COURSE SPECIFICATION

(Clinical Pharmacology)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Pharmacology department + Medical Oncology Internal Medicine Department
(4) Part of the programme:	first part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/092020
(7) Course title:	Clinical Pharmacology
(8) Course code:	MONC 606
(9) Total teaching hours:	15 hours/15 weeks

B) Professional information

1) Course Aims:

The broad aim of the course are as follows:

To provide the candidate with application of fundamental principles of pharmacology in the design of rational therapeutic regimens for patients, with a particular emphasis in anticancer therapy.

2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A1. Recognize chemotherapeutic drugs and protocols, biologic products, and growth factors and their mechanisms of action; pharmacokinetics, clinical indications, and their limitations, including their effects, toxicity, and interactions.

A2. Identify combined modality therapy of cancer and new target therapies.

A3. Identify concepts of supportive care, including hematologic, oncologic, and infectious disease

A4. Recognize pain management in patients with Oncologic disorders.

B- Intellectual skills

B1. Construct chemotherapy combinations protocols.

B2. Calculate doses for chemotherapy.

B3. Compare between conventional chemotherapy and novel therapies.

3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
1) Development of anticancer drugs	1h				1h
2) Pharmacokinetics & Pharmacodynamics	1h				1h
3) Pharmacogenomics	1h				1h
4) Design and analysis of clinical trials: a. Phase I b. Phase II c. Phase III	2h				2h
5) Classic antineoplastic drugs: a. Alkylating agents. b. Antimetabolites c. Topoisomerase-interacting agents d. Cisplatin and its analogs e. Antimicrotubule agents.	3h				3h
6) Endocrine manipulation of cancer	1h				1h
7) Small molecule tyrosine kinase inhibitors	1h				1h
8) Targeting signal transduction with antibodies	1h				1h
9) Histone deacetylase inhibitors & hypomethylating agents	1h				1h
10) Proteasome inhibitors	1h				1h
11) Cancer biotherapeutics: a. Interferon b. Interleukins c. Antisense agents d. Anti-angiogenesis e. Monoclonal antibodies	2h				2h

4) Teaching methods:

4.1 Power point presentation

4.2 Online Teaching.

5) Assessment methods:

5.1 Written exam for assessment of A1-4, B1-3,

5.3: MCQ for assessment of A1-4, B1-3,

Assessment schedule:

Assessment 1: Final exam week/month: 15th week

Percentage of each Assessment to the total mark:

Written exam:	80 marks	80% of total pharmacology exam.
MCQ exam	20 marks	20% of total pharmacology exam.

6) References of the course:

6.1: Hand books:

- Modern Pharmacology, Clinical pharmacology department, faculty of medicine, Mansoura University
- ESMO Handbook on Clinical Pharmacology of Anti- Cancer Agents

6.2: Text books-:-Pharmacology and therapeutics (Goodman).

-Basic and clinical pharmacology (Katzung).

- Pharmacology (Rang and Dale).
- Cancer Clinical Pharmacology (Jan H. M. Schellens)

6.3 DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020

7) Facilities and resources mandatory for course completion:

- Lectures Halls.
- Data show.
- Working Network.

Course coordinator:

Prof. Dr. Sameh Shamaa

Prof. Dr. Tawfik Elkhodary

Prof. Dr Hayam Fathy Ghazy.

Head of the department:

Prof. . Dr. Ayman Minesy

Date of Approval: 02/06/2020

COURSE SPECIFICATION

(Basics of Biology of Tumours (B))

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Hematology Unit. Clinical Pathology department.
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council:	02/06/2020
(6) Date of last approval of programme specification by Faculty council:	20/09/2020
(7) Course title:	Basics of biology of tumours (B)
(8) Course code:	MONC 630
(9) Total teaching hours:	7.5 hours/15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1. Provide candidate with a basic knowledge in molecular biology necessary for an understanding of the life sciences at the molecular level in addition to basic principles of molecular biology techniques.

(2) Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding

A1. Describe the structure and function of the cell.
A2. Discuss cellular growth and cell cycle durations.
A3. Define the cellular apoptosis and its application.
A4. List the secrets of cellular aging and individual senescence.
A5. Report the significance of human genome project and the principles of gene therapy.
A6. Describe cell cycle and its regulation, and point out how its dysregulation results in either apoptosis or carcinogenesis.
A7. Recognize the causes and possible mechanisms of carcinogenesis, and how to screen, diagnose, and follow-up cancer by detection of tumor markers.

B-Intellectual skills:

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

B1. Diagram the pathway of the angiogenesis and factors affecting it.
B2. Propose potential targets in carcinogenesis pathway.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
(1) Human Genome, Genomics & Proteionomics	1.5h				1.5h
(2) Genetic Counseling	1h				1h
(3) Molecular basis of Cancer	2h				2h
(4) Cell cycle Telomerase, telomere, Apoptosis, cell immortalization	1h				1h
(5) Angiogenesis, invasion and metastasis	1h				1h
(6) Cancer Stem Cells	1h				1h

(4) Teaching methods:

4.1: Power Point presentation.

4.2 Online Teaching.

(5) Assessment methods:

5.1: Written exam for assessment of A1-7, B1-2

5.2: MCQ exam for assessment of A1-7, B1-2

Assessment schedule:

Final exam 15th week

Percentage of each Assessment to the total mark:

Written exam: 80 marks: 80 % of total course exam.

MCQ exam: 20 marks :20% of total course exam.

(6) References of the course:

Text books:

6.1: Medicine, DeVita Cancer Principles and Practice of Oncology (DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020)

6.2: Journals: Journal of Clinical Oncology

6.3: Journals: American Society of Hematology (ASH) 2020,

6.4 European Hematology Association (EHA) 2020

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(7) Facilities and resources mandatory for course completion:

- Lecture Hall.
- Data show.

Working Network.

Course coordinator:

Prof. Dr. Sameh Shamaa

Prof. Dr. Tawfik Elkhodary

Prof. Dr. Hayam Fathy Ghazy.

Head of the department:

Prof. Dr. Ayman Minesy

Date of Approval: 02/06/2020

COURSE SPECIFICATION

(Medical Statistics & Epidemiology in Oncology)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine department
(3) Department responsible for teaching the course:	Department of public health
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Medical Statistics & Epidemiology in Oncology
(8) Course code:	MONC 618 BMS, BEP
(9) Total teaching hours:	7.5 hours/15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1. To enable students to turn a problem described in medical or biological terms into something that can be tackled by a statistical analysis.
2. To develop the student's computer skills so that they handle and analyze large medical databases.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A1. Discuss clinical epidemiology and medical statistics, resulting in:
   a. Improving the ability to conduct clinical studies.
   b. Learning the basis of experimental protocols design,
   c. Improving data collection, and analysis.
   d. Capability of Planning & conduction of clinical trials

B- Intellectual skills

B1. Compare between a range of health contexts, such as individual and institutional and national and international contexts

B2. Analyze health and health issues, and health information and data that may be drawn from a wide range of disciplines

B3. Articulate central theoretical arguments within a variety of health studies contexts;

B4. Construct research and research methodologies to locate, review and evaluate research findings relevant to health and health issues, across a range of disciplines

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Seminars	Total Teaching Hours
• Basic principles of statistics	1h				1h
• Observational studies	1h				1h
• Experimental studies	1h				1h
• Sample size collection	0.5h				0.5h
• Study design in medical research	0.5h				0.5h
• How to carry out a randomized clinical trial	0.5h				0.5h
• Evidence based medicine	0.5h				0.5h
• How to use appropriate statistical test for your date	1h				1h
• How to test a diagnostic performance of a new diagnostic modality	0.5h				0.5h
• Practice on SPSS	1h				1h

(4) Teaching methods:

[illegible]

(5) Assessment methods:

5.1 Written exam for assessment of A1, B1-4,

5.3: MCQ for assessment of A1, B1-4,

Assessment schedule:

Assessment 1: Final exam week/month: 15th week

Percentage of each Assessment to the total mark:

Written exam: 80 marks 80% of total course exam.

MCQ exam 20 marks 20% of total course exam.

(6) References of the course:

6.1: Cancer Clinical Trials, Methods and Practice, Mark E Buyse, Oxford Medical publications.

6.2: Cancer Principles & practice of Oncology, Vincent DeVita (DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020)

(7) Facilities and resources mandatory for course completion:

1. Lecture halls.
2. Data show.
3- Working Network.

Course coordinator:

Prof. Dr Sameh Shamaa

Prof. Dr Tawfik Elkhodary

Prof. Dr Hayam Fathy Ghazy.

Head of the department: Prof. Dr. Ayman Minesy

Date of Approval: 02/06/2020

COURSE SPECIFICATION

(Radiodiagnosis Course)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Radiology Department
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Radiodiagnosis
(8) Course code:	MONC 629
(9) Total teaching hours:	15 hours/15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

Provide candidate with basics and principles of radiological diagnosis for cancer for proper staging ad evaluate response to therapy.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding:

A1. Identify the principles of diagnosis, and staging, and management (Interventional Radiology) of neoplastic disorders including solid tumors and hematological malignancies.

A2. Define indications and applications of imaging techniques in patients with Oncologic disorders.

B-Intellectual skills:

B1. Judge professional radiodiagnosis practice, through critical evaluation of the theories and concepts presented within the evidence base and critical reflection on own and others clinical practice.

B2. Plan, implement and evaluate the value of Radiodiagnosis in research activities within given time scales.

B3. Evaluate quality assurance methods and assess safety measures for diagnostic radiology

(3) Course content:

Subjects	Lectures	Clinica	Laborator	Field	Total Teaching Hours
(1) Biological aspects of Radi0diagnosis	1h				1h
(2) Interventional radiology	1h				1h
(3) Physical aspects of Radiodiagnosis and value of plain films	1h				1h
(4) Basics & uses of ultrasonography (5) Basics & uses of CT (6) Basics & uses of MRI (7) Basics & uses of PET	2.5h				2.5h
(8) Basics & uses of angiography	1h				1h
(9) Basics & uses of mammography	1h				1h

(3) Teaching methods:

- Power Point presentation.
- Case discussion.
- Online Teaching.

(4) Assessment methods:

5.1: Written exam for assessment of A1-2, B1-3

5.2: MCQ exam for assessment of A1-2, B1-3

Assessment schedule:

Final exam week/month: 15th week.

Percentage of each Assessment to the total mark:

Written exam: 80 marks 80% of total course exam.

MCQ exam 20 marks 20% of total course exam.

(5) References of the course:

Course notes

Essential books (text books): ,

- Hollan-Frei Cancer Medicine,
- DeVita Cancer Principles and Practice of Oncology (

DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020)

Recommended books

Periodicals, Web sites

Facilities and resources mandatory for course completion:

-Lectures Halls.

-Data show.

-Working Network.

Course coordinator:

Prof. Sameh Shamaa

Prof. Tawfik Elkhodary

Prof. Hayam Fathy Ghazy.

Head of the department: Prof. Atta Bakr.

Date of Approval: 02/06/2020.

COURSE SPECIFICATION

(Radiotherapy)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Radiotherapy and Nuclear medicine department
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Radiotherapy
(8) Course code:	MONC 617
(9) Total teaching hours:	7.5 hours/15 weeks

(B) Professional information

(1) Course Aims:

1. Provide the Medical Oncology postgraduate students with the advanced medical knowledge essential for the practice of specialty and necessary to provide further training and practice in the field of Radiotherapy according to the international standards.
2. Provide Ethical principles related to the practice in this highly sensitive specialty.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding:

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

A1. Define the recent advances in radiotherapy, brachytherapy and cancer treatment by radioactive nuclides.

A2. Explain the recent advances in radiobiology.

A3. Explain the recent advances in chemotherapy and biotherapy combinations with radiotherapy.

A4. Identify the advanced studies and recent technologies in radiotherapy.

B-Intellectual skills:

B1. Assemble data through history taking to reach a provisional diagnosis for oncological problems.

B2. Determine different diagnostic alternatives the ones that help reaching a final diagnosis for oncological problems.

B3. Assess risk in professional practices of radiotherapy.

B4. Plan to improve performance in the field of radiotherapy.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
1) The Disciplines of Radiation Oncology	0.5h				0.5h
2) Biological and Physical Basis of Radiation Oncology	1h				1h
3) Modulators of Radiation.	0.5h				0.5h
4) Radiation and Treatment planning	1h				1h
5) Photon external-Beam Therapy: Dosimetry and Treatment planning	1h				1h
6) Electron-Beam Therapy: Dosimetry and Treatment planning	0.5h				0.5h
7) Tree-Disentail Conformal Radiation Therapy	1h				1h
8) Intensity-Modulated Radiation Treatment	0.5h				0.5h
9) Altered Fractionation Schedules	0.5h				0.5h
10) Basics of Nuclear Medicine	0.5h				0.5h
11) Late Effects of Cancer Treatment	0.5h				0.5h

(4) Teaching methods:

4.1: Power Point presentation.

4.2: Case discussion.

4.3 Online Teaching.

(5) Assessment methods:

5.1: Written exam for assessment of A1-4, B1-5,

Assessment schedule:

Final exam week/month: 15th week.

Percentage of each Assessment to the total mark:

Written exam:	80 marks	80% of total course exam.
MCQ exam	20 marks	20% of total course exam.

(6) References of the course:

Text books:- Hollan-Frei Cancer Medicine,

- DeVita Cancer Principles and Practice of Oncology (DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020)

(7) Facilities and resources mandatory for course completion:

-Lectures Halls.

-Data show.

- Working Network.

Course coordinator:

Prof. Sameh Shamaa.

Prof. Tawfik Elkhodary.

Prof. Hayam Fathy Ghazy.

Head of the department: Prof. Atta Bakr

Date of Approval: 02/06/2020.

COURSE SPECIFICATION

(SURGICAL TREATMENTs OF TUMOURS)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	General Surgery
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Surgical Treatments of Tumours
(8) Course code:	MONC 620
(9) Total teaching hours:	7.5 hours/15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

Provide the candidate with basic principles, procedure of surgical treatment of cancer.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding:

A1.	Identify the principles, applications, complications and contraindications of surgical treatment of solid tumors and hematopoietic malignancies.
A2.	Identify combined modality therapy of cancer.

B-Intellectual skills:

B1.	Take decision in the diagnosis and appropriate treatment planning.
B2.	Explain planned treatment clearly to junior staff
B3.	Evaluate and justify the appropriateness of approaches used in the management of cancer patients and explore the implications of these for the patient, their careers, the practitioner and the service.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
1) Surgery as a part of multidisciplinary cancer management	2h				2h
2) Surgical treatment of cancer breast	1.5h				1.5h
3) Surgical treatment of colorectal cancer.	1h				1h
4) Surgical treatment of gastric cancer.	1h				1h
5) Surgical treatment of hepatobiliary cancer	1h				1h
6) Surgical treatment of ovarian cancer	1h				1h
Total	7.5 h				7.5 h

(4) Teaching methods:

4.1: Power Point presentation.

4.2: Case discussion.

4.3 Online Teaching.

(5) Assessment methods:

5.1: Written exam for assessment of A1-2, B1-3

5.1: MCQ exam for assessment of A1-2, B1-3

Assessment schedule:

Final exam week/month: 15th week.

Percentage of each Assessment to the total mark:

Written exam: 80 marks 80% of total course exam.

MCQ exam 20 marks 20% of total course exam.

(6) References of the course:

Text books:- Hollan-Frei Cancer Medicine,

- DeVita Cancer Principles and Practice of Oncology (DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020)

(7) Facilities and resources mandatory for course completion:

- Lectures Halls.
- Data show.
-Working Network.

Course coordinator:
Prof.Dr. Sameh Shamaa
Prof.Dr. Tawfik Elkhodary
Prof. Dr.Hayam Fathy Ghazy.

Head of the department: Prof. Dr. Ayman Minesy.

Date of Approval: 02/06/2020

COURSE SPECIFICATION

(Internal Medicine)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctor degree of Medical Oncology MONC 610
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Internal Medicine Department
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Internal Medicine
(8) Course code:	MONC 610 MONC 610 HT
(9) Total teaching hours:	Theoretical: 210 hours/20 months Clinical: 240 hours/ 20 months Total: 285 hours/20 months

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1. Prepare the candidate for Systems-based Practice where they must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.
2. Prepare physicians as senior practitioners, educators, researchers, and administrators capable of practicing medical oncology in academic and clinical settings. The curriculum advances students' knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.
3. Construction of appropriate, optimal management strategies (both diagnostic and therapeutic) for patients with malignant diseases.
4. To give our candidate the ability to apply the principles of medicine to identify cancer patient with comorbidities and to manage these comorbidities.
5. Providing opportunities to gain knowledge, clinical experience and ethical attitude in practicing oncology and to demonstrate the capability to reconstruct cases scenario.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A1. Identify concepts of supportive care, including hematologic, oncologic, and infectious disease

A2. Recognize rehabilitation and psychosocial aspects of clinical management of patients with Oncologic disorders.

A3. Identify diagnosis and management of different hematological disorders.

A4. Discuss diagnosis and management of different co-morbid diseases that may be associated with cancer patients.

A5. Identify the basic principles of research, including how such research is conducted, evaluated, explained to patients, and applied to patient care.

B- Intellectual skills

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities

B1. Evaluate and improve methods and tools used in diagnosis & management of diseases associated with cancer patients.

B2. Critically analyze relevant health and social policy, legal, ethical and professional issues relating to autonomous clinical practice.

B3. Assemble clinical symptoms, signs and results of laboratory and radiological investigations for proper diagnosis.

C- Professional/practical skills

C1. Apply professional courses for appropriate use of antibiotic regimens for treatment and prophylaxis in the immunosuppressed patient.

C2. Apply multidisciplinary team work for managing complication.

C3. Apply evidence based medicine from updated reference.

C4. Construct meaningful, supervised research experience with appropriate protected time either in blocks or concurrent with clinical rotations while maintaining the essential clinical experience.

C5. Apply indications, contraindications, limitations, complications, techniques, and interpretation of results of those diagnostic and therapeutic procedures integral to the discipline.

D- Communication & Transferable skills

D1. Develop personal attitudes, and coping skills in care for critically ill patients.

D2. Participate in a multidisciplinary case management conference or discussion.

D3. Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

D4. Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

D5. Coordinate patient care within the health care system relevant to their clinical specialty.

D6. Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate.

D7. Advocate for quality patient care and optimal patient care systems.

D8. Work in inter-professional teams to enhance patient safety and improve patient care quality.

D9. Participate in identifying system errors and implementing potential systems solutions.

D10. Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

D11. Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Candidates are expected to demonstrate:

a. Compassion, integrity, and respect for others;
b. Responsiveness to patient needs that supersedes self-interest;
c. Respect for patient privacy and autonomy;
d. Accountability to patients, society and the profession; and,
e. Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

D12. To educate patients about the rationale, technique, and complications of procedures and in obtaining procedure-specific informed consent.

(3) Course content:

A. Module 1:

Subjects	Lecture	Clinical	Laboratory	Field	Total Teaching
1. CVS: • **Heart failure.** • **Rheumatic fever** • **Hypertension.** • **Pulmonary embolism.** • **Cardiomyopathy.**	18.5h	19.5h			38h
2. Chest: • **Pneumonias.** • **TB** • **Fungal disease of the lung.** • **Respiratory failure.** • **Pleural effusion.**	15h	18h			33h

B. Module 2:

Subjects	Lecture	Clinical	Laboratory	Field	Total Teaching
1. Endocrine: • **Diabetes Mellitus.** • **Hyper-hypofunction of endocrine glands.**	15h	17h			32h
2. Hematology: • **Anemias** • **MDS** • **Coagulation disorders** • **Thrombophilia** • **Platelets disorders**	19h	20.5h			39.5h

C. Module 3:

Subjects	Lecture	Clinical	Laboratory	Field	Total Teaching
1. GIT and the liver: • **Drug induced liver affection.** • **Mal-absorption syndromes.** • **Hepatitis.** • **Cirrhosis** • **Jaundice.** • **Liver cell failure.**	12h	14h			26h
2. Ethics: • **Medical ethics** • **Medical malpractice** • **Ethics in research** • **Research methodology**	4h				4h
3. Kidney: • **Nephrotic syndrome** • **Nephrotoxic drugs** • **Acute renal failure.** • **Chronic renal failure.**	12h	14h			26h
4. Water and electrolyte: • **Acid base balance.** • **Electrolytes balance**	6h	9.5h			15.5h

D. Module 4:

Subjects	Lecture	Clinical	Laboratory	Field	Total Teaching
3. Rheumatology: • **Rheumatoid arthritis** • **S.L.E** • **Collagen disease** • **Polyartritis nodosa**	9.5h	7.5h			17h
4. Fevers: • **PUO** • **Brucellosis** • **Rickietsial disease** • **Spirochetal disease** • **Fever with rash** • **Fever with splenomegaly** • **Fever with jaundice**	10h	16h			26h
3. Metabolic disorders: • **Dyslipidemia.** • **Dysproteinemia** • **Amyloidosis** • **Gout** • **Porphyria** • **Osteoporosis and Osteamalacia**	14h	14h			28h
Total	135h	150h			285h

(4) Teaching methods:

4.1: Power Point presentation.

4.2: Case discussion.

4.3: Focus group.

4.4: Clinical rounds

4.5 Online Teaching.

(5) Assessment methods:

5.1: Written exam for assessment of A1-5, B1-3.

5.2: MCQ exam for assessment of A1-5, B1-3.

5.4: Structured Oral exam for assessment of A1-5, B1-3, C1-5, D1-12.

5.5: OSCE for assessment of A1-5, B1-3, C1-5, D1-12.

Assessment schedule:

Assessment: Final exam at 20th month.

Percentage of each Assessment to the total mark:

Written exam: 80 Marks: 26.7 % of total Medical Oncology marks.

MCQ; 20 marks: 6.7% of total Medical Oncology marks.

OSCE: 100 Marks: 33.3% of total Medical Oncology marks.

Structured Oral exam: 100 Marks: 33.3% of total Medical Oncology marks.

Internal Medicine marks represent 33.3% of total marks of second part.

(6) References of the course:

6.1: Text books: - Harrisons Principles of Internal Medicine.

- Cesil Medicine.
- Davidson's Principles and Practice of Medicine.
- Kumar and Clark Clinical Medicine.

(7) Facilities and resources mandatory for course completion:

-Lectures Halls

-Data show

-Patients wards

- Outpatients clinics.

- Working Network

Course coordinator:

Prof. Sameh Shamaa

Prof. Tawfik Elkhodary

Prof. Hayam Fathy Ghazy.

Head of the department:

Prof. Atta Bakr.

Date of approval: 02/06/2020.

COURSE SPECIFICATION

(Medical Oncology)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctor degree of Medical Oncology MONC 610
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Medical Oncology Unit Internal Medicine Department
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Medical Oncology
(8) Course code:	MONC 610 MO MONC 610 MOTa MONC 610 MOTb MONC 610 MOTb MONC 610 MOTd
(9) Total teaching hours:	Theoretical: 210 hours/20 months Clinical: 240 hours/ 20 months Total: 450 hours/20 months

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1. To foster the development of personal communication skills with much emphasis on leadership & decision making skills as well as informational technology orientation.
2. To prepare the candidate for Systems-based Practice where they must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care
3. To give health care professionals an in-depth knowledge of commonly or rarely encountered oncological disorders.
4. To prepare physicians as senior practitioners, educators, researchers, and administrators capable of practicing medical oncology in academic and clinical settings. The curriculum advances students' knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.
5. Construction of appropriate, optimal management strategies (both diagnostic and therapeutic) for patients with malignant diseases.
6. Provide opportunities to gain knowledge, clinical experience and ethical attitude in practicing oncology and to demonstrate the capability to reconstruct cases scenario.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding:

A1. Discuss and debate current theories and concepts underpinning professional practice in oncology field.

A2. Discuss, explain & recognize the appropriateness of approaches used in the management of cancer patients and explore the implications of these for the patient, their careers, the practitioner and the service.

A3. Identify and critically appraise the principles and assumptions upon which clinical decisions are based and discuss the issues that influence these.

A4. Identify and evaluate the impact of current initiatives for cancer services improvement within Egypt and internationally.

A5. Identify principles of molecular genetics in the field of oncology

A6. Identify the principles of diagnosis, pathology, staging, and management of neoplastic disorders including solid tumors and hemato-oncology.

A7. To recognize chemotherapeutic drugs and protocols, biologic products, and growth factors and their mechanisms of action; pharmacokinetics, clinical indications, and their limitations, including their effects, toxicity, and interactions.

A8. Identify the applications of Gene therapy.

A9. Identify combined modality therapy of cancer.

A10. Identify concepts of supportive care, including hematologic, oncologic, and infectious disease

A11. Recognize rehabilitation and psychosocial aspects of clinical management of patients with Oncologic disorders

A12. Know the palliative care, including hospital and home care.

A13. Review thoroughly care and management of geriatric patients with hematologic and Oncologic malignancies.

A14. Review thoroughly the use of organs transplantations in oncology as well as post-transplant complications.

A15. Outline clinical epidemiology and proper utilization of medical statistics, designing clinical and experimental trials, data collection, and analysis.

A16. Identify the basic principles of research, including how such research is conducted, evaluated, explained to patients, and applied to patient care.

B- Intellectual activities

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities

B1. Analyze, deduce, extrapolate & evaluate laboratory testing results for the initial management of common and unusual oncological disorders.

B2. Critically analyze relevant health and social policy, legal, ethical and professional issues relating to autonomous clinical practice.

B3. Choose relevant research literature and demonstrate a critical understanding of the evidence base underpinning current concepts in the management of cancer patients, exploring the implications of evidence that is ambiguous, contradictory or limited.

B4. Take decision in the diagnosis and appropriate treatment planning.

B5. Explain planned treatment clearly to junior staff

B6. Construct meaningful, supervised research experience with appropriate protected time either in blocks or concurrent with clinical rotations while maintaining the essential clinical experience.

C- Professional/practical skills:

C1. Apply efficiently the use of chemotherapeutic agents and biological products through all therapeutic routes.

C2. Demonstrate competence in the performance and/or (where applicable) interpretation of the serial measurement of tumor masses.

C3. Construct professional courses of combination chemotherapy regimens, targeted therapy, antibiotic regimens for treatment and prophylaxis in the immunosuppressed patient.

C4. Demonstrate methods and tools used in stem cell transplantation

C5. Demonstrate methods and tools used in diagnosis & management of oncological emergencies.

C6. Apply indications, contraindications, limitations, complications, techniques, and interpretation of results of those diagnostic and therapeutic procedures integral to the discipline.

C7. Apply different pain management strategies in patients with Oncologic disorders.

C8. Apply multidisciplinary team work for managing complication

C9. Apply evidence based medicine from updated reference.

D- Communication & Transferable skills

D1. Develop personal attitudes, and coping skills in care for critically ill patients.

D2. Participate in a multidisciplinary case management conference or discussion.

D3. Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

D4. Work effectively in various health care delivery settings and systems relevant to their clinical specialty.

D5. Coordinate patient care within the health care system relevant to their clinical specialty.

D6. Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate.

D7. Advocate for quality patient care and optimal patient care systems.

D8. Work in inter-professional teams to enhance patient safety and improve patient care quality.

D9. Participate in identifying system errors and implementing potential systems solutions.

D10. Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

- To communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;
- To communicate effectively with physicians, other health professionals, and health related agencies;
- To work effectively as a member or leader of a health care team or other professional group;
- To act in a consultative role to other physicians and health professionals; and,
- To maintain comprehensive, timely, and legible medical records, if applicable.

D11. To demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Candidates are expected to demonstrate:

- Compassion, integrity, and respect for others;
- Responsiveness to patient needs that supersedes self-interest;
- Respect for patient privacy and autonomy;
- Accountability to patients, society and the profession; and,

- Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

D12. Educate patients about the rationale, technique, and complications of procedures and in obtaining procedure-specific informed consent.

(3) Course content:

A. Module 1:

Subjects	Lecture	Clinical	Laboratory	Field	Total Teaching
1. Cancer of the Lung: • **Non-Small Cell Lung Cancer** • **Small Cell Lung Cancer** • **Neoplasms of the Mediastinum** • **Mesothelioma**	10h	10h			20h
2. Advanced Molecular Diagnostics In: • **Pathology** • **Clinical Pathology**	4h				4h
□□ Advanced Imaging Methods	2h	6h			8h
4. Organ transplantations • **Hematopoietic Stem Cell Transplantation** • **Liver transplant** • **Other organs**	10h	10h			20h
5. Supportive Care and Quality of Life • **Transfusion Therapy** • **Hematopoietic Growth Factors** • **Infections in the Cancer Patient** • **Management of Cancer Pain** • **Nutritional Support** • **Nausea and Vomiting** • **Oral Complications** • **Pulmonary Toxicity** • **Cardiac Toxicity** • **Gonadal Dysfunction** • **Specialized Care of the Terminally ill**	14.5h	14h			28.5h
6. Paraneoplastic Syndromes	4h	4h			8h
7. Cancer of Unknown Primary Site	4h	8h			12h
8. Cancer of the Head and Neck	4h	8h			12h

B.Module 2:

Subjects	Lecture	Clinical	Laboratory	Field	Total Teaching
1. Pharmacology of Cancer Chemotherapy • **Alkylating Agents, Cisplatin and Its Analogues** • **Antimetabolites, Topoisomerase Interactive Agents** • **Anti-microtubule and Miscellaneous Agents**	8h	10h			18h
□□ Cancer Prevention: Diet and Chemo-preventive Agents	2h				2h
3. Cancer Screening	4h				4h
4. Oncologic Emergencies • **Superior Vena Cava Syndrome** • **Spinal Cord Compression** • **Metabolic Emergencies**	6h	6h			12h
5. Cancers of the Gastrointestinal Tract • **Cancer of the Esophagus** • **Cancer of the Stomach** • **Cancer of the Pancreas** • **Cancer of the Liver** • **Cancer of the Biliary Tree** • **Gastrointestinal Stromal Tumors** • **Cancer of the Colon** • **Cancer of the Rectum and Anal Region**	20h	24h			44h
6. Cancer of the Breast • **Biology, Screening, Diagnosis** • **Early Cancer breast** • **Locally advanced and metastatic Cancer breast**	8h	14h			22h
7. Sarcomas of the Soft Tissues and Bone • **Soft Tissue Sarcoma** • **Sarcomas of Bone**	4.5h	6h			10.5h

C. Module 3:

Subjects	Lecture	Clinical	Laboratory	Field	Total Teaching
1. Cancer of the Endocrine System: • **Thyroid Tumors** • **Pancreatic Endocrine Tumors** • **Carcinoid Tumors and the Carcinoid Syndrome**	6h	6h			12h
2. Cancer of the Skin • **Melanoma**	4h	6h			10h
3. Neoplasms of the Central Nervous System	4h	4h			8h
4. Lymphomas • **Non-Hodgkin's Lymphomas** • **Pathology, Natural history, and Prognosis** • **Therapy for indolent lymphoma** • **Therapy for aggressive Lymphoma** • **Special Types** • **Hodgkin's Lymphoma**	20h	18h			38h
5. Acute Leukemias • **Acute Leukemia; Diagnosis** • **AML management** • **ALL management**	8h	12h			20h
6. Myeloproliferative Disorders	3h	4h			7h
7. Myelodysplastic Syndromes	3h	4h			7h
8. Plasma Cell Neoplasms	4.5h	6h			10.5h

D. Module 4:

Subjects	Lecture	Clinical	Laboratory	Field	Total Teaching
1. Pharmacology of Cancer Bio-therapeutics • **Interferons, Interleukin-2** • **New Targeted Anticancer Drugs** • **Monoclonal Antibodies** • **Pharmacology of Endocrine Manipulation**	8h	12h			20h
2. Cancers of the Genitourinary System • **Cancer of the Kidney** • **Cancer of the Bladder, Ureter, and Renal Pelvis** • **Cancer of the Prostate** • **Cancer of the Testis**	16h	18h			34h
3. Gynecologic Cancers • **Cancer of the Cervix, Vagina, and Vulva** • **Cancers of the Uterine Body** • **Gestational Trophoblastic Diseases** • **Ovarian Cancer, Peritoneal Carcinoma, and Fallopian Tube Carcinoma**	16h	18h			34h
4. Nutritional support	4h	6h			10h
5. Hospice and palliative care	2.5h	6h			8.5h
6. Ethics • **Medical ethics** • **Medical malpractice** 7. Principles of clinical in research 8. Research methodology	6h				6h
Total;	210h	240h			450h

(4) Teaching methods:

4.1: Power Point presentation.

4.2: Case discussion.

4.3: Focus group.

4.4: Clinical rounds.

4.4 Online Teaching.

(5) Assessment methods:

5.1: Written exam for assessment of A1-16, B1-6,

5.2: MCQ exam for assessment of A1-16, B1-6,

5.3: Commentary exam for assessment of A1-16, B1-6, C6

5.4: Structured Oral exam for assessment of A1-16, B1-6, C1-9, D1-12.

5.5: OSCE for assessment of A1-16, B1-6, C1-9, D1-12.

Assessment schedule:

Assessment: Final exam at 20th month.

Percentage of each Assessment to the total mark:

Written exam: 180 Marks: 36 % of total Medical Oncology marks.

Commentary; 60 marks: 12% of total Medical Oncology marks.

MCQ; 60 marks: 12% of total Medical Oncology marks.

OSCE: 100 Marks: 20% of total Medical Oncology marks.

Structured Oral exam: 100 Marks: 20% of total Medical Oncology marks.

Medical Oncology marks represent 55.6% of total marks of second part.

(6) References of the course:

6.1: Hand books: BETHESDA Hand book of Clinical Hematology, Hand book of Cancer Chemotherapy.(author(s): Griffin P. Rodgers , Neal S. Young ISBN/ISS 9781496354006 Publication Date:May 1, 2018)

6.2: Text books: Essential Hematology (eBook, English, 2020 Edition :Eighth edition Publisher:Wiley-Blackwell, Hoboken, NJ, 2020),

6.3 Manual of Clinical Hematology, 2019

6.4 Post Graduate Hematology,2019

6.5 Hoffbrand's Essential Haematology, 8th Editio A. Victor Hoffbrand, David P. Steensma Oct 2019

6.6 Williams Hematology (Williams Hematology, 9E 9th Edition by Kenneth Kaushansky (Author), Marshall Lichtman (Author), Josef Prchal (Author), Marcel Levi (Author), Oliver Press (Author), Linda Burns (Author), Michael Caligiuri (Author), 2020

6.7 Wintrobes Clinical Hematology (Wintrobe's Clinical Hematology 14th Edition 2020 by John P. Greer MD (Author), Daniel A. Arber MD (Author), Bertil E. Glader MD PhD (Author), Alan F. List M.D. (Author), Robert T. Means Jr. MD (Author), George M. Rodgers MD PhD (Author), 2020

6.8 Hollan-Frei Cancer Medicine (Holland-Frei Cancer Medicine, 9th Edition), 2020

6.9 DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020 by Vincent T. DeVita Jr. MD (Author), Steven A. Rosenberg MD PhD (Author), Theodore S. Lawrence MD PhD (Author) 2020)

6.10: Journals: American Society of Hematology (ASH) 2020,

6.11 European Hematology Association (EHA) 2020.

(7) Facilities and resources mandatory for course completion:

- Lectures Halls.
- Data show.
- Outpatient clinics.
- Patients wards.
-Working Network.

Course coordinator:

Prof. Dr. Sameh Shamaa

Prof. Dr. Tawfik Elkhodary

Prof. Dr. Hayam Fathy Ghazy.

Head of the department:

Prof. Dr. Ayman Minesy..

Date of approval: 02/06/2020.

COURSE SPECIFICATION

(Stem cell transplants)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Medical Oncology Unit
(4) Part of the programme:	2nd part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Stem cell transplants
(8) Course code:	MONC 610 SCT
(9) Total teaching hours:	30 hours/15 Weeks

(B) Professional information

1) Course Aim:

The broad aim of the course are as follows:

To provide the candidate with basics and principles of stem cell transplantation with special emphasis on preparation the patient for the procedure and management of the complications.

2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A1. Identify the types of stem cell transplantation, complications of the transplant and supportive care.
A2. Identify steps of immune reconstitution.
A3. Define GVHD (acute and chronic), and its management.
A4. Explain indications of stem cell transplantation.

B- Intellectual skills

B1. Differentiate between different types of complications of stem cell transplantation.
B2. Compare between different stages of infection post-transplant & between acute and chronic GVHD.
B3. Differentiate between indications of allogenic and auto SCT.

3) Course content:

Subjects	Lectures	Clinical	Laboratory	Seminars	Total Teaching Hours
1) Biological properties of hematopoietic stem cells	4h				4h
2) Immunogenetics of allogeneic HSCT	2h				2h
3) Choice of the donor according to HLA typing and stem cell source	2h				2h
4) Principles of conditioning	2h				2h
5) Transfusion support in patients undergoing HSCT	2h				2h
6) Supportive care	2h				2h
7) Early complications after HSCT	2h				2h
8) Infections after HSCT	3h				3h
9) Graft-versus-host disease	2h				2h
10) Immune reconstitution after allogeneic HSCT	3h				3h
11) Late effects in patients treated with HSCT	4h				4h
12) Indications for and current practice of allogeneic and autologous HSCT	2h				2h

4) Teaching methods:

4.1 Power point presentation.

4.2 Online Teaching.

5) Assessment methods:

5.1: Written exam for assessment of A1-4 , B1-3 ,

5.2: MCQ exam for assessment of A1-4 , B1-3

Percentage of each Assessment to the total mark:

Written exam:	80 marks	80% of total exam.
MCQ exam	20 marks	20% of total exam.

6) References of the course:

6.1 Hand books:

The 2012 revised edition of the EBMT-ESH Handbook on Haematopoietic Stem Cell Transplantation (J. Apperley, E. Carreras, E. Gluckman, T. Masszi)

6.2 DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020

6.3 Williams Hematology (Williams Hematology, 9E 9th Edition by Kenneth Kaushansky (Author), Marshall Lichtman (Author), Josef Prchal (Author), Marcel Levi (Author), Oliver Press (Author), Linda Burns (Author), Michael Caligiuri (Author), 2020

6.4 Hoffbrand's Essential Haematology, 8th Editio A. Victor Hoffbrand, David P. Steensma Oct 2019

7) Facilities and resources mandatory for course completion:

- Lectures Halls.
- Data show.
- Working Network.

Course coordinator:

Prof. Dr. Sameh Shamaa

Prof. Dr. Tawfik Elkhodary

Prof. Dr.Hayam Fathy Ghazy.

Head of the department:

Prof. Dr. Ayman Minesy

Date of approval: 02/06/2020

COURSE SPECIFICATION

(Palliative Medicine)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Medical Oncology Unit
(4) Part of the programme:	2nd part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Palliative Medicine
(8) Course code:	MONC 610 PM
(9) Total teaching hours:	30 hours/15 Weeks

(B) Professional information

1) Course Aim:

The broad aim of the course are as follows:

To provide the candidate with principles of palliative care to improve the quality of life of cancer patients by preventing or treating the symptoms and side effects of the disease and its treatment, in addition to the related psychological, social, and spiritual problems

2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A1. Explain management of disease-related complications
A2. Review tools to controls symptoms in cancer patients
A3. Know How to offer psychosocial and spiritual care
A4. Identify proper nutritional support for cancer patients

B- Intellectual skills

B1. Decision making in proper supportive care for cancer patients
B2. Critically evaluate of the scientific literature with focus on how to help patients to live as actively as possible until death.

3) Course content:

Subjects	Lectures	Clinical	Laboratory	Seminars	Total Teaching Hours
1) Management of oncological emergencies	4h				4h
2) Management of cancer pain	2h				2h
3) Antiemetics	2h				2h
4) Cancer and chemotherapy induced anemia	2h				2h
5) Cancer associated venous thromboembolic events	2h				2h
6) Dyspnea , Dysphagia and Distress management	2h				2h
7) Use of Growth factors	2h				2h
8) Prevention and treatment of cancer related infections	3h				3h
9) Transfusion support for cancer patients	2h				2h
10) Nutritional support for cancer patients	3h				3h
11) Management of chemotherapy and target therapy complication	4h				4h
12) Psychological support to patients and their families	2h				2h

4) Teaching methods:

4.1 Power point presentation

4.2 Online Teaching.

5) Assessment methods:

5.1: Written exam for assessment of A1-4 , B1-2

5.2: MCQ exam for assessment of A1-4 , B1-2

Percentage of each Assessment to the total mark:

Written exam:	80 marks	80% of total exam.
MCQ exam	20 marks	20% of total exam.

6) References of the course:

6.1 Hand books: - Handbook of Palliative Care in Cancer, 2e 2nd Edition (Alexander waller)

6.2 Text books :- Manual of Clinical Oncology seventh edition(Dennis A.Casciato)

- Abeloff's Clinical Oncology, 5th Edition (Johj E. Niederhuber)
- NCCN GUIDELINES FOR SUPPORTIVE CARE

6.3 DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020

7) Facilities and resources mandatory for course completion:

-Lectures Halls.

-Data show.

- Working Network.

Course coordinator:

Prof. Dr Sameh Shamaa

Prof. Dr Tawfik Elkhodary

Prof. Dr Hayam Fathy Ghazy.

Head of the department:

Prof. Dr. Ayman Minesy..

Date of approval: 02/06/2020.

COURSE SPECIFICATION

(Medical Statistics)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Medical Oncology Unit
(4) Part of the programme:	2nd part
(5) Date of approval by the Department`s council	02/062020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Medical Statistics
(8) Course code:	MONC 610 MS
(9) Total teaching hours:	30 hours/15 Weeks

(B) Professional information

1) Course Aim:

The broad aim of the course are as follows:

1. To cover the advanced statistical methods in field of Medical Oncology.
2. To enable students to turn a problem described in medical or biological terms into something that can be tackled by a statistical analysis.

2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A1. Review Biostatistics applied to cancer research.
A2. List types of clinical trials.

B- Intellectual skills

B1. Calculate different statistical tests.
A3. Choose valid and reliable statistical tools to critically evaluate the effectiveness and efficiency of approaches to disease and patient management within oncology.
A4. Compare between descriptive and inferential Statistics.
A5. Formulate a design to a clinical trial or research proposal.

3) Course content:

Subjects	Lectures	Clinical	Laboratory	Seminars	Total Teaching Hours
1) Biostatistics applied to cancer research	4h				4h
2) Clinical trials	4h				4h
3) Frequentist approach	2h				2h
4) Bayesian approach	2h				2h
5) Adaptive designs of clinical trials	2h				2h
6) Bioinformatics	2h				2h
7) Descriptive Statistics	4h				4h
8) Inferential Statistics	4h				4h
9) Hypothesis Testing	2h				2h
10) Correlational and Predictive Techniques	4h				4h

4) Teaching methods:

4.1 Power point presentation

4.2 Online Teaching.

5) Assessment methods:

5.1: Written exam for assessment of A1-2 , B1-5

5.2: MCQ exam for assessment of A1-2 , B1-5

Percentage of each Assessment to the total mark:

Written exam: 80 marks 80% of total exam.

MCQ exam 20 marks 20% of total exam.

6) References of the course:

6.2 **Text books** :- Manual of Clinical Oncology seventh edition(Dennis A.Casciato)

- Abeloff's Clinical Oncology, 5th Edition (Johj E. Niederhuber)
- High-Yield Biostatistics, Epidemiology & Public Health, 4th edition

7) Facilities and resources mandatory for course completion:

-Lectures Halls.

-Data show.

-Working Network.

Course coordinator:

Prof. Sameh Shamaa

Prof. Tawfik Elkhodary

Prof. Hayam Fathy Ghazy

Head of the department:

Prof.Atta Bakr.

Date of approval: 02/06/2020.

COURSE SPECIFICATION

(Geriatric Oncology)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Medical oncology department
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	**20/09/2020**
(7) Course title:	Geriatric oncology
(8) Course code:	**MONC 610 GO**
(9) Total teaching hours:	30 hours/15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

To give the graduate the ability to treat elderly cancer patients based on the data obtained during the course and to have the ability to self-update his medical knowledge.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding:

A1. Describe the basic theories and principles update regarding cancer diagnosis, management; follow up, screening and prevention in elderly.

A2. Recognize the ethical and legal principles of cancer practice in elderly.

A3. Recognize the principles of quality assurance in chemotherapy practice in elderly.

A4. Express the various tools, methods and ethics of cancer research

B-Intellectual skills:

B1. Categorize and compose a pathology report.

B2. Correlate the pathological finding with clinical, laboratory and x-rays findings to reach the most accurate diagnosis and effective management of the disease.

B3. Choose the most appropriate and cost effective further pathologic diagnostic procedures if necessary.

B4. Determine the diagnostic investigations properly for each elderly cancer patient, describe the logic cost benefit solutions

B5. Frame a question, search the literature, collect, analyze, critically appraise and utilize the obtained information to solve a particular clinical problem according to the principles of evidence-based medicine.

B6. Construct a referring medical report about clinical case, reflecting its diagnosis and management plane, and respecting medico legal aspects

(3) Course contents:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
(1) Defining the elderly	2h				1h
(2) Cancer and aging	2h				1h
(3) Comprehensive geriatric assessment	2h				2h
(4) Frailty in the Elderly	2h				2h
(5) Hormonal Anticancer Treatment in the Senior Cancer Patient	2h				2h
(6) Cytotoxic and Targeted Anticancer Treatment in the Senior Cancer Patient	2h				2h
(7) Treatment of Lymphoma in the Elderly Population	5h				5h
(8) Breast Cancer in the Senior Patient	5h				5h
(9) Lung Cancer in the Elderly	4h				4h
(10) Prostate Cancer in the elderly	4h				4h

(4) Teaching methods:

1. Modified lectures: which start by listing the objectives and are given in either; white board, electronic, slide projector or overhead projector presentation.
2. Small group discussions and case studies to provide clinical correlation and integration.
3. Self-directed learning.
4. Problem Solving.
5.Online Teaching.

(5) Assessment methods:

5.1: Written exam for assessment of A1-4, B1-6

5.2: MCQ exam for assessment of A1-4, B1-6

Assessment schedule:

Assessment ……. Final (Written) Week 15th

Percentage of each Assessment to the total mark:

Written exam:	80 marks	80% of total exam.
MCQ exam	20 marks	20% of total exam.

(5) References of the course:

1-ESMO handbook of cancer in the senior patient

2=DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020

3- Hoffbrand's Essential Haematology, 8th Editio A. Victor Hoffbrand, David P. Steensma Oct 2019

(6) Facilities and resources mandatory for course completion:

1. Lecture halls.
2. Data show.
3. Working Network.

Course coordinator:

Prof. Dr. Sameh Shamaa.

Prof. Dr.Tawfik Elkhodary

Prof. Dr.Hayam Fathy Ghazy.

Head of the department:

Prof. Dr. Ayman Minesy

Date of approval: 02/06/2020.

COURSE SPECIFICATION

(Molecular Biology of Cancer)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Medical Oncology Unit
(4) Part of the programme:	2nd part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	20/09/2020
(7) Course title:	Molecular Biology of Cancer
(8) Course code:	MONC 610 MB
(9) Total teaching hours:	30 hours/15 Weeks

(B) Professional information

1) Course Aim:

The broad aim of the course are as follows:

1. To familiarize the students with basic principles of Molecular biology and protein synthesis.
2. To enable the student to describe the biological membrane, the role of free nucleotides in signal transduction control, and macromolecules involved in transmission of information from gene expression to the formation of functioning proteins.

2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A1. Define the significance of human genome project and the principles of gene therapy.

A2. Describe cell cycle and its regulation, and point out how its dysregulation results in either apoptosis or carcinogenesis.

A3. Identify the causes and possible mechanisms of carcinogenesis, and how to screen, diagnose, and follow-up cancer by detection of tumor markers.

B- Intellectual skills

B1. Analyze result of molecular tests.

B2. Compare between normal and cancer stem cells.

3) Course content:

Subjects	Lectures	Clinical	Laboratory	Seminars	Total Teaching Hours
1) Molecular Tools in Cancer Research	4h				4h
2) Intracellular Signaling	4h				4h
3) The Cellular Microenvironment and Metastases	4h				4h
4) Control of the Cell Cycle	4h				4h
5) Pathophysiology of Cancer Cell Death	4h				4h
6) Cancer Immunology	4h				4h
7) Stem Cells, Cell Differentiation, and Cancer	2h				2h
8) Vascular and Interstitial Biology of Tumors	4h				4h

4) Teaching methods:

4.1 Power point presentation

4.2 Online Teaching.

5) Assessment methods:

5.1: Written exam for assessment of A1-3 , B1-2

5.2: MCQ exam for assessment of A1-3 , B1-2

Percentage of each Assessment to the total mark:

Written exam: 80 marks 80% of total exam.

MCQ exam 20 marks 20% of total exam.

6) References of the course:

6.1 **Text books:** – Manual of Clinical Oncology seventh edition (Dennis A.Casciato)

– Abeloff's Clinical Oncology, 5th Edition (Johj E. Niederhuber)

6,2 DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020

7) Facilities and resources mandatory for course completion:

-Lectures Halls.

-Data show.

-Working Network.

Course coordinator:

Prof. Sameh Shamaa.

Prof. Tawfik Elkhodary.

Prof.Hayam Fathy Ghazy.

Head of the department:

Prof. Dr. Ayman Minesy.

Date of approval: 02/06/2020.

COURSE SPECIFICATION

(Cancer Genetics)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Doctorate degree of Medical Oncology
(2) Department offering the programme:	Internal Medicine Department
(3) Department responsible for teaching the course:	Medical Oncology Unit
(4) Part of the programme:	2nd part
(5) Date of approval by the Department`s council	02/06/2020
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Cancer Genetics
(8) Course code:	MONC 610 CG
(9) Total teaching hours:	30 hours/15 Weeks

(B) Professional information

1) Course Aim:

The broad aim of the course are as follows:

To help the student to be a qualified oncologist who has the ability to learn the basics of cancer etiology based on Genetics.

2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding

A1. Discuss Etiology of cancer & Mechanism of genome destabilization in human tumors.
A2. List all the cancer susceptibility syndromes

B- Intellectual skills

B1. Relate basics of genetics with cancer types.
B2. Asses the possibility of genetic targeting therapy based on genetic testing
B3. Design a screening & treatment plan based on genetic testing
B4. Evaluate the value of different genetic testing.

3) Course content:

Subjects	Lectures	Clinical	Laboratory	Seminars	Total Teaching Hours
1) DNA Damage Response Pathways and Cancer	4h				4h
2) Hereditary Cancer Predisposition Syndromes	8h				8h
3) Genetic and Epigenetic Alterations in Cancer	6h				6h
4) Genetic testing	4h				4h
5) Serum proteomics	4h				4h
6) Telomeres and telomerases	4h				4h

4) Teaching methods:

4.1 Power point presentation

4.2 Online Teaching

5) Assessment methods:

5.1: Written exam for assessment of A1-2 , B1-4,

5.2: MCQ exam for assessment of A1-2 , B1-4,

Percentage of each Assessment to the total mark:

Written exam: 80 marks 80% of total exam.

MCQ exam 20 marks 20% of total exam.

6) References of the course:

Text books: - Abeloff's Clinical Oncology, 5th Edition (Johj E. Niederhuber)

6.1 :Hand books: BETHESDA Hand book of Clinical Hematology, Hand book of Cancer Chemotherapy.(author(s): Griffin P. Rodgers , Neal S. Young

ISBN/ISS 9781496354006 Publication Date:May 1, 2018(

6.2 :Text books: Essential Hematology (eBook, English, 2020

Edition :Eighth edition Publisher:Wiley-Blackwell, Hoboken, NJ, 2020,(

6.3 Manual of Clinical Hematology, 2019

6.4 Post Graduate Hematology,2019

6.5 Hoffbrand's Essential Haematology, 8th Editio A. Victor Hoffbrand, David P. Steensma Oct 2019

6.6 Williams Hematology (Williams Hematology, 9E 9th Edition

by Kenneth Kaushansky (Author), Marshall Lichtman (Author), Josef Prchal (Author), Marcel Levi (Author), Oliver Press (Author), Linda Burns (Author), Michael Caligiuri (Author), 2020

6.7 Wintrobes Clinical Hematology (Wintrobe's Clinical Hematology 14th Edition 2020

by John P. Greer MD (Author), Daniel A. Arber MD (Author), Bertil E. Glader MD PhD (Author), Alan F. List M.D. (Author), Robert T. Means Jr. MD (Author), George M. Rodgers MD PhD (Author), 2020

6.8 Hollan-Frei Cancer Medicine (Holland-Frei Cancer Medicine, 9th Edition), 2020

6.9 DeVita Cancer Principles and Practice of Oncology (DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology (Cancer Principles and Practice of Oncology) 11th Edition 2020

by Vincent T. DeVita Jr. MD (Author), Steven A. Rosenberg MD PhD (Author), Theodore S. Lawrence MD PhD (Author) 2020(

6.10 :Journals: American Society of Hematology (ASH) 2020 ,

6.11 European Hematology Association (EHA) 2020.

7) Facilities and resources mandatory for course completion:

-Lectures Halls.

-Data show.

- Working Network.

Course coordinator:

Prof. Sameh Shamaa.

Prof. Tawfik Elkhodary.

Prof. Hayam Fathy Ghazy.

Head of the department:

Prof. Atta Bakr.

Date of approval: 02/06/2020.