PROGRAMME SPECIFICATION

Faculty of Medicine- Mansoura Unirsity

Medical Oncology Master Degree

(A) Administrative information

(1) Programme Title & Code	**Postgraduate Master degree of Medical Oncology/ MONC 500**
(2) Final award/degree	**MSc.**
(3) Department (s)	**Internal Medicine Department**
(4) Coordinator	**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	**23/08/2016**
(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 as follows:
The aim of this program is to:

1. Provide the candidate with Medical knowledge and skills essential for the practice of Medical Oncology efficiently and properly according to the international standards and necessary to gain further training and practice in the field.
2. Provide the candidate with Skills necessary for proper diagnosis and management of patients in the field of Medical Oncology including diagnostic, problem solving and decision making.
3. Provide the candidate with Ethical principles related to the practice in this specialty.
4. Active participation in community needs assessment and problems solving.
5. Allow the candidate to develop his intellectual potential, critical reflection and clinical reasoning skills, enabling an ability to evaluate, enhance and influence his own professional practice and that of others in the context of health care provision in the Egypt and internationally.
6. Provide the candidate with an opportunity to enhance his knowledge of practice developments and develop a critical understanding of these and the underpinning evidence base.
7. Maintenance of abilities necessary for continuous medical education.
8. Enable the candidate to understand and get the best of published scientific research and do the best of published scientific research and do their own research. and be aware of different research methodology.
9. Enable the candidate to pursue higher studies.
10. Create a learning environment that allows the candidate to share ideas and experiences and promotes peer discussion, feedback and support.

(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 disease, 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, and lymphatic tissues.
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, 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 basic 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:

1-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:

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

☐– The current programme is differ from that described in the ACGME programs 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)
- **Applied Pathology (MONC 505)** - **Clinical Pharmacology (MONC 506)** - **Basics of Radiodiagnosis (MONC 529)** - **Applied Physiology MONC 503** - **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Stem cell transplants (MONC 510 SCT)** - **Palliative Medicine (MONC 510 PM)** - **Medical Statistics (MONC 510 MS)** - **Geriatric oncology (MONC 510 (GO)** - **Molecular Biology of Cancer (MONC 510 MB)** - **Cancer Genetics (MONC 510 CG)**	A1-23	IV.A.5.b)1-12	1) Theories, concepts and specialized knowledge of the learning area and also sciences appropriate to the professional practice.
- **Basics of Radiodiagnosis (MONC 529)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Palliative Medicine (MONC 510 PM)** - **Geriatric oncology (MONC 510 (GO)**	A13	IV.A.5.b).(6)	2) Mutual influence between professional practice and its impacts on the environment.
- **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)**	A1	IV.A.5.e).(7)	3) Scientific developments in the field of specialization
- **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)**	D12	IV.A.5.e)	4) Moral and legal ethics of the professional practice in the area of specialization.
- **Applied Pathology (MONC 505)** - **Clinical Pharmacology (MONC 506)** - **Basics of Radiodiagnosis (MONC 529)** - **Applied Physiology MONC 503** - **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Stem cell transplants (MONC 510 SCT)** - **Palliative Medicine (MONC 510 PM)** - **Medical Statistics (MONC 510 MS)** - **Geriatric oncology (MONC 510 (GO)** - **Molecular Biology of Cancer (MONC 510 MB)** - **Cancer Genetics (MONC 510 CG)**	A1-23	IV.A.5.b).(7).(a)	5) The concepts and principles of quality of the professional practice in the area of specialization.
- **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Medical Statistics (MONC 510 MS)**	A6	IV.A.5.b).(6)	6) The basics and ethics of scientific research.

Benchmarks is:
Accreditation Council for Graduate Medical Education (ACGME)

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

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)
- **Applied Pathology (MONC 505)** - **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Medical Statistics (MONC 510 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.
- **Applied Pathology (MONC 505)** - **Basics of Radiodiagnosis (MONC 529)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Stem cell transplants (MONC 510 SCT)** - **Palliative Medicine (MONC 510 PM)** - **Geriatric oncology (MONC 510 (GO)**	B2, 7, 8	IV.A.5.b).(1)	2) Solve specific problems on the basis of limited and contradictory information.
- **Applied Pathology (MONC 505)** - **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Medical oncology (MONC 510 MO)** - **Medical Statistics (MONC 510 MS)** - **Molecular Biology of Cancer (MONC 510 MB)** - **Cancer Genetics (MONC 510 CG)**	B6	IV.A.3.b) IV.A.5.c)	3) Demonstrate a high level of competence in the coordination of different sources of knowledge to solve professional problems.
- **Applied Pathology (MONC 505)** - **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Medical oncology (MONC 510 MO)** - **Medical Statistics (MONC 510 MS)** - **Molecular Biology of Cancer (MONC 510 MB)** - **Cancer Genetics (MONC 510 CG)**	B3, 6	IV.B.2.a).(2)	4) Carry out a research study and / or writing a scientific methodology study on research problem.
- **Applied Pathology (MONC 505)** - **Basics of Radiodiagnosis (MONC 529)** - **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Medical Statistics (MONC 510 MS)** - **Geriatric oncology (MONC 510 (GO)**	B2, 5	IV.A.5.b).(12)	5) Assess and analyze risks of the professional practice in the field of specialization.
- **Basics of Medical statistics & epidemiology (MONC 517)** - **Medical oncology (MONC 510 MO)** - **Stem cell transplants (MONC 510 SCT)** - **Palliative Medicine (MONC 510 PM)** - **Geriatric oncology (MONC 510 (GO)**	B7, 8	IV.A.5.c)	6) Plan to improve performance in the field of specialization
- **Applied Pathology (MONC 505)** - **Basics of Radiodiagnosis (MONC 529)**	B2	IV.A.3.b)	7) Make career decisions in different

- **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Geriatric oncology (MONC 510 (GO)**			professional aspects

Benchmarks is:
Accreditation Council for Graduate Medical Education (ACGME)
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C- Professional/practical skills;

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- **Applied Pathology (MONC 505)** - **Clinical Pharmacology (MONC 506)** - **Basics of Radiodiagnosis (MONC 529)** - **Applied Physiology MONC 503** - **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Stem cell transplants (MONC 510 SCT)** - **Palliative Medicine (MONC 510 PM)** - **Medical Statistics (MONC 510 MS)** - **Geriatric oncology (MONC 510 (GO)** - **Molecular Biology of Cancer (MONC 510 MB)** - **Cancer Genetics (MONC 510 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 506)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Medical oncology (MONC 510 MO)** - **Stem cell transplants (MONC 510 SCT)**	C3-5	IV.B.2.a).(1)	2) Write and evaluate technical reports.
- **Applied Pathology (MONC 505)** - **Basics of Radiodiagnosis (MONC 529)** - **Applied Physiology MONC 503** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Medical oncology (MONC 510 MO)** - **Geriatric oncology (MONC 510 (GO)** - **Molecular Biology of Cancer (MONC 510 MB)** - **Cancer Genetics (MONC 510 CG)**	C2, 7	IV.A.5.a).(2).(j, k, l)	3) Adopt assessment methods and tools existing in the area of specialization

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

D- Communication & Transferable skills;

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- **Applied Pathology (MONC 505)** - **Basics of Radiodiagnosis (MONC 529)** - **Applied Physiology MONC 503** - **Basics of Medical statistics & epidemiology (MONC 517)** - **Basics of Radiotherapy (MONC 517)** - **Basics of Surgery in oncology (MONC 520)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)** - **Palliative Medicine (MONC 510 PM)** - **Medical Statistics (MONC 510 MS)** - **Molecular Biology of Cancer (MONC 510 MB)** - **Cancer Genetics (MONC 510 CG)**	D1-12	IV.A.5.d).(1-6)	1) Communicate effectively in different aspects.
- **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 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.
- **Basics of Medical statistics & epidemiology (MONC 517)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)**	D9, 11	IV.A.5.c) VI.A.6.f)	3) Adopt self-assessment and specify his needs of personal learning.
- **Basics of Medical statistics & epidemiology (MONC 517)** - **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)**	D9	IV.A.5.f)	4) Use different resources for information and knowledge.
- **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)**	D11	IV.A.5.c)	5) Establish rules and indicators for assessing the performance of others.
- **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)**	D11	IV.A.6.d)	6) Collaborate effectively within multidisciplinary team and lead teams in different professional contexts.
- **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)**	D11	IV.A.6.f)	7) Demonstrate a high level of competence in the time management.
- **Internal medicine (MONC 510)** - **Medical oncology (MONC 510 MO)**	D11	IV.A.5.c) VI.A.6.f)	8) Continuous self education.

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

4-Curriculum structure and contents:

4.a- Duration of the programme (in years or months):…4 semesters

4.b- programme structure:

***The programme consists of two parts; the first part composed of seven courses which are: Medical Statistics &Epidemiology, Applied Physiology, and Applied Pathology, Clinical Pharmacology, Radiodiagnosis, Basics of surgical Oncology and Basiccs of Radiotherapy. The second part composed of two courses; Internal Medicine and Medical Oncology.**

***Candidates should fulfill a total of 45 credit hours.**

●4.b.1: Number of credit hours (minimum) :

First part: 5 credit hours.

Second part: 18 credit hours .

Activities included in the log book: (14 Clinical Training+ 2 Scientific Activities) 16 credit hours.

Thesis:6 credit hours

4.b.2: Teaching hours/week:

First part:

Lectures: 5 hour/week.

Total: 70 hours for 15 weeks Second part:

Lectures: 4 hours/week.

Clinical/lab: 2 hours/week

(4) 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/15weeks	Programme ILOs covered (Referring to matrix)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	Seminars					
Basics of Medical statistics& Epidemiology	MONC 518 MSO& MONC518 EPO	1/2 hour				1/2 hour	7.5 hours	
Applied Physiology	MONC 503	1/2 hour				1/2 hour	7.5 hours	
Clinical Pharmacology	MONC 506	1 hour				1 hour	15 hours	
Applied Pathology	MONC 505	1 hour				1 hour	15 hours	
Basics of Radiodiagnosis	MONC 529	1/2 hour				1/2 hour	7.5 hours	
Basics of Surgical Oncology	MONC 520	1/2 hour				1/2 hour	7.5 hours	
Basics of Radiotherapy	MONC 517	1 hour				1 hour	15 hours	
		5 hours				5 hours	75 hours	

b- Elective courses: none

II. Second part (45 weeks duration over a period of 18 months)

a- Compulsory courses

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (Referring to matrix)
		Theoretical		Clinical /practical	Field	Total		
		Lectures	seminars					
Internal Medicine	MONC 510	3 hour		5 hours	-----	8 hour	330/45 weeks	
Medical Oncology	MONC 510 MO	3 hours		5 hours	-----	8 hours	330/45 weeks	
Log book						16 hours		
Thesis						6 hours		
		6 hours		10 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				x	x	x	x	x	x	x	x	x	x	x	x	x	
2	x	x	x				x	x	x	x			x	x	x	x	x	x	x	x				x	x	
3																										
4	x																				x	x		x	x	
5	x	x											x												x	
6		x	x										x													
7																										
8						x																				x
9																										
10																										

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																
2				x	x	x		x	x	x	x	x														x		
3	x																											x
4						x									x		x	x							x	x	x	x
5	x	x											x	x				x	x	x	x	x	x	x	x			
6																												
7													x															
8			x													x												
9	x		x																									
10																		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.

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
Applied Pathology (MONC		x	x		x		x	x				x												x	x	

505)																											
Clinical Pharmacology (MONC 506)					x									x													
Basics of Radiodiagnosis (MONC 529)		x											x					x							x	
Applied Physiology MONC 503			x	x	x		x					x		x												
Basics of Medical statistics & epidemiology (MONC 517						x																					x
Basics of Radiotherapy (MONC 517)													x			x		x							x	
Surgical oncology (MONC 520)			x										x		x										x	
Internal medicine (MONC 510)	x		x				x			x	x		x				x		x		x	x			x	
Medical oncology (MONC 510 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
Stem cell transplants (MONC 510 SCT)									x								x									
Palliative Medicine (MONC 510 PM)													x						x	x	x	x					
Medical Statistics (MONC 510 MS)						x																					x
Geriatric oncology (MONC 510 (GO)			x										x										x		x		
Molecular Biology of Cancer (MONC 510 MB)		x	x	x	x		x	x				x		x													
Cancer Genetics (MONC 510 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**
Applied Pathology (MONC 505)			x																								
Clinical Pharmacology (MONC 506)																											
Basics of Radiodiagnosis (MONC 529)																											
Applied Physiology MONC 503																											
Basics of Medical statistics & epidemiology (MONC 517	x	x	x																								
Basics of Radiotherapy (MONC 517)	x																										
Surgical oncology	x		x																								

(MONC 520)																												
Internal medicine (MONC 510)	x	x		x					x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Medical oncology (MONC 510 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 510 SCT)				x																								
Palliative Medicine (MONC 510 PM)					x																							
Medical Statistics (MONC 510 MS)	x	x	x																									
Geriatric oncology (MONC 510 (GO)					x																							
Molecular Biology of Cancer (MONC 510 MB)			x																									
Cancer Genetics (MONC 510 CG)			x																									

(6) Programme admission requirements:

- **General requirements:**

According to the postgraduate bylaws. Appendix IV.

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

(8) Regulations for progression and programme completion:

- Student must complete minimum of 45 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 Thesis is allowed 6 months from the day of registration to the programme and must fulfill a total of 8 credit hours including material collection, laboratory work, patients follow-up, and meetings with supervisors.

During 36 months, residents will have clinical rotation,30 months in the Oncology unit and 6 months in different units of the internal medicine department, with attendance of activities including discussions, clinical rounds, outpatients clinics, procedures…with both senior and junior staff.

Log book fulfillment:

- Student must fulfill a minimum of 16 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 logbook and signed by the lecturer.
- Works related to thesis must be documented in the logbook and signed by the supervisors.
- Any workshops, conferences and scientific meetings should be included in the logbook.

Essay preparation and presentation:

- The postgraduate student has to prepare an essay on a chosen subject in Medical Oncology under the supervision of a professor and at least one assistant professors or lecturer in the unit. It is registered 6 months after starting the MSc program. An open discussion of the essay presented by the student must be accomplished before earning the degree

(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 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: 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 First Approval: 23/08/2016