

Master of Industrial Organic Chemistry

The one-year Master of Industrial Organic Chemistry program is designed to provide both theoretical and practical knowledge in organic chemistry to prospective students and industrial persons who wish to enhance their skills in organic chemistry. This course consists of theory coursework (25 credits), practical classes (4 credits), industrial visits, guest lectures and case study. The student who follows this program must carry out a case study related to organic chemistry / industrial organic chemistry under the supervision of a faculty member. This is a direct entry program. In addition, this program is offered as an exit option to the Master of Science in Industrial Organic Chemistry Degree.

Objectives/ Graduate Profile:

A graduate of Master of Industrial Organic Chemistry should be able to;

- *Propose, direct, and carry out development processes of the respective fields through comprehensive theoretical knowledge and practical skills gained from the postgraduate level scientific training.*
- *Analyze problems related to the chemical industry and provide innovative value-added solutions by meeting realistic socio-economic and environmental constraints.*
- *Work independently as well as a team member or leader in diverse multi-disciplinary settings to accomplish common goals.*
- *Apply knowledge effectively as a part of problem-solving exercises.*
- *Communicate effectively in both written and oral forms.*

Professional and Employment Opportunities:

This program provides opportunities to obtain postgraduate level qualification for prospective students, teachers, current industrials, and research institutes personnel with advanced knowledge and hands-on experiences in industrially oriented organic chemistry. In addition, this program provides qualifications for higher positions in private and public sector industries such as chemical, pharmaceutical, food, textile, polymer, etc. This program serves as an entry qualification for Masters and Doctor of Philosophy Degrees.

Admission requirements:

To be eligible for admission to this program an applicant must possess one of the following qualifications;

- *BSc Special or Honours degree (SLQF 6) in Chemistry*
- *BSc General Degree (SLQF 5) with Chemistry as a subject*
- *BSc Special or Honours Degree (SLQF 6) with Chemistry as a subject*
- *BSc Degree (SLQF 5 or 6) in Chemical Engineering / Food Science or Agriculture / Pharmacy and Medical Laboratory Technology (MLT) with Chemistry as a subject / relevant subject area*

- *BSc Honours in Fisheries and Marine Sciences or Marine and Fresh water Sciences (SLQF 6) with Chemistry as a subject / relevant subject area*
- *Equivalent qualification recognized by the University Grants Commission*
- *Equivalent qualification accepted by the University Senate, University of Sri Jayewardenepura*
- *Post Graduate Diploma (SLQF 8) in Industrial Organic Chemistry*

Course Duration: One year

Medium of Instruction: English

Course Description:

Course Code	Course Name	Credit Value	Status (Compulsory/Optional)
IOC90102	Advanced organic chemistry	2	compulsory
IOC90203	Separation and identification techniques of organic compounds	3	compulsory
IOC90302	Basics and Principles of industrial organic chemistry and chemical engineering	2	compulsory
IOC90402	Modern medicinal chemistry	2	compulsory
IOC90503	Applications of microbiology, protein and food chemistry for industry*	3	optional
IOC90603	Organic chemistry applications in agriculture, petroleum and textile industries*	3	optional
IOC90703	Chemistry of natural products and industrial applications	3	compulsory
IOC90802	Industrial chemical and waste management, laboratory safety, and security	2	compulsory
IOC90902	Organic chemistry in nanotechnology and polymer science interface	2	compulsory
IOC91001	Quality assurance and management	1	compulsory
IOC91102	Research methodology, scientific communications, seminars and Industrial visits	2	compulsory
IOC91204	Laboratory practical ^{1,3}	4	compulsory
IOC91306	Independent case study ^{2,3}	6	compulsory
Total number of credits		35	

*Optional course - students are required to obtain 3 credits from IOC90503 and IOC90503 (It is required to obtain 32 out of 35 credits to be eligible for Master of Industrial Organic Chemistry degree)

¹Laboratory practical course (IOC91204) will be carried out throughout the 1st and 2nd semesters of the first year. The final grade for this course will be awarded at the end of the second semester.

² IOC91306 course is offered throughout the 1st and 2nd semesters.

³ Non-taught component.

Evaluation:

The candidate's performance at each course unit is assessed and graded by theory examinations / practical examinations / continuous assessments / assessment reports / oral examinations, etc. The assessment structure is modified when required, to facilitate achieving the intended learning outcomes of each course unit. When there are multiple assessment methods for a course unit, marks obtained by the candidate are combined in a pre-determined manner to obtain the final grade. All the theory courses will be evaluated based on End-Modular examinations.

It is necessary to maintain 80% or higher attendance for theory and practical sessions to become eligible to sit for the examination.

It is compulsory to finish all the practical classes within the first year of registration. Only for a valid medical reason a student may be allowed to follow practical classes with the next batch of students, an additional payment is charged in such an event.

Independent case study report will be evaluated by two faculty members/experts in the relevant area separately and the viva will be graded by the same members in the presence of the coordinator and the supervisor/s.

Repeating the Course Units:

A candidate who is unable to sit for theory course unit examination or fails a theory course unit or obtained lower grade than B can repeat the examination. Except for medical reasons the maximum mark that can be obtained is B grade (55%). Only two attempts will be granted to repeat an examination. Non-taught components cannot be repeated under any circumstances.

If a student obtains a lower grade at a repeat attempt, the higher grade obtained at previous attempts will be used to calculate the GPA. Repeat examinations will be conducted at the same time with the next immediate Master of Industrial Organic Chemistry batch.

If a candidate wants to repeat a course unit that is not offered to the next immediate Master of Industrial Organic Chemistry batch, the candidate has to sit for a paper which is similar in content and credit value to the course unit that the candidate intended to repeat. In this case, the candidate must inform the coordinator before taking the exam and if necessary, prior approval must be obtained.

Awarding the Degree:

Candidates should pass all the courses and should possess a minimum GPA of 2.7 for a total of at least 32 credits worth courses and shall maintain a minimum of C+ (45%) grade for course units except for laboratory practical course. Candidate should obtain a minimum of a B (55%) grade for the laboratory practical course and the independent case study.

If a candidate is unable to complete the independent case study within the given time period, he / she can exit the programme (if he / she wishes to do so) obtaining a Postgraduate Diploma in Industrial Organic Chemistry.

Payment Plan:

Course fee can be paid in two installments, 60% of the course fee at the registration and the balance within 3 months of the first year.