

برنامج الماجستير قسم الهندسة النووية
Nuclear Engineering Department

GENERAL COURSES: (all programs)

Student from any of the three branches must complete the following two courses:

	Subject	code	credits
1	Advanced Mathematics	GE 604	3
2	Numerical Methods in Engineering	GE 609	3

A. NUCLEAR REACTOR ENGINEERING BRANCH :

CORE COURSES:

	Subject	code	credits
1	Advanced Reactor Theory	NE 612	3
2	Advanced Reactor thermal hydraulics	NE 621	4
3	Advanced Seminar	NE 690	1

SPECIALIZED COURSES:

	Subject	code	credits
1	Nuclear Core Design and Analysis I	NE 651	3
2	Nuclear Core Design And Analysis II	NE 652	3
3	Reactor Dynamics and Control	NE 671	3
4	Research Project	NE 699	8

ELECTIVE COURSES:

	Subject	code	credits
1	Nuclear Fuel Management	NE 553	3
2	Environmental Radiation	NE 622	3
3	Nuclear Radiation Shielding	NE 631	3
4	Fast Reactor Physics	NE 670	3
5	Special Topics	NE 695	3
6	Transport Theory	NE 712	3
7	Nuclear Fusion System	NE 650	3

B. RADIATION APPLICATION BRANCH:**CORE COURSES:**

	Subject	code	credits
1	Radiation Physics	NE 610	4
2	Radiation Detection	NE 660	3
3	Advanced Seminar	NE 690	1

SPECIALIZED COURSES:

	Subject	code	credits
1	Advanced Health Physics	NE 630	3
2	Advanced Radiation Lab	NE 681	3
3	Nuclear Techniques of Elemental Analysis	NE 647	3
4	Research Project	NE 699	8

ELECTIVE COURSES:

	Subject	code	credits
1	Environmental Radiation	NE 622	3
2	Nuclear Radiation Shielding	NE 631	3
3	Medical Physics	NE 639	3
4	Radiation Effects on Materials	NE 640	3
5	Accelerators	NE 641	3
6	Special Topics	NE 695	3
7	Environmental Radiation	NE 622	3
8	Nuclear Radiation Shielding	NE 631	3

C. MEDICAL RADIATION PHYSICS:

CORE COURSES:

	Subject	code	credits
1	Radiation physics	NE 610	4
2	Radiation dosimetry	NE 661	3
3	Human Anatomy and Physiology	NE 601	3
4	Advanced Seminar	NE 690	1

SPECIALIZED COURSES:

	Subject	code	credits
1	Physics of Radiation Therapy	NE636	3
2	Radiationdosimetry	NE661	3
3	Medical Radiation Physics Lab	NE680	3
4	Research Project	NE 699	8

ELECTIVE COURSES:

	Subject	code	credits
1	Advanced Health Physics.	NE 630	3
2	Non Ionizing Radiation.	NE 638	3
3	Special Topics	NE695	3