



जम्मू केंद्रीय विश्वविद्यालय Central University of Jammu

राया-सूचानी, बागला, जिला सांबा-181143 जम्मू, जम्मू एवं कश्मीर

Rahya - Suchani (Bagla), District Samba-181143, Jammu (J&K)

No. CUJ/DCHE/2016/473

27 November, 2018

NOTIFICATION No. 67/2018

Sub: Course Scheme and Syllabus Notification of 1st to 10th semesters of Integrated M.Sc. Chemistry w.e.f. Academic session 2018 - 19 – Reg.

It is hereby notified for the information of all concerned that on the recommendations of the Board of Studies, Department of Chemistry & Chemical Sciences and School Board, School of Basic and Applied Sciences, the Academic Council has approved the Course Scheme and Syllabus of 1st to 10th semesters of Integrated M.Sc. in Chemistry w.e.f. Academic Session 2018-19. The approved course scheme and syllabus are as under:

Semester – I

| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|--------------------------|---|-----------|----------|----------|----------|------------|
| Core Courses | | | | | | |
| ICCHM1C004T | General Chemistry – I | 4 | 25 | 25 | 50 | 100 |
| ICCHM1C005L | General Chemistry Lab – I | 4 | 25 | 25 | 50 | 100 |
| ICAMT1C001T | Mathematics – I | 4 | 25 | 25 | 50 | 100 |
| ICZOL1C002T | Zoology – I | | | | | |
| ICPHY1C001T | Physics – I | 4 | 25 | 25 | 50 | 100 |
| ICBOT1C002T | Botany – I (Plant Kingdom Diversity in forms, structure and reproduction) | | | | | |
| ICPHY1C002L | Physics Lab – I (04 Credits) | 4 | 25 | 25 | 50 | 100 |
| ICBOT1C002L | Botany Lab – I (02 Credits) & | | | | | |
| ICZOL1C003L | Zoology Lab – I (02 Credits) | | | | | |
| Foundation Course | | | | | | |
| ICECL1F001T | English | 4 | 25 | 25 | 50 | 100 |
| Total | | 24 | - | - | - | 600 |

Semester – II

| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|---------------------------------|--------------------------------|-----------|----------|----------|----------|------------|
| Core Courses | | | | | | |
| ICCHM2C004T | General Chemistry – II | 4 | 25 | 25 | 50 | 100 |
| ICCHM2C005L | General Chemistry Lab – II | 4 | 25 | 25 | 50 | 100 |
| ICPHY2C001T | Physics – II | 4 | 25 | 25 | 50 | 100 |
| ICBOT2C002T | Botany – II | | | | | |
| ICAMT2C001T | Mathematics – II | 4 | 25 | 25 | 50 | 100 |
| ICZOL2C002T | Zoology – II | | | | | |
| ICPHY2C002L | Physics Lab – II (04 Credits) | 4 | 25 | 25 | 50 | 100 |
| ICBOT2C003L | Botany Lab – II (02 Credits) & | | | | | |
| ICZOL2C003L | Zoology- Lab – II (02 Credits) | | | | | |
| Interdisciplinary Course | | | | | | |
| ICEVS2C001T | Environmental Science | 4 | 25 | 25 | 50 | 100 |
| Foundation Course | | | | | | |
| ICICT2F001T | Introduction to Computers | 4 | 25 | 25 | 50 | 100 |
| Total | | 28 | - | - | - | 700 |

Handwritten signature

Handwritten mark

Semester – III

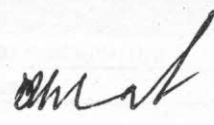
| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|---------------------------------|---|-----------|-----|-----|-----|------------|
| Core courses | | | | | | |
| ICCHM3C003T | Inorganic Chemistry – I | 4 | 25 | 25 | 50 | 100 |
| ICCHM3C004T | Organic Chemistry – I | 4 | 25 | 25 | 50 | 100 |
| ICCHM3C005T | Physical Chemistry – I | 4 | 25 | 25 | 50 | 100 |
| ICCHM3C005L | Inorganic Chemistry Lab – I | 3 | 25 | 25 | 50 | 100 |
| ICCHM3C006L | Organic Chemistry Lab – I | 3 | 25 | 25 | 50 | 100 |
| Interdisciplinary Course | | | | | | |
| ICMOL3I001T | Biochemistry | 4 | 25 | 25 | 50 | 100 |
| Foundation Course | | | | | | |
| ICECL3F001T | Communication Skill in English and Allied Factors | 4 | 25 | 25 | 50 | 100 |
| Total | | 26 | | | | 700 |

Semester – IV

| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|--------------------------|----------------------------|-----------|-----|-----|-----|------------|
| Core courses | | | | | | |
| ICCHM4C004T | Inorganic Chemistry – II | 4 | 25 | 25 | 50 | 100 |
| ICCHM4C005T | Organic Chemistry – II | 4 | 25 | 25 | 50 | 100 |
| ICCHM4C006T | Physical Chemistry – II | 4 | 25 | 25 | 50 | 100 |
| ICCHM4C006L | Organic Chemistry Lab – II | 4 | 25 | 25 | 50 | 100 |
| Elective Course | | | | | | |
| ICCHM4E001L | Physical Chemistry Lab – I | 4 | 25 | 25 | 50 | 100 |
| Foundation Course | | | | | | |
| ICCHM4F001T | Basic Analytical Chemistry | 4 | 25 | 25 | 50 | 100 |
| Total | | 24 | - | - | - | 600 |

Semester – V

| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|------------------------|---|-----------|------|------|-----|------------|
| Core courses | | | | | | |
| ICCHM5C001T | Organic Spectroscopy and Compounds with Heteroatoms | 4 | 25 | 25 | 50 | 100 |
| ICCHM5C002T | Quantum Mechanics, Surface and Colloidal Chemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM5C001P | Seminar | 2 | 12.5 | 12.5 | 25 | 50 |
| ICCHM5C001L | Physical Chemistry Lab – II | 3 | 25 | 25 | 50 | 100 |
| Elective Course | | | | | | |
| ICCHM5E001T | Properties of Inorganic Metal Complexes | 4 | 25 | 25 | 50 | 100 |
| ICCHM5E002T | Natural Products Chemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM5E001L | Inorganic Chemistry Lab – II | 3 | 25 | 25 | 50 | 100 |
| Total | | 24 | | | | 650 |



Semester – VI

| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|-----------------|--|-----------|-----|-----|-----|------------|
| Core courses | | | | | | |
| ICCHM6C001T | Selected Topics in Inorganic Chemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM6C002T | Bioorganic and Heterocyclic Chemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM6C001D | Dissertation (Project Work) | 6 | 25 | 25 | 50 | 100 |
| Elective Course | | | | | | |
| ICCHM6E001T | Spectroscopy and Computational Chemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM6E002T | Applied Chemistry | 4 | 25 | 25 | 50 | 100 |
| Total | | 22 | | | | 500 |

Semester – VII

| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|-------------------|---|-----------|------|------|-----|------------|
| Core courses | | | | | | |
| ICCHM7C001T | Bonding Theories and Inorganic Reaction Mechanisms | 4 | 25 | 25 | 50 | 100 |
| ICCHM7C002T | Organic Reaction Mechanism and Stereochemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM7C001L | Preparation of Inorganic Complexes and Analysis Lab | 3 | 25 | 25 | 50 | 100 |
| ICCHM7C002L | Organic Preparation and Qualitative Analysis Lab | 3 | 25 | 25 | 50 | 100 |
| ICCHM7C001P | Seminar | 2 | 12.5 | 12.5 | 25 | 50 |
| Elective Course | | | | | | |
| ICCHM7E001T | Quantum Chemistry and Chemical Dynamics | 4 | 25 | 25 | 50 | 100 |
| Foundation Course | | | | | | |
| ICCHM7F001T | Analytical Chemistry | 4 | 25 | 25 | 50 | 100 |
| | | 24 | - | - | - | 650 |

Semester – VIII

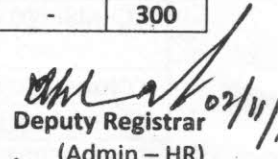
| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|-------------------|---|-----------|-----|-----|-----|------------|
| Core courses | | | | | | |
| ICCHM8C001T | Group Theory, Transition Metal Chemistry and Photochemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM8C002T | Group Theory and Spectroscopy | 4 | 25 | 25 | 50 | 100 |
| ICCHM8C001L | Organic Synthesis and Chromatography Lab | 3 | 25 | 25 | 50 | 100 |
| ICCHM8C002L | Thermodynamics, Kinetics and Spectroscopy Lab | 3 | 25 | 25 | 50 | 100 |
| Elective Course | | | | | | |
| ICCHM8E001T | Organic Synthesis and Reaction Mechanism | 4 | 25 | 25 | 50 | 100 |
| Foundation Course | | | | | | |
| ICCHM8F001T | Organic Spectroscopy and Organometallics | 4 | 25 | 25 | 50 | 100 |
| | | 22 | | | | 600 |

Semester – IX

| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|---------------------------------|--|-----------|-----|-----|-----|------------|
| Core courses | | | | | | |
| ICCHM9C001T | Thermodynamics and Electrochemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM9C002T | Reagents, Photochemistry and Heterocyclic Chemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM9C001L | Inorganic Preparation, Analysis and Chromatography Lab | 3 | 25 | 25 | 50 | 100 |
| ICCHM9C002L | Electrochemistry and Computational Chemistry Lab | 3 | 25 | 25 | 50 | 100 |
| ICCHM9C003L | Project Phase – I | 4 | 25 | 25 | 50 | 100 |
| Elective Course | | | | | | |
| ICCHM9E001T | Bio-inorganic and Supramolecular Chemistry | 4 | 25 | 25 | 50 | 100 |
| Interdisciplinary Course | | | | | | |
| ICCHM9I001T | Selected Topics in Physical and Inorganic Chemistry | 4 | 25 | 25 | 50 | 100 |
| | | 26 | | | | 700 |

Semester – X

| Course Code | Course Title | Credit | CIA | MSE | ESE | Max. Marks |
|----------------------------------|-----------------------------|-----------|----------|----------|----------|------------|
| Core courses | | | | | | |
| ICCHM10C001D | Dissertation (Project Work) | 12 | 25 | 25 | 50 | 100 |
| Elective Course (Any One) | | | | | | |
| ICCHM10E001T | Green Chemistry | 4 | 25 | 25 | 50 | 100 |
| ICCHM10E002T | Computational Chemistry | | | | | |
| ICCHM10E003T | Organometallic Chemistry | | | | | |
| ICCHM10E004T | Solid State Chemistry | | | | | |
| Interdisciplinary Course | | | | | | |
| ICCHM10I001T | Nano Chemistry | 4 | 25 | 25 | 50 | 100 |
| | | 20 | - | - | - | 300 |


 Deputy Registrar
 (Admin – HR)

Encl: Syllabus of Five Year Integrated M.Sc. Chemistry

To:
 Head, Department of Chemistry and Chemical Sciences

Copy to:
 OSD (Exam)