinator: Dr. Moamen Al- Mamon

6- Assistant coordinator: Dr.Abdeen Khair Allah.

7- External Evaluator(s) Professor dr .Roshdy Elkhayat

8- Last date of program specifications approval: Faculty council No."317", decree No. "1533" dated 17/12/2018.

B. Professional Information

1. Program Aims

The aim of this program is to provide the postgraduate with medical knowledge and skills essential for the practice of neurosurgery and necessary for further training and practice in the field of neurosurgery through providing:

1. Scientific knowledge essential for practice of Neurosurgery according to the international standards.
2. Skills necessary for proper diagnosis and management of patients including diagnostic, problem solving, decision making and operative skills.
3. Provision of sound ethical principles related to medical practice. 3-
4. Active participation in community needs assessment and problems solving .
5. learning abilities necessary for continuous medical education.
6. learning research abilities.

2. Attributes of the Neurosurgery master degree student:

1. Mastering the basics of scientific research methodologies.
2. The application of the analytical method and used in the field of Neurosurgery.
3. The application of specialized knowledge and integrate it with the relevant knowledge in practice.
4. Be aware of the problems and has modern visions in the field of Neurosurgery.
5. Identify problems in the field of Neurosurgery and find solutions to them.
6. Mastery of professional skills in this specialty and use of the appropriate recent technologies supporting these skills.
7. Communicate effectively and the ability to lead work teams.
8. Decision-making in his professional contexts.
9. To employ and preserve the available resources to achieve the highest benefit.

Program Specification of Master degree in Neurosurgery

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B. Professional Information

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4. Be aware of the problems and has modern visions in the field of Neurosurgery.
5. Identify problems in the field of Neurosurgery and find solutions to them.
6. Mastery of professional skills in this specialty and use of the appropriate recent technologies supporting these skills.
7. Communicate effectively and the ability to lead work teams.
8. Decision-making in his professional contexts.
9. To employ and preserve the available resources to achieve the highest benefit.

10. Awareness of his role in the community development and preservation of the environment at the lights of both international and regional variables.
11. Reflects the commitment to act with integrity and credibility, responsibility and commitment to rules of the profession.
12. Academic and professional self development and be capable of continuous learning.

3. Program Intended Learning Outcomes (ILOs)

a) Knowledge and Understanding:

By the end of the study of master program in neurosurgery the Graduate should be able to:

a1. Mention the normal structure and function of the human central and peripheral nervous system on the macro and micro levels.
a2. Mention the normal growth and development of the human central and peripheral nervous system.
a3. List the abnormal structure, function, growth and development of human central and peripheral nervous system
a4. Learn natural history of neurosurgical diseases.
a5. Mention the causation of neurosurgical diseases and their pathogenesis.
a6. Enumerate Methods of promoting normal function and structure of the central and peripheral nervous system and preventing their illness.
a7. List the clinical picture and differential diagnosis of neurosurgical diseases.
a8. Enumerate common diagnostic and laboratory techniques necessary to establish diagnosis of neurosurgical diseases.
a9. Describe the various therapeutic methods/alternatives used for neurosurgical diseases .
a10. Describe the structure, mechanism of action, advantages, disadvantages, side effects and complications of the neurosurgical diagnostic and therapeutic methods.
a11. Mention scientific development in the field of neurosurgery
a12. Describe the mutual influence between professional practice and it's impact on the environment
a13. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of neurosurgery.
a14. Describe the principles and fundamentals of quality assurance of professional practice in the field of neurosurgery
a15. Mention the basics and ethics of scientific research.
a16. Mention the effect of professional practice on the environment and the methods of environmental development and maintenance.

b) Intellectual Skills

By the end of the study of master program in neurosurgery the Graduate should be able to:

b1. Interpret data acquired through history taking to reach a provisional diagnosis for neurosurgical problems.
b2. Select from different neurosurgical diagnostic alternatives .
b3. Learn how to conduct research studies and/or write a scientific study on a research problem.
b4. Learn how to formulate scientific papers in the area of neurosurgery.
b5. Learn how to assess risk in professional practices in the field of neurosurgery

b6. Learn how to plan to improve performance in the field of neurosurgery.
b7. Identify neurosurgical problems..
b8. Have the ability to find solutions for neurosurgical problems.
b9. Learn scientific discussion based on scientific evidences and proofs.
b10.Write researches related to neurosurgery

c) Professional and Practical Skills

By the end of the study of master program in neurosurgery the Graduate should be able to

c1. Master of the basic professional medical and surgical skills in the area of neurosurgery
c2. Evaluate and develop methods and tools existing in the area of Neurosurgery
c3. Assess the methods and tools existing in the area of neurosurgery.
c4. Plan for the development of professional practice and development of the performance of others
c5. Be Oriented to methods, tools and ways of professional practice.
c6. Conduct research studies, that adds to knowledge
c7. Identify the macroscopic and microscopic criteria of the altered structure (pathology) of the body and its major organs and systems that are seen in various diseases.

d) General and Transferable Skills

By the end of the study of master program in neurosurgery the Graduate should be able to:

d1. Communicate effectively by all types of effective communication.
d2. Use information technology to serve the development of professional practice
d3. Teach others.
d4. Assess himself and identify personal learning needs.
d5. Use of different sources for information and knowledge.
d6. Work in a team.
d7. Learn how to prepare Scientific meetings.
d8. Learn himself continuously.

4. Academic Standards

Sohag Faculty of Medicine adopted the general National Academic Reference standards (NARS) provided by the national authority for quality assurance and accreditation of education (naqaae) for postgraduate programs. This was approved by the Faculty Council decree No.6854, in its cession No.177 Dated:18/5/2009. Based on these NARS; Academic Reference Standards (ARS) erre suggested for this program. These ARS were revised by external evaluator and approved by the Faculty Council decree No. , in its cession No. 191, dated: 15/3/2010. The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its cession No.60. dated 26-12-2011.

5. Curriculum Structure and Contents

5.a- Program duration 6semssters (3 years)
5.b- Program structure
5.b.i- No. of hours per week :

	hours /week		
Subject	**Lectures**	**Practical**	**Clinical**

		/Surgical	
First Part:			
General Surgery	١	1	1
Neurology	1	1	1
Physiology of Central Nervous System	1	2	
Anatomy And Embryology of Central Nervous System	2		
Histology of Central Nervous System	2		
Pathology of Central Nervous System	1	2	
Biostatistics ,computer and research methodology	1	2	
Second Part:			
Neurosurgery curriculum	٥	3.3	3.3

code	Item		No	%
b.i	Total credit hours	Compulsory	50	١٠٠
		Elective	٠	٠
		Optional	٠	٠
b.iii	credit hours of basic sciences courses		14	28
b.iv	credit hours of courses of social sciences and humanities		٠	٠
b.v	credit hours of specialized courses:		٢٥	٥٠
b.vi	credit hours of other course		6	14
b.vii	Practical/Field Training		٥	١٠
b.viii	Program Levels (in credit-hours system): Level 1: 1st part Level 2: 2nd Part Level 3: Thesis		 ١٥ ٢٤ ٦	 ٣٠ ٤٨ ١٢

6. Program Courses : 7 courses are compulsory

7 courses are compulsory

6.1- Level/Year of Program…1……. Semester…1…..

First part

a. Compulsory

Course Title	Total No. of hours	No. of hours /week			Program ILOs Covered (By No.)
		Lect.	Practical /Surgical	Clinical.	
General Surgery	٢	١	١	1	a11,a12,b1 ,b7 ,c3 ,d3
Neurology	٢	١		٢	a5,a7 ,a9 ,b1 ,b2 ,c5 ,d4
Anatomy And Embryology of Central Nervous System	٢	٢			a1,a2, b5 ,c2 , d6
Histology of Central Nervous System	٢	٢			a6 , b3 ,b 9,c6 ,d1
Pathology of Central Nervous System	٢	١	٢		a4 ,a5 ,a10 ,a15,b8, c7 ,d5 .
Physiology of Central Nervous System	٢	١	٢		a3 ,b4 ,c4 ,d2

Biostatistics and computer and research methodology	2	١	٢		a8,b1,b4,b5,b7,c1,c3,d1,d2, d3,d4, d6,d7,d8

Second Part

Course Title	No. of Units	No. of hours /week			Programme ILOs Covered (By No.)
		Lect.	Practical /Surgical.	Clinical	
Neurosurgery Curriculum	٢٥	5	3.3	3.3	a1 ,a7 ,a8 ,a13,a14,a16,b1 ,b2 ,b6 ,b8 ,b10 ,c1 ,d7 ,d8

7. Program Admission Requirements

I- General Requirements.

1. Candidate should have either:
   i. MBBch degree from any Egyptian Faculty of Medicine or
   ii. Equivalent Degree from Medical Schools abroad approved by the ministry of high Education.
2. Candidate should pass the house office training year.
3. Those who are not university hospital residents should pass a training for at least 12 months in one of the known hospitals.
4. Follow postgraduate bylaw Regulatory rules of Sohag Faculty of Medicine approved by the ministerial decree No. (44), dated 6/1/2010.

II- Specific Requirements.

1. Candidates graduated from Egyptian Universities should have at least "Good Rank" in their final year/ cumulative years examination, and grade "Good Rank" Neurosurgery course too.
2. Candidate should know how to speak & write English well
3. Candidate should have computer skills

8. Regulations for Progression and Program Completion

Duration of program is 50 credit hours (≥4 semesters ≥3 years), starting from registration till 2nd part exam; divided to:

First Part: (15 Credit hours ≥6 months ≥1 semester):

- Program-related basic & clinical sciences & research Methodology, Ethics & medical reports, Biostatistics and computer.
- At least six months after registration should pass before the student can ask for examination in the 1st part.
- Two sets of exams: 1st in October — 2nd in April.
- At least 50% of the written exam is needed to pass in each course.
- For the student to pass the first part exam, a score of at least 60% (Level D) in each course is needed.
- Those who fail in one course need to re-exam it only for the next time only, and if re-fail, should register for the course from the start.

Thesis/Essay(6 Credit hours ≥6 months=1 semester):

- Completion of the 1st part credit hours and passing the exams are pre requisites for documentation of the **Thesis/Essay** subject.
- Should be completed, defended and accepted after passing the 1st part examination, and at least one month before allowing to enter 2nd part final examination.
- Accepting the thesis is enough to pass this part.

Second Part: (24 Credit hours ≥18 months= 3 semesters):

- Program related specialized science of Neurosurgery courses.
- Completion of the 1st part credit hours and passing the exams are pre requisites for documentation of the 2nd part courses.
- After passing at least:
    - University hospital residents: 36 months residency in the department of Obstetrics & Gynecology.
    - Residents in other places: Completed 36 months residency; 12 months of them training in the department of Neurosurgery.
- The students should pass the 1st part before asking for examination in the 2nd part.
- Fulfillment of the requirements in each course as described in the template and registered in the log book (5 Credit hours; with obtaining ≥75% of its mark) is a prerequisite for candidates to be assessed and undertake part 1 and part 2 examinations; the credit hours of the logbook are calculated as following:
    - Each Cr. Hr.= 60 working Hrs.
    - Logbook= 5 Cr. Hr. X 60 working Hrs = 300 Working Hrs.
    - Collection of working Hrs. is as following:

Activity		**Hrs**
Grand rounds	**اجتماع علمى موسع**	**٦**
Training courses	**دورات تدريبية**	**12/ day**
Conference attendance	**حضور مؤتمرات علمية** **داخلى** **خارجة**	 **١٢/day** **18/day**
Thesis discussion	**حضور مناقشات رسائل**	**٦**
Workshops	**حضور ورش عمل**	**١٢/day**
Journal club	**ندوة الدوريات الحديثة**	**٦**
Seminars	**لقاء علمى موسع**	**٦**
Morbidity and Mortality conference	**ندوة تحليل المخاطر المرضية أوالوفاة**	**٦**
Self education program	**برنامج التعليم الذاتى**	**٦**

- Two sets of exams: 1st in October - 2nd in April.
- At least 50% of the written exam is needed to pass in each course.
- For the student to pass the 2nd part exam, a score of at least 60% (Level D) in each course is needed.

9. Methods of student assessments:

Method of assessment	weight	The assessed ILOs
1-Activities		- General transferable skills, intellectual skills
2-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	50%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills
3-OSCE/ OSPE	50%	-Practical skills, intellectual skills, general transferable skills
4-Structured Oral Exams		- Knowledge, Intellectual skills, General transferable skills

Assessment schedule:

Part I:

- Anatomy And Embryology: Written Exam (2 hours) + Structured oral Exam
- Histology: Written Exam (2 hours) + structured oral Exam
- Physiology: Written Exam (2 hours) + Structured oral Exam
- Pathology of Central Nervous System: Written Exam (2 hours) + Structured oral Exam
- General Surgery : Written Exam (3 hours) + OSCE + Structured oral Exam
- Neurology : Written Exam (3 hours) + OSCE + Structured oral Exam
- Biostatistics and computer and research methodology: Written Exam (2 hours) + Structured oral Exam

Part II:

- Neurosurgery and Surgical Pathology: Two Written Exam (3 hours for each) + OSCE + Structured oral Exam + oprative.

10. Evaluation of Program Intended Learning Outcomes

Evaluator	Tool	Sample
1- Senior students	Questionnaire	1
2- Alumni	Questionnaire	0
3- Stakeholders (Employers)	Questionnaire	
4-External Evaluator(s) (External Examiner(s))	Report	1
5- Other		

Course Specification of Human Anatomy & Embryology in Master degree in Neurosurgery

University of Sohag **Faculty of Medicine**

1. Program on which the course is given: Master degree in Neurosurgery.
2. Major or minor element of program: Minor
3. Department offering the program**:** Neurosurgery.
4. Department offering the course: Human Anatomy & Embryology department
5. Academic year / Neurosurgery 1st part of Master degree
6. Date of specification approval: Faculty council No."317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of Anatomy in Master degree in Neurosurgery

Code: ANA 0519-200

Total hours

Lectures	Practical	Tutorial	Total hour	Credit
٣٠	--	-	٣٠	2

B. Professional Information

1. Overall Aims of Course:

By the end of the course the student should be able to have the have the professional knowledge anatomy and embryology of urinary and male genital systems

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student should be able to:

a1. Mention the normal structure and function of the human central and peripheral nervous system on the macro levels.

a2. Mention the normal growth and development of the human central and peripheral nervous system.

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b1. Assess risk in professional practices in the field of neurosurgery

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c1. Evaluate and develop methods and tools existing in the area of Neurosurgery

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Work in a team and team's leadership.

3. Course contents:

Topic	No. of hours	Lecture	Practical
Anatomy of head and neck	6	6	
neuroanatomy	6	6	
Anatomy of the spine	4	4	
Anatomy of upper and lower limbs	4	4	
Embryology of CNS	6	6	
Embryology of the muscloskeletal system	4	4	
Total	**30**	**30**	
Credit	**2**	**2**	

4. Teaching and Learning Methods

4.1- Lectures.

4.2- practical lessons.

4.3- Assignments for the students to empower and assess the general and transferable skills

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 1…..Final written exam …….. week 24

Assessment 2 … Final Structured Oral Exam …. week: 24

Weighting of Assessments

Final-written Examination	50%
Oral Examination	50 %
Total	100%

Formative only assessements : simple research assignments , attendence ,absenteeism

6. List of References

6.1- Essential Books (Text Books)

- Fitzgerald M.J.T. (2016): The anatomical basis of medicine and surgery. By Standing s., ELIS H., Healy J. C., Johnson D. and Williams A. Gray's Anatomy. Elsevier; London, New York. Sydney. Toronto.

6.2- Recommended Books

- Stevens A. and Lowe J. S. (2015): Human histology; 5th edition; edited by Elsevier Mosby
- Colored Atlas of anatomy.
- Martini F. H., Timmons M. J. and McKinley M.P. (2015): Human anatomy; 10 edition.
- Tortora G. J. and Nielson M.T. (2016): Principles of human anatomy 14 edition; Edited by John Wiley and Sons ; United states.
- McMinn R.M.H. (2017): Lasts anatomy regional and applied chapter 7; 14 edition, edited by Longman group UK.

Facilities Required for Teaching and Learning

1. Adequate infrastructure: including teaching places (teaching class, teaching halls, teaching laboratory). Comfortable disks, good source of aeration, bathrooms, good illumination and safety and security tools.
2. Teaching tools: including screens, computers including CD, data show, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.
3. Computer program: for designing and evaluating MCQs.

Course Coordinator: Dr . Mohamed Al-Badry.

Head of Department: Dr. Mohamed Al-Badry.

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013,Revised:1/12/2018

Course Specification of Histology and Cell Biology in Master degree in Neurosurgery

University of Sohag **Faculty of Medicine**

1. Program on which the course is given: Master degree in Neurosurgery.
2. Major or minor element of program: Minor
3. Department offering the program**:** Neurosurgery.
4. Department offering the course: Histology and Cell Biology
5. Academic year / Neurosurgery 1st part of Master degree
6. Date of specification approval: Faculty council No."317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Histology and Cell Biology
Code: HIS 0519-200
Total hours :

lectures	Practical	Tutorial	Total hour	Credit
30	**-**	**-**	**30**	

B. Professional Information

1. Overall Aims of Course

Our aim is to graduate competent neuro surgeon mastering the:

- Scientific knowledges and skills essential for understanding the neuro surgical problems at microscopical level
- Having the ability to engage in further following researches and training in any branch of applied clinical Histology.

2. Intended learning outcomes (ILOs):

a) Knowledge and Understanding:

By the end of the program the student should be able to:

a1. Mention the histological structure of the nervous tissue.
a2. Mention the histological structure of the different parts of the central nervous system at different levels.
a3. Mention the function of the different parts of the peripheral and central nervous systems in relation to their structure .

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b1. Use self learning skills in problem solving.
b2. Interpret some of the medical importance of the histological structure in relation to neuron surgical problems.

c) Practical and professional skills:

By the end of the program the student should be able to:

c1. Identify the histological structure of the body tissues and the organs of urinary and male genital systems

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Use the computer to enter histological web sites.

d2. Collect scientific data from the computer.

d3. Work in groups, as a leader or as a college.

3. Contents

Topic	No. of hours (lectures)
Nervous tissue Neuron structure;L.M.&E.M. Types of nerve cells. Types and structure of nerve fibers. The organization of nerve fibers. Myelination. Structure of ganglia and types. Degeneration and regeneration of neurons. Neuroglia and their functions Types and structure of nerve endings. Blood brain barriers. Nerve terminal Tissue receptors	6
Pituitary gland: Development and general organization. Anterior lobe and its relation to the hypothalamus. Posterior lobe and its rlation to the hypothalamus. **Pineal gland**: Development. Structure and function. Pinealocytes structure and function.eceptors of he skin.	6
Spinal cord: Anatomical consideration of the CNS. Meninges,CSF.,blood brain barrier. Grey matter. White matter;ascending and descending tracts. Different sgments of the spinal cord.	6
Medulla oblongata ;closed and open and spinomedullary transition. **Pons;**superior ,middle and inferior levels and medullary pontine junction. **Midbrain**;superior and inferior levels	6
Cerebellum;cortex,medulla,nuclei,connection. **Diencephalon;t**halamus,medial and lateral geniculate bodies,internal capsule and corpus striatum. **Cerebral cortex.** **Reticular formation& ARAS system.**	6
Total	**30**
Credit	**2**

4. Teaching and Learning Methods

4.1- lectures.

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills

Assessment Schedule

Assessment 1…..Final written exam …….. week 24
Assessment 2 … Final Structured Oral Exam …. week: 24

Weighting of Assessments

Final-written Examination	50%
Oral Examination	50 %
Total	100%

Formative only assessements : simple research assignments , attendence ,absenteeism

6. List of References

6.1-Laboratory manual authorized by the department

6.2- Essential Books (Text Books)

-Junqueira, Carneino and Kelly (2018): Basic Histology, 15th ed.Librairrie du liban and lang buruit,London,New York.
-Fawcett(1997):A Text Book of Histology,12th ed.Chapman and Hall,New York,London.
- Drury,R.A.B. and Walington,E.A.(1980): Histological techniques,5th ed.Oxford university press,New York.
-
-Pears,A.G.E.(1985): Histochemistery theoretical and applied,4th ed.Churchill Livingstone,Melbourne and New York.

6.3- Recommended Books

- Cormack,H.D.(2001): A text book of Histology,second edition,Lippincott,J.B. Company,Philadelphia.

- Williams,P.L.(2015):Gray's Anatomy,the anatomical bases of Medicine and Surgery,41th ed.,Cgurchill,Livingstone,Britain.

6.4- Web Sites:

http://www.histology-world.com

http://histo.life.illinois.edu/histo/atlas/slides.php

6.5-Periodicals:

-Egyptian J of Histology

-Egyptian J of Anatomy

- Acta Anatomica

- International J of Experimental Research

- Science

- Cell and Tissue Research

7. Facilities Required for Teaching and Learning

1. An appropriate teaching microscope with a screen.
2. Discussion Microscope.
3. Good equibments essential for preparation of histological slides in the preparation room.
4. Staining set.
5. Data show

Course Coordinator: Dr. Eman Khalefa Ahmed

Head of Department: Prof/ Hekmat O. AbelAziz

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018

Course Specification of Medical Physiology in Master degree in Neurosurgery

University of Sohag **Faculty of Medicine**

1. Program on which the course is given: Master degree in Neurosurgery.
2. Major or minor element of program: Minor
3. Department offering the program**:** Neurosurgery.
4. Department offering the course: Medical Physiology
5. Academic year / Neurosurgery 1st part of Master degree
6. Date of specification approval: Faculty council No. ."317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of Physiology in Master degree in Neurosurgery
Code:PHY0519-200
Total hours

Lectures	Practical	Tutorial	Total hour	Credit
30	---	-	30	2

B. Professional Information

1. Overall Aims of Course

By the end of the course the post graduate students should be able to have the professional knowledge of the Physiology of C.N.S.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student should be able to:

a1. List the normal structure and function, of human central and peripheral nervous system

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b1. Formulate scientific papers in area of neurosurgery.
b2. Mange Scientific discussion based on scientific evidences and proofs.

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c1. Plan for the development of professional practice and development of the performance of others

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Use information technology to serve the development of professional practice

3. Course contents:

Topic	No. of hours	Lecture	Practical
Physiology of CNS	6	6	
Physiology of autonomic nervous system	6	6	
Physiology of endocrine glands	6	6	
Physiology of respiration and cardiovascular system and blood	6	6	
Physiology of muscles and nerves	6	6	
Total	30	30	
Credit	2	2	

4. Teaching and Learning Methods

4.1-Lectures.
4.2-practical lessons.
4.3- Assignments for the students to empower and assess the general and transferable skills

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 1…..Final written exam …….. week 24
Assessment 2 … Final Structured Oral Exam …. week: 24

Weighting of Assessments

Final-written Examination 50%
Oral Examination 50 %

Total 100%

Formative only assessements : simple research assignments ,log book , attendance, absenteeism

6. List of References

6.1- Essential Books (Text Books):

Guyton and Hall Textbook of Medical Physiology, John E. Hall,13th edition, Elsevier Health Sciences, 2015.

6.2- Recommended Books

Ganong's Review of Medical Physiology, 25th Edition, McGraw Hill Professional, 2015.

6.3- Periodicals, American journal of physiology

Web Sites: http://www.ncbi.nlm.nih.gov/pubmed/

7. **Facilities Required for Teaching and Learning:**
    a. Adequate infrastructure: including teaching places (teaching class, teaching halls, teaching laboratory). Comfortable disks, good source of aeration, bathrooms, good illumination and safety and security tools.
    b. Teaching tools: including screens, computers including CD, data show, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.
    c. Computer program: for designing and evaluating MCQs.

Course Coordinator: Dr. Hoda Mostafa

Head of Department: Dr. Hoda Mostafa

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018

Course Specification of Pathology in Master degree in Neurosurgery

Sohag University **Faculty of Medicine**

Course Specifications

1. Program on which the course is given: Master degree in Neurosurgery.
2. Major or minor element of program: Minor
3. Department offering the program**:** Neurosurgery.
4. Department offering the course: Pathology
5. Academic year / Neurosurgery 1st part of Master degree
6. Date of specification approval: Faculty council No."317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of Pathology in Master degree in Neurosurgery

Code:PAT0519-200

Total hours

Lectures	Practical	Tutorial	Total hour	Credit
15	30	-	45	2

B. Professional Information

1. Overall Aims of Course

By the end of the course the post graduate students should be able to have the professional knowledge of the pathology of medical diseases.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student should be able to:

a1. Learn natural history of neurosurgical diseases

a2. Describe the causation of neurosurgical diseases and their pathogenesis.

a3. Describe the structure, mechanism of action, advantages, disadvantages, side effects and complications of the neurosurgical diagnostic and therapeutic methods.

a4. Learn the basics and ethics of scientific research.

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b2. Able to solve pathological problems

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c1. Identify the macroscopic and microscopic criteria of the altered structure (pathology) of the body and its major organs and systems that are seen in various diseases.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Use of different sources for information and knowledge

3. Course contents:

Topic	No. of hours	Lecture	Practical
1- General Pathology: Inflammation & repair. Cell response to injury and aging. Disturbances of circulation. Infection. General pathology of tumors. Genetic diseases.	15	5	10
2- Endocrine system: Diseases of pituitary gland & pineal body.	6	2	4
3- The musculoskeletal system: Motor neuron diseases & neuropathies	9	3	6
4- Nervous system: Meningitis, encephalitis and brain abscess. Demyelinating diseases Degenerative diseases Hydrocephalus. Cerebral edema. Space occupying lesion. Intracranial hemorrhages. Spina pifida Arnold Chiari malformation Spinal disc prolapse. Spinal canal stenosis. Spondylolithesis. Tumors of the brain. Tumors of spinal cord	15	5	10
Total	**45**	**15**	**30**
Credit	**2**	**1**	**1**

4. Teaching and Learning Methods

4.1-Lectures.

4.2-Practical lessons.

4.3- Assignments for the students to empower and assess the general and transferable skills

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 1…..Final written exam …….. week 24
Assessment 2 … Final Structured Oral Exam …. week 24

Weighting of Assessments

Final-written Examination	50%
Structured Oral Exam	50 %
Total	100%

Formative only assessements : simple research assignments ,log book , attendance, absenteeism

6. List of References

6.1- Essential Books (Text Books):

- Muir's text book of pathology, 15th egition,2014
- Robbins pathologic basis of diseases, 10th edition, 2017

6.2- Recommended Books:

- Rosi &Ackerman text book of pathology, 11th edition, 2017
- Sternberg text book of pathology, 6th edition,2015

6.3- Periodicals, websites:

American journal of pathology
Pathology journal
Human pathology jounal
Web Sites: http://www.ncbi.nlm.nih.gov/pubmed/

7. Facilities Required for Teaching and Learning:

1. Adequate infrastructure: including teaching places (teaching class, teaching halls, teaching laboratory). Comfortable disks, good source of aeration, bathrooms, good illumination and safety and security tools.
2. Teaching tools: including screens, computers including CD, data show, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.
3. Computer program: for designing and evaluating MCQs.

Course Coordinator: Dr. Fatma El Zaharaa

Head of Department: DR. Afaf Al-Nashar

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018

Course Specification of General Surgery in Master degree in Neurosurgery

Sohag University **Faculty of Medicine**

1. Program on which the course is given: Master degree in Neurosurgery.
2. Major or minor element of program: Minor
3. Department offering the program: Neurosurgery.
4. Department offering the course: General Surgery
5. Academic year / Neurosurgery 1st part of Master degree
6. Date of specification approval: Faculty council No."317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of General Surgery in Master degree in Neurosurgery
Code:SUR0519-200
Total hours

Lectures	Practical	Tutorial	Total hour	Credit
15	30	-	45	2

B. Professional Information

1. Overall Aims of Course

By the end of the course the post graduate students should be able to have the professional knowledge of the General Surgery .

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student should be able to:

a1. Mention scientific development in the field of neurosurgery

a2. Mention the mutual influence between professional practice and it's impact on the environment

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b1. Interpret data acquired through history taking to reach a provisional diagnosis for surgical problems.

b2. Identify surgical problems related to neurosurgical procedure and find solutions

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c1. Use the technological methods to serve the professional practice.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Teach others and evaluating their performance

3. Course contents:

Lectures	Total No. of hours	Lectures	Clinical
General Surgery			
Breast	9	3	6
Thyroid	6	2	4
Hernia	6	2	4
Differential diagnosis of abdominal mass	6	2	4
Types of wounds and management	6	2	4
Hemorrhage	6	2	4
Shock	6	2	4
Total	**45**	**15**	**30**
Credit	**2**	**1**	**1**

4. Teaching and Learning Methods

4.1-lectures.

4.2-Clinical lessons.

4.3- Assignments for the students to empower and assess the general and transferable skills

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSCE	-Practical skills, intellectual skills General transferable skills
5.5 Computer search assignment	-General transferable skills, intellectual skills

Assessment schedule:

Assessment final written exam week٢٤

Assessment OSCE week٢٤

Assessment final Structured Oral Exam week٢٤

Weighting of Assessments

Final- written Examination	50%
Structured Oral Examination	30%
OSCE	20%
Total	100%

Formative only assessments: attendance and absenteeism

6. List of References:

6.1Essential books:

baily text book of surgery 2005 .

6.2-Recommended books:

Sabiston text book of surgery 2010

6.2 -Periodicals , Web Sites:

- http://www.google .com
- http://www.ncbi.nlm.gov .com
- http://www.freemedicaljournals.com

7. Facilities Required for Teaching and Learning:

1. 1-Adequate infrastructure: including teaching places (teaching class, teaching halls, teaching laboratory). Comfortable disks, good source of aeration, bathrooms, good illumination and safety and security tools.

2. 2-Teaching tools: including screens, computers including CD, data show, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.

3. 3-Computer program: for designing and evaluating MCQs.

Course Coordinator: Dr. Alaa El Deen Hassan.

Head of Department: Dr. Nabil Yuosef Abo El-Dahab

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018

Course Specification of Neurology in Master degree in Neurosurgery

Sohag University **Faculty of Medicine**

1. Program on which the course is given: Master degree in Neurosurgery.
2. Major or minor element of program: Minor
3. Department offering the program**:** Neurosurgery.
4. Department offering the course: Neurology and psychiatry
5. Academic year / Neurosurgery 1st part of Master degree
6. Date of specification approval: Faculty council No."317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of Neurology in Master degree in Neurosurgery

Code: NEU 0519-200

Total hours

Lectures	Practical	Tutorial	Total hour	Credit
15	30		45	2

B. Professional Information

1. Overall Aims of Course

By the end of the course the post graduate students should be able to have the professional knowledge of the Neurological diseases.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student should be able to:

a1. Mention the causation of neurological diseases and their pathogenesis.
a2. List the clinical picture and differential diagnosis of neurological diseases.
a3. Describe the various therapeutic methods/alternatives used for neurological diseases .

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b1. Interpret data acquired through history taking to reach a provisional diagnosis for neurological problems.
b2. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for neurological diseases

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c1. Be Oriented to develop new methods, tools and ways of professional practice.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

b1. Assess himself and identify personal learning needs

3. Course contents:

Title	Total	Lectures	Tutorial/ Practical
CVA	6	2	4
Epilepsy	9	3	6
Brain tumors	6	2	4
Headache	6	2	4
Increase intracranial tension	9	3	6
Spinal cord lesions	9	3	6
Total	**45**	**15**	**30**
Credit	**2**	**1**	**1**

4. Teaching and Learning Methods

4.1- Lectures.

4.2- Clinical lessons.

4.3- Assignments for the students to empower and assess the general and transferable skills

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSCE	-Practical skills, intellectual skills General transferable skills
5.5 assignment	-General transferable skills, intellectual skills

Assessment Schedule

Assessment 1…. Final OSCE …. week 24
Assessment 2…..Final written exam …….. week 24
Assessment 3 … Final Structured Oral Exam …. week: 24

Weighting of Assessments

Final-written Examination	50%
Structured Oral Exam and OSCE	50 %
Total	100%

Formative only assessements : simple research assignments , attendence ,absenteeism

6. List of References:

6.1 <u>Essential books:</u>

1. Brain 's Disease of The Nervous System (2000).
2. Brain ' s Clinical Neurology (1992).

6.3-Recommended books:

- Adams & Victor's ,Principle of Clinical Neurology 2005.

- Neurology in clinical practice 2010.
- Clinical Neurology (1990).

6.4-Periodicals , Web Sites:

- http://www.google .com
- http://www.ncbi.nlm.gov .com
- http://www.freemedicaljournals.com

7. Facilities Required for Teaching and Learning:

1. Adequate infrastructure: including teaching places (teaching class, teaching halls, teaching laboratory). Comfortable disks, good source of aeration, bathrooms, good illumination and safety and security tools.
2. Teaching tools: including screens, computers including CD, data show, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.
3. Computer program: for designing and evaluating MCQs.

Course Coordinator: Dr. Mohamed Abd Elmonem

Head of Department: Prof. Ghareeb Fawy Mohamed

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018

Course Specifications of Applied biostatistics (with computer use)and Research Methodology in Master degree of Neurosurgery

Sohag University **Faculty of Medicine**

1. Program title : Master degree in Neurosurgery
2. Major/minor element of the program : Minor
3. Department offering the course: Community Medicine and public Health Dep.
4. Department offering the program: Neurosurgery
5. Academic year /level : 1st part
6. Date of specification approval: Faculty council No."317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Master degree in Neurosurgery Biostatistics and Computer use for health services **and Research Methodology**

Code: COM: 0519-200

Total Hours:

Title	Lectures	Practical/ surgical	Total	credit
Applied biostatistics and computers & Research methodology	15	30	45	2

B. Professional Information

1. Overall Aims of Course

Applied Biostatistics Module:

a. To influence the students to adopt an analytical thinking for evidence based medicine.
b. To use precisely the research methodology in researches and computer programs SPSS, Epi Info and Excel in data analysis.

Research Methodology Module:

The aim of this course is to provide the postgraduate student with the advanced medical knowledge and skills essential for the mastery of practice of specialty and necessary to provide further training and practice in the field of Public health and Community Medicine through providing:

1. Recent scientific knowledge essential for the mastery of practice of Public Health and Community Medicine according to the international standards.
2. Skills necessary for preparing for proper diagnosis and management of community problems, skills for conducting and supervising researches on basic scientific methodology.
3. Ethical principles related to the practice in this specialty.
4. Active participation in community needs assessment and problems identification.
5. Maintenance of learning abilities necessary for continuous medical education.
6. Upgrading research interest and abilities.

2. Intended Learning Outcomes of Courses (ILOs)

Applied Biostatistics Module:

a) Knowledge and understanding:

By the end of the course, the student is expected to be able to:

a1. Mention different programs of analysis of data and statistical packages

a2. Define the recent advances of sources of data and methods of collection.

a3. Summarize data, construct tables and graphs

a4. Calculate measures of central tendency and measures of dispersion

a5. Describe the normal curves and its uses

a6. Illustrate selected tests of significance and the inferences obtained from such tests

a7. Illustrate selected tests of significance for parametric and non parametric inferences

a8. Identify factor analysis and discrimination analysis.

b) Intellectual Skills

By the end of the course, the student is expected to be allowed to:

b1. Mention how to collect and verify data from different sources

b2. Interpret data to diagnose prevalent problems clinical pathology

c) Professional and Practical Skills:

By the end of the course, the student is expected to practice the following:

c1. Perform recent advanced technological methods in collection, analysis and interpretation of data and in management of prevalent problems in clinical pathology

d) General and Transferable Skills:

By the end of the course, the student is expected to be able to:

d1. Use appropriate computer program packages.

d2. Use of different sources for information and knowledge about biostatistics.

Research Methodology Module:

a) Knowledge and understanding:

By the end of the course, the student is expected to be able to:

a1. Define the recent advances of screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests.

a2. Explain the usefulness of screening tests, and calculate sensitivity, specificity, and predictive values.

a3. Describe the study design, uses, and limitations.

a4. Mention the recent advances of principles, methodologies, tools and ethics of scientific research.

a5. Explain the strategies and design of researches.

a6. Describe bias and confounding.

a7. Describe sampling techniques and list advantages of sampling

a8. Identify principles of evidence based medicine.

b) Intellectual Skills

By the end of the course, the student is expected to be able to:

b1. Conduct research studies that adds to knowledge.

b2. Formulate scientific papers in the area of public health and community medicine
b3. Innovate and create researches to find solutions to prevalent community health problems
b4. Criticize researches related to public health and community medicine

c) Professional and Practical Skills:

By the end of the course, the student is expected to be able to:

c1. Enumerate the basic and modern professional skills in conducting researches in the area of public health and community medicine.
c2. Design new methods, tools and ways of conducting researches. .

d) General and Transferable Skills:

By the end of the course, the student is expected to be able to:

d1. Use of different sources for information and knowledge to serve research.
d2. Work coherently and successfully as a part of a team and team's leadership in conducting researches and field studies.

3. Contents

Topic	**No. of hours**	**Lecture**	**Tutorial/ Practical**
Applied Biostatistics Module:			
Recent advances in collection, analysis and interpretation of data	3	1	2
-Details of Tests of significance: Proportion test	3	1	2
-Chi-square test	1.5	.5	1
-Student T test	1.5	.5	1
-Paired T test	1.5	.5	1
-Correlation	1.5	.5	1
-Regression	2	1	1
-ANOVA test	3	1	2
-Discrimination analysis	3	1	2
-Factor analysis	3	1	2
-Parametric and non parametric tests	4.5	.5	4
Research Methodology Module:			
Details of epidemiological studies (case control, cohort and cross sectional)	3	1	2
Clinical trials, Quasi experimental study	3	1	2
Bias and errors	2	1	1
Setting a hypothesis	1.5	.5	1
Recent advances in screening	1.5	.5	1
- Evidence – based Medicine: Concept and examples Applicability Scientific writing: A protocol A curriculum	3	1	2
Setting an objective - Critical thinking	2	1	1

Formulation of papers	1.5	.5	1
Total hours	**45**	**15**	**30**
Total Credit hours	**2**	**1**	**1**

4. Teaching and Learning Methods

4.1- Lectures
4.2- Practical sessions
4.3- Computer search assignments
4.4- Computer application

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exams:	- Knowledge
-Short essay: 40%	- Knowledge
-structured questions: 25%	- Knowledge, intellectual skills
-MCQs: 20%	- Intellectual skills, General transferable skills,
-Commentary, Problem solving: 15%	- Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge
5.4Computer search assignment	- general transferable skills, intellectual skills

Assessment Schedule

Assessment 1….Final written exam Week: 24
Assessment 2…..Final oral exam Week: 24
Assessment 3 Attendance and absenteeism throughout the course
Assessment 4 Computer search assignment performance throughout the course

Weighting of Assessments

Final-term written examination	50%
Final oral Examination	50%
Total	100%

Formative only assessments: attendance and absenteeism and Computer search assignments performance.

6. List of References

Applied Biostatistics Module:

6.1- Essential Books (Text Books)

1-Maxy-Rosenau Public health and preventive medicine, 2008.,Robert Wallace, publisher McGraw-Hill Medical; 15 edition.

6.2- Recommended Books

1- Dimensions of Community Based projects in Health Care, 2018. Arxer, Steven L., Murphy, John W.; 1st edition.

2- Parks Text Book of Preventive & Social Medicine. 2017., K. Park. BanarsidasBhanot Publishers; 23 edition.

3- Clinical Epidemiology: The Essentials, 2013, Robert F., Suzanne W. Fletcher, Grant S., publisher Lippincott Williams & Wilkins; 5 edition.

6.3- Periodicals, Web Sites, …etc

1-American Journal of Epidemiology
2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

Research Methodology Module:

6.1- Essential Books (Text Books)

1-Maxy-Rosenau Public health and preventive medicine, 2008.,Robert Wallace, publisher McGraw-Hill Medical; 15 edition.

6.2- Recommended Books

1- Dimensions of Community Based projects in Health Care, 2018. Arxer, Steven L., Murphy, John W.; 1st edition.

2- Parks Text Book of Preventive & Social Medicine. 2017., K. Park. BanarsidasBhanot Publishers; 23 edition.

3- Clinical Epidemiology: The Essentials, 2013, Robert F., Suzanne W. Fletcher, Grant S., publisher Lippincott Williams & Wilkins; 5 edition.

6.3- Periodicals, Web Sites, …etc

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

7. Facilities Required for Teaching and Learning:

Applied Biostatistics Module:

- Adequate conditioned space for staff and assistants.
- Adequate conditioned teaching facilities.
- Audiovisual Aids: Data show, overhead and slide projectors and their requirements.

Research Methodology Module:

- ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.

Course Coordinator: Dr/ Rasha Abd-El-Hameed

Head of Department: Prof/ Ahmed Fathy Hamed

Date: Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013,Revised:1/12/2018

Course Specification of Neurosurgery in Master degree of Neurosurgery

Sohag University **Faculty of Medicine**

1. Program on which the course is given: Master degree in Neurosurgery.
2. Major or minor element of program: Major
3. Department offering the program**:** Neurosurgery.
4. Department offering the course: Neurosurgery
5. Academic year / Neurosurgery 2nd second part of Master degree
6. Date of specification approval: Faculty council No."317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of Neurosurgery in Master degree in Neurosurgery

Total hours

Lectures	Clinical /surgical	Tutorial	Total hour	Credit
225	300		525	25

B. Professional Information

1. Overall Aims of Course

By the end of the course the post graduate students should be able to have the professional knowledge of Neurosurgical diseases.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student should be able to:

a1. Mention the recent advances in the normal structure and function of the human central and peripheral nervous system on the micro levels.
a2. List the clinical picture and differential diagnosis of neurosurgical diseases.
a3. Enumerate common diagnostic and laboratory techniques necessary to establish diagnosis of neurosurgical diseases
a4. Mention the principles and fundamentals of quality assurance of professional practice in the field of neurosurgery .

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b1. Interpret data acquired through history taking to reach a provisional diagnosis for neurosurgical problems.
b1. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for neurosurgical diseases .
b2. Plan to improve performance in the field of neurosurgery
b3. Have the ability to innovate nontraditional solutions to neurosurgical problems.
b4. Criticize researches related to neurosurgery

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c1. Master of the basic and modern professional medical and surgical skills in the area of neurosurgery.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Manage Scientific meetings administration according to the available time.

d2. Learn himself continuously

3. Course contents:

Topic	No. of hours	Lecture	Clinical /surgical
History, examination and diagnostic procedures	55.5	22.5	30
Anesthesia preoperative care and operative techniques	55.5	22.5	30
Cranial and spinal trauma	55.5	22.5	30
Neuro- oncology	55.5	22.5	30
Vascular neurosurgery	55.5	22.5	30
Infections of the CNS	55.5	22.5	30
Developmental anomalies	55.5	22.5	30
Disorders of peripheral and cranial nerves and autonomic nervous system	55.5	22.5	30
Pain	55.5	22.5	30
Benign spine lesions	55.5	22.5	30
Total	**525**	**225**	**300**
Credit	**25**	**15**	**10**

4. Teaching and Learning Methods

4-1 Lectures.

4-2 Clinical lessons.

4-3 Surgical lessons .

4-4 Seminars.

4-5 Assignments for the students to empower and assess the general and transferrable skills.

4-6Attending and participating in scientific meetings, conferences, workshops and thesis discussion to acquire the general and transferrable skills needed.

5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2- Log book	- General transferable skills
5.3-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	 - Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.4-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.5-OSCE	-Practical skills, intellectual skills General transferable skills
5.6 Computer search assignment	-General transferable skills, intellectual skills

Assessment schedule:

Assessment	review	week 92
Assessment	final written exam	week92
Assessment	OSCE	week96
Assessment	final Structured Oral Exam	week96

Weighting of Assessments

Final- written Examination	50%
Structured Oral Examination	30%
OSCE	20%
Total	100%

Formative only assessments: attendance and absenteeism
Formative only assessements : simple research assignments ,log book , attendance, absenteeism

6. List of References

61- Essential Books (Text Books):

- Hand book of Neurosurgery 2016.

6.3- Recommended Books:

- Youmans text book of neurosurgery 2016.

6.4- Periodicals, American journal of pathology

Pathology
Human pathology

7. Facilities Required for Teaching and Learning

- Lecture rooms
- Round rooms
- Accessibility to hospital wards, clinics and endoscopy unite
- Audio-visual teaching equipments (computers, data show projector, video, etc.)
- Models and mannequins
- Video tapes and scientific pictures archives.
- Radiology collections and archives.
- Library for the department.

Course Coordinator: Dr. Abdeen Khair Allah

Head of Department: Dr. Moamen A- Mamon

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018