PROGRAMME SPECIFICATION

Faculty of Medicine– Mansoura University

Medical Oncology Doctorate Degree

(A) Administrative information

(1) Programme Title & Code	Postgraduate Doctorate degree of Medical Oncology/MONC 610
(2) Final award/degree	MD.
(3) Department (s)	Internal Medicine Department
(4) Coordinator(s)	Prof. Dr. Sameh Shamaa Prof. Dr. Tawfik Elkhodary
(5) External evaluator (s)	Prof. Dr. Ola Mohamed Reda Khorshed Professor of Medical Oncology, National Cancer Institute Cairo University
(6) Date of approval by the Department`s council	2/08/2016
(7) Date of last approval of programme specification by Faculty council	9/8/2016

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are to:

1. Provide the medical oncologist with advanced personal communication skills, decision making skills as well as expanded informational technology orientation.
2. Prepare the medical oncologist 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. Give the medical oncologist an in-depth knowledge of commonly or rarely encountered oncological disorders.
4. Prepare the medical oncologist as consultant oncologist, medical oncology educator, researcher and administrator capable of practicing medical oncology in academic and clinical settings.
5. Provide candidate with in-depth knowledge of the principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.
6. Teach candidate how to conduct appropriate and optimal management strategies (both diagnostic and therapeutic) for patients with malignant diseases.
7. Gain expanded knowledge, clinical experience and ethical attitude in practicing oncology and to demonstrate the capability to reconstruct cases scenario.
8. Provide the candidate with recent and comprehensive molecular and genetic principles, their possible application in Medical Oncology field and to relate the mechanistic science to new drug discovery.
9. Provide the candidate with established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care in the field on oncology.

(2) Intended Learning Outcomes (ILOs):

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

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

A- Knowledge and Understanding:

A1. Identify the scientific method of problem solving and evidence-based decision making.

A2. Define indications, contraindications, limitations, complications, techniques, and interpretation of results of those diagnostic and therapeutic procedures integral to the discipline, including the appropriate indications for and use of screening tests/procedures.

A3. Discuss pathogenesis, diagnosis, and treatment of cancers, including:

   a. Basic molecular and pathophysiologic mechanisms, diagnosis, and therapy of diseases of the blood, including anemias, diseases of white blood cells and stem cells, and disorders of hemostasis and thrombosis; and

   b. Etiology, epidemiology, natural history, diagnosis, pathology, staging, and management of neoplastic diseases of the blood, blood-forming organs, lymphatic tissues, different organs in the body.

A4. Explain genetics and developmental biology, including molecular genetics; prenatal diagnosis; the nature of oncogenes and their products and cytogenetics.

A5. Describe physiology and pathophysiology of cancers, including; cell and molecular biology; hematopoiesis; principles of oncogenesis; tumor immunology; molecular mechanisms of hematopoietic and lymphopoietic malignancies; basic and clinical pharmacology, pharmacokinetics, and toxicity; and pathophysiology and patterns of tumor metastases.

A6. Discuss clinical epidemiology and biostatistics in oncology, including clinical study and experimental protocol design, data collection, and analysis.

A7. Identify principles of laboratory and clinical testing, quality control, quality assurance, and proficiency standards.

A8. Describe immune markers, immunophenotyping, flow cytometry, cytochemical studies, and cytogenetic and DNA analysis of neoplastic disorders;

A9. Recognize malignant and hematologic complications of organ transplantation

A10. Review transfusion medicine, including the evaluation of antibodies, blood compatibility, and the indications for and complications of blood component therapy and apheresis procedures;

A11. Summarize acquired and congenital disorders of red cells, white cells, platelets and stem cells;

A12. Classify hematopoietic and lymphopoietic malignancies, including disorders of plasma cells;

A13. Describe principles of multidisciplinary management of organ-specific cancers;

A14. Describe the mechanisms of action, pharmacokinetics, clinical indications, and limitations of chemotherapeutic drugs, biologic products, and growth factors, including their effects, toxicity, and interactions.

A15. Discuss principles of, indications for, and limitations of surgery in the treatment of cancer

A16. Discuss principles of, indications for, and limitations of radiation therapy in the treatment of cancer

A17. Discuss principles of, indications for, and complications of autologous and allogeneic bone marrow or peripheral blood stem cell transplantation and peripheral stem cell harvests.

A18. Identify indications and application of imaging techniques in patients with oncologic disorders.

A19. Identify concepts of supportive care, including hematologic, oncologic, and infectious disease.

A20. Recognize pain management in patients with oncologic disorders.

A21. Recognize rehabilitation and psychosocial aspects of clinical management of patients with Oncologic disorders.

A22. Discuss the palliative care, including hospital and home care.

A23. Discuss thoroughly care and management of geriatric patients with hematologic and Oncologic disorders.

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. Take decision in the diagnosis and appropriate treatment planning.
B3. Construct meaningful, supervised research experience with appropriate protected time either in blocks or concurrent with clinical rotations while maintaining the essential clinical experience.
B4. Critically analyze relevant health and social policy, legal, ethical and professional issues relating to autonomous clinical practice.
B5. Evaluate the impact of current initiatives for cancer services improvement within Egypt and internationally.
B6. Judge 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.
B7. Evaluate and improve methods and tools used in stem cell transplantation.
B8. Evaluate and improve methods and tools used in diagnosis & management of oncological emergencies.

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.
C4. Construct professional courses for appropriate use of antibiotic regimens for treatment and prophylaxis in the immunosuppressed patient.
C5. Construct professional courses for combined modality treatment appropriately
C6. Construct professional courses for use targeted therapy

C7. Apply indications, contraindications, limitations, complications, techniques, and interpretation of results of those diagnostic and therapeutic procedures integral to the discipline.

C8. Educate planned treatment clearly to junior staff.

C9. Apply multidisciplinary team work for managing complication

C10. Apply evidence based medicine from updated reference.

C11. Apply the basic principles of research, including how such research is conducted, evaluated, explained to patients, and applied to patient care.

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

D11. Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

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

D12. 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.

(3) Academic standards:

Academic standards for the programme are attached in Appendix I. in which **NARS** issued by the National Authority for Quality Assurance & Accreditation in Education are used. External reference points/Benchmarks are attached in Appendix II.

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

Accreditation Council for Graduate Medical Education (ACGME)

www.acgme.org

http://www.acgme.org/Specialties/Program-Requirements-and-FAQs-and-Applications/pfcatid/2/Internal%20Medicine

http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/155_hematology_oncology_int_med_2016.pdf

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

1- All programme aims and contents of the Benchmark are formulated according to the current programme without mentioning the six competencies.

2- The current programme is differ from that described in the ACGME in the context of resources and evaluation methods.

A- Knowledge and Understanding:

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark Accreditation Council for Graduate Medical Education	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراه في طب الأورام)
- **Pathology of tumors (MONC 605)** - **Clinical Pharmacology (MONC 606)** - **Radiodiagnosis (MONC 629)** - **Basics of Biology (MONC 630)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Stem cell transplants (MONC 610 SCT)** - **Palliative Medicine (MONC 610 PM)** - **Medical Statistics (MONC 610 MS)** - **Geriatric oncology (MONC 610 (GO)** - **Molecular Biology of Cancer (MONC 610 MB)** - **Cancer Genetics (MONC 610 CG)**	A1-23	IV.A.5.b)1-12	1. The theories, concepts and modern knowledge in the field of specialization and other related field.
- **Basics of Medical statistics & epidemiology (MONC 618)** - **Medical oncology (MONC 610 MO)** - **Medical Statistics (MONC 610 MS).**	A6	IV.A.5.b).(6)	2. The basics, methodologies, ethics of scientific research and its versatile tools.
- **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	D12	IV.A.5.e)	3. The moral and legal ethics of the professional practice in the area of specialization.
- **Pathology of tumors (MONC 605)** - **Clinical Pharmacology (MONC 606)** - **Radiodiagnosis (MONC 629)** - **Basics of Biology (MONC 630)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Stem cell transplants (MONC 610 SCT)** - **Palliative Medicine (MONC 610 PM)** - **Medical Statistics (MONC 610 MS)** - **Geriatric oncology (MONC 610 (GO)** - **Molecular Biology of Cancer (MONC 610 MB)** - **Cancer Genetics (MONC 610 CG)**	A1-23	IV.A.5.b).(7).(a)	4. The concepts and principles of quality of the professional practice in the area of specialization.
- **Radiodiagnosis (MONC 629)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Palliative Medicine (MONC 610 PM)** - **Geriatric oncology (MONC 610 (GO)**	A13	IV.A.5.b).(6)	5. The knowledge on the effects of professional practice on the environment and ways of development and maintenance of the environment.

Benchmarks is:

B- Intellectual activities;

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark Accreditation Council for Graduate Medical Education	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراه في طب الأورام)
- **Pathology of tumors (MONC 605)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Medical Statistics (MONC 610 MS)**	B1, 4	IV.A.5.c).(4)	1) Analyze and evaluate of information in the field of specialization and make full use of such information to solve problems
- **Pathology of tumors (MONC 605)** - **Radiodiagnosis (MONC 629)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Stem cell transplants (MONC 610 SCT)** - **Palliative Medicine (MONC 610 PM)** - **Geriatric oncology (MONC 610 (GO)**	B2, 7, 8	IV.A.5.b).(1)	2) Solve specific problems on the basis of limited and contradictory information
- **Pathology of tumors (MONC 605)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of surgical oncology (MONC 620)** - **Medical oncology (MONC 610 MO)** - **Medical Statistics (MONC 610 MS)** - **Molecular Biology of Cancer (MONC 610 MB)** - **Cancer Genetics (MONC 610 CG)**	B3, 6	IV.B.2.a).(2)	3) Carry out a research studies to add new information to the knowledge
- **Basics of Medical statistics & epidemiology (MONC 618)** - **Medical oncology (MONC 610 MO)** - **Medical Statistics (MONC 610 MS)**	B3	IV.B.2.a)	4) Write scientific papers
- **Pathology of tumors (MONC 605)** - **Radiodiagnosis (MONC 629)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Medical Statistics (MONC 610 MS)** - **Geriatric oncology (MONC 610 (GO)**	B2, 5	IV.A.5.b).(12)	5) Assess and analyze risks in the field of specialization
- **Basics of Medical statistics &**	B7, 8	IV.A.5.c)	6) Plan to improve

epidemiology (MONC 618) - **Medical oncology (MONC 610 MO)** - **Stem cell transplants (MONC 610 SCT)** - **Palliative Medicine (MONC 610 PM)** - **Geriatric oncology (MONC 610 (GO)**			performance in the field of specialization
- **Pathology of tumors (MONC 605)** - **Radiodiagnosis (MONC 629)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Geriatric oncology (MONC 610 (GO)**	B2	IV.A.3.b)	7) Make good decisions in different professional aspects
- **Pathology of tumors (MONC 605)** - **Radiodiagnosis (MONC 629)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Stem cell transplants (MONC 610 SCT)** - **Palliative Medicine (MONC 610 PM)** - **Medical Statistics (MONC 610 MS)** - **Geriatric oncology (MONC 610 (GO)** - **Molecular Biology of Cancer (MONC 610 MB)** - **Cancer Genetics (MONC 610 CG)**	B1-8	IV.A.5.c).(1)	8) Have innovation/creativity
- **Pathology of tumors (MONC 605)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of surgical oncology (MONC 620)** - **Medical oncology (MONC 610 MO)** - **Medical Statistics (MONC 610 MS)** - **Molecular Biology of Cancer (MONC 610 MB)** - **Cancer Genetics (MONC 610 CG)**	B6	IV.A.3.b) IV.A.5.c)	9) Discuss and negotiate in high level of confidence based upon proofs and evidences

Benchmarks is:
Accreditation Council for Graduate Medical Education (ACGME)
http://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/155_hematology_oncology_int_med_2016.pdf

C- Professional/practical skills;

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- **Pathology of tumors (MONC 605)** - **Clinical Pharmacology (MONC 606)** - **Radiodiagnosis (MONC 629)** - **Basics of Biology (MONC 630)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Stem cell transplants (MONC 610 SCT)** - **Palliative Medicine (MONC 610 PM)** - **Medical Statistics (MONC 610 MS)** - **Geriatric oncology (MONC 610 (GO)** - **Molecular Biology of Cancer (MONC 610 MB)** - **Cancer Genetics (MONC 610 CG)**	C1-11	IV.A.5.a).(1) IV.A.5.a).(2) IV.A.5.c).(1-9)	1) Apply modern and principle professional skills in the area of specialization
- **Clinical Pharmacology (MONC 606)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Medical oncology (MONC 610 MO)** - **Stem cell transplants (MONC 610 SCT)**	C3-5	IV.B.2.a).(1)	2) Write and evaluate technical reports
- **Pathology of tumors (MONC 605)** - **Radiodiagnosis (MONC 629)** - **Basics of Biology (MONC 630)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Medical oncology (MONC 610 MO)** - **Geriatric oncology (MONC 610 (GO)** - **Molecular Biology of Cancer (MONC 610 MB)** - **Cancer Genetics (MONC 610 CG)**	C2, 7	IV.A.5.a).(2).(j, k, l)	3) Adopt assessment methods and tools existing in the area of specialization.
- **Pathology of tumors (MONC 605)** - **Clinical Pharmacology (MONC 606)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	C10	IV.A.5.c).(7)	4) Use of the appropriate technological means to serve the professional practice.
- **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	C8	IV.A.5.c).(2) IV.A.5.c).(4)	5) Plan to improve the performance of the professional practice and development of the performance of others

Benchmarks is:
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D- Communication & Transferable skills;

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- **Pathology of tumors (MONC 605)** - **Radiodiagnosis (MONC 629)** - **Basics of Biology (MONC 630)** - **Basics of Medical statistics & epidemiology (MONC 618)** - **Basics of radiotherapy (MONC 617)** - **Basics of surgical oncology (MONC 620)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)** - **Palliative Medicine (MONC 610 PM)** - **Medical Statistics (MONC 610 MS)** - **Molecular Biology of Cancer (MONC 610 MB)** - **Cancer Genetics (MONC 610 CG)**	D1-12	IV.A.5.d).(1-6)	1) Communicate effectively in different aspects
- **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	D5	IV.A.5.c).(7)	2) Demonstrate efficient IT capabilities in such a way that serves in the development of the professional practice
- **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	D11	IV.B.2.a).(4)	3) Manage the scientific meetings and manage time
- **Basics of Medical statistics & epidemiology (MONC 618)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	D9, 11	VI.A.6.f)	4) Adopt self-assessment and Adopt life-long learning
- **Basics of Medical statistics & epidemiology (MONC 618)** - **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	D9	IV.A.5.f)	5) Use different resources for information and knowledge
- **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	D11	IV.A.6.d)	6) Collaborate effectively within multidisciplinary team and lead team works
- **Internal medicine & hematology (MONC 610)** - **Medical oncology (MONC 610 MO)**	D11	IV.A.6.f)	7) Demonstrate a high level of competence in the management of time and scientific meetings

Benchmarks is:
Accreditation Council for Graduate Medical Education (ACGME)
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(4) Curriculum structure and contents:

4. A- Duration of the programme (in years or months):6 semesters

4. b- programme structure:

*The programme consists of two parts; the first part composed of four courses which are: Laboratory diagnosis in Hematology, Transfusion Medicine, Radiodiagnosis Technology in Hematology, and Molecular Biology in Hematology. The second part composed of two courses; Internal Medicine and Hematology.

*Candidates should fulfill a total of 60 credit hours.

4. B.1: Number of credit hours (minimum):

First part: 5 credit hours.

Second part: 25 credit hours.

Activities included in the log book: 15 credit hours.

Thesis: 15 credit hours

(5) Programme courses:

I. First part (15 weeks duration over a period of 6 months):

a- Compulsory courses:

Course Title	Course Code	NO. of hours per week					Total teaching hours/20wks	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
Pathology of tumours	MONC 603	1 hour				1 hour	15 hours	
Clinical pharmacology	MONC 605	1 hour				1 hour	15 hours	
Radiodiagnosis	MONC 629	1 hour				1 hour	15 hours	
Basics Biology of tumours	MONC 630	0.5 hour				0.5 hour	7.5 hours	
Basics of Medical statistics& epidemiology	MONC 618	0.5 hour				0.5 hour	7.5 hours	
Basics of Radiotherapy	MONC 617	0.5 hour				0.5 hour	7.5 hours	
Basics of surgical Oncology	MONC 620	0.5 hour				0.5 hour	7.5 hours	
Advanced studies in the medical field: a- Scientific research methodology b- Medical statistics c- Use of computer in the medical sciences *		3 hour				3 hour	28 hours in 4 weeks	
		8 hours					103 hours	

b- Elective courses: none

II. Second part

a- Compulsory courses: (80 weeks duration over a period of 20 months)

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (Referring to matrix)
		Theoretical		Clinical/ Laboratory	Field	Total		
		Lectures	seminars					
Internal Medicine Hematology	MONC 610 MONC 610 ht	2 hours		2 hours	-----	4 hour	285 hours	
Medical Oncology	MONC 610 MO	3 hours		3 hours	-----	6 hours	450 hours	
Total		7 hours				10 hours	735 hours	
Log book							15 credit hours	
Thesis							15 credit hours	

b- Elective courses: candidate choose one course (15 weeks duration over a period of 6 months);

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (Referring to matrix)
		Theoretical		Clinical/ Laboratory	Field	Total		
		Lectures	seminars					
Stem cell transplants	MONC 610 SCT	2 hours				2 hour	30 hours	
Palliative Medicine	MONC 610 PM	2 hours				2 hours	30 hours	
Medical Statistics	MONC 610 MS	2 hours				2 hours	30 hours	
Geriatric oncology	MONC 610 GO	2 hours				2 hours	30 hours	
Molecular Biology of Cancer	MONC 610 MB	2 hours				2 hours	30 hours	
Cancer Genetics	MONC 610 CG	2 hours				2 hours	30 hours	
Total		2 hours				2 hours	30 hours	

Programme-Aims ILOs Matrix

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

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

Course Aim	Programme ILOs																								
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	B1	B2	B3
1	x																				x	x		x	x	
2	x	x											x												x	
3		x	x										x													
4		x	x			x	x		x				x	x	x	x	x	x	x	x	x	x	x	x	x	
5						x																				x
6	x	x	x				x	x	x	x			x	x	x	x	x	x	x	x				x	x	
7		x	x																							
8				x				x																		
9					x	x					x	x						x			x	x				

Course Aim	Programme ILOs																									
	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
1						x									x		x	x							x	x	x	x
2	x	x											x	x				x	x	x	x	x	x	x	x			
3																												
4			x				x			x	x	x																
5			x													x												
6				x	x	x		x	x	x	x	x														x		
7																												
8																												
9																	x					x						

Programme-Courses ILOs Matrix

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

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

Course Title/Code	Programme ILOs																								
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	B1	B2	B3
Pathology (MONC 605)		x	x		x		x	x				x												x	x	
Clinical Pharmacology (MONC 606)					x									x												
Radiodiagnosis (MONC 629)		x											x					x							x	
Basics of Biology (MONC 630)			x	x	x		x					x		x												
Basics of Medical statistics & epidemiology (MONC 618)						x																				x
Basics of radiotherapy (MONC 617)													x			x		x							x	
Basics of surgical oncology (MONC 620)			x										x		x										x	
Internal medicine & hematology (MONC 610)	x		x				x			x	x		x				x		x		x	x			x	
Medical oncology (MONC 610 MO)	x	x	x	x	x	x		x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Stem cell transplants (MONC 610 SCT)									x								x									
Palliative Medicine (MONC 610 PM)													x						x	x	x	x				
Medical Statistics (MONC 610 MS)						x																				x
Geriatric oncology (MONC 610 (GO)			x										x										x		x	
Molecular Biology of Cancer (MONC 610 MB)		x	x	x	x		x	x				x		x												
Cancer Genetics (MONC 610 CG)		x		x	x			x																x		

Course Title/Code	Programme ILOs																											
	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12
Pathology (MONC 605)			x																									
Clinical Pharmacology (MONC 606)																												
Radiodiagnosis (MONC 629)																												
Basics of Biology (MONC 630)																												
Basics of Medical statistics & epidemiology (MONC 618)	x	x	x																									
Basics of radiotherapy (MONC 617)	x																											
Basics of surgical oncology (MONC 620)	x		x																									
Internal medicine & hematology (MONC 610)	x	x		x					x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Medical oncology (MONC 610 MO)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Stem cell transplants (MONC 610 SCT)				x																								
Palliative Medicine (MONC 610 PM)					x																							
Medical Statistics (MONC 610 MS)	x	x	x																									
Geriatric oncology (MONC 610 (GO)					x																							
Molecular Biology of Cancer (MONC 610 MB)			x																									
Cancer Genetics (MONC 610 CG)			x																									

(6) Programme admission requirements:

- **General requirements:**

  According to the postgraduate bylaws. Appendix IV.

- **Specific requirements (if applicable): NONE**

(7) Regulations for progression and programme completion:

- Student must complete minimum of 60 credit hours in order to obtain the master degree, which include the courses of first and second parts, thesis and activities of the log book.
- Courses description are included in Appendix III.
- Registration for the Master thesis is allowed 6 months from the day of admission to the programme and must fulfill a total of 15 credit hours including material collection, laboratory work, patients follow-up, and meetings with supervisors.

Log book fulfillment:

- Student must fulfill a minimum of 15 credit of log book activities including clinical training in the form of residency period, clinical rotation in other internal medicine specialties, laboratory work and conferences attendance or speaking.
- Lectures and seminars must be documented in the log book and signed by the lecturer.
- Works related to thesis must be documented in the log book and signed by the supervisors.
- Any workshops, conferences and scientific meetings should be included in the log book.

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

Evaluator	Tools*	Signature
Internal evaluator (s) Prof. Dr. Salah Elgamal	Focus group E-mail Group discussion	
External Evaluator (s) Prof. Dr. Ola Mohamed Reda Khorshed Professor of Medical oncology, National Cancer Institute, Cairo University	E-mail interview	
Senior student (s)	none	
Alumni	none	
Stakeholder (s)	none	
Others	none	

* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinator(s): Prof. Dr. Sameh Shamaa Prof. Dr. Tawfik Elkhodary Dr. Ziad Emarah	Signature & date:
Head of the Department: Prof. Dr. Salah Elgamal	Signature & date:
Dean: Name: Prof. Dr. Elsaid Abdelhady	Signature & date:
Executive director of the quality assurance unit: Name: Prof. Dr. Seham Gad El-hak	Signature & date:

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

Date of First Approval: 22/12/2010

Date of Last Approval: 23/08/2016