

Syllabus of
M.Sc. INDUSTRIAL CHEMISTRY
2018-19

FACULTY OF SCIENCE
Mohanlal Sukhadia University, Udaipur
M.Sc. Industrial Chemistry (CBCS) Programme
(Session 2016-17)

1. Duration of the course

The Master of Science Industrial Chemistry programme will be of four semesters duration under Choice based Credit system which will be conducted in two years. Each semester will be of approximately 5 months (minimum 90 working days in a semester) duration.

2. Eligibility:

Candidates seeking admission to the first semester of M.Sc.(CBCS) Industrial Chemistry must have a B.Sc. with Chemistry as one of the optional subjects or as a honours subject (10+2+3 scheme) with minimum 48% marks from a UGC recognized University.

3. Admissions:

Admissions to the first semester of M.Sc. (Industrial Chemistry) will be made as per admission rules for M.Sc. (CBCS).

4. Medium of instruction

The medium of instruction and examination shall be English.

5. Nature of course and no. of seats

M.Sc. (Industrial Chemistry) is a self financed course and no of seats as per information bulletin.

6. Curriculum

6.1 M.Sc.(Industrial Chemistry) programme has a two years, four semester prescribed course structure which in general terms is known as curriculum. It prescribes courses to be studied in each semester as given below.

6.2 M.Sc.(Industrial Chemistry) programme shall have a curriculum and course contents (syllabi) for the courses recommended by the committee courses in Industrial Chemistry and approved by the academic council of the University.

6.3 The programme shall follow Choice Based Credit System(CBCS) and will be governed by the Common Rules and Regulations of Masters programme under CBCS approved by the Academic Council of the University.

Courses of Study and Examination (2016-17) List of courses

Core Courses: Theory

Course Code	Title of Course
M 1 IC 01-CT 01	Inorganic Chemistry
M 1 IC 02-CT 02	Organic Chemistry
M 1 IC 03-CT 03	Physical Chemistry
M 1 IC 04-CT 04	Spectroscopy in analysis-I
M 2 IC 01-CT 05	Environmental and Green Chemistry
M 2 IC 02-CT 06	Instrumental techniques
M 2 IC 03-CT 07	Fundamentals of polymer chemistry
M 2 IC 04-CT 08	Spectroscopy in analysis-II
M 3 IC 01-CT 09	Specialty polymers
M 3 IC 02-CT 10	Industrial Aspect of Chemistry
M 4 IC 01-CT 11	Textile chemistry
M 4 IC 02-CT 12	Effluents treatment and waste management

Core Courses: Practical's

Course Code	Title of Course
M 1 IC 05-CP 01	Practical-A-I
M 1 IC 06-CP 02	Practical-B-I
M 2 IC 05-CP 03	Practical-A-II
M 2 IC 06-CP 04	Practical-B-II
M 3 IC 05-CP 05	Practical-A-III
M 4 IC 05 CP 06	Practical-A-IV

Discipline Specific Courses: Theory

Subject code	Title of course
M 3 IC 03 ET 01	Organic reagents, Natural products and Colorants
M 3 IC 04 ET 02	Principles of Chemical Engineering
M 3 IC 05 ET 03	Medicinal Chemistry-I
M 4 IC 03 ET 04	Agro based chemicals
M 4 IC 04 ET 05	Fuels, Petroleum and petrochemicals
M 4 IC 05 ET 06	Medicinal Chemistry-II

Discipline Specific Courses: Practicals

M 3 IC 06 EP 01	Practical-B-III
M 4 IC 06 EP 02	Practical-B-IV

Course codes are written in the following format

Masters programme (M)+Semester (1,2,3,4) + IC (Industrial Chemistry)+Serial Number of Course in the Semester(01,02,03 etc.) + hyphen(“-”) + Course type [Core Theory (CT), Core Practical (CP), Discipline Specific Theory (ET), Discipline Specific Practical (EP), Skill Practical (SP)].

For example; The Course code M1IC 01-CT01 should read as Master Programme First Semester Industrial Chemistry First Course-Core Theory Course-01

Note: -

1. Skill based courses will be offered on payment basis. Fees will be decided by the concern Department as per rules.
2. Candidate has to select any two papers from DSE in the III and IV semester.
3. Practical examinations will be conducted by the board of examiners consisting of one internal (to be appointed by the Course Director) and one external examiner (to be appointed by the University).

THE COURSES OF STUDY

M.Sc. INDUSTRIAL CHEMISTRY (2016-2017)

Semester I

S. No.	Course code	Title of the course	L-T-P	No. of credits	Max. marks 100		
					Uni. Exam	Int. exam	Total
1	M 1 IC 01-CT 01	Inorganic Chemistry	3-1-0	4	80	20	100
2	M 1 IC 02-CT 02	Organic Chemistry	3-1-0	4	80	20	100
3	M 1 IC 03-CT 03	Physical Chemistry	3-1-0	4	80	20	100
4	M 1 IC 04-CT 04	Spectroscopy in analysis-I	3-1-0	4	80	20	100
5	M 1 IC 05-CP 01	Practical-A-I	0-0-8	4	80	20	100
6	M 1 IC 06-CP 02	Practical-B-I	0-0-8	4	80	20	100
		Total		24	480	120	600

Semester II

S. No.	Course code	Title of the course	L-T-P	No. of credits	Max. marks 100		
					Uni. Exam	Int. exam	Total
1	M 2 IC 01-CT 05	Environmental and Green Chemistry	3-1-0	4	80	20	100
2	M 2 IC 02-CT 06	Instrumental techniques	3-1-0	4	80	20	100
3	M 2 IC 03-CT 07	Fundamentals of polymer chemistry	3-1-0	4	80	20	100
4	M 2 IC 04-CT 08	Spectroscopy in analysis-II	3-1-0	4	80	20	100
5	M 2 IC 05-CP 03	Practical-A-II	0-0-8	4	80	20	100
6	M 2 IC 06-CP 04	Practical-B-II	0-0-8	4	80	20	100
7	M 2 IC 07-SE 01	Skill Course Elective	1-0-3	2	80	20	100
		Total		26	560	140	700

Semester III

S. No.	Course code	Title of the course	L-T-P	No. of credits	Max. marks 100		
					Uni. Exam	Int. exam	Total
1	M 3 IC 01-CT 09	Specialty polymers	3-1-0	4	80	20	100
2	M 3 IC 02-CT 10	Industrial Aspect of Chemistry	3-1-0	4	80	20	100
3-4	M 3 IC 03-ET 01	Organic reagents, Natural products and Colorants	3-1-0	4	80	20	100
	M 3 IC 04-ET 02	Principles of Chemical Engineering	3-1-0	4	80	20	100
	M 3 IC 05-ET 03 (Select any two)	Medicinal Chemistry-I	3-1-0	4	80	20	100
5	M 3 IC 06-CP 05	Practical-A-III	0-0-8	4	80	20	100
6	M 3 IC 07 EP 01	Practical-B-III	0-0-8	4	80	20	100
		Total		24	480	120	600

Semester IV

S. No.	Course code	Title of the course	L-T-P	No. of credits	Max. marks 100		
					Uni. Exam	Int. exam	Total
1	M 4 IC 01 CT 11	Textile chemistry	3-1-0	4	80	20	100
2	M 4 IC 02 CT 12	Effluents treatment and waste management	3-1-0	4	80	20	100
3-4	M 4 IC 03-ET 04	Agro based chemicals	3-1-0	4	80	20	100
	M 4 IC 04-ET 05	Fuels, Petroleum and petrochemicals	3-1-0	4	80	20	100
	M 4 IC 05-ET 06 (Select any two)		Medicinal Chemistry-II	3-1-0	4	80	20

5	M 4 IC 06-CP 06	Practical-A-IV	0-0-8	4	80	20	100
6	M 4 IC 07-EP 02	Practical-B-IV	0-0-8	4	80	20	100
7	M 4 IC 08-SE 02	Skill Course Elective	1-0-3	2	80	20	100
		Total		26	560	140	700

Credit table

Credits for all four semesters	100
No. of Core Course Credits	72
No. of Discipline Specific Course Credits	24
No. of Credits for SGPA and CGPA calculation	96
No. of Skill course credits	04