



Msc. in Regenerative Medicine

Program Outline

The Master of Science Program

The Program has two major areas of specialization, namely:

- Anti-aging Health
- Stem cell Science

The Master of Science program is a Two-Year program organized as follows:

The curriculum is organized around 4 semesters (of 16 weeks duration each). The first semester consists of core courses, while the second semester is devoted to specialized courses. During each semester, the student organizes with the supervisor/s the required courses and the research work, which all spread over the semesters of the academic year.

At the end of the second semester, students must achieve a GPA of 3.0 or higher to proceed to thesis. The thesis topic is decided in consultation with the Supervisor and the approval of the Academic Committee of the program taking into consideration the student's interests and ongoing research activities. Thesis work can be partly performed by the student in his/her institution if a qualified supervisor is identified and technical facilities are available to carry out the planned experiments. Internal and external examiners evaluate the written thesis and examine the student orally.

The Diploma Program

The Diploma Program is a one-year program organized around two semesters. The first semester consists of core courses (14 credit hours), while the second semester is devoted to 10 Credit Hours of specialized courses and a Diploma Project (4 credit hours). The program is implemented by a Director and decisions are made by an Academic Committee consisting of members representing the major specialties in

the program according to the rules and regulations of the Arabian Gulf University (AGU).

Outline of Courses

The students study 36 credit hours inclusive of a Master thesis, which is equivalent to 8 credit hours. The courses cover 28 credit hours as in the list below.

A. Core Courses

The requirement of these Core Courses is 14 credit hours (1st semester).

Course Code	Course Name	Credit Hours
CMMSRM 600	Basic Stem Cell Science	2 Credit Hours
CMMSRM 601	Biology of Aging	2 Credit Hours
CMMSRM 602	Ethical, Legal and Social Issues of Stem Cell Research	2 Credit Hours
CMMSRM 603	Genetic, Epigenetic and Genomic Testing	2 Credit Hours
CMMSRM 604	Research Methodology	2 Credit Hours
CMMSRM 605	The Fundamentals of Regenerative Medicine	2 Credit Hours
CMMS 604	Research Methodology	2 Credit Hours
CMMS 621	Inferential Statistics and its Applications	2 Credit Hours

B.1. Specialized Courses for Anti-aging Health Specialty

The requirement of these courses is 14 credit hours (2nd semester).

Course Code	Course Name	Credit Hours
CMMSAA 600	Metabolic and Endocrine Approaches and Hormone Therapy in Lifespan Health	2 Credit Hours
CMMSAA 601	Environmental Health in Anti-Aging	1 Credit Hour
CMMSAA 602	Nutrigenomics and Longevity Nutritional Therapies	2 Credit Hours
CMMSAA 603	Stem Cells Therapies in Lifespan Health	2 Credit Hours

CMMSAA 604	Gene Therapy in Lifespan Health	2 Credit Hours
CMMSAA 605	Antiaging Aesthetic Health	2 Credit Hours
CMMSAA 606	Anti-Aging Drugs and Supplements: Pharmacological Aspects	2 Credit Hours
CMMSAA 607	Lifestyle and Lifespan Health	1 Credit Hour

B.2. Specialized Courses for Stem Cell Science Specialty

The requirement of these courses is 14 credits (2nd semester).

Course Code	Course Name	Credit Hours
CMMSSC 600	Embryonic, fetal and adult stem cells	2 Credit Hours
CMMSSC 601	Clinical applications of stem cells in Regenerative Medicine	2 Credit Hours
CMMSSC 602	Stem cell culturing and sorting techniques/differentiation	2 Credit Hours
CMMSSC 603	Hematopoietic stem cell transplantation	1 Credit Hours
CMMSSC 604	Tissue engineering	2 Credit Hours
CMMSSC 605	Immunological aspects of cellular therapy	2 Credit Hours
CMMSSC 606	Stem Cells and Translational Health	1 Credit Hours
CMMSSC 607	DNA Editing and Gene therapy	2 Credit Hours

C. Diploma Project

Course Code	Course Name	Credit Hours
CMMSRMD 608	Diploma Project	4 Credit Hours

D. Master Research Project

Course Code	Course Name	Credit Hours
CMMSRMD 609	Thesis	8 Credit Hours