



إعتماد توصيف مقررات برنامج الماجستير في علاج الأورام

نقر نحن الموقعون على هذا أدناه أن توصيف وثيقة البرنامج التعليمي لدرجة الماجستير في

علاج الأورام والمقررات الدراسية المكونة له قد تم وضعها بمعرفة الأقسام المعنية

م	اسم المقرر	اسم منسق المقرر	التوقيع	اسم رئيس القسم	التوقيع
١-	الفيزياء الإشعاعية الطبية.	د./ السيد مصطفى على	د.د. السيد مصطفى على	أ.د./ على عبد الرحمن	د.د. السيد مصطفى على
٢-	بيولوجيا الأورام والتأثيرات البيولوجية للإشعاع والوقاية منها.	د./ السيد مصطفى على	د.د. السيد مصطفى على	أ.د./ على عبد الرحمن	د.د. السيد مصطفى على
٣-	باثولوجيا الأورام.	د./ فاطمة الزهراء صلاح الدين	د.د. فاطمة الزهراء صلاح الدين	د./ ايمان محمد صلاح الدين	د.د. فاطمة الزهراء صلاح الدين
٤-	دراسات متقدمة في المجال الطبى للأورام واستخدام التكنولوجيا الحديثة فى علاج الأورام والبيولوجيا الجزيئية والمناعة.	د./ السيد مصطفى على	د.د. السيد مصطفى على	أ.د./ على عبد الرحمن	د.د. السيد مصطفى على
٥-	أسس الجراحة بما له علاقة بعلاج الأورام.	أ.د./ نبيل يوسف صلاح الدين	د.د. نبيل يوسف صلاح الدين	أ.د./ علاء الدين حسن محمد	د.د. نبيل يوسف صلاح الدين
٦-	أسس الباطنة بما له علاقة بعلاج الأورام.	د./ ميرفت محمد عطية	د.د. ميرفت محمد عطية	أ.د./ حسن احمد حسانين	د.د. ميرفت محمد عطية
٧-	احصاء طبي وكمبيوتر وأساليب بحث علمي	د./ أحمد فتحى حامد	د.د. أحمد فتحى حامد	د./ ايمان عبد الباسط محمد	د.د. أحمد فتحى حامد
٨-	علاج الأورام بالإشعاع والنظائر المشعة و العقاقير (الكيميائيات). تكنولوجيا الإشعاع و النظائر المشعة. علاج أورام الأطفال و أورام الدم الخبيثة و العلاج التخفيفى للأورام	د./ السيد مصطفى على	د.د. السيد مصطفى على	أ.د./ على عبد الرحمن	د.د. السيد مصطفى على

عميد الكلية



وكيل الكلية للدراسات العليا

Peer Revision

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

Program Specification on Master degree of clinical oncology

Sohag University

Faculty of medicine

A. Basic Information

1. Program Title: Master degree in Clinical Oncology
2. Programme Type: Single
3. Faculty: Faculty of Medicine
4. Department: Oncology and Nuclear Medicine
5. Assistant coordinator: Emad Eldin Nabil Hassan
6. Coordinator: Prof. Dr. Ali Abd Elrahman
7. External Evaluator: Prof.Dr. Amina Mohamed Mostafa
8. Last date of program specifications approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

B. Professional Information:

1. Program Aims:

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

1. Scientific knowledge essential for the 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. 3-Ethical principles related to the practice in this highly sensitive specialty.
4. Active participation in community needs assessment and problems solving.
5. Maintenance of research interest and abilities.
6. Maintenance of research interest and abilities.

2. Attributes of the student:

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

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

3. Program Intended Learning Outcomes (ILOs)

a) Knowledge and Understanding:

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

- a1. Mention the principles of biostatistics and molecular biology related to cancer.
- a2. Mention the principles of radiobiology and cancer pathology.
- a3. Mention the principles of medical radiation physics, techniques of radiotherapy and cancer treatment by radioactive nuclides.
- a4. Explain the principles of chemotherapy.
- a5. Explain the principles of management of haematological malignancies .
- a6. Explain the principles of pediatric oncology field, palliative care of cancer patients.
- a7. Tell the principles of internal medicine related to oncology.
- a8. Tell the principles of surgical oncology.
- a9. Mention the advanced studies and recent technologies in clinical oncology.
- a10. Mention scientific developments in the field of Clinical Oncology .
- a11. Mention The mutual influence between professional practice and its impacts on the environment.
- a12. Mention Ethical and legal principles of professional practice in the field of Clinical Oncology.
- a13. List The principles and fundamentals of quality in professional practice in the field of Clinical Oncology.
- a14. Describe the basics and ethics of scientific research.

b) Intellectual Skills

By the end of the study of master 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. Link between knowledge for Professional problems' solving.
- b4. Conduct research study and/or write a scientific study on a research problem.
- 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. Analyze researches and issues related to clinical oncology.

c) Professional and Practical Skills

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

- c1. Master the basic and modern professional skills in the area of Clinical Oncology .
- c2. Write and evaluate medical reports.
- c3. Assess methods and tools existing in the area of Clinical Oncology.

d) General and Transferable Skills

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

- d1. Communicate effectively by all types of effective communication.
- d2. Use information technology to serve the development of professional practice.
- d3. Assess himself and identify personal learning needs.
- d4. Use different sources to obtain information and knowledge.
- d5. Develop rules and indicators for assessing the performance of others.
- d6. Work in a team, and team's leadership in various professional contexts.
- d7. Manage time efficiently.
- d8. Learn himself continuously.

4. Academic Standards:

Sohag Faculty Of Medicine adopted the general National Academic Reference Standards (NARS) provided by the national authority for quality assurance and accreditation of education (naqaae) for postgraduate programs. This was approved by the Faculty Council decree NO.6854, in its session NO.177 Dated: 18/5/2009. Based on these NARS; Academic Reference Standards (ARS) were suggested for this program. These ARS were 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 6 semesters
- 5.b- Program structure
- 5.b.i-No. of hours per week:

Subject	hours /week		
	Lectures	Practical	Clinical
<u>First Part:</u>			
Medical radiation physics	1	1	
Radiobiology & Radioprotection	1	1	
Molecular biology, biostatistics	1	1	
Pathology	1	1	

Internal medicine related to oncology course.	1		1
General surgery related to oncology course.	1		1
2nd part	6	6	
Clinical oncology:			
1)Cancer treatment by chemotherapy, radiation therapy, and radionuclide			
2)Radiation technology and radioisotopes	3	3	
3)Pediatric oncology , hematological malignancies and oncological palliative care	3	3	

code	Item	No	%	
b.i	Total credit hours	Compulsory	49	100
		Elective	0	0
		Optional	0	0
b.iii	credit hours of basic sciences courses	4	8	
b.iv	credit hours of courses of social sciences and humanities	0	0	
b.v	credit hours of specialized courses:	28	57	
b.vi	credit hours of other course	6	12	
b.vii	Practical/Field Training	5	10	
b.viii	Program Levels (in credit-hours system):			
	Level 1: 1 st part	15	30	
	Level 2: 2 nd Part	24	48	
	Level 3: Thesis	6	12	

6. Program Courses:6 courses are compulsory

6.1- Level of Program :

Semester...1.....

First part

a. Compulsory

Course Title	No. of hours	No. of hours /week			Program ILOs Covered (By No.)
		Lect.	Lab.	Exer./ Clin	
First Part Medical radiation physics	2	1	1		a3,c1,c2,c3,d1,d2,d3,d4,d5, d6,d7, d8
Radiobiology &Radioprotection	2	1	1		a2,c1,c2,c3,d1,d2,d3,d4,d5, d6,d7, d8
Molecular biology	2	1	1		a1,c1,c2,c3,d1,d2,d3,d4,d5, d6,d7, d8
Biostatistics	2	1	1		a1,c1,c2,c3,d1,d2,d3,d4,d5, d6,d7, d8

Pathology	2	1	1		a2,c1,c2,c3,d1,d2,d3,d4,d5, d6,d7, d8
General surgery related to oncology course	2	1	1		a8,c1,c2,c3,d1,d2,d3,d4,d5, d6,d7, d8
Internal medicine	2	1	1		a7,c1,c2,c3,d1,d2,d3,d4,d5, d6,d7, d8
Second Part: Clinical oncology: 1)Cancer treatment by chemotherapy , radiation therapy and radionuclide	12	6	6		a3, a4,a5,a6,a9,a10, a11,a12,a13,a14,b1,b2,b5,b6,b7, b8,c1,c2,c3,d1,d2,d3,d4,d5, d6,d7, d8
2)Radiation technology and Radioisotopes.	6	3	3		
3)pediatric oncology ,hematological malignancies and palliative care	6	3	3		

7. Program Admission Requirements

I- General Requirements.

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

II. Specific Requirements:

A. Candidates graduated from Egyptian Universities should have at least “Good Rank” in their final year/cumulative years examination, and grade “Good Rank” in internal medicine Course too.

B. Candidate should know how to speak & write English well.

C. Candidate should have computer skills.

8. Regulations for Progression and Program Completion

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

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

- Program-related basic & clinical sciences & research Methodology, Ethics & medical reports, Biostatistics and computer.
- At least six months after registration should pass before the student can ask for examination in the 1st part.
- Two sets of exams: 1st in October — 2nd in April.
- At least 50% of the written exam is needed to pass in each course.

- For the student to pass the first part exam, a score of at least 60% (Level D) in each course is needed.
- Those who fail in one course need to re-exam it only for the next time only, and if re-fail, should register for the course from the start.

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

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

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

- Program related specialized sciences of Clinical Oncology Courses. After passing at least:
- Completion of the 1st part credit hours and passing the exams are pre requisites for documentation of the 2nd part courses.
- After passing at least:
 - University hospital residents: 36 months residency in the department of clinical oncology.
 - Residents in other places: Completed 36 months residency; 12 months of them training in the department of clinical oncology.
- The students should pass the 1st part before asking for examination in the 2nd part.
- Fulfillment of the requirements in each course as described in the template and registered in the log book (5 Credit hours; with obtaining \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= 5 Cr. Hr. X 60 working Hrs = 300 Working Hrs.
 - Collection of working Hrs. is as following:

Activity		Hrs
Grand rounds	اجتماع علمي موسع	6
Training courses	دورات تدريبية	12/ day
Conference attendance	حضور مؤتمرات علمية داخلي خارجة	12/day 18/day
Thesis discussion	حضور مناقشات رسائل	6
Workshops	حضور ورش عمل	12/day
Journal club	ندوة الدوريات الحديثة	6
Seminars	لقاء علمي موسع	6

Morbidity and Mortality conference	ندوة تحليل المخاطر المرضية أو الوفاة	6
Self education program	برنامج التعليم الذاتي	6

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

9. Methods of student assessments:

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

Assessment schedule:

Part I:

- Medical radiation physics: Written Exam (2 hours) +OSCE + Structured oral Exam
- Radiobiology & Radioprotection: Written Exam (2 hours) +OSCE + Structured oral Exam
- Pathology: Written Exam (2 hours) + OSCE + Structured oral Exam
- Molecular biology: Written Exam (2 hours) + OSCE + Structured oral Exam
- Biostatistics & Computer and Research Methodology: Written Exam (2 hours) + Structured oral Exam+ OSPE

Written exam(3hours)for internal medicine and General surgery related to oncology + OSCE + structured oral exam.

Part II:

-Four written Exams (3 hours for each): two for Cancer treatment by Chemotherapy, radiation therapy and radionuclide, one for radiation technology and radioisotopes, and one for Pediatric oncology, hematological malignancies and oncological palliative care: + OSCE for all + Structured oral Exam for all.

10. Evaluation of Program Intended Learning Outcomes

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 Physics in master degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: master 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.
5. Academic year/ Level: 1^d part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specification of physics in master degree in oncology

Code :ONC 0521-200

Total hours

Lectures	Practical/Surgical	Total hour	Credit hours
15	30	45	2

B. Professional Information:-

1. Overall Aims of Course

To understand and to deal with machines of radiotherapy used in treatment of different types of cancer.

2. Intended Learning Outcomes of Course (ILOs)

a) Knowledge and Understanding:

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

- a1. Describe the atom and matter.
- a2. Mention nuclear transformation.
- a3. List the radiotherapy machines.
- a4. Describe the electron beam.
- a5. Describe the percentage depth
- a6. dose and factors affecting it.
- a7. Mention the radiation detectors.
- a8. List the cardinal principles of protection.

b) Intellectual Skills:

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

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

c) Professional and Practical Skills:

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

- c1. Understand the functions of machines used in radiotherapy.

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. Use computers in understanding medical physics.

3. Contents

Topic	No. Of hours	Lecture	Tutorial/Practical
Atom and matter	6hours	3hours	3hours
Nuclear transformation	6hours	2 hours	4 hours
Radiotherapy machines	6 hours	2 hours	4 hours
Electron beam	9hours	2 hours	7 hours
Percentage depth dose	6 hours	2 hours	4 hours
Radiation detectors	6 hours	2hours	4 hours
Protection	6 hours	2hours	4 hours
Total	45 hours	15 hours	30 hours

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-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exams	- Practical skills, intellectual skills - Knowledge

Assessment Schedule

Assessment 1	practical final exam	23 Week
Assessment 2	written final exam	24 week
Assessment 3	Log book	23 week
Assessment 4	oral final exam	24 week

Weighting of Assessments:

Log book :	Formative exams		
	Final-term written examination	50	%
	Final Structured Oral Exam	40	%
	Practical Examination	10	%
	Total	100	%

6. List of References

- 6.1- Essential Books (Text Books)
 - 1. Khan (medical phsics)

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

7. Facilities Required for Teaching and Learning

1. Appropriate teaching class
2. camera digital.
3. Computers and data show.

Course Coordinator: Dr: Elsayed Mostafa

Head of Department: Prof. Dr / Ali Abd El-Rahman

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

Course Specification of Radiobiology in master degree in clinical oncology

University Sohag

Faculty of Medicine

1. Program on which the course is given: Master 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.
5. Academic year/ Level: 1^d part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specification of radiobiology in master degree in oncology

Code: ONC 0521-200

Total hours

Lectures	Practical/Surgical	Tutorials/Clinical	Total hour	Credit hours
15	30	-----	45	2

B. Professional Information

1. Overall Aims of Course

1. mention the basic of many and varied uses of ionizing radiation in the medical profession.
2. mention the biological effects of radiation.
3. mention the basic background in radiobiology

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 hazardous biologic effect of radiation , and how to deal with acute and late effect of radiation.
- a2. Describe the radiation safety

b) Intellectual Skills

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

- b1. know the different biological effect of ionizing radiation
- b2. Know the methods of radiation safety
- b3. Know the acute and late effect of radiation.
- b4. Understand the different uses of ionizing radiation in the medical profession.

c) Practical Training aspects:

- c1. Clinical assessment of different radiation side effects.
- c2. Methods of radiation safety.
- c3. New radiation modalities.

d) General and Transferable Skills:

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

- d1. Know the radiobiological effect of radiotherapy on different tissues.
- d2. Understand the different cellular response to radiation.
- d3. Know the basic biologic interactions of radiation.

3. Contents

Topic	No. of hours	lecture	Tutorial/Practical
Review of cell biology.	5	3	2
Basic biologic interactions of radiation.	8	2	6
Cellular response to radiation	6	2	4
Tissue radiation biology	6	2	4
Modification of cell and tissue responses to radiation.	6	2	4
<u>Clinical radiobiology.</u> * goal of radiotherapy. * tumor radiobiology. * radio sensitivity and radiocurability. * chemical modifiers in radiotherapy . * new radiation modalities. * new treatment techniques. * hyperthermia Early effect and late effect of radiation.	8	2	6
	6	2	4
Total	45	15	30

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-Written Exams:	- Knowledge
-Short essay: 40%	- Knowledge
-structured questions: 25%	- Knowledge, intellectual skills
-MCQs: 20%	- Intellectual skills, General transferable skills,
-Commentary, Problem solving: 15%	- Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge

Assessment Schedule

Assessment 1	practical final exam	23 Week
Assessment 2	written final exam	24 Week
Assessment 3	Log book	23 Week
Assessment 4	oral final exam	24 Week

Weighting of Assessments:

Log book :	Formative exams		
	Final-term written examination	50	%
	Final Structured Oral Exam	40	%
	Practical Examination	10	%
	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

7. Facilities Required for Teaching and Learning:

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

Course Coordinator: Dr/ Elsayed Mostafa Ali Hassan

Head of Department: Prof. Dr. Ali Abd El-Rahman

Date:1/9/2012

Course Specification of Pathology in Master degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: Master 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
5. Academic year/ Level: First part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specification of pathology in master degree in clinical oncology

Code : PAT 0521-200

Lectures	Practical/Surgical	Tutorials/Clinical	Total hour	Credit hours
15	30		45	2

B. Professional Information:-

1. Overall Aims of Course

To understand and know cancer pathology of different organs, staging, prognostic factors and their relation with treatment outcome of different types of cancer.

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. Mention and understand of lung cancer.
- a4. Mention and understand of G.I.T. malignancies.
- a5. Mention and understand of genitourinary malignancies.
- a6. Mention and understand of skin, soft tissue and bone malignancies.
- a7. Mention and understand of 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	No. Of hours	Lecture	Tutorial/Practical
General pathology of cancer.	9 hours	3 hours	6 hour
Head and neck malignancies	6 hours	2 hours	4hour
Lung cancer	6hours	2 hours	4hour
G.I.T. malignancies.	6hours	2 hours	4hour
Genitourinary malignancies	6 hours	2 hours	4 hour
Skin, soft tissue and bone malignancies.	6hours	2 hours	4 hour
C.N.S. tumors and endocrine malignancies.	6hours	2 hours	4hours
Total	45 hours	15hours	30 hours
Credit	2	1	1

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-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills, - Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge

Assessment Schedule

Assessment 1	practical final exam	23 Week
Assessment 2	written final exam	24 week
Assessment 3	Log book	23 week
Assessment 4	oral final exam	24 week

Weighting of Assessments:

Log book : Formative exams		
Final-term written examination	50	%
Final Structured Oral Exam	50	%
Total	100	%

6. List of References

6.1- Essential Books (Text Books)
2. Robbins (pathology)

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

7. Facilities Required for Teaching and Learning

4. Appropriate teaching class
5. Camera digital.
6. Computers and data show.

Course Coordinator: Dr/Fatma El Zhraa Salla Eldeen

Head of Department: Dr/Eman Mohamed Salah El deen

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

Course Specification of Immunology in master degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: Master degree in clinical oncology
2. Major or Minor element of program: Minor
3. Department offering the course : Medical Microbiology and Immunology
4. Department offering the program: Clinical oncology Dep.
5. Academic year/ Level: First part .
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specification of immunology and molecular biology

Code: MIC 0521-200

Title	Lecture	Practical:	Total:	Credit hours
Immunology and molecular biology	15	30	45	2

B. Professional Information

1. Overall Aims of Course

By the end of the course the postgraduate student is expected to acquire advanced knowledge about the structure and function of the immune system and the role of the immune system in health and disease.

2. Intended Learning Outcomes of Course (ILOs):

a) **Knowledge and Understanding:**

By the end of the course the student is expected to:

- a1. Describe the structure and function of immune system
- a2. Mention the basics of the immune system, and the role it plays in health and disease
- a3. Illustrate the role of molecular genetics and molecular biology applications in general
- a4. Transplantation & immune system

b) **Intellectual Skills:**

By the end of the course the student is expected to:

- b1. Select from different diagnostic alternatives the ones that help reaching a final diagnosis
- b2. Determine the involvement of the immune system in the current disease process.

c) **Professional and Practical Skills:**

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

- c1. Recognize some serological tests used in diagnosis
- c2. Interpret a report containing immunological data.

d) **General and Transferable Skills:**

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

- d1. Use of different sources for information and knowledge.
- d2. Educate himself Continuously

3. Content

Topics	No. of hours	Lecture	Practical
<i>Immunology</i>			
1. Congenital & Acquired Immunity	5	2	3
2. Immunological Cells	5	2	3
3. Hypersensitivity	5	2	3
4. Transplantation	6	2	4
5. Tumor Immunology	6	2	4
6. Immunodeficiency	6	2	4
7. antigen- antibody reactions	6	2	4
<i>Molecular biology</i>			
PCR technique	6	1	5
Total hours	45	15	30

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-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills, - Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge
5.4-OSPE	-Practical skills, intellectual skills
5.5Computer search assignment	- general transferable skills, intellectual skills

Assessment Schedule

- Assessment 1. Attendance and absenteeism (formative)
- Assessment 2. Final Written examination: week 24
- Assessment 3. Final Oral examination: week 24
- Assessment4. Final OSPE: week 24

Weighting of Assessments

Final-term Examination	50%
Oral Examination	30%
OSPE	20%
Total	100%

formative only assessment :simple research assignment, attendance and absenteeism.

6. List of References

6.1- Essential Books (Text Books)

Jawetz Medical Microbiology.

Roitt Essential Immunology.

Abbas Clinical Immunology

Alberts Molecular Biology

6.2- Recommended Books

Topley and Wilson, Microbiology

6.3- Periodicals, Web Sites, etc

Clinical Immunology journal

<http://mic.sgmjournals.org/>

microbiology and immunology on line

7. Facilities Required for Teaching and Learning:

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

Course Coordinator: Dr/ Mamdoh M. Esmt

Head of Department: Dr. Abeer Shineaf

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

Course Specification of Internal medicine and General surgery in master degree in clinical oncology

Sohag University

Sohag Faculty of Medicine

1. Program on which the course is given: Master degree in clinical oncology
2. Major or Minor element of program: Major
3. Department offering the program: Clinical Oncology and Nuclear medicine.
4. Department offering the course: : Internal medicine and General surgery department
5. Dated Academic year/ Level: 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specification of internal medicine and General surgery in master degree in clinical oncology

Code: SUR - MED 0521-200

Total hours :

Module	Lectures	Practical/Surgical	Tutorials/Clinical	Total hour	Credit hours
General surgery	15		30	45	2
Internal medicine	15		30	45	2

B. Professional Information:-

1. Overall Aims of Course

General surgery module:

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

Internal medicine module :

By the end of the course of Internal Medicine, the candidate should be able to:
Deal with common medical conditions on the basis of adequate history taking, physical examination interpretation of relevant supportive investigations and management

2. Intended Learning Outcomes of Course (ILOs)

General surgery module:

a) Knowledge and Understanding:

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

- a1. Mention and understand basics of General surgery (shock, haemoperitoneum, ascites, and peritonitis.
- a2. Mention and understand of head injury.
- a3. Mention and understand of jaw swelling.
- a4. Mention and understand of esophageal cancer, non malignant obstructions.
- a5. Mention and understand of G.I.T. diseases.
- a6. Mention and understand of abdominal masses.

- a7. Mention and understand of portal hypertension.
- b) Intellectual Skills:**
By the end of the program, the student 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 program, 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..

Internal medicine module :

- 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 .

3. Contents

General surgery module :

opic	No. Of hours	Lectures	clinical
General General surgery	7.5	2.5	5
Head injury	7.5	2.5	5
Jaw swelling	7.5	2.5	5
Esophageal cancer, non malignant obstructions.	7.5	2.5	5
G.I.T. diseases	6	2	4
Abdominal masses	6	2	4
Portal hypertension	3	1	2
Total	45	15hours	30

Internal medicine module :

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

2-Endocrinology teaching

Topics	No of lectures	leecture	clinical
Disorders of the anterior pituitary and the hypothalamus	2	1	1
<u>Disorders of the thyroid gland</u>	2	1	1

Hypothyroidism			
Hyperthyroidism			
<u>Disorders of the adrenal gland:</u> -Cushing syndrome -Aldosteronism -Adrenogenital syndrome Pheochromocytoma	2	1	1
Diabetes mellitus	2	1	1

Hematology :

Topics	No of Lectures	Lecture	clinical
Leukemias and myeloma and myelodysplastic syndromes	2	1	1
Lymphomas	2	1	1
Anemias: -Megaloplastic -Iron deficiency -Acquired hemolytic anemias	2	1	1
-Bleeding disorders Thrombocytopenia	2	1	1

5-Nephrology teaching

Topics	No of hours	Lecture	clinical
<u>Disturbed renal function:</u> Acute renal failure - Chronic renal failure Renal dialysis and Renal transplantation	2	1	1

6-Gastroenterology and hepatology teaching

Topics	No of lectures	Lecture	clinical
Gastro esophageal junction disorders	2	1	1
Inflammatory bowel dis: Crhon's dis Ulcerative colitis	2	1	1
Jaundice	2	1	1
Hepatitis (acute and chronic)			
Cirrhosis and Portal hypertension and Hepatocellular failure	2	1	1
Upper and lower GI bleeding	1	0.5	0.5

4. Teaching and Learning Methods

4.1- Lectures

5. Student Assessment Methods:

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exams:	- Knowledge

-Short essay: 40%	- Knowledge
-structured questions: 25%	- Knowledge, intellectual skills
-MCQs: 20%	- Intellectual skills, General transferable skills,
-Commentary, Problem solving: 15%	- Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge
5.4- OSCE	Practical skills, intellectual skills

Assessment Schedule

Assessment 1	clinical final exam	96 Week
Assessment 2	written final exam	96 week
Assessment 3	Log book	96 week
Assessment 4	oral final exam	96 week

Weighting of Assessments:

Log book : Formative exams		
Final-term written examination	50	%
Final Structured Oral Exam	40	%
Clinical Examination	10	%
Total	100	%

6. List of References

General surgery module :

6.1- Essential Books (Text Books)

1. Baily and Love
2. Schwartz

6.2- Periodicals, Web Sites, ... etc

Freemedical journals.com

Internal medicine module:

6.1- Essential Books (Text Books)

- Kumar and Clarke Textbook of Medicine; 14th edition, 2007
- Hutchison's Clinical Methods; 21st edition;2003

6.2- Recommended Books

- Cecil Textbook of Medicine; McGraw Hill; 16th edition, 2007.

6.3- Periodicals, Web Sites, ... etc

7. Facilities Required for Teaching and Learning

1. Appropriate teaching class
2. camera digital.
3. Computers and data show.

Course Coordinator:

General surgery module: Prof. Alaa El Suty

Internal medicine module: Dr. Mervat Mohamed Ahmed Attia

Head of Department:

General surgery module: Prof. Nabil Abo El Dahab

Internal medicine module: Prof. Hassan Shehata

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

Course Specification of Biostatistics in master degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: Master degree in clinical oncology
2. Major or Minor element of program: Minor
3. Department offering the course: Community Medicine and public Health
4. Department offering the program: Oncology and Nuclear Medicine Dep.
5. Academic year/ Level: First part .
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

Title: Course Specification of biostatistics

Code: COM 0521-200

Lectures	Practical/Surgical	Tutorials/Clinical	Total hour	Credit hours
15	30		45	2

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 and computer programs SPSS, Epi Info and Excel in data analysis

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 causation and association
- a2. Describe bias and confounding
- a3. Describe different samples sizes
- a4. Define the screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests
- a5. Explain the usefulness of screening tests, and calculate sensitivity, specificity, and predictive values
- a6. Define the sources of data and methods of collection
- a7. Describe five sampling techniques and list at least three advantages of sampling
- a8. Describe data in tables and graphs
- a9. Explain measures of central tendency and measures of dispersion
- a10. Describe the normal curves and its uses
- a11. Define selected tests of significance and the inferences obtained from such tests

b) **Intellectual Skills**

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

- b1. Integrate data variables impacting health and disease
- b2. Interpret selected tests of significance and the inferences obtained from such tests
- b3. Analyze measures of central tendency and measures of dispersion
- b4. Compare different sampling methods
- b5. Evaluate data, create tables and graphs
- b6. Evaluate the sources of data and methods of collection

c) Professional and Practical Skills:

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

- c1. Perform methods of data collection
- c2. Design tables and graphs for data prescription
- c3. Teach association and causation

d) General and Transferable Skills:

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

- d1. Choose and use appropriate computer programs for statistical analysis effectively.
- d2. Utilize computers in conducting researches.
- d3. Work as a part in a team for data collection and prescription
- d4. Write structural reports in the field of biostatistics
- d5. Use different sources for information and knowledge

3. Contents

Topic	No. of hours	Lecture	Tutorial/Practical
<u>Methodology & statistics</u>			
Introduction to research Terminology and rationale	4	1	3
Data collection methods	4	1	3
Types of Data	5	2	3
Tabulation of data	5	2	3
Measures of central tendency	4	1	3
Measures of dispersion	5	2	3
Normal distribution curves	4	1	3
Study design :Cross sectional study and the prevalence rate .Cohort study, incidence rate, relative & attributable risk. Case-control study, Odd's ratio	4	1	3
Sampling	5	2	3
Basics of selected tests of significance	5	2	3
Total	45	15	30

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-Written Exams:	- Knowledge
-Short essay: 40%	- Knowledge
-structured questions: 25%	- Knowledge, intellectual skills
-MCQs: 20%	- Intellectual skills, General transferable skills,
-Commentary, Problem solving: 15%	- Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge
5.4-OSPE	-Practical skills, intellectual skills
5.5Computer search assignment	- general transferable skills, intellectual skills

Assessment Schedule

Assessment 1. Attendance and absenteeism (formative)

Assessment 2. Final Written examination: week 24

Assessment 3. Final Oral examination: week 24

Assessment 4. Final OSPE: week 24

Weighting of Assessments

Final-term Examination 50%

Oral Examination 30%

OSPE 20%

Total 100%

formative only assessment :simple research assignment, attendance and absenteeism.

6. List of References

6.1- Essential Books (Text Books)

1-Maxy-Rosenau Public health and preventive medicine, Prentice – Hall International Inc.

6.2- Recommended Books

1- Dimensions of Community Health, Boston Burr Ridge Dubuque.

2- Short Textbook of preventive and social Medicine. Prentice-Hall International Inc.

3- Epidemiology in medical practice, 5th edition. Churchill Livingstone. New York, London and Tokyo.

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:

4. Adequate conditioned space for staff and assistants.

5. Adequate conditioned teaching facilities.

6. Audiovisual Aids: Data show, overhead and slide projectors and their requirements

Course Coordinator: Dr/Ahmmed Fathy

Head of the department: Prof/Eman Abd El-Baset Mohammed

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

Course Specification of clinical oncology in master degree in clinical oncology

Sohag University

Faculty of Medicine

1. Program on which the course is given: Master degree in clinical oncology
2. Major or Minor element of program: Major
3. Department offering the program: Clinical Oncology and nuclear medicine.
4. Department offering the course: Clinical Oncology and nuclear medicine.
5. Academic year/ Level: 2nd part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

A. Basic Information

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

Code: ONC 0521-200

Radiation oncology

Lectures	Practical/Surgical	Tutorials/Clinical	Total hour
40	30	30	100

Radiation technology

Lectures	Practical/Surgical	Tutorials/Clinical	Total hour
30	75	60	135

Paediatric oncology

Lectures	Practical/Surgical	Tutorials/Clinical	Total hour
22	15	15	52

Medical oncology

Lectures	Practical/Surgical	Tutorials/Clinical	Total hour
35	30	22.5	87.5

1. Overall Aims of Course

The student should be able to:

Understand radiotherapy and radioisotopes in the management of malignant disease and understand and deal with the toxicities of radiotherapy and radioisotopes

2. Intended Learning Outcomes of Course (ILOs)

Radiation oncology

a) Knowledge and understanding:

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

- a1. Mention the role of radiotherapy in the management of malignant diseases
- a2. Mention different techniques of radiotherapy
- a3. Mention using different procedures for planning patients for radiotherapy

b) Intellectual Skills

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

Define basic terminology

- b1. Understand the interactions of radiation in different tissues
- b2. Understand different techniques of radiotherapy

- b3. Understand different rationale of radiotherapy in management of malignancy
- b4. Know new modalities of radiotherapy
- b5. Know palliative care with radiotherapy

c) Practical Training aspects:

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

- c1. Training in different equipment of radiotherapy in the department
- c2. Practical training in the simulator machine
- c3. Clinical evaluation of the patient before receiving radiotherapy

d) General and Transferable Skills:

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

- d1. Take a decision of delivering radiotherapy in cancer patient and the rationale of giving the radiotherapy or radioisotopes
- d2. Update with a new modalities of radiotherapy equipment
- d3. Update with a new protocols of radiotherapy

Radiation Technology

1. Overall Aims of Course:

- 1. Understand how radiotherapy is delivered (treatment machines, treatment planning, and brachytherapy).
- 2. Understand different techniques of radiation including conformal radiotherapy and stereotactic radiation therapy,
- 3. Understand the radiobiological effects of radiation therapy and radioisotopes.

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. List the different pretreatment procedures
- a2. Describe the planning procedures for radiotherapy
- a3. List the delivering radiotherapy
- a4. Mention new modalities of radiotherapy
- a5. Mention the radiotherapy toxicities
- a6. Mention radioisotopes

b) Intellectual Skills

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

- b1. how to take a decision in a cancer patients need radiotherapy
- b2. understand different rationale of radiotherapy
- b3. understand different techniques of planning and delivering radiotherapy
- b4. know management of side effects of radiotherapy
- b5. know using of radioisotopes in diagnosis and management

c) Practical Training aspects:

- c1. Know the properties of the simulator machine
- c2. Understand different position of the patients during planning
- c3. Understand different methods of fixation in mould rooms
- c4. Understand different methods of brachytherapy
- c5. Understand different new modalities of planning and radiotherapy
- c6. know different radioisotopes and their uses and precautions

d) General and Transferable Skills:

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

- d1. know different modalities of radiotherapy
- d2. know different techniques of delivering radiotherapy
- d3. know different methods of patient fixation
- d4. Know new modalities of radiotherapy

- d5. Understand using radioisotopes in diagnosis and management of malignant diseases

Paediatric oncology

1. Overall Aims of Course

The student should be able to:

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

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 basic knowledge of pediatric malignant diseases and their management
- a2. Mention general care of pediatric patient
- a3. Describe treatment toxicities in pediatric patients
- a4. Mention basic knowledge of malignant hematological diseases and their management
- a5. Mention the procedures of bone marrow transplantation and types
- a6. Mention how to palliate different symptoms of cancer patient

b) Intellectual Skills

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

Define basic terminology

- b1. understand the different rationale of management pediatric malignancy
- b2. understand using chemotherapy protocols in management pediatric malignancy
- b3. know using chemotherapy protocols in management hematological malignancy
- b4. understand palliative treatment of cancer patients

c) Practical Training aspects:

- c1. clinical training in chemotherapy administration in pediatric cases
- c2. clinical training in dealing with hematological toxicities of chemotherapy and other toxicities
- c3. clinical training in different methods of palliation symptoms of cancer patients

d) General and Transferable Skills:

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

- d1. Know new chemotherapy agents used in management of pediatric malignancy and hematological malignancy
- d2. Know new chemotherapy protocols
- d3. know the basic of medical care of pediatric cases and hematological malignancy cases

medical oncology

a) Knowledge and understanding:

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

- a1. Mention different chemotherapeutic agent
- a2. Mention other lines of medical oncological treatment as the hormonal treatment, immunotherapy, the target therapy
- a3. Mention different mechanism of action of chemotherapeutic agent

a4. Mention different side effects of those agents

b) Intellectual Skills

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

- b1. Know different chemotherapeutic agents
- b2. Understand dealing with other lines of treatment as hormonal treatment ,immunotherapy, target therapy
- b3. Understand taking a decision of using chemotherapy or other lines of medical treatment in different malignant diseases
- b4. Know dealing with chemotherapy toxicities

c) Practical Training aspects:

- c1. clinical training in administration the different chemotherapeutic agents
- c2. clinical training in management the chemotherapy side effects

General and Transferable Skills:

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

- d1. Know chemotherapeutic agents
- d2. Know using of hormonal, immunotherapy and target therapy

3. Contents

Radiation oncology

	No. of hours	Lecture	Tutorial/practical
<u>Part I</u>			
• physical and biological basis of radiation therapy	8	3	5
• clinical radiation physics	8		5
• principles of combining radiation therapy and General surgery	8	3	6
• principles of combining radiation therapy and chemotherapy	8	2	6
		2	

<u>Part II</u>			
<ul style="list-style-type: none"> • <u>skin</u> 	8	2	6
<ul style="list-style-type: none"> • <u>head and neck</u> 			
*salivary gland			
*nasal fossa and paranasal sinuses			
*nasopharynx		3	
*oropharynx	12		9
*oral cavity			
*larynx and hypopharynx			
*orbit			
*temporal bone, ear, and paraganlion			
* thyroid			
<ul style="list-style-type: none"> • <u>breast</u> 			
<ul style="list-style-type: none"> • <u>thorax</u> 	8	2	6
* blood vessels and heart			
* lung and thymus	8	2	6
<ul style="list-style-type: none"> • <u>GIT</u> 			
* esophagus			
* stomach and small intestine			
* pancreas			
* liver and biliary system	10	4	6
* colon and rectum			
* anal region			
<ul style="list-style-type: none"> • <u>Urinary tract</u> 			
* testis			
* prostate			
<ul style="list-style-type: none"> • <u>Female genital system</u> 	9	4	5
* uterine cervix			
* endometrium			
* vulva and vagina			
* ovary			
<ul style="list-style-type: none"> • <u>CNS</u> 	8		
* brain		3	5
* spinal cord			
<ul style="list-style-type: none"> • <u>Leukemia , lymphoma and Hodgkin, disease</u> 	8		
		3	5

<ul style="list-style-type: none"> • <u>Musculoskeletal</u> <ul style="list-style-type: none"> * bone * soft tissue • <u>Childhood cancer</u> • <u>Special consideration</u> 	8	3	5
* radiation therapy for bone marrow or stem cell transplantation	8	3	5
* palliative care	8	3	5
* clinical application of new modalities	8	3	5
<u>Total</u>	135	45	90

Radiation technology

Topics	No. of hours	Lecture	Tutorial /Practical
<u>General technology</u>			
• physical and biological basis of radiation therapy	8	3	5
• clinical radiation physics	8	3	5
• recent modalities of radiotherapy	8	3	5
• brachytherapy	8	3	5
• radioisotopes	8	3	5
Radiotherapy techniques and planning for different types of malignant diseases			
• skin	8	3	5
• head and neck	8	3	5
• breast	9	3	6
• thorax	8	3	5
• GIT	8	2	6
• Urinary tract	8	3	5
• Male genital tract	8	2	6
• Female genital tract	8	3	5
• CNS	8	2	6
• Leukemia & lymphoma and HD	6	1	5
• Musculoskeletal	8	3	5
• Childhood cancers	8	2	6
	8	3	5
Total	135	45	90

Pediatric oncology

Topics	No. of hours	Lecture	Tutorial/clinical
<u>Part I (pediatric malignancy)</u>			
• bone marrow failure	5	2	3
• lymphadenopathy and splenomegally	6	2	4
• lymphoproliferative disorders and myelodysplastic syndromes	5	2	3
• leukemias		2	4
• Hodgkin's disease	6	2	4
• Non Hodgkin lymphoma	6	2	4
• Central nervous system malignancies	5	2	3
• Neuroblastoma		2	3
• Wilm,s tumor	5	2	4
• Soft tissue sarcoma	6	2	4
• Bone sarcomas	6	2	4
• Histiocytosis syndromes	6	2	4
• Retinoblastoma		2	4
• Miscellaneous tumors	6	1	4
• Bone marrow transplantation	5	2	4
• Supportive care and management of oncological emergencies	6	2	4
• Late effects of childhood cancer	6	2	4
<u>Part II (hematological malignancies)</u>			
• Hodgkin and non Hodgkin lymphoma	6	2	4
• Plasma cell dyscrasias and waldenstrom,s macroglobulinemia	6	2	4
• Chronic leukemias		2	4
• Myeloproliferative			

disorders		2	4
• Acute leukemias and myelodysplastic syndromes	6	2	4
	6	2	4
	6		
<u>Part III (palliative treatment)</u>	8		
		2	6
Total	135	45	90

Medical oncology

Topic	No. of hours	lecture	Tutorial/Practical
• principles of oncology	9	3	6
• cancer chemotherapeutic agents	9	3	6
• supportive care	9	3	6
• head and neck cancers	9	3	6
• lung cancers	9	3	6
• GIT cancers	9	3	6
• Breast cancer	9	3	6
• Gynecological cancers	9	3	6
• Testicular cancer	9	3	6
• UT cancers	9	3	6
• Neurological tumors	9	3	6
• Endocrinal neoplasm	9	3	6
• Skin cancers	9	3	6
• Miscellaneous neoplasm	9	3	6
Metastases of unknown origin	9	3	6
Total	135	45	90

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-Written Exams:	- Knowledge
-Short essay: 40%	- Knowledge
-structured questions: 25%	- Knowledge, intellectual skills

-MCQs: 20%	- Intellectual skills, General transferable skills,
-Commentary, Problem solving: 15%	- Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge
5.4- OSCE	-Practical skills, intellectual skills

Assessment Schedule

Assessment 1	clinical final exam	96 Week
Assessment 2	written final exam	96 week
Assessment 3	Log book	96 week
Assessment 4	oral final exam	96week

Weighting of Assessments:

Log book : Formative exams	
Final-term Examination	50%
Oral Examination	30%
OSPE	20%
Total	100%

6. List of References

- 6.1- Essential Books (Text Books)
- * Perez text book
 - * James D. cox (radiation oncology)
- 6.2- Recommended Books
- * Ann Barrett (practical radiotherapy planning)

7. Facilities Required for Teaching and Learning:

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

Course Coordinator: Dr / Elsayed Mostafa Ali Hassan

Head of Department: Prof. Dr. Ali Abd El-Rahman

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