MEDICAL DOCTORATE (M.D.) DEGREE PROGRAM AND COURSES SPECIFICATIONS FOR VASCULAR SURGERY

(According to currently applied* Credit points *bylaws)

Vascular Surgery department
Faculty of medicine
Assiut University
2022-2023/2023-2024

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Assiut University
Faculty of Medicine
Quality Assurance Unit (QAU)

كلية الطب
وحدة ضمان الجودة

M. D. degree of Vascular Surgery

A. Basic Information

- **Program Title: M.D. degree of Vascular Surgery.**
- **Nature of the program: Single.**
- **Responsible Department: Department of Vascular Surgery.**
- **Program Academic Director (Head of the Department): Prof.Dr. Ayman El Sayed Hassaballa**

  Coordinator (s):
  - **Principle coordinator Assistant coordinator (s)**
  - **Prof. Ayman El Sayed Hassaballa**
  - **Assistant coordinator :Dr. Mahmoud ismael**
- **Internal evaluators: : Prof. Moustafa Saad**
- **External evaluator**: **Prof. Dr** Amr Hamdy Helmy Morsy
  Prof. Dr Osman AboElcibaa Osman
- **Date of Approval by the Faculty of Medicine Council of Assiut University: 27 - 11 - 2022**
- **Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University:**
- **Total number of courses: 6 courses + 2 Elective courses**
  First part 5 courses
  Second part 1 course

B. Professional Information

1- Program aims

1/1 To enable the MD students to keep with the satisfactory standards regarding vascular patients' care. This will be facilitated by gaining the most updated medical knowledge, mastering high levels of clinical skills, and achieving an optimum level of clinical experience and competence in Vascular Surgery.

1/2 Provide the students with a high quality research skills and activities and assist them in the international publications in peer-reviewed specialized medical journals.

1/3 To enable candidates to describe the basic ethical and medicolegal principles relevant to Vascular Surgery.

1/4 Facilitate the obtaining of the Consultant Degree in the Egyptian medical profession and recognized abroad.

2-Intended learning outcomes (ILOs) *for the whole program*:

2/1Knowledge and understanding:

A. Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio – behavioral science relevant to Vascular Surgery as well as the evidence – based application of this knowledge to patient care.
B. Explain basics, methodology, tools and ethics of scientific medical, clinical research.
C. Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Vascular Surgery.
D. Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of Vascular Surgery.
E. Mention health care system, public health and health policy, issues relevant to this specialty and principles and methods of

system – based improvement of patient care in common health problems of the field of Vascular Surgery.

2/2 Intellectual outcomes

A. Apply the basic and clinically supportive sciences which are appropriate to Vascular Surgery related conditions .

B. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to Vascular Surgery.

C. plain research projects.

D. Write scientific papers.

E. Participate in clinical risk management as a part of clinical governance.

F. Plan for quality improvement in the field of medical education and clinical practice in Vascular Surgery.

G. Create / innovate plans, systems, and other issues for improvement of performance in Vascular Surgery.

H. Present and defend his / her data in front of a panel of experts.

I. Formulate management plans and alternative decisions in different situations in the field of Vascular Surgery.

2/3 Skills

2/3/1 Practical skills (Patient Care)

Students will be able to:

A. Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

p.s. Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.

B. Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to Vascular Surgery.

C. Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.

D. Perform diagnostic and therapeutic procedures considered essential in the field of Vascular Surgery.

E. Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.

F. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in Vascular Surgery related situations**.**

G, Gather essential and accurate information about patients of Vascular Surgery related conditions.

H. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for Vascular Surgery related conditions.

I. Develop and carry out patient management plans for Vascular Surgery related conditions.

J. Counsel and educate patients and their families about Vascular Surgery related conditions.

K. Use information technology to support patient care decisions and patient education in all Vascular Surgery related clinical situations.

L. Perform competently all medical and invasive procedures considered essential for Vascular Surgery related conditions and area of practices.

M. Provide health care services aimed at preventing Vascular Surgery related health problems.

N. Lead health care professionals, including those from other disciplines, to provide patient-focused care in Vascular Surgery related conditions**.**

O. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)

2/3/2 General skills

Including:

- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

Practice-Based Learning and Improvement

A. Demonstrate continuous evaluation of different types of care provision to patients in the different area of Vascular Surgery.
B. Appraise scientific evidence.
C. Continuously improve patient care based on constant self-evaluation and life-long learning.
D. Participate in clinical audit and research projects.
E. Practice skills of evidence-based Medicine (EBM).
F. Educate and evaluate students, residents and other health professionals.
G. Design logbooks.
H. Design clinical guidelines and standard protocols of management.
I. Appraise evidence from scientific studies related to the patients' health problems.
J. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.
K. Use information technology to manage information, access on-line medical information; for the important topics.

Interpersonal and Communication Skills

L. Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:-

- Present a case.
- Write a consultation note.
- Inform patients of a diagnosis and therapeutic plan completing and maintaining comprehensive.

- Timely and legible medical records.
- Teamwork skills.

M. Create and sustain a therapeutic and ethically sound relationship with patients.
N Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.
O. Work effectively with others as a member or leader of a health care team or other professional group.

Professionalism

P. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.
Q. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
R. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

Systems-Based Practice

S. Work effectively in health care delivery settings and systems related to Tropical Medicine and Gastroenterology including good administrative and time management.
T. Practice cost-effective health care and resource allocation that does not compromise quality of care.
U. Advocate for quality patient care and assist patients in dealing with system complexities.
V. Design, monitor and evaluate specification of under and post graduate course and programs.
W. Act as a chair man for scientific meetings including time management.

3- Program Academic Reference Standards (ARS) (Annex 2)

Academic standards for Medical Doctorate (MD) degree in Vascular Surgery

Assiut Faculty of Medicine developed MD degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program.

These standards were approved by the faculty council on 3/2010.

These standards were revised and approved without changes by the Faculty Council on 23-9-2014.These standards were re-revised and approved without changes by the Faculty Council on 27-11-2022.

4- Program External References (Benchmarks)

1. ACGME (Accreditation Council for Graduate Medical Education). http://www.acgme.org/acWebsite/navPages/nav_Public.asp
2. American Board of Surgery .https://www.abplsurg.org/ModDefault.aspx

Comparison between program and external reference		
Item	**MD vascular surgery**	**American Board of Surgery**
Goals	Matched	Matched
ILOS	Matched	Matched
Duration	4 -6years	Different
Requirement	Different	Different
Program structure	Different	Different

5- Program Structure

A. Duration of program: **4-6 years**

B. Structure of the program:

Total number of credit point = = 420 CP

Master degree: 180 credit point

Didactic #: 37 (23.1%), practical 123 (76.9%), total 160 CP

Thesis and researches: 80 CP (33.3%)

First part

Didactic 10 CP (100 %), practical 0(0 %).total 10 CP

Second part

Didactic 24 , (16.3 %) practical 123 (83.7 %) total 147

According the currently applied bylaws:

Total courses:160 credit point

Compulsory courses: 157 credit point (98.1%)

Elective courses: 3 credit point (1.9%)

	Credit points	% from total
Basic courses	10	4.1%
Humanity and social courses	3	1.2%
Specialized courses	147	61.3%
Others (Computer, …)		0
Field training	123	51.3%
Thesis	40	16.7%
2 published researches	40	16.7%

C- Program Time Table

Duration of program 4 years (could be extended at maximum to 6 years) divided into

- Part 1

Program-related essential courses

- Medical statistics.
- Research methodology
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Students are allowed to sit the exams of these courses after 6 months from applying to the M D degree.

Students are allowed to sit the exams of the remaining essential courses after 12 months from applying to the MD degree.

Thesis and 2 published researches

For the M D thesis;

MD thesis subject should be officially registered within 1 year from application to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject;

It could be discussed and accepted either before or after passing the second part of examination

- Part 2

Program –related specialized science courses and ILOs

Students are not allowed to sit the exams of these courses before 4 years from applying to the MD degree.

Two elective courses can be set during either the 1st or 2nd parts.

The students pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical exams of each course and 60% of summation of the written exams, oral and clinical exams of each course

Total degrees 1700 marks.

500 marks for first part
1200 for second part
Written exam 40% - 70%.
Clinical and oral exams 30% - 60%.

Curriculum Structure: (Courses):

- Levels and courses of the program:

Courses and student work load list	**Course Code**	**Core Credit points**		
		Didactic	**training**	**total**
First Part				
Essential Courses (10 CP) Course 1: Medical Statistics and computer Course 2: Research Methodology Course 3: - Medicolegal Aspects & Ethics in Medical Practice and Scientific Research Course 4 Surgical Anatomy Course 5 Surgical Pathology	 FAC309A FAC309B FAC310C VAS 315A VAS 315B	 1 1 1 4 3	 - - - - -	 1 1 1 4 3
Elective courses*		3 CP		
Elective course 1 Elective course 2		1.5 1.5		1.5 1.5
Thesis		40 CP		
Published researches**		40 CP		
Second Part		Specialized courses 24 CP Specialized Clinical Work (log Book) 123 CP		
Specialized Courses Course 6 Vascular Surgery	VAS 315C	24		
Specialized Clinical Work (123 CP)	VAS 315C		123	
Total of second part		24	123	147

* Elective courses can be taken during either the 1st or 2nd parts.

Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

Elective Courses#:

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

Two of the above mentioned courses are prerequisites for fulfillment of the degree.

3. Thesis / Researches:

40 CP are appointed to the completion and acceptance of the thesis.

**Another 40 points are appointed to acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module

Annex 6 II: Program Matrix

7-Admission requirements

- **Admission Requirements (prerequisites) if any :**
  - **I. General Requirements:**
  - **- Master degree in general or Vascular Surgery**
  - **II. Specific Requirements:**
  - **- Fluent in English (study language)**

VACATIONS AND STUDY LEAVE

The current departmental policy is giving the candidate one month leave before the date of exam.

FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

8-Progression and completion requirements

- Examinations of the first part (Medical statistic, Research methodology and Medicolegal Aspects and Ethics in Medical Practice and Scientific Research) could be set at 6 months from registering to the MD degree.
- Students are allowed to sit the exams of the remaining essential courses of the first part after 12 months from applying to the MD degree.
- Examination of the second part cannot be set before 4 years from registering to the degree.
- Discussion of the MD thesis could be set after 2 years from officially registering the MD subject, either before or after setting the second part exams.
- The minimum duration of the program is 4 years.

The students are offered the degree when:

1. Passing the exams of all essential, elective and specialized courses of this program as regulated by the post graduates approved rules by the faculty council.
2. Completing all scheduled CP and log book (minimum 80%).
3. Discussion and acceptance of the MD thesis.

4. Acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

9-Program assessment methods and rules (Annex IV)

Method	ILOs measured
Written examinations: **Structured essay questions** **Objective questions** **MCQ** **Problem solving**	**K & I**
Clinical: **Long/short cases** **OSCE**	**K ,I, P &G skills**
Structured oral	**K ,I &G skills**
Logbook assessment	**All**
Research assignment	**I &G skills**

Weighting of assessments:

Courses	Course code	Written Exam	Oral and/or Practical l Exam		Total
First part					
Essential Courses:					
Medical Statistics	FAC309A	35	15		50
Research Methodology	FAC309B	35	15		50
Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	FAC310C	35	15		50
Surgical anatomy	VAS 315A	100	100		200
Surgical Pathology	VAS 315B	100	50		150
Total of First Part					500

Second Part					
	Course code	written	Oral *	Practical / Clinical	total
Specialized Courses		*480*			
Course 6 (Vascular Surgery) Paper 1 Paper2 Paper 3 Paper 4	VAS315C	 120 120 120 120	360	360	
Total of second part		480	360	360	1200
Elective course 1		50	50		100
Elective course 2		50	50		100

* * 25% of the oral exam for assessment of logbook

Total degree 1900
500 marks for first part
1200 for second part
Written exam 40% (480 marks).
Clinical and oral exams 60-% (720 marks

Examination system:

- **First part:**
- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
- Written examination Surgical Anatomy (3 hour) + oral examination
- Written examination in Surgical pathology (2 hour) + oral examination
- **Second part:**
  - Written exam 4 papers 3 hours for each in Vascular surgery + Oral exam+ Clinical exam

- **Elective courses**
  - Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
  - Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam

10-Program evaluation

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

#Annex 5 contains evaluation templates and reports (Joined in the departmental folder).

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.

All course specifications for this program are in place.

Contributor	Name	Signature	Date
Program Principle Coordinator:	**Prof. Ayman El Sayed Hassaballa**		
Head of the Responsible Department (Program Academic Director):	**Prof. Ayman El Sayed Hassaballa**		

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses

First Part

1) **Course 1: Medical statistics**
2) **Course 2: Research Methodology**
3) **Course 3: - Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
4) **Course 4 Surgical anatomy**
5) **Course 5 Surgical pathology**

Course 1: Medical statistics

Name of department: Public Health and Community Medicine
Faculty of medicine
Assiut University
2022-2023

1. Course data

- **Course Title: Medical statistics**
- **Course code: FAC309A**
- **Specialty: offered to all clinical and academic specialties**
- **Number of credit points: 1 credit point**
- **Department (s) delivering the course:** Pubic Health and Community Medicine
- **Coordinator (s):**
  - Course coordinator: Prof. Farag Mohammed Moftah
  - Assistant coordinator (s): Prof. Medhat Araby Khalil Saleh
- Date last reviewed: January -2022
- **Requirements (pre-requisites) if any:**
  - Completed Master degree in any of the academic or clinical departments of Medicine.

2. Course Aims

Enable gradute students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data

3. Intended learning outcomes (ILOs):To be able to use statistical principals to manage data

A knowledge and understanding

ILOS	Methods of teaching/ learning	Methods of Evaluation
A. List the types of variables	Lecture and discussion	Written examination
B. Identify the methods of data collection	Lecture and discussion	Written examination
C. Describe the different sampling strategies	Lecture and discussion	Written examination
D. Identify types of tabular and graphic presentation of data	Lecture and discussion	Written examination
E. Identify measures of central tendency and dispersion	Lecture and discussion	Written examination
F. Identify the characters of normal distribution curve.	Lecture and discussion	Written examination
G. Detect the difference between parametric and non-parametric tests	Lecture and discussion	Written examination
H. Identify the concepts of correlation and regression	Lecture and discussion	Written examination

B. intellectual

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe the normal curves.	Lecture& Discussions	Written examination
B. Describe and summarize data	Lecture& Discussions	Written examination
C. Select the proper test of significance	Lecture& Discussions	Written examination
D. Interpret the proper test of significance	Lecture& Discussions	Written examination
E. Describe the difference between parametric and non-parametric tests	Lecture& Discussions	Written examination

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design data entry files.	Tutorial on SPSS	Assignments SPSS exam
B. Validate data entry.	Tutorial on SPSS	Assignments SPSS exam
C. Manage data files.	Tutorial on SPSS	Assignments SPSS exam
D. Construct tables and graphs.	Tutorial on SPSS	Assignments SPSS exam
E. Calculate measures of central tendency and dispersion.	Tutorial on SPSS	Assignments SPSS exam
F. Select, apply and interpret the proper test of significance.	Tutorial on SPSS	Assignments SPSS exam

D general skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Appraise scientific evidence	Discussions	Research assignment
B. Use information technology to manage information, access on-line medical information; for the important topics.	tutorial	Research and audits' assignment

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Introduction	A-F	A-D	-	A&B
Tables and graphics	D	A-D	-	A&B
Sampling	C	-	-	A&B
Methodology of data collection	B	-	-	A&B
Type of variables	A	-	-	A&B
Proportion test& Chi-square test	E,F	C&D	-	A&B
Student T test& Paired T test	E,F	C&D	F	A&B
ANOVA test	E,F	C&D	F	A&B
Non parametric tests	E,F	C&D	F	A&B
Discrimination analysis factor analysis	E,F	C&D	-	A&B
SPSS Introduction	A-F	A-D	-	A&B
Data entry and cleaning of data	A	A-D	A-C	A&B
Transforming of variables	A	A&B	A-C	A&B
Descriptive statistics	D	A-D	D&E	A&B
Graphic presentation	D	A&B	D	A&B
Chi square and interpretation of results	E,F	C&D	F	A&B
Correlation Regression	E,F	C&D	F	A&B
Multiple and logistic Regression	E,F	C&D	F	A&B

5. Course Methods of teaching/learning

1. Lectures
2. Assignments
3. Discussions
4. Exercises
5. Tutorial on SPSS v.16

6. Course assessment methods:

i. Assessment tools:

1. Attendance and active participation
2. Assignment
3. Practical SPSS examination
4. Written exam

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for practical exam).

7. List of references

i. Lectures notes

Department lecture notes

ii. Essential books

- Medical Statistics: Book by Ramakrishna HK 2016
- Janet Peacock and Philip Peacock. Oxford Handbook of Medical Statistics (second edition.) Publisher: Oxford University Press, Print Publication Date: Nov 2010 Print ISBN-13: 9780199551286, Published online: Jun 2011. DOI: 10.1093/med/9780199551286.001.0001
- Leslie E. Daly MSc, PhD, Hon MFPHM,, Geoffrey J. Bourke MA, MD, FRCPI, FFPHM, FFPHMI, Interpretation and Uses of Medical Statistics, Fifth Edition, First published:1 January 2000, Print ISBN:9780632047635 |Online ISBN:9780470696750 |DOI:10.1002/9780470696750
- Marcello Pagano, Kimberlee Gauvreau: Principles of Biostatistics second edition published in 2000 by Brooks/Cole and then Cengage Learning. CRC Press, Feb 19, 2018 - Mathematics - 584 pages.

Iii- Recommended books

- Ji-Qian Fang (Sun Yat-Sen University, China) Handbook of Medical Statistics: https://doi.org/10.1142/10259 | September 2017.Pages: 852
- Robert H. Riffenburgh: Statistics in Medicine 4th Edition (2020). EvidenceEvidence Based Medicine How to practice and teach EBM.
- Discovering Statistics Using IBM SPSS Book by Andy Field, 2013.

iii. Periodicals, Web sites, etc

iv. **Periodicals , etc** Statistics in Medicine - Wiley Online Library

v. **Web sites** https://www.phc.ox.ac.uk/research/medical-statistics

8. Signatures

Course Coordinator: - Farag Mohammed Moftah	**Head of the Department:** - Prof. Eman Morsy Mohamed
Date: 10-1-2022	**Date**: 10-1-2022
Associated Coordinator: Prof. Medhat Araby Khalil Saleh	
Date: 10-1-2022	

Course 2: Research Methodology

Name of department: Public Health and Community Medicine
Faculty of medicine
Assiut University
2021-2022

1. Course data

- **Course Title: Research methodology**
- **Course code: FAC309B**
- **Specialty: Offered to all clinical and academic specialties**
- **Number of credit points: 1 credit point**
- **Department (s) delivering the course: Department of public health**
- **Coordinator (s):**
  - **Course coordinator:** Prof. Mahmoud Attia

  Assistant coordinator (s): Prof. Ekram Mohamed
  - Prof. Medhat Araby Khalil
- **Date last reviewed:** January 2022
- **Requirements (prerequisites) if any:**
  - **Completed Master degree in any of the academic or clinical departments of Medicine.**

2. Course Aims

To provide graduate students with the skills of:

- planning and implementing sound research
- writing a scientific research proposal

3. Intended learning outcomes (ILOs)

A knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Explain differences between different study designs.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
B. Identify sources and types of bias in research.	Lecture and discussion Practical sessions	Written exam Log book assignments Practical exam
C. Identify methods of data collection.	Lecture and discussion Practical sessions	Written exam Log book assignments
D. Select and design valid measurement tools for research.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
E. Explain ethical issues in conducting research on human subjects.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
F. List the steps involved in proposal writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
G. Identify a research problem within a	Lecture Discussion	Written exam Log book

conceptual framework.		assignments Practical exam
H. Use the web sources to do a literature search	Practical tutorial on web	Log book assignment
I. Describe the rules of authorship in scientific writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
J. Select the appropriate study design for the research question.	Lecture Practical sessions	Written exam Practical exam
K. Minimize bias in designing research.	Lecture	Written exam
L. Screening & theoretical background	Lectures	Written exam Practical exam
M. Mention the basic ethics for conducting a research and medicolegal principles relevant to data confidentiality.	lectures seminar	Written exam Practical exam

B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Apply basic science & knowledge for appraising scientific literature.	Discussions &seminars	Written exam Practical exam
B- Design research and present study data, in seminars.	lecture seminar	log book assignments
C- Design suitable epidemiological study.	lecture seminar	log book assignments
D- Design strategies for resolving ethical concerns in research, law, and regulations.	lecture Workshops	Written exam log book assignments
E- Apply coherently synthesize ideas and integrate lateral and vertical thinking.	lecture Workshops	log book assignments
F- Evaluate screening tests and interpreting their uses in different population.	lecture	Written exam Practical exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Conduct epidemiological studies, screening and surveys.	lectures seminar	written exam log book assignments
B- Identify steps required in fielding the study.	Lecture	Assignments Written exam
C- Managing data collection team.	lectures seminar	log book assignments
D- Identify steps required for calculation sensitivity, specificity, positive predictive value, negative predictive value, accuracy of a screening test.	Lecture Practical sessions	Assignments Written exam Practical exam
E- Be able to define and apply the epidemiologic criteria of causality and be able to distinguish between a measure of association and evidence of causality.	Lecture Practical sessions	Assignments Written exam Practical exam
F- Synthesize information from multiple sources for research writing and the ability to perform paper critique .	Lecture Practical sessions	Assignments Written exam Practical exam
G- Identify bias and confounding in epidemiological study designs, their types and ways to control them in various types of biases.	Lecture Practical sessions	Assignments Written exam Practical exam

D General skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- Scientific paper and proposal writing skills: be able to write an introduction, objectives and the methodological section.	Tutorial	Written examination
B- Learn authorship ethical rules.	Tutorial	Written examination
C- Perform practice-based improvement activities using a systematic methodology (audit, logbook, critical appraisal)	- Lectures -Practical sessions - Discussion - Readings	critical appraisal
D- Appraise evidence from scientific studies(journal club)	- Lectures -Practical sessions - Discussion - Readings	critical appraisal
E- Conduct epidemiological studies, screening and surveys.	- Lectures -Practical sessions - Discussion - Readings	attendance and participation
F- Facilitate training of junior students and other health care professionals in different screening activities.	Field work Participation in projects	attendance and participation

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
G- Maintain ethically sound relationship with community members.	- Lectures -Practical sessions - Discussion - Readings	Written exams
H- Provide information using effective nonverbal, explanatory, questioning, and writing skills.	- Lectures -Practical sessions - Discussion - Readings	Written exams Practical exams
I- Present results of researches in seminars.	- Lectures -Practical sessions - Discussion - Readings	Log book assignments

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
J- Demonstrate respect, compassion, and integrity to the needs of society.	- Lectures - Discussion - Readings	Written exams
K- Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.	- Lectures - Discussion - Readings	Written exams
L- Design strategies for resolving ethical concerns in research, law, and regulations.	Lectures - Discussion - Readings	Written exams Practical exams
M- Demonstrate ways to control for confounding in the analysis phase of a study	Lectures - Discussion - Readings	Written exams Practical exams
N- Demonstrate a commitment to ethical principles including confidentiality of participants' information and informed consent.	Lectures - Discussion - Readings	Written exams
O- Assess ethical considerations in developing communications and promotional initiatives.	- Lectures - Discussion - Readings	Written exams

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	**Intellectual B**	**Practical skills C**	**General Skills D**
Over view on research conduction and research ethics	A&E	A-D	A-C	C-G, I,L&M-O
How to write a research proposal	F,I	E	F	A-C&H
Observational study design	A& D	B & C	D	E & F
Experimental study design	A& D	B & C	B	E & F
Evaluation of diagnostic tests (Screening)	L	A	B& E	F
Systematic reviews and meta analysis	G, H & M	E& F	F	C, D
Confounding, bias & effect modification	B & K	D	E & G	M

5. Course Methods of teaching/learning:

1. Lectures
2. Assignments
3. Discussion
4. Exercises

6. Course assessment methods:

i. Assessment tools:

1. Attendance and participation
2. Log book assignments
3. Written examination
4. Practical examination

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for practical exam).

7. List of references

i. Lectures notes

- Department lecture notes

ii. Essential books

- Research Design: Qualitative, Quantitative and Mixed Methods Approaches 4th Edition by John W. CreswellSAGE Publications, Inc; 4th edition (January 1, 2014)
- Research methodology: A step – by – step Guide for Beginners. Ranjit Kumar, 2020. Second edition https://books.google.com.eg/books?
- Medical Research Essentials Rania Esteitie, McGraw Hill Professional, third edition, Feb 5, 2014 - Medical - 104 pages
- Research Methodology in the Medical and Biological Sciences Petter Laake, Haakon Breien Benestad, Bjorn R. Reino Olsen, 4th edition , Academic Press, Nov 5, 2007 - Science - 512 pages

iv. Recommended books

- Research Methods in Education 7th Edition, by Louis Cohen, Lawrence Manion, Keith Morrison Publisher: Routledge; (April 22, 2011) www.routledge.com/textbooks/cohen7e.
- Research Methodology: A Practical and Scientific Approach Vinayak Bairagi, Mousami V. Munot · 2019, Research Methodology: A Practical and Scientific Approach - Google Books
- Based Medicine How to practice and teach EBM. David Sachett, Sharon E. Straus, W. Scott Richardson , William Rosenberg R.Brain Haynes
- Dissertation workshop open courseware JHSPH

8. Signatures

Course Coordinator: Prof.Mahmoud Attia	**Head of the Department:** Prof. Eman Morsy Mohamed
Date: 10-1-2022	**Date**: 10-1-2022

Course 3: Medico legal Aspects and Ethics in Medical Practice and Scientific Research

Name of department:
Forensic medicine and clinical toxicology
Faculty of medicine
Assiut University
2016-2017

1. Course data

- **Course Title: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
- **Course code: FAC310C**
- **Speciality:General and special surgery (1st part),**
- **Number of credit points: 1 credit point**
- **Department (s) delivering the course: Forensic Medicine and Clinical Toxicology**
- **Coordinator (s):**
- **Course coordinator:**
  Prof. Ghada omran
- **Date last reviewed:** September 2017
- **Requirements (prerequisites) if any :**
  - **Completed Master degree**

2. Course Aims

To describe the basic ethical and medicolegal principles and bylaws relevant to practice in the field of General and special surgery Rheumatology

3. Intended learning outcomes (ILOs):

A. knowledge and understanding

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Mention principals of writing consent forms.	Lecture and discussion	Written & oral exam
B. Mention principals of Writing a death certificate	Lecture and discussion	Written & oral exam
C. Explain principals of medical reports.	Lecture and discussion	Written & oral exam
D. Mention principals of Dealing with wounds.	Lecture and discussion	Written & oral exam
E. Mention principals of firearm injuries.	Lecture and discussion	Written & oral exam
F. List indications of induced emesis, gastric lavage and samples collection.	Lecture and discussion	Written & oral exam

B. Intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case , seminars in death certificate	Lecture and discussion	Written & oral exam
B. Design and present case, seminars in toxicological cases	Lecture and discussion	Written & oral exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Identify medical ethics and ethics in research.	Lecture and discussion	Discussion
B. Prepare and write consent.	Lecture and discussion	Discussion
C. Identify medical responsibilities.	Lecture and discussion	Discussion
D. Write death certificate.	Lecture and discussion	Discussion and active participation
E. Deal with a case of Suspicious death	Lecture and discussion	Discussion and active participation
F. Write medical reports	Lecture and discussion	Discussion and active participation
G. Identify types of wounds and deal with them.	Lecture and discussion	Discussion and active participation
H. Identify types, distance and direction of firearm wounds	Lecture and discussion	Discussion and active participation

and deal with them		
I. Elicit death associated with surgical anesthesia.	Lecture and discussion	Discussion and active participation
J. Perform gastric lavage, induce emesis, and obtain samples	Lecture and discussion	Discussion and active participation

D. General Skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Present a case.	Lecture and discussion	Global rating logbook
B. Write a consultation note	Lecture and discussion	Global rating logbook
C. Inform patients and maintaining comprehensive.	Lecture and discussion	Global rating logbook
D. Make timely and legible medical records	Lecture and discussion	Global rating logbook
E. Acquire the teamwork skills	Lecture and discussion	Global rating logbook

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
1. Death and death certificate.	B	A	D	
2. Suspicious death	B		E	B
3. Death associated with surgical anesthesia	B		I	B
4. Medical reports	C	B	F	A,D,E
5. Toxicological Reports	F	B	J	A,E
6. Wounds	D		G	B
7. Firearm injuries	E		H	B
8. Ethics in research			A	
9. Medical ethics.	A		A,B,C	C,E

5. Course Methods of teaching/learning:

1. Lectures.
2. Discussions.
3. Exercises.

6. Course assessment methods:

i. Assessment tools:

1. Written examination.
2. Attendance and active participation.
3. Oral examination.

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35for written exam and 15 for oral exam).

7. List of references

i. Lectures notes

- Course notes.
- Staff members print out of lectures and/or CD copies.

ii. Essential books

- Bernard Knight and Pekka Saukko (2015: Knight Forensic Pathology. Hodder Arnold press
- Goldfrank, Lewis R.; Howland, Mary Ann; Hoffman, Robert S.; Nelson, Ewis S.; Lewin, Neal A (2019): Goldfrank's Toxicologic Emergencies, 11th ed. McGraw Hill / Medical.
- Medical Ethics Manual. World medical association. Third edition 2015.
- Medical ethics and law. Dominic Wilkinson, 3rdedition 2019.

iii. Recommended books

- Biswas Gautam (2021): Review of Forensic Medicine & Toxicology. 5th ed. Jaypee Brothers Medical Pub.

iv. Journal and web site

- Journals of all Egyptian Universities of Forensic Medicine and Clinical Toxicology.
- All International Journals of Forensic Medicine and Clinical Toxicology which available in the university network at www.sciencedirect.com. As :
  - Forensic Science International Journal.
  - Toxicology Letter.

v. others

8. Signatures

- Course Coordinator: **Prof.** Prof. Ghada omran	**- Head of the Department:** **Prof.** Randa Hussein Abdelhady
Date: September 2017	**Date:** September 2017

Course 4 Surgical Anatomy

1. Course data

- **Course Title: Surgical Anatomy**
- **Course code: VAS 315A**
- **Specialty** Vascular surgery
- **Number of Credit point :- Didactic 4(100%)hours - practical 0 (0%)hours, total (4)**
- **Department (s) delivering the course :** Vascular surgery **department**
- **Coordinator (s):**
  - **Course coordinator:**
    Prof Dr: Ayman ElSayed Hassaballa
  - **Assistant coordinator (s)**
    Dr. Mahmoud ismael
    Date last reviewed April /2022

- **Requirements (prerequisites) if any : None**

2. Course Aims

-The student should acquire in depth Anatomical facts necessary for Vascular Surgery.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A-Describe Anatomic details of Vascular Surgery including: • Brain vasculature • Upper limb • Lower limb • Mesenteric circulation • Peripheral arteries • Venous system • Portal circulation • Fascial compartments of the leg • Lymphatic system • Anatomy of foot • Surgical anatomy of the neck • Surgical Anatomy of thoracic outlet	-Lectures	-Written and oral examination - Log book

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of Anatomy with clinical reasoning, diagnosis and management of common conditions related to Vascular Surgery.	Clinical rounds Senior staff experience	Portfolios Procedure/case presentation Log book
A. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Vascular Surgery.		

C- Practical skills

Practical: 0 hours

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Log book Oral exam

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A	-Clinical round -Seminars -Lectures	- Logbook Oral exam Chick list

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Observation Senior staff experience Case taking	Logbook Oral exam

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems	-Observation -Senior staff experience	1. 360o global rating

4. contents (topic s/modules/rotation

Matrix Course

Time Schedule: One year after application to MD degree

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill	General Skills
• Brain vasculature	A	A&B	-	A-D
• Upper limb	A	A&B	-	A-D
• Lower limb	A	A&B	-	A-D
• Mesenteric circulation	A	A&B	-	A-D
• Peripheral arteries	A	A&B	-	A-D
• Venous system	A	A&B	-	A-D
• Portal circulation	A	A&B	-	A-D
• Fascial compartments of the leg	A	A&B	-	A-D
• Lymphatic system	A	A&B	-	A-D
• Anatomy of foot	A	A&B	-	A-D
• Surgical anatomy of the neck	A	A&B	-	A-D
• Surgical Anatomy of thoracic outlet	A	A&B	-	A-D

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Written & oral communication
3. Observation
4. Senior staff experience
5. Clinical round

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs

7. Assessment methods:

i. Assessment tools:

1- Written and oral examination
2- Log book

ii. Time schedule: One year after application to MD degree

iii. Marks: 200

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

Vascular Surgery, Rutherford, 8th Edition

Vascular Surgery, Moore.

iii. Recommended books

Vascular Surgery, Hiamovici

Current Vascular Surgery

iv. Periodicals, Web sites, … etc

- European Journal of Vascular and Endovascular Surgery
- Vascular surgery
- Annals of vascular surgery

9. Signatures

- Course Coordinator: Prof Dr: Ayman ElSayed Hassaballa Assistant coordinator (s) Dr. Mahmoud ismael	**- Head of the Department:** Prof Dr: Ayman ElSayed Hassaballa
Date: 9-2022	**Date:** 9-2022

Course 5 Surgical Pathology

1. Course data

- **Course Title: Surgical Pathology**
- **Course code: VAS 315B**
- **Specialty** Vascular surgery
- **Number of Credit point :- Didactic 3(100%)hours - practical 0 (0%)hours, total (3)**
- **Department (s) delivering the Course:** Vascular surgery **department**

- **Coordinator (s): Coordinator (s):**
  - **Course coordinator:**
    Prof Dr: Ayman Alsyed Hassaballa
  - **Assistant coordinator (s)**

    Dr. Mahmoud Ismael

- **Date last reviewed: April/2022**

- **Requirements (prerequisites) if any : None**

2. Unit Aims

-The student should acquire in depth pathological facts necessary for Vascular Surgery.

3. Intended learning outcomes (ILOs):

A- Knowledge and understanding

ILOs	Methods of teaching/ learning	*Methods of Evaluation*
A. Mention Principles of General Pathology of: - Acute and Chronic Inflammation. - Gangrene -Diabetic foot - Surgical infection. - Pathology of vascular tumors	-Lectures	-Written and oral examination - Log book
B-Describe Pathologic Details of: - The Blood Vessels -Atherosclerosis -Autoimmune arteritis -Mesenteric ischemia -Cerebrovascular diseases -Acute limb ischemia -Haemostasis -Neo-angiogenesis		

B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of Pathology with clinical reasoning, diagnosis and management of common diseases related to Vascular Surgery.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Vascular Surgery.		

C- Practical skills

Practical: 0 hours

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Log book Oral exam

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A and A.B	-Clinical round -Seminars -Lectures	- Logbook Oral exam Chick list

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	Observation Senior staff experience Case taking	Logbook Oral exam

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems	-Observation -Senior staff experience	1. 360o global rating

contents (topic s/modules/rotation
Course Matrix

Time Schedule: One year after application to MD degree

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
Acute and Chronic Inflammation.	A	A&B	-	A-D
- Gangrene	A	A&B	-	A-D
-Diabetic foot	A	A&B	-	
- Surgical infection.	A	A&B	-	A-D
- Pathology of vascular tumors	A	A&B	-	A-D
The Blood Vessels	B	A&B	-	
-Atherosclerosis	B	A&B	-	A-D
Autoimmune arteritis	B	A&B	-	A-D
-Mesenteric ischemia	B	A&B	-	
-Cerebrovascular diseases	B	A&B	-	A-D
-Acute limb ischemia	B	A&B	-	A-D
Haemostasis	B	A&B	-	A-D
Neo-angiogenesis	B	A&B	-	A-D

5. Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Written & oral communication
3. Observation

6. Methods of teaching/learning: for students with poor achievements

1. Extra Didactic (lectures, seminars, tutorial) according to their needs

7. Assessment methods:

i. Assessment tools:

1- Written examination
2- oral examination
3- Log book

ii. Time schedule: One year after application to MD degree

iii. Marks: 150

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

Vascular Surgery, Rutherford, 9th Edition 2018

Vascular Surgery, Moore, 9thEdition 2018

iii. Recommended books

Vascular Surgery, Hiamovici,

iv. Periodicals, Web sites, … etc

- European Journal of Vascular and Endovascular Surgery
- Vascular surgery
- Annals of vascular surgery

9. Signatures

- Course Coordinator: Prof Dr: Ayman ElSayed Hassaballa Assistant coordinator (s) Dr. Mahmoud ismael	**- Head of the Department:** Prof Dr: Ayman ElSayed Hassaballa
Date: 9-2022	**Date:** 9-2022

Course 6: Vascular surgery

Vascular Surgery
Faculty of medicine
Assiut University
2022-2023/2023-2024

1. Course data

- **Course Title: Vascular surgery**
- Course code: VAS 315 C
- Specialty: Vascular Surgery
- **Number of Credit point : 24 (16.3%) practical** 123 **(83.7%).total** 147
- **Department (s) delivering the Course : Vascular Surgery**
- **Coordinator (s):**
  - **Course coordinator**

Prof Dr: Ayman EL Sayed Hassaballa

Assistant coordinator (s): Dr. Mahmoud Ismael

- **Dr. Mustafa M.ELmahrizy**

Date last reviewed: 9/2022

- **Requirements (prerequisites) if any :**
  - **First assistant in 50 operations.**
  - **Second assistant in 70 operations.**
  - **Must perform 50 operation at least.**
  - **The candidate should give 5 lecture at least.**
  - **The candidate should participate in three Joural club meetings.**
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

2. Course Aims

1. To enable the MD students to keep with the satisfactory standards regarding vascular patients' care. This will be facilitated by gaining the most updated medical knowledge, mastering high levels of clinical skills, and achieving an optimum level of clinical experience and competence in Vascular Surgery.
2. Provide the students with a high quality research skills and activities and assist them in the international publications in peer-reviewed specialized medical journals.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	**Methods of teaching/ learning**	***Methods of Evaluation***
A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions: • Cerebrovascular diseases. • Peripheral arterial diseases • Thoracic Outlet Syndrome • Diseases of Thoracic Aorta and Supra –Aortic Trunks • Diseases of Abdominal Aorta • Mesentric Vascular Diseases • Renovascular diseases • Varicose veins and venous insufficiency. • Vascular trauma. • Superficial and Deep Venous Thrombosis	Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)	-Written exams. -oral exams. -Operative performance

• Infection in Vascular surgery • Diabetic foot infection • - Congenital Vascular Malformations • - Vascular Tumors		
B. Mention the principles of: -Vascular access procedures. - Sympathectomy -Lymphatic Diseases and Surgery -Vascular Laboratory -Complications of Vascular Surgery -Vascular imaging and endovascular procedures - Anticoagulants -Antibiotics for vascular infections -Laser in Mangement of Vascular Diseases New Development in Vascular Surgery		
C. Mention Basics of the following rare diseases and conditions: -Vasculitis -Carotids body tumor -Aortic Dissection -Popliteal entrapment		
D. Explain the facts and principles of the relevant basic supportive sciences related to vascular surgery.		
E. Explain the facts and principles of the relevant clinically supportive sciences related to vascular surgery		
F. Describe the basic ethical and medicolegal principles revenant to the vascular surgery.		
G. Describe the basics and measurement of quality assurance to ensure good clinical care		

in vascular surgery.		
H. Explain the ethical and scientific principles of medical research		
I. Explain the impact of common health problems in the field of vascular surgery on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design / present case in common problem related to Vascular surgery.	Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)	-Written and oral exams.
B. Apply the basic and clinically supportive sciences which are appropriate to Vascular surgery related conditions.		
C. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to Vascular surgery.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs. -Intra operative bleeding -Graft thrombosis -Acute limb ischemia -Visceral injury		
G. Plain quality improvement activities in the field of medical education and clinical practice in		

Vascular surgery.		
H. Create and innovate plans, systems, and other issues for improvement of performance in Vascular surgery.		
I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of Vascular surgery		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to vascular surgery.	Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching	-Written and oral exams. Operative performance
B. Order the following non invasive and invasive diagnostic procedures ➢ Angiography ➢ Doppler studies ➢ Duplex scanning	Clinical rounds Seminars Clinical rotations (service teaching) Video conference	Written and oral exams. Operative performance -Logbook
C. Interpret the following non invasive and invasive diagnostic procedures ➢ Angiography ➢ Doppler studies ➢ Duplex scanning	Clinical rounds Seminars Clinical rotations (service teaching) Video conference	Written and oral exams. Operative performance -Logbook

D. Perform the following non invasive and invasive diagnostic procedures ➢ Angiography ➢ Doppler studies ➢ Duplex scanning	Hand on workshops -Perform under supervision of senior staff	Procedure presentation - Log book - Chick list
E. Prescribe the following non invasive and invasive therapeutic procedures. -Prescribe anticoagulant -Antibiotic -Use of vasodilators -DUPLEX GUIDED Sclerotherapy	-Hands on workshops -Perform under supervision of senior staff	-Procedure presentation - Log book - Chick list
F. Perform the following non invasive and invasive therapeutic procedures -Perform emergent and elective vascular surgical operations -Endovascular procedures -Intrluminal thrombolysis	Hand on workshops -Perform under supervision of senior staff	Procedure presentation - Log book - Chick list
G. Develop and carry out patient management plans for the following problems • Peripheral arterial diseases. • Varicose veins and venous insufficiency. • Vascular trauma • Vascular access procedure	Lectures Clinical rounds Seminars Clinical round with senior staff Observation Post graduate teaching Case Presentation	
H. Counsel and educate patients and their family about: -Inform patient about sequelae of operative and non-operative management	Lectures Clinical rounds Seminars Clinical round	Clinical examination -Check list -log book &

-Explain perioperative process, likely outcome and time to recovery to patients, and check understanding. - Interpretation of results of different investigations related to the conditions mentioned in A.A -AC and discussion of different therapeutic options.	with senior staff Observation Post graduate teaching	portfolio Procedure/case presentation
I. Use information technology to support patient care decisions and patient education for Vascular surgery related conditions.		
J. Provide health care services aimed at preventing the following conditions • Problems of diabetic foot • Surgical infections	Lectures Clinical rounds Seminars	checklist
K. Work with health care professionals, including those from other disciplines, to provide patient-focused care .		
L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)	Clinical round with senior staff	

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles)	Didactic; Lectures Clinical rounds Seminars, Clinical rotations (service teaching)	Written and oral exams. Operative performance
B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.	Simulations Clinical round Seminars Lectures Case presentation Hand on workshops	Global rating Portfolios Procedure/case presentation Log book Chick list
C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D. Use information technology to manage information, access on-line medical information; and support their own education		
E. Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients	Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)	oral exams. Operative performance
G. Perform the following oral communications: -Relevant history taking -Obtain consent from patients: -Inform patient about sequelae of operative and non-operative management -Explain perioperative process, likely outcome and time to recovery to patients, and check understanding. - Interpretation of results of different investigations related to the conditions mentioned in A.A –A-C and discussion of different therapeutic options.		
H. Fill the following reports: Vascular trauma report Duppler study report Discharge report		
I. Work effectively with others as a member or leader of a health care team e.g. in operative theatre		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)	1. Objective structured clinical examination 2. Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		1. 360o global rating
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching	1. 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

4. Contents (topic s/modules/rotation
Course Matrix (UNIT 1)

Time Schedule: Second part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
• Cerebrovascular diseases.	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Varicose veins and venous insufficiency.	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Vascular trauma.	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Infection in Vascular surgery	A,D-I	A-E,G-J	A,J	A-P
• Diabetic foot infection	A,D-I	A-E,G-J	A-D,J	A-P
• Peripheral arterial diseases	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Thoracic Outlet Syndrome	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Diseases of Thoracic Aorta and Supra – Aortic Trunks	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Diseases of Abdominal Aorta	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Mesentric Vascular Diseases	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Renovascular diseases	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• Superficial and Deep Venous Thrombosis	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• - Congenital Vascular Malformations	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
• - Vascular Tumors •	A,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P

Vascular access procedures.	B,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
-Vascular imaging and endovascular procedures	B,D-I	A-E,G-J	A-D,F,H,I,K,L	A-P
- Anticoagulants	B,D-I	A-E,G-J	A,E,F,G	A-P
-Antibiotics for vascular infections	B,D-I	A-E,G-J	A,E,F	A-P
- Sympathectomy	B,D-I	A-E,G-J	A,E,F,G	A-P
-Lymphatic Diseases and Surgery	B,D-I	A-E,G-J	A,E,F	A-P
-Vascular Laboratory	B,D-I	A-E,G-J	A,E,F,G	A-P
Complications of Vascular Surgery	B,D-I	A-E,G-J	A,E,F	A-P
New Development in Vascular Surgery	B,D-I	A-E,G-J	A,E,F,G	A-P
-Laser in Mangement of Vascular Diseases	B,D-I	A-E,G-J	A,E,F	A-P
Vasculitis	C,D-I	A-E,G-J	A,E,F,I,K,L	A-P
-Carotids body tumor	C,D-I	A-E,G-J	A-D,F,G,H,I,K,L	A-P
-Aortic Dissection	C,D	A-E,G-J	A-D,F,H,I-L	A-P
-Popliteal entrapment	C,D	A-E,G-J	A-E,F.I,K,L	A-P
Intra operative bleeding	-	F	A-D,E	A-P
-Graft thrombosis	-	F	A-D,E	A-P
-Acute limb ischemia	-	F	A-D,E	A-P
-Visceral injury	A	F	A-D,E	A-P
-Graft thrombosis	A	F	A-D,E	A-P

5. Methods of teaching/learning:

1. Lectures
2. Seminars
3. Clinical rounds
4. Operative practice

5. Simulations
6. Case presentation
7. Hand on workshops

6. Methods of teaching/learning: for students with poor achievements

1. Lectures
2. Seminars
3. Clinical rounds

7. Assessment methods:

i. Assessment tools:

- Written exams
- Oral exams
- Logbook
- Clinical exams
- Operative

ii. Time schedule: At the end of second part

iii. Marks: 1200

8. List of references

i. Lectures notes

ii. Essential books

Vascular Surgery, Rutherford, 9th Edition 2018

Vascular Surgery, Moore, 9th Edition 2018

iii. Recommended books

Vascular Surgery, Hiamovici,

iv. Periodicals, Web sites, … etc

- European Journal of Vascular and Endovascular Surgery
- Vascular surgery

9. Signatures

- Course Coordinator: Prof Dr: Ayman ElSayed Hassaballa Assistant coordinator (s) Dr. Mahmoud ismael	**- Head of the Department:** Prof Dr: Ayman ElSayed Hassaballa
Date: 9-2022	**Date:** 9-2022

ANNEX 2
Program Academic Reference Standards (ARS)

1- Graduate attributes for medical doctorate in Vascular surgery

***The Graduate (after residence training and medical doctorate years of study) must*:**

1- Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in Vascular Surgery.

2- Have continuous ability to add knowledge to Vascular Surgery through research and publication.

3- Appraise and utilise relevant scientific knowledge to continuously update and improve clinical practice.

4- Acquire excellent level of medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific research.

5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.

6- Identify and create solutions for health problems in Vascular Surgery.

7- Acquire an in depth understanding of common areas of Vascular Surgery, from basic clinical care to evidence based clinical application, and possession of required skills to manage independently all problems in these areas.

8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.

9- Function as teacher in relation to colleagues, medical students and other health professions.

10- Master decision making capabilities in different situations related to Vascular Surgery..

11- Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.

12- Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.

13- Show model attitudes and professionalism.

14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Vascular Surgery or one of its subspecialties.

15- Use recent technologies to improve his practice in Vascular Surgery.

16- Share in updating and improving clinical practice in Vascular Surgery.

2- Competency based Standards for medical doctorate in vascular surgery

22.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

2-1-A- Established, updated and evidence- based theories, basics and developments of Vascular Surgery and relevant sciences.

2-1-B- Basics, methods and ethics of medical research.

2-1-C- Ethical and medicolegal principles of medical practice related to Vascular Surgery.

2-1-D- Principles and measurements of quality in Vascular Surgery..

2-1-E- Principles and efforts for maintainace and improvements of public health.

2- Intellectual skills

By the end of the program, the graduate should be able to demonstrate the following

2-2-A- Application of basic and other relevant science to solve Vascular Surgery related Problems.

2-2-B- Problem solving based on available data.

2-2-C- Involvement in research studies related to Vascular Surgery.

2-2-D- Writing scientific papers.

2-2-E- Risk evaluation in the related clinical practice.

2-2-F- Planning for performance improvement in Vascular Surgery.

2-2-G- Creation and innovation in the Vascular Surgery.

2-2-H- Evidence – based discussion.

2-2-I- Decision making in different situations related to the Vascular Surgery.

2.3- Clinical skills

By the end of the program, the graduate should be able to

- ***Competency-based outcomes for Patient Care:-***

2-3-A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Vascular Surgery.

2-3-B- Master patient care skills relevant to that specialty for patients with all diagnoses and procedures.

2-3-C- Write and evaluate reports for situations related to Vascular Surgery.

<u>2.4- General skills</u>

By the end of the program, the graduate should be able to

- ***Competency-based outcomes for Practice-based Learning and Improvement***

2-4-A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management

2-4-B- Use competently all information sources and technology to improve his practice.

2-4-C- Master skills of teaching and evaluating others.

- ***Competency-based objectives for Interpersonal and Communication Skills***

2-4-D-Master interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.

- ***Competency-based objectives for Professionalism***

2-4-E-Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

- ***Competency-based objectives for Systems-based Practice:***

2-4-F-Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.

2-4-G- Participate in improvement of the education system.

2-4-H- Demonstrate skills of leading scientific meetings including time management

2-4-O- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

Annex 3, Methods of teaching/learning

	Patient care	**Medical knowledge**	**Practice-based learning/ Improvement**	**Interpersonal and communication skills**	**Professionalism**	**Systems-based practice**
Didactic (lectures, seminars, tutorial)	X	X		X	X	X
journal club,	X	X	X			
Educational prescription	X	X	X	X	X	X
Present a case (true or simulated) in a grand round	X	X	X	X	X	
Observation and supervision	X		X	X	X	X
conferences		X	X	X		X
Written assignments	X	X	X	X	X	X
Oral assignments	X	X	X	X	X	X

Teaching methods for knowledge

- ❖ Didactic (lectures, seminars, tutorial)
- ❖ journal club
- ❖ Critically appraised topic
- ❖ Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- ❖ Present a case (true or simulated) in a grand round
- ❖ Others

Teaching methods for patient care

- ❖ Observation and supervision /Completed tasks procedure/case logs
- ❖ On-the-job" training without structured teaching is not sufficient for this skill (checklists).
- ❖ Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- ❖ Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).

- ❖ Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)

- ❖ Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes

both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, ILOs evaluation methods for MD students.

Method	Practical skills	K	Intellectual	General skills			
	Patient care	K	I	Practice-based learning/ Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Record review	X	X	X		X	X	X
Checklist	X				X		
Global rating	X	X	X	X	X	X	X
Simulations	X	X	X	X	X	X	
Portfolios	X	X	X	X	X		
Standardized oral examination	X	X	X	X	X		X
Written examination	X	X	X	X			X
Procedure/ case log	X	X					
OSCE	X	X	X	X	X	X	X

Annex 4, Glossary of MD students assessment methods

- Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.

- Chart Stimulated Recall – Uses the MD doctor's patient records in an oral examination to assess clinical decision-making.

- Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.

- Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MD doctor's performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MD doctor's performance.

- Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MD doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MD doctors.

- Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.

- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

- Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.
- 360 Global Rating Evaluations – MD doctors, faculty, nurses, clerks, and other clinical staff evaluate MD doctors from different perspectives using similar rating forms.
- Portfolios – A portfolio is a set of project reports that are prepared by the MD doctors to document projects completed during the MD study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.
- Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.
- Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

Annex 5, Program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

Annex 6, Program Correlations:

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الدكتوراه مع المعايير الأكاديمية المعتمدة من كلية الطب □ جامعة أسيوط لدرجة الدكتوراه في جراحة الشرايين

I- General Academic Reference Standards (GARS) versus Program ARS

1- Graduate attributes

Faculty ARS	NAQAAE General ARS for postgraduate programs
1- Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in Vascular surgery.	1-إتقان أساسيات و منهجيات البحث العلمي
2- Have continuous ability to add knowledge new developments to Vascular surgery through research and publication.	2-العمل المستمر علي الإضافة للمعارف في مجال التخصص
3- Appraise and utilise scientific knowledge to continuously update and improve clinical practice and relevant basic sciences.	3-تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص و المجالات ذات العلاقة
4- Acquire excellent level of medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific	4-دمج المعارف المتخصصة مع المعارف ذات العلاقة مستنبطا و مطورا للعلاقات البينية بينها
5- Function as a leader of a team to provide patient care that is appropriate, compassionate for dealing with effective and health Problems and health promotion. 7- Acquire an in depth understanding of common areas of speciality, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.	5-إظهار وعيا عميقا بالمشاكل الجارية و النظريات الحديثة في مجال التخصص
6- Identify and create solutions for health problems in Vascular surgery	6-تحديد المشكلات المهنية و إيجاد حلولا مبتكرة لحلها
5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health	7-إتقان نطاقا واسعا من المهارات المهنية في مجال التخصص

problems and health promotion. 7- Acquire an in depth understanding of common areas of Vascular surgery, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.	
16- Share in updating and improving clinical practice in Vascular surgery. 9- Function as teacher in relation to colleagues, medical students and other health professions.	8- التوجه نحو تطوير طرق و أدوات و أساليب جديدة للمزاولة المهنية
15- Use recent technologies to improve his practice in Vascular surgery.	9-استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية
8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public. 5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.	10-التواصل بفاعلية و قيادة فريق عمل في سياقات مهنية مختلفة
10- Master decision making capabilities in different situations related to Vascular surgery.	11-اتخاذ القرار في ظل المعلومات المتاحة
11- Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.	12-توظيف الموارد المتاحة بكفاءة و تنميتها والعمل على إيجاد موارد جديدة
12- Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based	13-الوعي بدوره في تنمية المجتمع والحفاظ على البيئة

improvement of care.	
13- Show model attitudes and professionalism.	14-التصرف بما يعكس الالتزام بالنزاهة و المصداقية و قواعد المهنة
14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Vascular surgery or one of its subspecialties. 15- Use recent technologies to improve his practice in Vascular surgery	15-الالتزام بالتنمية الذاتية المستمرة و نقل علمه و خبراته للآخرين

2- Academic standards

Faculty ARS	NAQAAE General ARS for postgraduate programs
2.1. A- Established, updated and evidence- based theories, basics and developments of Vascular surgery and relevant sciences.	2-1-أ- النظريات و الأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة
2.1. B- Basic, methods and ethics of medical research.	2-1-ب -أساسيات و منهجيات و أخلاقيات البحث العلمي و أدواته المختلفة
2.1. C- Ethical and medicologal principles of medical practice related to Vascular surgery.	2-1-ج- المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص
2.1. D- Principles and measurements of quality in Vascular surgery.	2-1-د مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. E- Principles and efforts for maintains and improvements of public health.	2-1-هـ - المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها
2.2. A- Application of basic and other relevant science to solve Vascular surgery related problems.	2-2-أ -تحليل و تقييم المعلومات في مجال التخصص و القياس عليها و الاستنباط منها
2.2.B- Problem solving based on available data.	2-2-ب -حل المشاكل المتخصصة استنادا علي المعطيات المتاحة
2.2.C- Involvement in research studies related to Vascular surgery.	2-2-ج -إجراء دراسات بحثية تضيف إلى المعارف
2.2. D- Writing scientific papers.	2-2-د- صياغة أوراق علمية
2.2. E- Risk evaluation in the related clinical practice	2-2-هـ تقييم المخاطر في الممارسات المهنية
2.2.F- Planning for performance improvement in Vascular surgery.	2-2-و -التخطيط لتطوير الأداء في مجال التخصص

2-2-G- Creation and innovation in the Vascular surgery.	2-2-ز- الابتكار /الإبداع
2.2. H- Evidence – based discussion.	2-2-ح- الحوار والنقاش المبني علي البراهين والأدلة
2.2.I- Discussion making in different situations related to Vascular surgery.	2-2-ط -اتخاذ القرارات المهنية في سياقات مهنية مختلفة
2.3. A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Vascular surgery. 2.3. B- Master patient care skills relevant to Vascular surgery or patients with all diagnoses and procedures.	2-3-أ -إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص
2.3. C- Write and evaluate reports for situations related to the field of Vascular surgery.	2-3-ب- كتابة و تقييم التقارير المهنية.
2.4.A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	2-3-ج -تقييم و تطوير الطرق و الأدوات القائمة في مجال التخصص
2.4.B- Use competently all information sources and technology to improve his practice.	2-3-د - استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية
2.4.A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management 2.4.G- Participate in improvement of the education system.	2-3-هـ -التخطيط لتطوير الممارسة المهنية وتنمية أداء الآخرين

II-Program ARS versus program ILOs

Comparison between ARS- ILOS for medical doctorate

(ARS)	(ILOs)
2-1- Knowledge and understanding	***2-1- Knowledge and understanding***
2-1-A- Established, updated and evidence-based Theories, Basics and developments of Vascular surgery and relevant sciences.	**2-1-A**- Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio behavioral science relevant to his specialty as well as the evidence – based application of this knowledge to patient care.
2-1-B Basic, methods and ethics of medical research.	**2-1-B-** Explain basics, methodology, tools and ethics of scientific medical, clinical research.
2-1-C- Ethical and medicologal principles of medical practice related to Vascular surgery field.	**2-1-C-** Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Vascular surgery
2-1-D- Principles and measurements of qu in the Vascular surgery	**2-1-D-** Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of Vascular surgery.
2-1-E-Principles and efforts for maintains and improvements of public health.	**2-1-E-** Mention health care system, public health and health policy, issues relevant to this specialty and principles and methods of system – based improvement of patient care in common health problems of the field of Vascular surgery.
***2-2- Intellectual skills*:**	***2-2- Intellectual skills:***
2-2-A-Application of basic and other relevant science to solve Vascular surgery related problems.	**2-2-A-** Apply the basic and clinically supportive sciences which are appropriate to Vascular surgery related conditions / problem / topics.

2-2-B-Problem solving based on available data.	**2-2-B-** Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to Vascular surgery.
2-2-C- Involvement in research studies related to the Vascular surgery.	**2-2-C-** Plain research projects.
2-2-D Writing scientific papers.	**2-2-D-** Write scientific paper.
2-2-E-Risk evaluation in the related clinical practice.	**2-2-E-** Participate in clinical risk management as a part of clinical governance.
2-2-F-Planning for performance improvement in the Vascular surgery field.	**2-2-F-** Plan for quality improvement in the field of medical education and clinical practice in his specialty.
2-2-G-Creation and innovation in the specialty field.	**2-2-G-** Create / innovate plans, systems, and other issues for improvement of performance in his practice.
2-2-H-Evidence – based discussion.	**2-2-H-** Present and defend his / her data in front of a panel of experts.
2-2-I-Decision making in different situations related to Vascular surgery fields.	**2-2-I-** Formulate management plans and alternative decisions in different situations in the field of the Vascular surgery.

continuous (ARS)	continuous (ILOs)
2-3- Clinical skills:	***2/3/1/Practical skills (Patient care :)***
2-3-A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in his field of practice.	**2-3-1-A-** Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. ***p.s.*** Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.
2-3-B- Master patient care skills relevant to Vascular surgery for patients with all diagnoses and procedures.	**2-3-1-B-** Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to Vascular surgery
	2-3-1-C- Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.
	2-3-1-D- Perform diagnostic and therapeutic procedures considered essential in the field of Vascular surgery
	2-3-1-E- Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.
	2-3-1-F- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the Vascular surgery related situations.
	2-3-1-G- Gather essential and accurate

	information about patients of the Vascular surgery related conditions. **2-3-1-H** Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for the Vascular surgery related conditions. **2-3-1-I-** Develop and carry out patient management plans for Vascular surgery related conditions. **2-3-1-J-** Counsel and educate patients and their families about Vascular surgery related conditions. **2-3-1-K-** Use information technology to support patient care decisions and patient education in all Vascular surgery related clinical situations. **2-3-1-L-** Perform competently all medical and invasive procedures considered essential for the Vascular surgery related conditions / area of practices. **2-3-1-M-** Provide health care services aimed at preventing the Vascular surgery related health problems. **2-3-1-N-** Lead health care professionals, including those from other disciplines, to provide patient-focused care in Vascular surgery related conditions**.**

2-3-C- Write and evaluate reports for situations related to the field of Vascular surgery	**2-3-1-O-** Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive timely and legible medical records).
2-4- General skills **2-4-A-** Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	***2/3/2 General skills*** **2-3-2-A-** Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of Vascular surgery **2-3-2-B-** Appraise scientific evidence. **2-3-2-C-** Continuously improve patient care based on constant self-evaluation and life-long learning. **2-3-2-D**. Participate in clinical audit and research projects. **2-3-2-E-** Practice skills of evidence-based Medicine (EBM). **2-3-2-G-** Design logbooks. **2-3-2-H-** Design clinical guidelines and standard protocols of management. **2-3-2-I-** Appraise evidence from scientific studies related to the patients' health problems.

2-4-B- Use competently all information sources and technology to improve his practice.	**2-3-2-J-** Apply knowledge of study designs and statistical methods to the appraisal of clinical studies. **2-3-2-K**- Use information technology to manage information, access on-line medical information; for the important topics.
2-4-C- Master skills of teaching and evaluating others.	**2-3-2-F-** Educate and evaluate students, residents and other health professionals.
2-4-D- Master interpersonal and communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals.	**2-3-2-L**- Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:- • Present a case. • Write a consultation note. • Inform patients of a diagnosis and therapeutic plan Completing and maintaining comprehensive. • Timely and legible medical records. • Teamwork skills. **2-3-2-M-** Create and sustain a therapeutic and ethically sound relationship with patients. **2-3-2-N**- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills. **2-3-2-O-** Work effectively with others as a member or leader of a health care team or other professional group.
2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical	**2-3-2-P-** Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.

principles, and sensitivity to a diverse patient population.	**2-3-2-Q-** Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices. **2-3-2-R-** Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.
2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value. **2-4-G**- Participate in improvement of the education system.	**2-3-2-S-** Work effectively in health care delivery settings and systems related to Vascular surgery including good administrative and time management. **2-3-2-T-** Practice cost-effective health care and resource allocation that does not compromise quality of care. **2-3-2-U-** Advocate for quality patient care and assist patients in dealing with system complexities. **2-3-2-V-** Design, monitor and evaluate specification of under and post graduate courses and programs.
2-4-H- Demonstrate skills of leading scientific meetings including time management	**2-3-2-W-** Act as a chair man for scientific meetings including time management **2-3-2-S-** Work effectively in health care delivery settings and systems related to Vascular surgery including good administrative and time management.
2-4-O- Demonstrate skills of self and continuous learning .	From A to H

III-Program matrix
Knowledge and understanding

Course	Program covered ILOs				
	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E
Course 1 : Medical statistics		✓			
course 2 : Research Methodology		✓			
course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research			✓		
course 4 Surgical Anatomy	✓				
course 5 Surgical pathology	✓				
Course 6 : Vascular surgery	✓	✓	✓	✓	✓

Intellectual

Course	Program covered ILOs								
	2/2/A	2/2/B	2/2/C	2/2/D	2/2/E	2/2/F	2/2/G	2/2/H	2/2/I
Course 1 : Medical statistics			✓	✓				✓	
course 2 : Research Methodology			✓	✓				✓	
course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research								✓	
course 4 Surgical Anatomy	✓	✓							
course 5 Surgical pathology	✓	✓							
Course 6 : Vascular surgery	✓	✓	✓	✓	✓	✓	✓	✓	✓

Practical Skills (Patient Care)

Course	Program covered ILOs							
	2/3/1/ A	2/3/1/ B	2/3/1/ C	2/3/1/ D	2/3/1/ E	2/3/1/ F	2/3/1/ G	2/3/1/ H
Course 1 : Medical statistics								
course 2 : Research Methodology								
course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research				✓				
course 4 Surgical Anatomy								
course 5 Surgical pathology								
Course 6 : Vascular surgery	✓	✓	✓	✓	✓	✓	✓	✓

Patient care

Course	Program covered ILOs						
	2/3/1/I	2/3/1/J	2/3/1/K	2/3/1/L	2/3/1/M	2/3/1/N	2/3/1/0
Course 1 : Medical statistics							
course 2 : Research Methodology							
course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	✓						✓
course 4 Surgical Anatomy							
course 5 Surgical pathology							
Course 6 : Vascular surgery	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	Program covered ILOs							
	2/3/2/ A	2/3/2/ B	2/3/2/ C	2/3/2/ D	2/3/2/ E	2/3/2/ F	2/3/2/ G	2/3/2/ H
Course 1 : Medical statistics		✓						
course 2 : Research Methodology		✓		✓	✓			
course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research								
course 4 Surgical Anatomy								
course 5 Surgical pathology								
Course 6 : Vascular surgery	✓	✓	✓	✓	✓	✓	✓	✓

General skill

Course	Program covered ILOs							
	2/3/2/I	2/3/2/J	2/3/2/K	2/3/2/L	2/3/2/ M	2/3/2/ N	2/3/2/ O	2/3/2/P
Course 1 : Medical statistics	✓	✓	✓					
course 2 : Research Methodology	✓	✓						
course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research				✓				
course 4 Surgical Anatomy			✓	✓			✓	✓
course 5 Surgical pathology			✓	✓			✓	✓
Course 6 : Vascular surgery	✓	✓	✓	✓	✓	✓	✓	✓

General skills

Course	Program covered ILOs						
	2/3/2/Q	2/3/2/R	2/3/2/S	2/3/2/T	2/3/2/U	2/3/2/V	2/3/2/W
Course 1 : Medical statistics							
course 2 : Research Methodology							
course 3 : Medicolegal Aspects & Ethics in Medical Practice and Scientific Research							
course 4 Surgical Anatomy	✓		✓				
course 5 Surgical pathology	✓		✓				
Course 6 : Vascular surgery	✓	✓	✓	✓	✓	✓	✓

Annex 7, Additional information:

Department of Vascular Surgery

Head of Vascular Surgery Department:

Prof. Dr. Ayman El-Sayed Abde-Salam Hasaballah

Team of Vascular Surgery:

Prof.Dr. Hassan Bakr Al-Badawy
Prof.Dr. Bahgat Abdel-Hameed Thabet
Prof.Dr. Mohamed Alaa El-deen Mubarak
Dr. Mostafa Saad Khalil
Dr. Khaled Abdel-Aziz Atallah
Dr. Ashraf Gamal Taha
Dr. Ahmed Hassen Baker
Dr. Haithem Ali Hassen
Dr. Mahmoud Ismail Ahmed
Dr. mohamed Ibrahem Ahmed
Dr. Hesham Elsayed Mohamed Ibrahim Aboloyoun
Dr. Ashraf M. Abu Bakr Al-Nagar
Dr. Osman Mahmoud Ahmed
Dr. Ahmed khairy Sayed
Dr. Mohamed Salah Abdel Kareem
Dr. Mostafa Mostafa.AL-Mehrezy
Dr. Ahmed Mostafa Nagi

The team also includes 6 Assistant lecturers and 6 Residents.

Historical perspective:

Our Vascular Surgery center is one of the best and most challenging centers in Egypt.

Vascular Surgery Unit began as a unit within General Surgery Department in 1982. It became a separate department in May 1999.

As this department is a pioneer in Vascular Surgery, the first doctorate degree in Vascular Surgery in Egypt was registered in our department in 2005.

Services offered by Vascular Surgery Department:

Outpatient clinic:

In our outpatient clinic we offer consultation for all types of vascular diseases, clinical assessment, management and admission of critical cases.

The average number of cases seen in the clinic is **150 patients** every week, as we are the tertiary center of all Upper Egypt.

Inpatient Ward:
We offer inpatient treatment for patients with all types of vascular diseases with the capacity of 36 beds, full most times of the year. We also offer management for patients admitted in other departments.

Vascular Lab:
Including hand Doppler, plethysmography, strain gauge plethysmography, continuous wave Doppler and color duplex.
Operative section:

Including 5 operation rooms, the department performs 3 operative lists every week.

Endovascular section:
Performing with minimally invasive techniques new endovascular interventions including Angioplasty, stenting, intra-arterial thrombolyisis and radiofrequency for varicose vein management.We have 2 lists per week.
.
Conference Room:
For Scientific discussions and weekly lectures.

Statistics:
The department treats about 5000 patients every year.
150 patients seen in outpatient clinic every week
2000 operations done every year including 600 major operations and more than 350 endovascular cases.

Department quality control insurance for completing the program:

- Evaluation by the Department head and staff members.
- Regular assessments.
- Log book monitoring.

(end of the program specifications)