



## PROGRAMME SPECIFICATION

# Faculty of Medicine- Mansoura University

# (A) Administrative information

| (1) Programme Title & Code  | M D NUEROSURGERY   |
|---|--|
|   | NSUR600  |
| (2) Final award/degree  | M D  |
| (3) Department (s)  | NEUROSURGERY   |
| (4) Coordinator   | MOHAMED KASSEM   |
| (5) External evaluator (s)  | PRO DR. Amgad Matter   |
|   | Prof. of Neurosurgery –Dean of Faculty of<br>Medicine, Suez Canal University |
| (6) Date of approval by the Department's council                        | Unit Unit  |
| (7) Date of last approval of programme specification by Faculty council | 9/8/2016   |

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# (B) Professional information

#### (1) Programme Aims.

The broad aims of the Programme are as follows: (either to be written in items or as a paragraph)

- 1- Provide the candidate with knowledge about the anatomical features of central and peripheral nervous systems for better surgical dissections and exposures.
- 2- Prepare the candidate to interpret the gross and microscopic picture of neurosurgical diseases.
- 3- Prepare the candidate to Identify the path- physiological mechanisms underlying various neurological/neurosurgical problems.
- 4- Provide the trainee with the guidelines for diagnosis and current management of neurosurgical lesions with the anticipation of difficulties and complications and how to avoid and their management.
- 5- Encourage the candidate to adopt the concept of sub specialization in neurosurgery and to follow the advanced guidelines in management.
- 6- Enhance the candidate to follow recent advances in management of neurovascular spinal and skull base lesions.
- 7- Enhance neurosurgical skills of MD candidates of Neurosurgery.
- 8- Provide the student with advanced training in Neurosurgery.
- 9- Encourage the student to adopt habits necessary to maintain life long learning and self-learning.
- 10- Encourage the candidate to adopt standers of medical ethics in management of neurosurgical diseases and in research studies and work as a team
- 11- Encourage the student to communicate effectively with patients, families, and the public

### (2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the programme, the candidate will be able to:

#### A- Knowledge and Understanding

A1- To describe basic neuro-anatomy, microanatomy and embryology related to head and neck and nervous system development.

- A2-To explain the underlying physiological mechanisms of neurosurgical diseases
- A 3- Identify pathological changes that accompany CNS, skull, spine and peripheral nerve tumors
- A4 To recognize different lines of management of neurosurgical problems (conservative surgical)

A5 To identify new guide lines in management of neurosurgical problems

A6 To identify different Investigations of neurosurgical problems.(NON INVASIVE - INVASIVE )

A7 To describe different research methodologies

A8- Identify principles of ethics, medico legal and research in the field of neurosurgery

A9- Review the specific neurosurgical problems related to the subspecialties of spinal surgery, vascular Neurosurgery and skull base surgery

#### B- Intellectual skills

B1 Interprets neuro-radiological findings.

B2 Analyze neurosurgical findings.

B3 Decide appropriate surgical approach for management .

B4 Choose appropriate line for treatment (conservative or surgical )and to assess risk management .

B5 To conduct research projects

B6 To criticize scientific papers

B7 To develop safety culture for medical practice

B8 To interpret the underling process of neurological diseases

B 9 To analyze different mechanisms of neurological diseases

B10 To analyze pathological changes of neurological diseases

B 11To interpret clinical changes of neurological diseases

#### C- Professional/practical skills

C1- Handle cases of neurosurgical problem.

C2- apply different surgical approaches for cranial and spinal diseases.

C3- Utilize tools and micro-surgical instruments for management of cases of neurosurgical problems.
C4-perform neurosurgical procedures cranial and spinal
C5-assist in different neurosurgical procedures
C6- perform neurosurgical procedures under supervision of neurosurgical tutor.

#### D- Communication & Transferable skills

D1-To communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;

D2- To communicate effectively with physicians, other health professionals, and health related agencies;

D3- To work effectively as a member or leader of a health care team or other professional group;

D4- To maintain comprehensive, timely, and legible medical records, if applicable.

D5- Plan for educational and research practice.

#### **Program Objectives/ ILOs matrix**

# Please reformulate it after the modifications made to the knowledge ILOS

|           | Objective1 | Objective2 | Objective3 | Objective4 | Objective5 | <b>Objective6</b> | Ob.7 | Ob.8 | Ob.9 | 10 | 11 |
|-----------|------------|------------|------------|------------|------------|-------------------|------|------|------|----|----|
| A1        | @          |            |            |            |            |                   |      |      |      |    |    |
| A2        |            |            | @          |            |            |                   |      |      |      |    |    |
| A3        |            | @          |            |            |            |                   |      |      |      |    |    |
| A4        |            |            |            | @          |            |                   |      |      |      |    |    |
| A5        |            |            |            | @          |            |                   |      |      |      |    |    |
| A6        |            |            |            | @          |            | @                 |      |      |      |    |    |
| A7        |            |            |            |            |            |                   |      |      | @    | @  |    |
| <b>A8</b> |            |            |            |            |            |                   |      |      |      | @  |    |
| A9        |            |            |            |            | @          | @                 |      |      |      |    |    |

|            | Objective1 | Objective2 | Objective3 | Objective4 | Objective5 | <b>Objective6</b> | 7 | 8 | 9 | 10 | 11 |
|------------|------------|------------|------------|------------|------------|-------------------|---|---|---|----|----|
| <b>B1</b>  | @          |            |            |            |            |                   |   |   |   |    |    |
| <b>B2</b>  |            |            | @          |            |            |                   |   |   |   |    |    |
| <b>B3</b>  |            |            |            | @          |            |                   | @ |   |   |    |    |
| <b>B4</b>  |            |            |            | @          |            |                   | @ |   |   |    |    |
| <b>B5</b>  |            |            |            |            |            |                   |   |   | @ | @  |    |
| <b>B6</b>  |            |            |            |            |            |                   |   |   |   | @  |    |
| <b>B7</b>  |            |            |            |            |            |                   |   |   |   |    | @  |
| <b>B8</b>  |            |            | @          |            |            |                   |   |   |   |    |    |
| <b>B9</b>  |            |            | @          |            |            |                   |   |   |   |    |    |
| <b>B10</b> |            | @          |            |            |            |                   |   |   |   |    |    |
| <b>B11</b> |            |            |            | @          |            |                   |   |   |   |    |    |

|           | Objective1 | Objective2 | Objective3 | Objective4 | Objective5 | <b>Objective6</b> | 7 | 8 | 9 | 10 | 11 |
|-----------|------------|------------|------------|------------|------------|-------------------|---|---|---|----|----|
| C1        |            |            |            | @          |            |                   |   |   |   |    |    |
| C2        |            |            |            |            |            | @                 | @ |   |   |    |    |
| C3        |            |            |            |            |            |                   | @ |   |   |    |    |
| C4        |            |            |            |            |            |                   | @ | @ |   |    |    |
| C5        |            |            |            |            |            |                   | @ | @ |   |    |    |
| <b>C6</b> |            |            |            |            |            |                   | @ |   |   |    |    |

|           | Objective1 | Objective2 | Objective3 | Objective4 | Objective5 | <b>Objective6</b> | 7 | 8 | 9 | 10 | 11 |
|-----------|------------|------------|------------|------------|------------|-------------------|---|---|---|----|----|
| <b>D1</b> |            |            |            |            |            |                   |   |   |   | @  | @  |
| D2        |            |            |            |            |            |                   |   |   |   | @  | @  |
| D3        |            |            |            |            |            |                   |   |   |   | @  | @  |
| D4        |            |            |            |            |            |                   |   |   |   | @  |    |
| D5        |            |            |            |            |            |                   |   |   | @ |    |    |

## (3) Academic standards.

Academic standards for the programme are attached in Appendix I.

A table of comparison between the ARS, NARS and program ILOs is attached in Appendix II.

3.a- External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs and structure of assessment of the programme.

British Neurosurgical Training programme www..iscp.ac.uk http://www.gmc-uk.org/education/neurosurgery.asp

3.b- Comparison of the specification to the selected external reference/ benchmark.

all programme aims and ILOS of the Benchmark are covered by the current programme

(4) Curriculum structure and contents.

4.a- Duration of the programme 6 semesters

4.b- programme structure.
Candidates should fulfill a total of 60 credit hours
4.b.1. Number of credit hours.
First part: 5 Second part 25 Thesis: 15 practical training 15.

•4.b.2: Teaching hours/week FIRST PART Lecture 5 .Total: 5HOURS / WEEK FOR 15 WEEKS = 75 HOURS SECOND PART 11+3+4=18/w=390 12+4+4=20/w=420

| Course Title | a– Compulsory<br>Course Code | course   |          | of hours      | per we | eek   | Total             | Programme ILOs        |
|--------------|------------------------------|----------|----------|---------------|--------|-------|-------------------|-----------------------|
|              |                              | Theor    | etical   | Labora<br>ory | Field  | Total | teaching<br>hours | covered<br>(REFERRING |
|              |                              | Lectures | seminars |               |        |       |                   | TO MATRIX)            |
| ANATOMY      | NSUR601<br>NSUR632 AN        | 2        |          |               |        | 2     | 30                | A1<br>B1              |
| PHSIOLOGY    | NSUR603<br>NSUR632PH         | 1        |          |               |        | 1     | 15                | A2,B2,B9              |
| PATHOLOGY    | NSUR605<br>NSUR632PA         | 2        |          |               |        | 2     | 30                | A3,B10,B11,           |
|              |                              |          |          |               |        |       |                   |                       |

| Course Title                      | Course Code       |          |              | NO. of hours | Total teaching | Programme |                      |   |
|-----------------------------------|-------------------|----------|--------------|--------------|----------------|-----------|----------------------|---|
|                                   |                   | Theore   | tical        | clinical     | operative      | Total     | hours                | ILOs<br>covered   |
|                                   |                   | Lectures | Semina<br>rs |              |                |           |                      | (REFERRI<br>NG TO<br>MATRIX)  |
| NEUROSURGERY<br>MODULES<br>(1&11) | NSUR632<br>Ta GNS | 11       |              | 3            | 4              | 18        | 180+90+120=390       | A4,5,6,<br>,A9<br>B3,B4,<br>,B7,B8<br>B9,B10,B11<br>C1<br>C2,C3<br>D1.D2,D3 |
|                                   |                   |          |              |              |                |           |                      |   |
| MODULES<br>(111&1V)               | NSUR632 Tb        | 12       |              | 4            | 4              | 20        | 180 +120+<br>120=420 | C4<br>C5,C6,D4<br>D5  |
|                                   |                   |          |              |              |                |           |                      |   |
| THESIS                            |                   |          |              |              |                |           | 15 CREDIT            | A7 ,A8,B5,B6  |
|                                   |                   |          |              |              |                |           |                      |   |
|                                   |                   |          |              |              |                |           |                      |   |
|                                   |                   |          |              |              |                |           |                      |   |
|                                   |                   |          |              |              |                |           |                      |   |

# a- Compulsory courses (thesis will be included in this table):

## b- Elective courses.

| Innovative spinal surgery    | NSUR 632<br>ISS  | 2/W | 30 | А9, |
|------------------------------|------------------|-----|----|-----|
| Innovative Vascular Neurosu  | NSUR 632<br>IVNS | 2/w | 30 | А9, |
| Innovative Skull Base Surger | NSUR 632 ISBS    | 2/w | 30 | А9, |

#### Programme-Courses ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2.....etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses' specifications are attached in Appendix III.

| Course                         |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 | F    | rc | gr | an  | nm  | e] | ILC | Ds |    |    |    |    |   |      |      |    |     |       |      |   |  |
|--------------------------------|----|----|-----|-----|-----|----------|----|----|---|----|----|-----|----|----|----|------------|------|---|-----------------|------|----|----|-----|-----|----|-----|----|----|----|----|----|---|------|------|----|-----|-------|------|---|--|
| Title/Code                     | a1 | a2 | 2 a | 3 a | 4 a | 15       | a6 | a7 | A | A9 | 10 | .11 | b1 | b2 | b3 | <b>b</b> 4 | 4 b5 | b | 6 <b>&gt;</b> b | 7 38 | ;  | B9 | B10 | B11 |    | C1  | C2 | C3 | C4 | C5 | 26 | D | 1 D2 | 2 D3 | D4 | 4 D | 95 De | 6 D' | 7 |  |
| ANATOMY                        | x  |    |     |     |     |          |    |    |   |    |    |     | @  |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| PHSIOLOGY                      |    | @  |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    | @  |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| PATHOLOGY                      |    |    | @   | )   |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    | @   | @   |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| NEUROSURGERY                   |    |    |     | 0   | 0   | <u>@</u> | @  |    |   | @  |    |     |    |    | @  | @          |      |   | (               | D (  | @  | @  | @   | @   |    | @   | @  | @  |    |    |    | @ | @    | @    |    |     |       |      |   |  |
| MOULES(1&2)                    |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      | _  |     |       |      |   |  |
| NEUROSURGERY<br>MODULES(111&1V |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    | @  | @  | 0  |   |      |      | 0  | 0 ( | 0     |      |   |  |
|                                |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| Innovative                     |    |    |     |     |     |          |    |    |   | @  |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| spinal surgery                 |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| Innovative Vasc                |    |    |     |     |     |          |    |    |   | @  |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| Neurosurgery                   |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| Innovative Skul                |    |    |     |     |     |          |    |    |   | @  |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
| Base Surgery                   |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
|                                |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
|                                |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
|                                |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
|                                |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |
|                                |    |    |     |     |     |          |    |    |   |    |    |     |    |    |    |            |      |   |                 |      |    |    |     |     |    |     |    |    |    |    |    |   |      |      |    |     |       |      |   |  |

(5) rogramme admission requirements.General requirements.POST GRADUATE BY LAWS

Specific requirements (if applicable). Non

#### (6) Regulations for progression and programme completion.

• Student must complete minimum of 60 credit hours in order to obtain the M.D. degree, which include the courses of first and second parts, thesis and activities of the log book.

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•Registration for the M.D. thesis is allowed one semester from the day of registration to the programme and must fulfill a total of 15 credit hours including material collection, laboratory work, patients follow-up, and meetings with supervisors.

#### Log book fulfillment.

•Student must fulfill a minimum of 15 credit of log book activities including, clinical training at word and out patient clinic and operative theaters – Emergency hospital, and conferences attendance or speaking.

•Student must present scientific papers in regular neurosurgical journal.

• Lectures and seminars of the previously described courses (page 11&12) must be documented in the log book and signed by the lecturer.

• Works related to thesis must be documented in the log book and signed by the supervisors.

Any workshops, conferences and scientific meetings should be included in the log book.

## (7) Evaluation of Programme's intended learning outcomes (ILOs):

| Evaluator   | Tools*    | Sample size |
|---|-----------|-------------|
| Internal evaluator (s)                                  | CHIK LIST |             |
| Pro. Dr. Nabil mansour . (head of the department)       | INTERVIEW |             |
| Pro. Dr. abd elwahab mahmoud                            |           |             |
|   |           |             |
| External Evaluator (s)                                  | E-MAIL    |             |
| - PRO DR . Amgad Matter                                 |           |             |
| Prof. of Neurosurgery – Dean of Faculty of Medicine, Su |           |             |
| University  |           |             |
|   |           |             |
| Senior student (s)                                      |           |             |
|   |           |             |
| Alumni  |           |             |
| Stakeholder (s)   |           |             |
|   |           |             |
| Others  |           |             |
|   |           |             |

\* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E\_MAIL

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.

| Programme coordinator:                            | Signature & date: |
|---|-------------------|
| Name: MOHAMED KASSEM                              |                   |
|   |                   |
| Dean:   | Signature & date: |
| Name:   |                   |
| Executive director of the quality assurance unit. | Signature & date. |
| Name:   |                   |

P.S. The programme specification should have attached to it all courses specifications for all courses listed in the matrix.