

Peer Revision

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

Program Specification of Medical Doctorate Degree of Clinical Oncology

Sohag University

Faculty of medicine

A. Basic Information:

1. Program Title: Medical Doctorate in Clinical Oncology
2. Programme Type: Single
3. Faculty: Faculty of Medicine
4. Department: Oncology and Nuclear Medicine
5. Coordinator: Dr. Elsayed Mostafa Ali
6. Assistant Coordinator: Dr. Ahmed Marzouk
7. External Evaluator: Prof. Dr. Amina Mohamed Mostafa
8. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

B. Professional Information:

1. Program Aims:

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

- 1- Recent Scientific knowledge essential for the practice of practice of clinical oncology according to the international standards.
- 2- Skills necessary for proper diagnosis and management of patients including diagnostic, problem solving and decision making skills.
- 3- Ethical principles related to the practice in this highly sensitive specialty.
- 4- Active participation in community needs assessment and problems identification.
- 5- Maintenance of learning abilities necessary for continuous medical education.
- 6- Upgrading research interest and abilities.

2. Attributes of the student:

1. Efficient in carrying out the basics and methodologies of scientific research.
2. The continuous working to add new knowledge in the field of oncology.
3. Applying the analytical course and critical appraisal of the knowledge in his specialty and related fields.
4. Merging the oncological knowledge with the other related knowledge with conclusion and developing the relationships in between them.
5. Showing a deep awareness with the ongoing problems, theories, and advanced sciences in the specialty of oncology.
6. Determination of the professional problems in the specialty of oncology and creating solutions for them.
7. Efficient in carrying out the professional skills in his specialty.
8. Using advanced suitable technologies which serves his practice.



Program Specification of Medical Doctorate Degree of Clinical Oncology

Sohag University

Faculty of medicine

A. Basic Information:

1. Program Title: Medical Doctorate in Clinical Oncology
2. Programme Type: Single
3. Faculty: Faculty of Medicine
4. Department: Oncology and Nuclear Medicine
5. Coordinator: Dr. Elsayed Mostafa Ali
6. Assistant Coordinator: Dr. Ahmed Marzouk
7. External Evaluator: Prof. Dr. Amina Mohamed Mostafa
8. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

B. Professional Information:

1. Program Aims:

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

- 1- Recent Scientific knowledge essential for the practice of practice of clinical oncology according to the international standards.
- 2- Skills necessary for proper diagnosis and management of patients including diagnostic, problem solving and decision making skills.
- 3- Ethical principles related to the practice in this highly sensitive specialty.
- 4- Active participation in community needs assessment and problems identification.
- 5- Maintenance of learning abilities necessary for continuous medical education.
- 6- Upgrading research interest and abilities.

2. Attributes of the student:

1. Efficient in carrying out the basics and methodologies of scientific research.
2. The continuous working to add new knowledge in the field of oncology.
3. Applying the analytical course and critical appraisal of the knowledge in his specialty and related fields.
4. Merging the oncological knowledge with the other related knowledge with conclusion and developing the relationships in between them.
5. Showing a deep awareness with the ongoing problems, theories, and advanced sciences in the specialty of oncology.
6. Determination of the professional problems in the specialty of oncology and creating solutions for them.
7. Efficient in carrying out the professional skills in his specialty.
8. Using advanced suitable technologies which serves his practice.

9. Efficient communication and leadership of team work in his specialty.
10. Decision making through the available information.
11. Using the available resources efficiently and working to find new resources.
12. Awareness with his role in the development of the society and preserve environment.
13. Behaving in a way which reflects his credibility, accountability, and responsibility.
14. Keeping continuous self development and transfer his experiences and knowledge to others.

3. Intended Learning Outcomes (ILOs)

a) Knowledge and Understanding:

By the end of the study of doctoral program in Clinical Oncology, the Graduate should be able to:

- a1. Mention the recent advances in molecular biology related to cancer.
- a2. Mention the recent advances in radiobiology and cancer pathology.
- a3. Mention the recent advances in radiotherapy, brachytherapy and cancer treatment by radioactive nuclides.
- a4. Explain the recent advances in chemotherapy and biotherapy.
- a5. Explain the recent advances in haematological malignancies and bone marrow transplantation.
- a6. Explain the recent advances in pediatric oncology field, palliative care and intensive care of cancer patients.
- a7. Tell the recent advances in internal medicine related to oncology.
- a8. Tell the recent advances in surgical oncology.
- a9. Mention the advanced studies and recent technologies in clinical oncology.
- a10. Mention principles, methodologies, tools and ethics of scientific research.
- a11. Mention The principles and fundamentals of ethics and legal aspects of professional practice in the field of Clinical Oncology.
- a12. Mention The principles and fundamentals of quality of professional practice in the field of Clinical Oncology.
- a13. Mention biostatistics and computer skills.
- a14. Mention the effect of professional practice on the environment and the methods of environmental development and maintenance.

b) Intellectual Skills

By the end of the study of doctoral program in Clinical Oncology the graduate should be able to:

- b1. Interpret data through history taking to reach a provisional diagnosis for oncological problems.
- b2. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for oncological problems.
- b3. Conduct research studies, that add to knowledge.
- b4. Formulate scientific papers in the area of Clinical Oncology.
- b5. Assess risk in professional practices in the field of Clinical Oncology.
- b6. Plan to improve performance in the field of Clinical Oncology.
- b7. Identify oncological problems and find solutions.
- b8. Have the ability to innovate nontraditional solutions for oncological problems.
- b9. Manage Scientific discussion based on scientific evidences and proofs.
- b10. Criticize researches related to Clinical Oncology.

c) Professional and Practical Skills

By the end of the study of doctoral program in Clinical Oncology , the Graduate should be able to:

- c1. Master the basic and modern professional clinical skills in the area of Clinical Oncology.
- c2. Write and evaluate of medical reports.

- c3. Evaluate and develop methods and tools existing in the area of Clinical Oncology.
- c4. Teach the imaging procedures of treatment planning.
- c5. Train junior staff through continuous medical education programs.
- c6. Design new methods, tools and ways of professional practice.
- c7. Perform recent advanced technological methods in collection, analysis and interpretation of data

d) General and Transferable Skills

By the end of the study of doctoral program in Clinical Oncology , the Graduate should be able to:

- d1. Present reports in seminars effectively.
- d2. Use appropriate computer program packages.
- d3. Teach others and evaluate their performance.
- d4. Assess himself and identify his personal learning needs.
- d5. Use of different sources for information and knowledge.
- d6. Work coherently and successfully as a team and team's leadership.
- d7. Manage Scientific meetings according to the available time.

4. Academic Standards:

Sohag Faculty Of Medicine adopted the general National Academic Reference Standards (NARS) provided by the national authority for quality assurance and accreditation of education (NAAQAE) for postgraduate programs. This was approved by the Faculty Council decree NO.6854, in its session NO.177 Dated: 18/5/2009. Based on these NARS; Academic Reference Standards (ARS) were suggested for this program. These ARS were revised by external evaluator and approved by the Faculty Council decree NO.7528 , in its session No. 191, dated 15/3/2010. The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its session No.60. dated 26-12-2011.

5. Curriculum Structure and Contents

5.a- Program duration 7 semesters (3.5 years).

5.b- Program structure

5.b.i- No. of hours per week:

Subject	hours /week		
	Lecture s	Practical	Clinical
<u>First Part:</u>			
<u>minor</u>			
Biostatistics + Computer	2	1	
Research Methodology	2	1	
Primary Medical Report	1	1	
basic pathology			
radiobiology	2		
molecular biology	2		
pathology	2		
<u>Second Part:</u>			
Clinical oncology	5,75		
internal medicine and surgery related to oncology	1		

code	Item	No	%
------	------	----	---

b.i	Total credit hours	Compulsory	90	100
		Elective	0	0
		Optional	0	0
b.iii	credit hours of basic sciences courses		6	6,67
b.iv	credit hours of courses of social sciences and humanities		0	0
b.v	credit hours of specialized courses:		61	67,7
b.vi	credit hours of other course			
b.vii	Practical/Field Training		8	8.9%
b.viii	Program Levels (in credit-hours system):			
	Level 1: 1 st part		14	15.56
	Level 2: 2 nd Part		53	58.89
	Level 3: Thesis		15	16.67

6. Program Courses:

14 courses compulsory

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

Compulsory

Course Title	No. of hours	No. of hours /week			Program ILOs Covered (By No.)
		Lect.	Lab	Clin	
First Part					
Biostatistics + Computer	3	2	1		a13, b1,c7,d2,d5
Research ,methodology	3	2	1		a10, b3, b4, 8,b10, c1,c6, d5,d6
Primary medical report	2	1	1		a10,b3,c2,d1
Pathology	2	2			a1,a2,a10,b3
molecular biology	2	2			a1
radiobiology	2	2			a 2
Second Part:					
Clinical oncology	47	5.75			a1,a2,a3,a4,a5, a6,a9,a10,a11,a12, a14,b1,b2,b3,b4,b5,b6,b7,b8,b9,c1,c2,c3,c4,c5,c6,d1,d2,d3,d4,d5,d6,d7
internal medicine and surgery related to oncology	6	1			a7a8a10a11a12a14b1b2b3c1c2

7. Program Admission Requirements

I- General Requirements.

- Candidate should have either MBBch degree from any Egyptian Faculty of Medicine or Equivalent Degree from Medical Schools abroad approved by the ministry of high Education.
- Candidate should know how to speak & write English well
- Candidate should have computer skills.
- Follow postgraduate bylaw Regulatory rules of Sohag Faculty of Medicine approved by the ministerial decree No. (44), dated 6/1/2010.

II- Specific Requirements

- Master degree in **Clinical Oncology** with at least "Good Rank".

8. **Regulations for Progression and Program Completion**

Duration of program is 90 credit hours (≥ 7 semesters ≥ 3.5 years), starting from registration till acceptance of the thesis; divided to:

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

- Program-related basic science, Research Methodology, Ethics & medical reports, Biostatistics and computer.
- At least six months after registration should pass before the student can ask for examination in the 1st part.
- Two sets of exams: 1st in October — 2nd in April after fulfillment of the credit hours.
- At least 60% of the written exam and 60% of the total oral and practical/clinical is needed to pass in each course.
- For the student to pass the first part exam, a score of at least 60% (Level D) in each course is needed.
- Those who fail in one course need to re-exam it only.
- GPA of ≥ 1.3 is needed to pass this level (semester).

Second Part: (50-60 Credit hours ≥ 24 months= 4 semesters):

- Program related specialized science of **Clinical Oncology** courses. At least 24 months after passing the 1st part should pass before the student can ask for examination in the 2nd part.
- Fulfillment of the requirements in each course as described in the template and registered in the log book (8 Credit hours; with obtaining $\geq 75\%$ of its mark) is a prerequisite for candidates to be assessed and undertake part 1 and part 2 examinations; the credit hours of the logbook are calculated as following:
 - Each Cr. Hr.= 60 working Hrs.
 - Logbook= 8 Cr. Hr. X 60 working Hrs = 480 Working Hrs.
 - Collection of working Hrs. is as following:

Activity		Hrs
Grand rounds	اجتماع علمي موسع	٦
Training courses	دورات تدريبية	12/ day
Conference attendance	حضور مؤتمرات علمية داخلي خارجية	١٢/day 18/day
Thesis discussion	حضور مناقشات رسائل	٦
Workshops	حضور ورش عمل	١٢/day
Journal club	ندوة الدوريات الحديثة	٦
Seminars	لقاء علمي موسع	٦
Morbidity and Mortality conference	ندوة تحليل المخاطر المرضية أو الوفاة	٦

- Two sets of exams: 1st in October - 2nd in April.
- At least 60% of the written exam is needed to be admitted to the oral and practical exams.
- 4 times of oral and practical exams are allowed before the student has to re-attend the written exam.

Third Part (Thesis) (15 Credit hours =24-48 months=4-8 semester):

- Documentation of the subject should not be delayed for > 1.5 years after registration.
- Could start after registration and should be completed, defended and accepted after passing the 2nd part final examination, after passing of at least 24 months after documentation of the subject of the thesis and after publishing of at least one paper from the thesis in a specialized peer-reviewed journal.
- Accepting the thesis is enough to pass this part.

9. Methods of student assessments:

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

Assessment schedule:

Part I:

- Biostatistics & Computer: Written Exam (2 hours) + Structured oral Exam + OSPE
- Research Methodology: Written Exam (2 hours) + structured oral Exam+ OSPE
- Primary medical reports: Written Exam (2 hour) + Structured oral Exam+ OSPE
- Oncologic biology: Written Exam (2 hour) + Structured oral Exam+ OSCE
- Molecular Biology: Written Exam (2 hour) + Structured oral Exam+ OSCE
- Oncologic Pathology: Written Exam (2 hours) + OSCE + structured oral Exam.

Part II:

- Five Written Exams: (3 hours for each) Two written Exams for Clinical oncology + Two written Exams for Internal medicine and surgery related to oncology + OSCE + structured oral Exam + one written ExamContaining commentary (1.30 hours)

10. Evaluation of Program:

Evaluator	Tool	Sample
1- Senior students	Questionnaire	7
2- Alumni	Questionnaire	3
3- Stakeholders (Employers)	Questionnaire	20
4-External Evaluator(s) (External Examiner(s))	Report	1
5- Other	-	-

Course Specification of Biostatistics and computer in MD degree in clinical oncology (first part)

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in clinical oncology
2. Major or Minor element of program: Minor
3. Department offering the course: Community Medicine and public Health Dep.
4. Department offering the program: Oncology and Nuclear Medicine Dep.
5. Academic year/ Level: First part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: **Course Specification of biostatistics and computer in MD degree in clinical oncology (first part)**

Code: COM 0521-300

lecture	Practical	total	credit
30	30	60	3

B. Professional Information

1. Overall Aims of Course

- To use precisely the computer programs and biostatistics.

2. Intended Learning Outcomes of Courses (ILOs)

a) **Knowledge and understanding:**

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

- a1. Mention different programs of analysis of data and statistical packages
- a2. Define the recent advances of sources of data and methods of collection.
- a3. Summarize data, construct tables and graphs
- a4. Calculate measures of central tendency and measures of dispersion
- a5. Describe the normal curves and its uses
- a6. Illustrate selected tests of significance and the inferences obtained from such tests
- a7. Illustrate selected tests of significance for parametric and non parametric inferences
- a8. Identify factor analysis and discrimination analysis

b) **Intellectual Skills**

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

- b1. understand how to collect and verify data from different sources
- b2. Interpret data to diagnose prevalent health problems in the Clinical oncology and nuclear medicine field.

c) **Professional and Practical Skills:**

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

c1. Perform recent advanced technological methods in collection, analysis and interpretation of data and in management of problems in the Clinical oncology and nuclear medicine field.

d) General and Transferable Skills:

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

- d1. Use appropriate computer program packages.
- d2. Use of different sources for information and knowledge about biostatistics.

3. Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Recent advances in collection, analysis and interpretation of data	6	3	3
-Details of Tests of significance: Proportion test	6	3	3
Chi-square test	6	3	3
Student T test	6	3	3
Paired T test	6	3	3
-Correlation	4	2	2
-Regression	6	3	3
-ANOVA test	4	2	2
-Discrimination analysis	6	3	3
Factor analysis	4	2	2
- parametric and non parametric tests	6	3	3
Total hours	60	30	30
Total credit hours	3	2	1

4. Teaching and Learning Methods

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

5. Student Assessment Methods

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

Assessment Schedule

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

Weighting of Assessments

Final-term written examination	50	%
Final Structured Oral Exam	50	%
Total	100	%

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

6. List of References

6.1- Essential Books (Text Books)

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

6.2- Recommended Books

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

Parks Text Book of Preventive & Social Medicine. 2017., K. Park. Banarsidas Bhanot Publishers; 23 edition.

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

6.3- Periodicals, Web Sites, ...etc

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

7. Facilities Required for Teaching and Learning:

- 1- ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
- 2- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

Course Coordinator: Dr/Foad Metry Atya

Head of Department: Prof/Ahmed Fathy Hammed

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

Course Specification of Research methodology in MD degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in clinical oncology
2. Major or Minor element of program: Minor
3. Department offering the course: Community Medicine and public Health Dep.
4. Department offering the program: Oncology and Nuclear Medicine Dep.
5. Academic year/ Level: First part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title : **Course Specification of research methodology in MD degree in clinical oncology (first part)**

Code:COM 0521-300

Lecture	Practical	Total	Credit
30	30	60	3

B. Professional Information

1. Overall Aims of Course

1. To influence the students to adopt an analytical thinking for evidence based medicine
2. To use precisely the research methodology in researches

2. Intended Learning Outcomes of Courses (ILOs)

a) **Knowledge and understanding:**

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

- a1. Define the recent advances of screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests.
- a2. Explain the usefulness of screening tests, and calculate sensitivity, specificity, and predictive values.
- a3. Describe the study design, uses, and limitations.
- a4. mention the recent advances of principles, methodologies, tools and ethics of scientific research.
- a5. Explain the strategies and design of researches.
- a6. Describe bias and confounding.
- a7. Describe sampling techniques and list advantages of sampling
- a8. Identify principles of evidence based medicine.

b) **Intellectual Skills**

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

- b1. Conduct research studies that adds to knowledge.
- b2. Formulate scientific papers in the area of Clinical oncology and nuclear medicine

b3. Innovate and create researches to find solutions to prevalent problems in Clinical oncology and nuclear medicine field.

b4. Criticize researches related to Clinical oncology and nuclear medicine

c) Professional and Practical Skills:

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

c1. Master the basic and modern professional skills in conducting researches in the area of Clinical oncology and nuclear medicine .

c2. Design new methods, tools and ways of conducting researches. .

d) General and Transferable Skills:

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

d1. Use of different sources for information and knowledge to serve research.

d2. Work coherently and successfully as a part of a team and team's leadership in conducting researches and field studies.

3. Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Details of epidemiological studies (case control, cohort and cross sectional)	8	4	4
Clinical trials, Quasi experimental study	6	3	
Bias and errors	6	3	
Setting a hypothesis	6	3	
Recent advances in screening	6	3	
- Evidence – based Medicine:			
Concept and examples	4	2	2
Applicability	4	2	2
Scientific writing:			
A protocol	4	2	2
A curriculum	4	2	2
Setting an objective	2	1	1
- Critical thinking	2	1	1
Formulation of papers	8	4	4
Total hours	60	30	30
Credit hours	3	2	1

4. Teaching and Learning Methods

4.1- Lectures.

4.2- Computer search assignments

5. Student Assessment Methods

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

Assessment Schedule

Assessment 1	Final written exam	Week: 24
Assessment 2	Final Structured Oral Exam	Week: 24
Assessment 3	Attendance and absenteeism throughout the course	
Assessment 4	Computer search assignment performance throughout the course	

Weighting of Assessments

Final-term written examination	50	%
Final Structured Oral Exam	50	%
Total	100	%

Any formative only assessments Attendance and absenteeism throughout the course
Computer search assignment performance throughout the course

6. List of References

6.1- Essential Books (Text Books)

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

6.2- Recommended Books

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

Parks Text Book of Preventive & Social Medicine. 2017., K. Park. Banarsidas Bhanot Publishers; 23 edition.

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

6.3- Periodicals, Web Sites, ...etc

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

7. Facilities Required for Teaching and Learning:

1. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
2. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

Course Coordinator: Dr/Foad Metry Atya

Head of Department: Prof/Ahmed Fathy Hammed

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

Course Specification of Primary Medical Reports in MD degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in clinical oncology
2. Major or Minor element of program: Minor
3. Department offering the course: Forensic Medicine and Clinical Toxicology Dep.
4. Department offering the program: Oncology and Nuclear Medicine Dep.
5. Academic year/ Level: First part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: : Course Specification of primary medical reports in MD degree in clinical oncology (first part)

Code: FOR 05021-300

Lecture	Practical	Total	Credit
15	30	45	2

B. Professional Information

1. Overall Aims of Course

The aim of this program is to provide the postgraduate with the advanced medical/ knowledge and skills essential for safe practice of specialty and necessary for further training and practice in the field of Clinical oncology through ding:

1. Recent scientific knowledge essential for mastery of practice of Obstetrics & Gynecology according to the international standards.
2. Skills necessary for proper diagnosis and management of patients in the field of Clinical oncology including diagnostic, problem solving and decision making and operative skills.
3. Ethical principles related to the practice in this highly sensitive specialty.
4. Active participation in community needs assessment and problems identification.
5. maintenance of learning abilities necessary for continuous medical education.
6. Upgrading research interest and abilities.

2. Intended Learning Outcomes of Courses (ILOs)

a) **Knowledge and understanding:**

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

- a1. Define terms of primary medical reports
- a2. Describe the items of primary medical reports

b) **Intellectual Skills**

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

- b1. Apply different primary medical reports
- b2. Apply appropriate primary medical reports

b3. Interpret legal and ethical aspects of medical practice

c) Professional and Practical Skills:

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

c1. Perform a primary medical report

d) General and Transferable Skills:

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

d1. Use standard computer programs to construct primary medical reports.

3. Contents

Topic	No. of hours	Lecture	practical
Definition of poison, classification of poison and factors that influence toxicity	6	2	4
Diagnosis & Management of poisoning including: respiratory support, circulatory support and neurological support	4	1	3
toxicological sampling and permanent infirmity	4	1	3
How to write a toxicological report & How to write death certificate	4	1	3
Obligation of physicians (towards patients, colleagues, community)	5	2	3
Consent, and professional secrecy	4	1	3
Types of malpractice, and items of medical responsibility	6	2	4
Medicolegal aspects of organ transplantation, intersex states, euthanasia, assisted reproduction techniques	6	2	4
Ethical considerations of medical research involving human subjects	6	3	3
Total hours	45	15	30
Credit hours	2	1	1

4. Teaching and Learning Methods

4.1- Lectures

4.3- Assignments.

5. Student Assessment Methods

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

Assessment Schedule

Assessment 1: written exam	week 24
Assessment 2: Structured Oral Exam	week 24
Assessment 3: Attendance and absenteeism	(formative)

Weighting of Assessments

Final-term written examination	50	%
Oral Examination.	50	%
Total	100	%

6. List of References

Essential books

Simpson's Forensic Medicine, 13th Edition, by Jason Payne-James, Richard Jones, Steven B Karch, John Manlove. published by Hodder & Stoughton Ltd (2011).
Goldfrank's Toxicologic Emergencies, (9th ed.) by Lewis S. Nelson, Robert S. Hoffman, Mary Ann Howland, Neal A Lewin, Lewis R. Goldfrank, Neal E. Flomenbaum. Published by McGraw-Hill (2011)
Emergency Toxicology, Peter Viccellio, (2nd ed.) Published by Lippincott Williams & Wilkins (1998)

Recommended books

Medical ethics. (1997) Robert M Veatch. 2nd edition. Jones & Bartlett publishers

Periodicals and websites.....etc.

Egyptian journals of forensic medicine and clinical toxicology
International journals of forensic medicine and clinical toxicology
www.sciencedirect.com
<https://emedicine.medscape.com>
<https://www.ncbi.nlm.nih.gov/pmc/>

7. Facilities Required for Teaching and Learning:

- Adequate conditioned space, bathrooms, comfortable discs, good illumination and safety security tools.
- Teaching tools: screens, computers, data shows, projectors, flip charts, white boards, video player, digital video camera, scanners, copiers and laser printer.
- Computer programs: for designing and evaluating MCQS exams.

Course Coordinator: Dr. Soheir Ali Mohamed

Head of Department: Dr. Soheir Ali Mohamed

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

Course Specification of Pathology in MD degree in clinical oncology

Sohag University

Sohag Faculty of Medicine

1. Program on which the course is given: MD degree in clinical oncology
2. Major or Minor element of program: Minor
3. Department offering the program: Oncology and Nuclear Medicine.
4. Department offering the course: Pathology department
5. Academic year/ Level: First part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: **Course Specification of Pathology in MD degree in clinical oncology**

Code: PAT 0521-300

Lecture	practical	Total hours	Credit hours
30		30	2

B. Professional Information

1. Overall Aims of Course

To know the pathological aspect of different types of malignancies

2. Intended Learning Outcomes of Course (ILOs)

a) Knowledge and Understanding:

By the end of the program , the student is expected to:-

- a1. Mention and understand of general pathology of cancer.
- a2. Mention and understand of head and neck malignancies.
- a3. List of lung cancer.
- a4. Mention the G.I.T. malignancies.
- a5. Describe genitourinary malignancies.
- a6. Mention skin, soft tissue and bone malignancies.
- a7. Mention C.N.S. tumors, endocrine malignancies.

b) Intellectual Skills:-

By the end of the program, the student is expected to:-

- b1. Run in scientific thinking.
- b2. Gain skills of observation.
- b3. Gain skills of description and interpretation of what he observes.

c) Professional and Practical Skills:-

By the end of the programme, the student is expected to:-

- c1. Understand the aetiology and prognostic factors of each organ and their affection on treatment outcome.

d) General and Transferable Skills:

By the end of the program, the student is expected to:-

- d1. Acquire skills of observation and description.
- d2. Acquire skills of working within team.
- d3. Acquire skills of logical and scientific thinking..
- d4. Know computers in understanding medical physics.

3. Contents

Topic	Total hours	Lecture	Tutorial/ Practical
General pathology of cancer.	5	5 hours	
Head and neck malignancies	4	4 hours	
Lung cancer	3	3hours	
G.I.T. malignancies.	5	5 hours	
Genitourinary malignancies	3	3 hours	
Skin, soft tissue and bone malignancies.	5	5hours	
C.N.S. tumors and endocrine malignancies.	5	5 hours	
Total hours	30	30	
Credit hours	2	2	

4. Teaching and Learning Methods

4.1- Lectures

4.2- Assignments.

4.3-attention and participating in scientific conferences, workshops and thesis discussion to acquire the general and transferable skills needed.

5. Student Assessment Methods

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

Assessment Schedule

Assessment 1: written exam	week 24
Assessment 2: Structured Oral Exam	week 24
Assessment 3: Attendance and absenteeism	(formative)

Weighting of Assessments:

written Examination	50%
Structured Oral Exam.	50 %

Total	100%
-------	------

6. List of References

6.1- Essential Books (Text Books)

Robbins text book

6.2- Recommended Books

El-bolkainy text book

6.3- periodicals

Free medical journals

7. Facilities Required for Teaching and Learning:

- Adequate conditioned space, bathrooms, comfortable discs, good illumination and safety security tools.
- Teaching tools: screens, computers, data shows, projectors, flip charts, white boards, video player, digital video camera, scanners, copiers and laser printer.
- Computer programs: for designing and evaluating MCQS exams.

Course coordinator: Dr. Eman Mohamed Salah El deen

Head of Department: Dr: Eman Mohamed Salah El deen

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

Course Specification of Radiobiology in MD degree in clinical oncology

Sohag University

Sohag Faculty of Medicine

1. Program on which the course is given: MD degree in clinical oncology
2. Major or Minor element of program: Minor
3. Department offering the program: Oncology and Nuclear Medicine.
4. Department offering the course: Oncology and Nuclear Medicine department
5. Academic year/ Level: First part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of radiobiology in MD degree in clinical oncology

Code: ONC 0521-300

Title	Lecture	Practical	Total	Credit
Radiobiology	30	--	30	2

B. Professional Information

1. Overall Aims of Course

to know the radiobiological effect of different ionizing radiation and radioisotopes on different types of normal tissues and tumors.

2. Intended Learning Outcomes of Course (ILOs)

a) Knowledge and understanding:

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

- a1. Mention the radiobiological effects of radiotherapy and radioisotopes
- a2. Mention the radiosensitivity and radioresistance aspects of different tumors and normal tissues
- a3. Explain different fractionation schedules.
- a4. Describe the radiobiology of new modalities of radiotherapy.
- a5. List the principles of radioprotective agents.
- a6. Describe the radiosensitizers.

b) Intellectual Skills

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

- b1. Analyze the radiobiological effects of ionizing radiation.
- b2. Interpret the terms of radiosensitivity, radiocurability, and radioresistance
- b3. Suggest different fractionation schedules.

c) Professional and Practical Skills:

- d1. Design new radiotherapy modalities.
- d2. Teach different effects of radiation .
- d3. Train radiotherapists for radiation protection measures.

d) General and Transferable Skills:

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

- d1. Use appropriate computer based protection methods.
- d2. Present reports for different cellular response to radiation.
- d3. Choose and use new agents as radiosensitizers or radioprotectants.

3. Contents

Topic	Total hours	Lectures	Practical
Review of cell biology.	3	3	
Basic biologic interactions of radiation.	3	3	
Cellular response to radiation	3	3	
Tissue radiation biology	3	3	
Modification of cell and tissue responses to radiation.	3	3	
<u>Clinical radiobiology.</u>			
* radio sensitivity and radiocurablity.	<u>3</u>	<u>3</u>	
* chemical modifiers in radiotherapy .	<u>3</u>	<u>3</u>	
* new radiation modalities.	<u>2</u>	<u>2</u>	
* new treatment techniques.	<u>2</u>	<u>2</u>	
*radiation protection measures	<u>2</u>	<u>2</u>	
Early effect and late effect of radiation.	3	3	
Total hours	30	30	
Credit hours	2	2	

4. Teaching and Learning Methods

4.1- Lectures

4.2- Assignments.

4.3-attention and participating in scientific conferences, workshops and thesis discussion to acquire the general and transferable skills needed.

5. Student Assessment Methods

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

Assessment Schedule

Assessment 1: written exam	week 24
Assessment 2: Structured Oral Exam	week 24
Assessment 3: Attendance and absenteeism	(formative)

Weighting of Assessments:

Final-term written examination	50%
Structured Oral Exam	50%
Total	100%

6. List of References

- 6.1- Essential Books (Text Books)
 - Hassan Awad text book
 - Elizabeth Latorre---medical radiobiology
 - Perez text book
- 6.2- Recommended Books
 - Gunderson text book
- 6.3- periodicals
 - Free medical journals

7. Facilities Required for Teaching and Learning:

- Adequate conditioned space, bathrooms, comfortable discs, good illumination and safety security tools.
- Teaching tools: screens, computers, data shows, projectors, flip charts, white boards, video player, digital video camera, scanners, copiers and laser printer.
- Computer programs: for designing and evaluating MCQS exams.

Course coordinator: Dr. Ahmed Marzok

Head of Department: Prof.Dr / Elsayed Mostafa Ali

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

Course Specification of Molecular Biology in MD degree in clinical oncology

Sohag University

Sohag Faculty of Medicine

1. Program on which the course is given: MD degree in clinical oncology
2. Major or Minor element of program: Minor
3. Department offering the program: Oncology and Nuclear Medicine.
4. Department offering the course: Medical Microbiology and Immunology department
5. . Academic year/ Level: First part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of Molecular biology in MD degree in clinical oncology

Code : MIC 0521-300

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

B. Professional Information

1. Overall Aims of Course

to know the molecular biological aspects on different types of normal tissues and tumors.

2. Intended Learning Outcomes of Course (ILOs).

a) Knowledge and understanding:

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

- a1. Mention the molecular biological aspects of cancer.
- a2. Mention cancer molecular biology and its impact on novel cancer therapies.

b) Intellectual Skills

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

- b1. Analyze the molecular biological bases of cancer.
- b2. Interpret the terms of molecular biology.

c) Professional and Practical Skills:

- c1. Teach different molecular biological bases of cancer.
- c2. Teach the impact of molecular biology on the future of cancer classification and treatment .
- c3. Teach the detailed items of molecular biology.

d) General and Transferable Skills:

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

- d1. Present reports for different molecular biological bases of cancer

3. Contents

Topic	Total hours	Lectures	Practical
- Identification of genetic material- DNA molecular structure-RNA molecular structure, types	4	4	

- DNA replication: models-enzymes	4	4	
- transcription	2	2	
- Protein synthesis	2	2	
- Regulation of gene action	2	2	
Molecular biology techniques			
1. Nucleic acid amplification techniques PCR:	2	2	
2. Nucleic acid hybridization techniques : In-situ hybridization (ISH)-Fluorescence In-situ hybridization(FISH)	3	3	
3. Genetic engineering(tools-isolation and use of restriction enzymes	3	3	
4. Sequencing of genes	2	2	
5. Synthesis of genes	2	2	
6. DNA finger printing	2	2	
7. DNA microarray	2	2	
Total hours	30	30	
Credit hours	2	2	

4. Teaching and Learning Methods

4.1- Lectures

4.2- Assignments.

4.3-attention and participating in scientific conferences, workshops and thesis discussion to acquire the general and transferable skills needed.

5. Student Assessment Methods

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

Assessment Schedule

Assessment 1: written exam	week 24
Assessment 2: Structured Oral Exam	week 24
Assessment 3: Attendance and absenteeism	(formative)

Weighting of Assessments:

Final-term written examination	50%
Structured Oral Exam	50%
Total	100%

6. List of References

6.1- Essential Books (Text Books)

Gunderson text book

6.2- Recommended Books

Devita text book

6.3- periodicals

Free medical journals

7. Facilities Required for teaching and learning.

1. **Adequate infrastructure:** including teaching places (teaching class, teaching halls, teaching laboratory), Comfortable desks, good source of aeration, bathrooms, good illumination, safety & Security tools.

2. **Teaching Tools:** including screens, Computer including cd(rw), data shows, Projectors, flip charts, white board, video player, digital video camera, Scanner, copier, colour and laser printers.

3. **Computer Program:** for designing and evaluating MCQs

Course Coordinator: Dr. Nahed Fath Alla

Head of Department: Dr. Abeer Shenief

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

Course Specification of Clinical Oncology in MD degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in clinical oncology
2. Major or Minor element of program: Major
3. Department offering the program: Oncology and Nuclear Medicine dep.
4. Department offering the course: Oncology and Nuclear Medicine dep.
5. Academic year/ Level: 2nd part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

A. Basic Information

Title: Course Specification of clinical oncology in MD degree in clinical oncology

Code: ONC 0521-300

Title	Lecture	Practical	Total	Credit
Biological therapy	120	210	330	15
chemotherapy and bone marrow transplantation	120	210	330	15
paediatric oncology, haemato-oncology and palliative care	45	90	135	5
radiotherapy and radioisotopes	90	270	360	12

B. Professional Information

1. Overall Aims of Course

1-Biological therapy

the student should understand the molecular biology of cancer , understand the role of immunotherapy, gene therapy, and monoclonal antibodies in management malignant diseases The student should know the different agents of chemotherapy, hormonal therapy , target therapy and immunotherapy , and different protocols used in management of cancer diseases , able to deal with their toxicities, able to take a decision in the treatment of different types of malignancy.

The doctorate student should be able to deal with any recent technology in cancer management.

2- chemotherapy and bone marrow transplantation

The student should know different groups of chemotherapy, indications of use, methods of administration, side effects and complications.

The student should know indications of bone marrow transplantation, types of it, how to follow transplant patient.

3- paediatric oncology, haemato-oncology and palliative care

The student should know different type of pediatric malignant diseases and their management , understand the malignant hematological diseases and their management including the supportive treatment should be given to the patient due to chemotherapy toxicities , understand bone marrow transplantation and its different types and the drugs used in the procedure and after, and also the student should know different methods of palliative care of cancer patients

The student should know to select cancer patients who deserve to be admitted in intensive care unit, know the different measures of intensive care

4- radiotherapy and radioisotopes

- a. The student able to perform techniques of brachytherapy, and know different methods of application and understand the rationale of brachytherapy in different types of malignant diseases
- b. The student should know isotopes used in tumor imaging and its indication in diagnosis and treating malignant diseases

2. Intended Learning Outcomes of Course (ILOs)

a) Biological therapy

a) Knowledge and understanding:

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

- a1. Explain different aspects of cancer molecular biology
- a2. mention immunotherapy agents and its role in cancer treatment
- a3. Describe gene therapy and its role in cancer treatment
- a4. Mention monoclonal antibodies and its role in cancer treatment
- a5. Explain the different rationales of using other agents as the hormonal treatment , target therapy, and immunotherapy in the treatment of malignant disease
- a6. Mention different chemotherapy protocols and method of administration
- a7. Mention the different drugs toxicities and interactions
- a8. List all new technologies in the oncology field

b) Intellectual Skills

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

- b1. Interpret principles of cancer biology
- b2. Interpret principles of biotherapy in cancer
- b3. Evaluate tumor angiogenesis and its role in cancer metastasis and treatment
- b4. Apply principles of target therapy
- b5. deal with different side effects of the chemotherapy, hormonal , target therapy, and immunotherapy
- b6. Understand different rationale of using chemotherapy, hormonal therapy, target therapy, and immunotherapy in treatment malignant disease
- b7. Use chemotherapy concurrent or sequential with other lines of treatment as surgery, or radiotherapy

c) Professional and Practical Skills:

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

- c1. Integrate immunotherapy in cancer treatment
- c2. Perform monoclonal antibody protocols
- c3. Perform some of the novel techniques in oncology field

d) General and Transferable Skills:

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

- d1. Solve cancer problems by using new immunotherapy agents
- d2. Choose and use appropriate computer programs
- d3. Write reports about monoclonal antibodies
- d4. Updating with new agents of chemotherapy, hormonal, target therapy, immunotherapy
- d5. Updating with new protocols of treatment
- d6. Understand the principles of using chemotherapy combined with other lines of treatment
- d7. Present reports in seminars about novel techniques in oncology field

chemotherapy and bone marrow transplantation

a) Knowledge and understanding:

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

- a1. List different groups of chemotherapy
- a2. Mention indications of each agent and each chemotherapy combination
- a3. Explain methods of chemotherapy administration
- a4. Tell how to deal with chemotherapy side effects and complications
- a5. Mention indications of bone marrow transplantation
- a6. Describe types and procedures of bone marrow transplantation
- a7. Explain how to follow transplant patient

b) Intellectual Skills

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

- b1. Evaluate the role of chemotherapy as antineoplastic therapy
- b2. Compare different groups of chemotherapy.
- b3. Conclude how to deal with chemotherapy side effects and complications
- b4. Interpret types and procedures of bone marrow transplantation

c) Professional and Practical Skills:

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

- c1. Inject chemotherapy
- c2. Train others for chemotherapy manipulation
- c3. Teach indications and procedures of bone marrow transplantation

d) General and Transferable Skills:

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

- d1. Write structural reports for chemotherapy patients
- d2. Use computer programs to choose the suitable tailored chemotherapy protocols
- d3. Present reports in seminars for bone marrow transplant cases

paediatric oncology, haemato-oncology and palliative care

a) Knowledge and understanding:

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

- a1. Describe pediatric malignant diseases and their management
- a2. Tell general care of pediatric patient
- a3. Describe treatment of toxicities in pediatric patients
- a4. Describe malignant hematological diseases and their management
- a5. Explain how to palliate different symptoms of cancer patient
- a6. List different measures of intensive care for cancer patients
- a7. Explain the difference between palliative measures and intensive care measures
- a8. Tell all precautions and instructions used in intensive care units

b) Intellectual Skills

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

- b1. Interpret the different rationales of management pediatric malignancy
- b2. Apply chemotherapy protocols in management pediatric malignancy
- b3. Apply chemotherapy protocols in management hematological malignancy
- b4. Integrate palliative treatment of cancer patients
- b5. Evaluate the aim of cancer patients intensive care
- b6. Suggest how to deal with the patients in intensive care unit

c) Professional and Practical Skills:

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

- c1. Inject chemotherapy in pediatric cases

- c2. Train others in dealing with hematological toxicities of chemotherapy and other toxicities
- c3. Teach different methods of palliation of symptoms of cancer patients
- c4. Perform clinical training in intensive care units for cancer patients

d) General and Transferable Skills:

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

- d1. Write structural reports for cancer patient candidate for palliative care
- d2. Present reports of pediatric cases and hematological malignancy cases
- d3. Write reports for cancer patients candidate for admission in intensive care unit
- d4. Use computer based technology for the the benefit of intensive care unit cancer patient

Radiotherapy and radioisotopes

a) Knowledge and understanding:

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

- a1. List the principles and advances of external beam radiotherapy
- a2. Tell indications of external beam radiotherapy
- a3. Explain external beam radiotherapy technology
- a4. Define the rationale of using different isotopes in malignancy
- a5. Describe the principles of gamma camera
- a6. Describe the principles of PET
- a7. Describe the use of radionuclide therapy in treating malignancy
- a8. Mention the idea of using brachytherapy alone or combined with the external beam of radiotherapy in treatment certain types of malignancy
- a9. Tell different rationales of using brachytherapy
- a10. Explain different methods of applications

b) Intellectual Skills

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

- b1. Interpret the principles and advances of external beam radiotherapy
- b2. Analyze indications of external beam radiotherapy
- b3. Evaluate external beam radiotherapy technology
- b4. Interpret the radiation biology of different radioisotopes
- b5. Interpret the precautions of using radioisotopes
- b6. Suggest the use of different isotopes in tumor imaging
- b7. Compare different sources used in brachytherapy
- b8. Suggest the suitable method of application from different methods of brachytherapy application
- b9. Analyze different types and methods of brachytherapy and the acute and late effects

c) Professional and Practical Skills:

- c1. Design appropriate radiotherapy techniques for various malignancies.
- c2. Perform various nuclear medicine activities.
- c3. Perform brachytherapy applications
- c4. Teach physics of brachytherapy

d) General and Transferable Skills:

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

- d1. Be self-trained and problem solvent by the use of radioisotopes in imaging and treating malignant diseases
- d2. Choose and use appropriate computer programs in radiotherapy technology
- d3. Use computer programs in different techniques of brachytherapy
Write sheets for different types of applications

3. Contents

(Biological therapy)

Topics actually taught	No. of hours	Lecturer	Clinical
Part I cancer biology			
molecular biology	10	4	6
cell proliferation, differentiation, and apoptosis	10	4	6
growth factor signal transduction in cancer	10	4	6
oncogenes	10	4	6
tumor suppressor gene defects in human cancer	10	4	6
chromosomes rearrangement in human cancer	10	4	6
biochemistry of cancer	10	4	6
invasion and metastasis	10	4	6
tumor angiogenesis	10	4	6
part II			
tumor immunology	10	4	6
part III			
principles of biotherapy	10	4	6
immunostimulants	10	4	6
active specific immunotherapy with vaccines	10	4	6
interferones	10	4	6
cytokines	10	4	6
hematopoietic growth factor	10	4	6
monoclonal antibodies	10	4	6
part IV			
principles of gene therapy	8	4	10
Recent technologies in cancer therapy:	10	4	10
1-stem cells			
2- monoclonal antibodies			
hormonal treatment	6	2	6
target therapy	10	2	6
immunotherapy	6	2	6
gene therapy	10	2	6

head and neck cancers	10	2	6
lung cancers	6	2	6
GIT cancers	10	2	8
Breast cancer	6	2	8
Gynecological cancers	6	2	6
Testicular cancer	10	4	6
UT cancers	10	2	6
Neurological tumors	10	4	6
Endocrinal neoplasm	6	2	6
Skin cancers	6	2	6
Miscellaneous neoplasm	10	4	6
Metastases of unknown origin	10	4	6
Complication of cancer and its treatment	10	4	8
Total hours	330	120	210
Credit hours	15	8	7

(chemotherapy and bone marrow transplantation)

Topics actually taught	No. of hours	Lecture	clinical
<u>Part I (chemotherapy)</u>			
- Groups of antineoplastic chemotherapy	50	20	30
- Indications of chemotherapy	30	10	20
- Chemotherapy regimens for different indications	30	10	20
- Chemotherapy side effects and toxicities	40	10	30
- Managing side effects and toxicities	40	10	30
<u>Part II (bone marrow transplantation)</u>			
A. Indications of bone marrow transplantation	40	10	30
B. Types of bone marrow transplantation	50	30	20
C. Complication of bone marrow transplantation	50	20	30
Total hours	330	120	210
Credit hours	15	8	7

(paediatric oncology, haemato-oncology and palliative care)

Topics actually taught	No. of hours	Lecture	clinical
<u>Part I (pediatric malignancy)</u>			
1d bone marrow failure	1	2	3
1d lymphadenopathy and splenomegally	1	2	3
1d lymphoproliferative disorders and myelodysplastic	1	2	3

syndromes			
1d leukemias	3	6	9
1d Hodgkin's disease	3	6	9
1d Non Hodgkin lymphoma	3	6	9
1d Central nervous system malignancies	3	4	7
1d Neuroblastoma	1	2	3
1d Wilm,s tumor	1	2	3
1d Soft tissue sarcoma	1	2	3
1d Bone sarcomas	1	2	3
1d Histocytosis syndromes	1	2	3
1d Retinoblastoma	1	2	3
1d Miscellaneous tumors	1	2	3
1d Bone marrow transplantation	1	2	3
1d Supportive care and management of oncological emergencies	2	4	6
1d Late effects of childhood cancer	2	4	6
Part II (hematological malignancies)			
1d Hodgkin and non Hodgkin lymphoma	2	4	6
1d Plasma cell dyscrasias and waldenstrom,s macroglobulinemia	1	2	3
1d Chronic leukemias	2	4	6
1d Myeloproliferative disorders	1	2	3
1d Acute leukemias and myelodysplastic syndromes	2	4	6
1d Mast cell leukemia and other mast cell neoplasms	1	2	3
1d Polycythemia vera and essential thrombocythemia	1	2	3
Part III (palliative treatment)			
1d complication of cancer and its treatment	2	4	6
1d infections in cancer patients	2	4	6
1d oncologic emergencies	2	4	6
intensive care : 1- oncologic emergencies 2- therapy related complications 1d 3- oncological complications related to the cancer and its treatment 4- assessment of cancer patients 5- intensive care measures	3	6	9
Total hours	45	90	135
Credit hours	15	8	7

(Radiotherapy and radioisotopes)

Topics	No. of hours	Lecturer	Clinical
general nuclear medicine	5	14	19
radiation biology	10	14	24
tumor imaging and radionuclide therapy	5	14	19
radioscintigraphic assay	5	14	19
positron emission tomography	5	14	19

<ul style="list-style-type: none"> • system imaging and radiotherapy • cardiac imaging • central nervous system • thyroid and parathyroid • genitourinary • GIT • Bone and soft tissues • Lymphatics • LUNG AND BREAST 	30	100	130
<p>. Brachytherapy</p> <p>physics of brachytherapy-1 --2- radiobiology of brachytherapy 3- sources used in brachytherapy 4-low dose rate brachytherapy 5-high dose rate brachytherapy 6-acute and late effects of brachytherapy 7-clinical application of brachytherapy in different malignancy</p>	30	100	130

4. Teaching and Learning Methods

4.1- Lectures

4.2- Practical lessons.

4.3- Assignments.

4.4-attention and participating in scientific conferences, workshops and thesis discussion to acquire the general and transferable skills needed.

5. Student Assessment Methods

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

Assessment Schedule

Assessment 1: log book	week 90
Assessment 2: Written exam	week 96
Assessment 3: Oral exam	week 96
Assessment 4: Practical exam	week 96
Assessment 5: Attendance and absenteeism	(formative)

Weighting of Assessments:

Final written exam (separate exam)

Passing in the written exam is a condition to attend the following exams

Practical/clinical/surgical exam	50%
Structured Oral Exam	50%
Total	100%

6. List of References

Biological therapy

6.1- Essential Books (Text Books)

- cancer medicine 5
- Devita text book
 - cancer management (Haskins)
 - Perez text book
 - James D. cox (radiation oncology)
 - Gunderson text book
 - Phillips text book

6.2- Recommended Books

- Gunderson text book
- the cancer handbook (Professor Robert Weinberg)

6.3- periodicals and web sites

www.nccn.org and www.nci.pdq.org

chemotherapy and bone marrow transplantation

6.1- Essential Books (Text Books)

* Manual of pediatric hematology and oncology (Philip Lanzkowsky)

* De-vita text book

6.2- Recommended Books

Multidisciplinary approach text book

6.3- periodicals and web sites

www.nccn.org and www.nci.pdq.org

paediatric oncology, haemato-oncology and palliative care

6.1- Essential Books (Text Books)

* Manual of pediatric hematology and oncology (Philip Lanzkowsky)

* Perez text book

* De-vita text book

6.2- Recommended Books

* Gunderson text book

6.3- periodicals and web sites
www.nccn.org and www.nci.pdq.org

Radiotherapy and radioisotopes

6.1- Essential Books (Text Books)

- * Perez text book
- * Phillips text book
- * Elkaser Elene nuclear medicine department notes

6.2- Recommended Books

- * Gunderson text book

6.3- periodicals and web sites

www.nccn.org and www.nci.pdq.org

7. Facilities Required for Teaching and Learning:

1. Adequate conditioned space, bathrooms, comfortable discs, good illumination and safety security tools.
2. Teaching tools: screens, computers, data shows, projectors, flip charts, white boards, video player, digital video camera, scanners, copiers and laser printer.
3. Computer programs: for designing and evaluating MCQS exams.

Course coordinator: Dr. Ahmed Marzok

Head of Department: Prof.Dr / Elsayed Mostafa Ali

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

Course Specification of internal Medicine and General surgery in MD degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in clinical oncology
2. Major or Minor element of program: Major
3. Department offering the program: Oncology and Nuclear Medicine.
4. Department offering the course: Internal Medicine and General Surgery
5. Academic year/ Level: 2nd part
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

A- Basic Informatio

Title: Course Specification of surgery in MD degree in clinical oncology (second part)

Code: SUR 0521-300

	Lectures	Practical/ surgical	Clinical/ Tutorial	Total
hours /week	2		1	3
Total	30		45	75

Title: Course Specification of internal medicine in MD degree in clinical oncology (second part)

Code: INT 0521-300

	Lectures	Practical/ surgical	Clinical/ Tutorial	Total
hours /week	2		1	3
Total	30		45	75

Title: Course Specification of internal medicine in MD degree in clinical oncology (second part)

B- Professional Information

1. Overall Aims of Course

Internal Medicine

By the end of the course of Internal Medicine, the candidate should be able to:

- 1- Deal with common medical conditions on the basis of adequate history taking, physical examination interpretation of relevant supportive investigations and management.
- 2- Deal with acute medical emergencies safely and effectively.

Surgery

To know update in surgical treatment options done to cancer patients and complications of different modalities .

2. Intended Learning Outcomes of Course (ILOs)

Internal Medicine

a) Knowledge and Understanding:

- a1. Grasp the spectrum of clinical symptomatology related to different Internal medicine disorders.
- a2. Appreciate the clinical spectrum of common medical conditions with multisystem affection.
- a3. Describe the concept of emergency management of acute medical disorders.

b) Intellectual Skills

- b1. Interpret the most important symptoms and signs of disease in Internal Medicine patients.
- b2. Formulate appropriate management plans for individual patients presenting with the most common medical disorders.
- b3. Make decisions regarding common clinical situations using appropriate problem solving skills.

c) Professional and Practical Skills

- c1. Conduct a proper general examination and identify normal and major abnormal physical signs.
- c2. Conduct proper regional examination of the thorax and abdomen by inspection, palpation, percussion and auscultation to identify:
 - Surface anatomy of internal organs.
 - Normal physical signs.
 - Major abnormal physical signs.
- c3. Develop and present a comprehensive medical sheet including history and physical examination.
- c4. Interpret the significance and relevance of abnormal physical signs.
- c5. Identify the appropriate supportive investigations relevant to a particular patient and adequately interpret the results.
- c6. Integrate the patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis.
- c7. Identify adequate logistics for further patient assessment and management.
- c8. Get acquainted with special therapeutic and interventional techniques related to the specialty.
- c9. Adequately interpret the results of common laboratory investigations as urine analysis, blood picture, liver and kidney function tests, etc.
- c10. Get acquainted with the methods of patient clinical assessment and monitoring, their significance and inter-relations.
- c11. Identify a clear priority plan in the patient's management.
- c12. Recognize the indications for consulting higher levels or reference to other disciplines.

d) General and Transferable Skills

- d1. Presentation, analyzing and solving of clinical problems .

Surgery

a) Knowledge and Understanding:

By the end of the programme, the student is expected to:-

- a1. Describe basics of general surgery (shock, haemoperitoneum, ascites, and peritonitis).
- a2. Mention update in management of head injury.
- a3. Enumerate update in management of jaw swelling.
- a4. Describe update in management of oesophageal cancer, non malignant obstructions.
- a5. List the G.I.T. diseases.
- a6. List abdominal masses.

a7. Describe the portal hypertension.

b) Intellectual Skills: -

By the end of the program, the student is expected to:-

- b1. Understand scientific thinking.
- b2. Understand skills of observation.
- b3. Understand skills of description and interpretation of what he observes.

c) Professional and Practical Skills:-

By the end of the program, the student is expected to:-

- c1. Understand treatment options done to cancer patients.

d) General and Transferable Skills:-

By the end of the programme, the student is expected to:-

- d1. Understand skills of observation and description.
- d2. Acquire skills of working within team.
- d3. Acquire skills of logical and scientific thinking..

3. Contents

Internal Medicine

Topics	No of hours	leecture	clinical
Cardiovascular Symptoms and signs	3	1	3
Rheumatic fever	3	1	3
Infective endocarditis	3	1	3
Valvular diseases	3	1	3
<u>Coronary artery diseases</u> -Acute coronary syndromes -Chronic ischemia	3	1	2
Systemic Hypertension	3	1	2
Adult Congenital Heart Diseases	3	1	2
<u>Heart failure</u> -Systolic Heart Failure -Diastolic Heart Failure -Decompensated cor pulmoale	3	1	2
Pulmonary embolism	3	1	2

Endocrinology teaching

Topics	No of lectures	leecture	clinical
Disorders of the anterior pituitary and the hypothalamus	3	1	2
<u>Disorders of the thyroid gland</u> Hypothyroidism Hyperthyroidism	3	1	2
<u>Disorders of the adrenal gland:</u> -Cushing syndrome -Aldosteronism -Adrenogenital syndrome Pheochromocytoma	3	1	2
Diabetes mellitus	3	1	2

Hematology :

Topics	No of lectures	leecture	Clinical
Leukemias and myeloma and myelodysplastic syndromes	3	1	3
Lymphomas	3	1	2
Anemias: -Megaloplastic -Iron deficiency -Acquaried hemolytic anemias	3	1	1
-Bleeding disorders Thrombocytopenia	3	1	1

Nephrology teaching

Topics	No of hours	leecture	Clinical
<u>Disturbed renal function:</u> Acute renal failure Chronic renal failure Renal dialysis and Renal transplantation	4	2	2

Gastroenterology and hepatology teaching

Topics	No of lectures	leecture	clinical
Gastroesophageal junction disorders	3	1	1
Infilammatory bowel dis:. Crhon's dis Ulcerative colitis	3	1	1
<u>Jaundice</u>	3	3	2
Hepatitis (acute and chronic)			
Cirrhosis and Portal hypertension and Hepatocellular failure	3	3	1
Upper and lower GI bleeding	3	3	1

surgery

Topic	No. Of hours	Lectures	Clinical
General surgery	10	3 hours	8
Head injury	10	3 hours	7
Jaw swelling	10	3 hours	6
Oesophageal cancer, non malignant obstructions.	10	3 hours	6
G.I.T. diseases	10	3hours	6
Abdominal masses	10	3 hours	6
Portal hypertension	5	2 hour	6
Total	135	45 hours	90
Credit hours	6	3	3

4. Teaching and Learning Methods

4.1- Lectures.

5. Student Assessment Methods

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

Assessment Schedule

Assessment 1: log book	week 90
Assessment 2: Written exam	week 96
Assessment 3: Oral exam	week 96
Assessment 4: clinical exam	week 96
Assessment 5: Attendance and absenteeism	(formative)

Weighting of Assessments:

Final-term written examination	50%
Structured Oral Exam	50%
Total	100%

Passing in the written exam is a condition to attend the following exams

6. List of References

Internal Medicine

6.1- Essential Books (Text Books)

- Kumar and Clarke Textbook of Medicine; Parveen Kumar and Richard Clark; Blackwell Science; 9th edition, 2018
- Hutchison's Clinical Methods; Robert Hutchison; Harry Rainy; 24st edition;2018

6.2- Recommended Books

- Goldman-Cecil Textbook of Medicine;25th edition, 2018.
- Harrison's principles of internalmedicine,20th edition, 2018.

6.3- Periodicals, Web Sites, ... etc

surgery

6.1- Essential Books (Text Books)

1. Baily and Love
2. Schwartz

6.2- Recommended Books

6.3- Periodicals, Web Sites, ... etc
Freemedical journals.com

7. Facilities Required for Teaching and Learning

- a) Adequate conditioned space, bathrooms, comfortable discs, good illumination and safety security tools.
- b) Teaching tools: screens, computers, data shows, projectors, flip charts, white boards, video player, digital video camera, scanners, copiers and laser printer.
- c) Computer programs: for designing and evaluating MCQS exams.

Course Coordinator:

Internal Medicine: DR. Mohamed Hussein Ahmed El-Sayed El- Rashidy

General Surgery: Dr. Alla Elaseote

Head of Department

Internal Medicine: Prof .dr. Usama Ahmed Arafa.

General Surgery: Prof: Nabil Yosef Abo El dahab

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