



University of Technology,
Jamaica
Faculty of Science and Sport

School of Natural & Applied Science
Mphil/PhD in Chemistry

Accredited by the University Council of Jamaica (UCJ)

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FACULTY OF SCIENCE AND SPORT
SOLVING PROBLEMS... KEEPING THE VIBES



Course Description

The Master/Doctor of Philosophy Degree in Chemistry at the University of Technology, Jamaica will focus on applied practical scientific methods. These are highly analytical in nature and involve strong communication skills and the use of knowledge-based systems. The course of study is designed to produce graduates who are equipped to contribute at the highest levels of planning and research. The graduates of the course of study will demonstrate an awareness of the importance of integrity, ethics and professionalism in the execution of their profession.

Course Goals

This course of study aims to produce graduates with a strong chemical background and expertise in chemical research, data collection and analysis and the application of results to solve scientific problems and in developing ideas as academics, researchers and leaders in academia and industry.

Course Objectives

On completion of the course the Chemistry MPhil/PhD graduate will be able to:

- teach at the University level, through the inclusion of advanced core modules such as Research Methodology, Organic, Inorganic and Physical Chemistry and Instrumentation.
- perform research and make innovative progress in his/her field of interest through laboratory based research in a major problem solving project resulting in a Thesis, complete with presentation and defence.
- demonstrate competence in the field of analytical research, quality assurance and decision-making capacities for academia and industry.
- demonstrate leadership and initiative in solving problems and in innovation and entrepreneurship.

Course Design

The SGSRE guidelines in “Higher Degrees by Research” state that the MPhil course of study consists of forty (40) credits, eighteen (18) credits of which shall be taught modules/seminars and twenty-two (22) credits for the research thesis component. The PhD course of study consists of ninety (90) credits, twenty-four (24) credits of taught modules/seminars, two (2) credits from conference/journal paper and sixty-four (64) credits for the research dissertation. Candidates may register for either course of study on a full-time or part-time basis and taught modules may be offered as face-to-face, online or blended learning. Taught modules will be delivered during the first one or two semesters of the study while the research component will be continuous over the period of study. The full-time MPhil should normally be completed within two years minimum or four years maximum, and the PhD within three years minimum or six years maximum.

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Course Structure

Year 1 – Semester 1 & 2

Module	Hours per Semester		
	Theory	Lab	Cr
Research Methodology	3		3
Advanced Statistics	3		3
Advanced Topics in Organic Chemistry	2	3	3
Advanced Topics in Physical Chemistry (may be done in place of Advanced Organic or Inorganic Chemistry)	2	3	3
Advanced Topics in Inorganic Chemistry	2	3	3
Advanced Instrumentation	2	3	3
Sub Total:			15

Course Structure

MPhil Chemistry

Year 1 – Semester 1 & 2

Module	Hours per Semester		
	Theory	Lab	Cr
Research Methodology	3		3
Advanced Statistics	3		3
Advanced Topics in Organic Chemistry	2	3	3
Advanced Topics in Physical Chemistry (may be done in place of Advanced Organic or Inorganic Chemistry)	2	3	3
Advanced Topics in Inorganic Chemistry	2	3	3
Advanced Instrumentation	2	3	3
Sub Total:			15

Year 2 – Semester 1 CONTINUOUS Year 1 and 2

Chemistry Research Seminar (one per semester)	3	3
M. Phil Research and Thesis		22
Sub Total:		25

TOTAL FOR YEAR 1 AND 2: 40



Course Structure

PhD Chemistry

Year 1

Module	Hours per Semester			
	Theory	Tut	Lab	Cr
Research Methodology	3			3
Seminar (one per semester)	1			1
Advanced Topics in Organic Chemistry	2		3	3
Advanced Topics in Physical Chemistry ((may be done in place of Advanced Organic or Inorganic Chemistry)	2		3	3
Advanced Topics in Inorganic Chemistry	2		3	3
Advanced Instrumentation	2		3	3
Paper – Conference or Referenced Journal				2
Sub Total:				18

Year 2

Module	Hours per Semester			
	Theory	Tut	Lab	Cr
3 Optional Modules*				8
CONTINUOUS THROUGH YEARS 2, 3, 4				
Ph. D. Research and Thesis				64
Sub Total:				72
TOTAL CREDITS:				90

OPTIONAL MODULES*

Advanced Statistics

Chemical Waste Disposal

Advanced Quality Assurance in Industry

Industrial and Entrepreneurial Business

Chemistry of the Environment

Entry Requirements

Applicants seeking admission into the MPhil in Chemistry course of study must have a first- or second-class honours Bachelor of Science degree in Applied Science or Science and Education, Chemistry option, from the University of Technology, Jamaica, or equivalent qualification in Chemistry or a related subject including, but not limited to, Biochemistry, Pharmacy and Chemical Engineering, from a recognised accredited institution. MPhil candidates seeking to transfer to the PhD course of study must do so within the first three years of the commencement of their studies and fulfil all requirements of the university. Applicants seeking direct admission to the Doctor of Philosophy course of study should possess a Masters degree in Chemistry from a recognised institution. Alternatively, “outstanding BSc” applicants may seek direct admission to the PhD course of study, “if they have appropriate research or professional experience at graduate level which has resulted in published work, written reports or other appropriate evidence of accomplishment” (see “Higher Degrees by Research”).

All applicants will be considered on their merits and in relation to the nature and scope of the work proposed, and will be required to provide the names of two academic referees.

Certification

On successful completion of the Masters course of study, the graduate will receive the degree of Master of Philosophy in Chemistry. MPhil candidates will have the option to transfer to the PhD course of study. Successful candidates of the Doctoral course of study will receive the degree of Doctor of Philosophy in Chemistry.

Career Opportunities

Graduates with a Master/Doctor of Philosophy in Chemistry will find employment as educators in the academic arena at universities, schools and colleges, researchers, management, leaders of analytical and quality assurance teams in both private and public sector institutions and as consultants and will be equipped with both technical and entrepreneurial skills to manage independent businesses regionally and internationally..

Applications

Application forms are available from the Admissions Office of the University of Technology, Jamaica. Applications should be completed and returned on or before the stated deadline (stated on the annual brochures) and be addressed to:.

The Admissions Officer
University of Technology, Jamaica
237 Old Hope Road
Kingston 6

Phone: (876) 927-1680-8 or
Fax: (876) 927-1925, 977-4388



Visit our website: www.utechjamaica.edu.jm



Any further inquiries can be addressed to

The Programme Director
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Faculty of Science and Sport

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