



**Department of Chemistry**  
**University College of Science,**  
**Maharana Bhupal Campus**  
**Mohanlal Sukhadia University**  
**Udaipur – 313001**

No. Chem. Est/UCoS/2021/ 777

Dated: 25-01-2021

A meeting of Committee of Courses was held on 25-01-2021 at 10.00 am in the chamber of undersign (maintaining social distancing) to discuss the introduction of new specialization that is Industrial Chemistry in M.Sc. Chemistry and approval of the syllabus for the same. The following members were present in this meeting.

**INTERNAL MEMBERS:**

1. Dr. Jyoti Chaudhary, Department of Chemistry
2. Dr. Shikha Agarwal, Department of Chemistry
3. Dr. Poonam Khandelwal, Department of Chemistry
4. Dr. Ajay Sharma, Govt. College, Shirohi. **(Attended Meeting Online)**
5. Dr. Bhupendra Sharma, Govt PG College, Banswara **(Attended Meeting Online)**

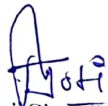
**EXTERNAL MEMBERS:**

1. Dr. Neelu Chauhan, Deptt of Pure & Applied Chemistry, University of Kota, Kota. **(Attended Meeting Online)**
2. Dr. Samar Bandhopadhyay, Business Head, Pukhraj Additives LLP, Mumbai (Maharashtra) **(Not Attended Meeting)**


Minutes of the meeting are as follow:

All members give their consents for this new specialization and approved the syllabus. Members who attended the meeting online give their consent by mail. (Copy Attached)

The meeting ended with a vote of thanks to the chair.

  
Dr. Jyoti Chaudhary  
Head

  
Dr. Shikha Agarwal  
Member

  
Dr. Poonam Khandelwal  
Member

O/C

Regarding meeting of Committee of Courses

Dr Neelu chouhan <neeluchouhan@uok.ac.in>  
to: HOD Chemistry <hodchem@mlsu.ac.in>

Mon, Jan 25, 2021 at 12:09 PM

Dear Dr. Choudhary

please find the corrections in Industrial specialisation paper

On Sat, Jan 23, 2021 at 5:26 PM HOD Chemistry <hodchem@mlsu.ac.in> wrote:  
[Quoted text hidden]

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Dr. Neelu Chouhan  
Associate Professor.  
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324005  
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 **MLSU Chemistry CBCS Syllabus 2020-21.doc**  
496K

**FACULTY OF SCIENCE**  
**Mohanlal Sukhadia University, Udaipur**  
**M.Sc. Chemistry (CBCS) Programme**  
(Valid from session 2020-21 onwards)

**1. Duration of the Course**

The Master of Science 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) Chemistry must have a B.Sc. with Chemistry as one of the optional subjects or as a honor's subject (10+2+3 scheme) with minimum 48% marks from a UGC recognized University

**3. Admissions:**

Admissions to the first semester of M.Sc. (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. No. of Seats**

Total number of normal fee seats: As per information bulletin

**6. Curriculum**

M.Sc. (Chemistry) programme has a two year, 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

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

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.

**A. Courses of Study and Examination (2020-21)**  
**List of courses**

**Core Courses: Theory**

<b>Course Code</b>	<b>Title of Course</b>
M1CHE 01-CT01	Inorganic Chemistry-I
M1CHE 02-CT02	Organic Chemistry-I
M1CHE 03-CT03	Physical Chemistry-I
M1CHE 04-CT04	Group Theory and Spectroscopy
M2CHE 01-CT05	Inorganic Chemistry-II
M2CHE 02-CT06	Organic Chemistry-II
M2CHE 03-CT07	Physical Chemistry-II
M2CHE 04-CT08	Environmental and Green chemistry
M3CHE 01-CT09	Advanced Spectroscopic Techniques
M3CHE 02-CT10	Bioinorganic, Bioorganic and Biophysical Chemistry
M4CHE 01-CT11	Special methods of analysis
M4CHE 02-CT12	Photochemistry and Supramolecules

**Core Courses: Practical**

<b>Course Code</b>	<b>Title of Course</b>
M 1CHE 05-CP01	PR-I: Organic Chemistry
M 1CHE 06-CP02	PR-II: Inorganic and Physical Chemistry
M 2CHE05-CP03	PR-III: Inorganic Chemistry
M 2CHE06-CP04	PR-IV: Organic and Physical Chemistry

M3CHE05-CP05	PR-V: Inorganic Chemistry and spectral problems
M4CHE05- CP06	PR-VI: Polymer synthesis and extraction of natural products

## Discipline Specific Courses: Theory and Practical

Subject code	Title of course
<b>Inorganic chemistry discipline ( Group A)</b>	
<b>Theory</b>	
M3CHE03-ET01A	Modern aspects of inorganic Chemistry
M3CHE04-ET02A	Advanced Bio-Inorganic Chemistry
M4CHE03-ET03A	Organometallic chemistry
M4CHE04-ET04A	Inorganic polymers
<b>Practical</b>	
M3CHE06- EP01A	Inorganic Chemistry Practical-I
M4CHE06- EP02A	Inorganic Chemistry Practical-II
<b>Organic chemistry discipline ( Group B)</b>	
<b>Theory</b>	
M3CHE03-ET01 B	Modern interfaces of organic chemistry
M3CHE04-ET02 B	Chemistry of heterocyclic compounds
M4CHE03-ET03 B	Medicinal chemistry
M4CHE04-ET04 B	Chemistry of natural products
<b>Practical</b>	
M3CHE06- EP01 B	Organic Chemistry Practical-I
M4CHE06- EP02 B	Organic Chemistry Practical-II
<b>Physical chemistry discipline ( Group C)</b>	
<b>Theory</b>	
M3CHE03-ET01C	Chemical kinetics
M3CHE04-ET02C	Nuclear and radiochemistry
M4CHE03-ET03C	Advanced photochemistry and radiation Chemistry
M4CHE04-ET04C	Solid state chemistry
<b>Practical</b>	
M3CHE06- EP01C	Physical Chemistry Practical-I
M4CHE06- EP02C	Physical Chemistry Practical-II
<b>Analytical Chemistry Discipline (Group D)</b>	
<b>Theory</b>	
M3CHE03-ET01D	Fundamentals of analytical chemistry
M3CHE04-ET02D	Modern analytical methods
M4CHE03-ET03D	Analytical techniques
M4CHE04-ET04D	Applied analytical methods
<b>Practical</b>	
M3CHE06- EP01D	Analytical Chemistry Practical-I
M4CHE06- EP02D	Analytical Chemistry Practical-II
<b>Industrial Chemistry Discipline (Group E)</b>	
<b>Theory</b>	

M3CHE03-ET01E	Specialty Polymer
M3CHE04-ET02E	Industrial Aspects of Chemistry
M4CHE03-ET03E	Agro Based Chemicals
M4CHE04-ET04E	Textile Chemistry
<b>Practical</b>	
M3CHE06- EP01E	Industrial Chemistry Practical-I
M4CHE06- EP02E	Industrial Chemistry Practical-II

<b>Skill Based Courses</b>	
CHE-SP01	Green methods in chemistry
CHE-SP02	Basic analytical chemistry
CHE-SP03	Basics in pharmaceutical chemistry

## Course Code

Course codes are written in the following format

Masters programme (M)+Semester (1,2,3,4)+CHE (Chemistry Discipline)+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) ] + Group Code (A,B,C etc)

For example the Course code M1CHE 01-CT01 should read as Master Programme First Semester Chemistry First Course-Core Theory Course-01

In the Course code M3CHE06- EP01A should read as Master Programme Third Semester Chemistry Sixth Course-Discipline Specific Elective Practical Course-01 Group-A

### **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 two papers from any group A/B/C/D/E in the III semester, the selected group will continue in the IV semester. Group D courses are available only at Vidhya Bhawan Rural Institute and Government College, Chittorgarh.
3. Practical examinations will be conducted by the board of examiners consisting of one internal (to be appointed by the Head of Department) and one external examiner (to be appointed by the University).

**THE COURSES OF STUDY**  
**M.Sc. CHEMISTRY (2020-2021)**

**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	M1CHE 01-CT01	Inorganic Chemistry-I	3-1-0	4	80	20	100
2	M1CHE 02-CT02	Organic Chemistry-I	3-1-0	4	80	20	100
3	M1CHE 03-CT03	Physical Chemistry-I	3-1-0	4	80	20	100
4	M1CHE 04-CT04	Group Theory and Spectroscopy	3-1-0	4	80	20	100
5	M1CHE 05-CP01	Core practical-I	0-0-8	4	80	20	100
6	M1CHE 06-CP02	Core practical-II	0-0-8	4	80	20	100
7	M2CHE07-SP01	Skill Course- I	1-0-3	2	80	20	100
		Total		26	560	140	700

**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	M2CHE01-CT05	Inorganic Chemistry-II	3-1-0	4	80	20	100
2	M2CHE02-CT06	Organic Chemistry-II	3-1-0	4	80	20	100
3	M2CHE03-CT07	Physical Chemistry-II	3-1-0	4	80	20	100
4	M2CHE04-CT08	Environmental and Green Chemistry	3-1-0	4	80	20	100
5	M2CHE05-CP03	PR-III: Inorganic Chemistry	0-0-8	4	80	20	100
6	M2CHE06-CP04	PR-IV: Organic and Physical Chemistry	0-0-8	4	80	20	100
		Total		24	480	120	600



### 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	M3CHE01-CT09	Advanced Spectroscopic Techniques	3-1-0	4	80	20	100
2	M3CHE02-CT10	Bioinorganic, Bioorganic and Biophysical Chemistry	3-1-0	4	80	20	100
3	M3CHE03-ET01X X = A/B/C/D/E	Discipline Specific Elective- I	3-1-0	4	80	20	100
4	M3CHE04-ET02X X=A/B /C /D/E	Discipline Specific Elective- II	3-1-0	4	80	20	100
5	M3CHE05-CP05	PR-V:Inorganic Chemistry and spectral problems	0-0-8	4	80	20	100
6	M3CHE06- EP01 X= A/B/ C/ D/E	Discipline Specific Practical- I	0-0-8	4	80	20	100
7	M4CHE07-SP02	Skill Course-II	1-0-3	2	80	20	100
		Total		26	560	140	700

### 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	M4CHE01-CT11	Special methods of Analysis	3-1-0	4	80	20	100
2	M4CHE02-CT12	Photochemistry and Supramolecules	3-1-0	4	80	20	100
3	M4CHE03-ET03X X=A/B /C /D/E	Discipline Specific Elective- III	3-1-0	4	80	20	100
4	M4CHE04-ET04X X=A/B /C /D/E	Discipline Specific Elective- IV	3-1-0	4	80	20	100
5	M4CHE05- CP06	PR-VI: Polymer Synthesis and Extraction of Natural Products	0-0-8	4	80	20	100
6	M4CHE06-EP02X X=A/ B /C /D/E	Discipline Specific Practical- II	0-0-8	4	80	20	100
		Total		24	480	120	600

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