

**J.J College of Arts and Science (Autonomous)**  
Sivapuram Post, Pudukkottai – 622 422  
(Re-Accredited by NAAC – 4<sup>th</sup> Cycle)  
Affiliated to Bharathidasan University, Tiruchirappalli  
**PG and Research Department of Chemistry**  
**Minutes of the Board of Studies Meeting**

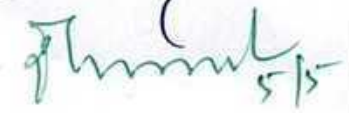
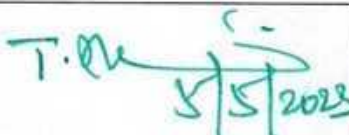
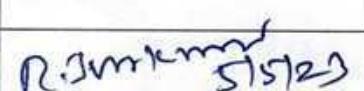
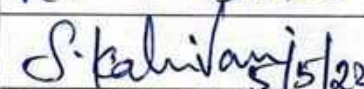
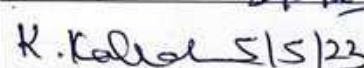
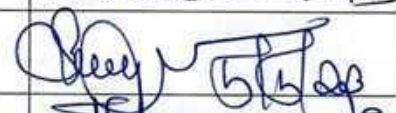
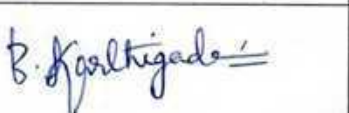
**Meeting No: 07**

**Date: 05.05.2023**

**Time: 10.30 a.m.**

The Meeting of the Board of Studies in Chemistry (U.G. and P.G.) for the **Sixth revision of the Curricula** to be implemented from **2023-2024**, was conducted at 10.30 a.m. on Friday, 05.05.2023.

**Members Present**

| S.No. | Name                                                                                                                         | Designation                     | Signature                                                                             |
|-------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------|
| 1.    | <b>Dr.C.Muthukumar</b><br>Assistant Professor and Head<br>Department of Chemistry                                            | Chairman                        |    |
| 2.    | <b>Dr.R.Ramesh</b><br>Professor and Chair, School of Chemistry<br>Bharathidasan University,<br>Tiruchirappalli – 620 024     | University Nominee              |    |
| 3.    | <b>Dr.T.Stalin</b><br>Associate Professor,<br>Department of Industrial Chemistry<br>Alagappa University, Karaikudi – 630 003 | Subject Expert                  |   |
| 4.    | <b>Dr.N.Dinakaran</b><br>Assistant Professor of Chemistry<br>Alagappa Government Arts College<br>Karaikudi – 630 003         | Subject Expert                  |                                                                                       |
| 5.    | <b>Dr.R.Sivakumar</b><br>Assistant Professor                                                                                 | Faculty Member                  |  |
| 6.    | <b>Ms.S.Kalaivani</b><br>Assistant Professor                                                                                 | Faculty Member                  |  |
| 7.    | <b>Ms.K.Kalaichelvi</b><br>Assistant Professor                                                                               | Faculty Member                  |  |
| 8.    | <b>Ms.K.R.Ulagu</b><br>Assistant Professor                                                                                   | Faculty Member                  |  |
| 9.    | <b>Dr.P.Jagajeevanram</b><br>Assistant Professor                                                                             | Faculty Member                  |  |
| 10.   | <b>Mr.M.Salai Vadamalai</b><br>Proprietor, Universe Food Products,<br>256 D, AV Road, Annavasal,<br>Pudukkottai – 622 101    | Representative from<br>Industry |  |
| 11.   | <b>Ms.B.Karthigadevi</b><br>No.11, New Annai Nagar,<br>Malaiyeedu, Attangudi Post,<br>Pudukkottai – 622 003                  | Alumni                          |  |

The Chairman, Dr.C.Muthukumar chaired the meeting and welcomed all the members to the Seventh BoS Meeting. After the brief introduction, the agenda items listed were taken up for discussion and the following resolutions were passed.

The following resolutions were proposed, discussed, finalized and passed in the Board of studies meeting of Chemistry for the **B.Sc. and M.Sc. Chemistry Programmes** which is to be implemented from the ensuing Academic year 2023-2024 onwards, pertaining to the approval from the Academic Council of the college.

1. As per the instructions from **TANSCH**E and the **Parent University**, it is resolved to include **75 % of mandatory inclusion** content from model syllabus and **25 % of Preferential inclusion** by our Department to preserve equivalence in U.G. and P.G. Degree Programmes to enable student Mobility to be implemented from the academic year 2023 – 2024 onwards is framed and restructured following the guidelines laid down by the UGC - LOCF and Tamil Nadu State Council for Higher Education (TANSCH)E and the Parent University.
2. It is resolved to evaluate the Syllabus followed during the Academic Year 2022-2023 based on the first Semester Results.
3. It is also resolved to analyze the previous Curriculum based on the feedback received from the Teachers, Employers, Students and the Alumni.
4. It is resolved to convene a Board of Studies meeting in the coming days (if the need arises) to incorporate the Modifications / Updations in the Curriculum based on the communication from the Parent University / TANSCH)E.
5. It is resolved to have the following 16 core courses for UG semester-wise

#### **Semester –I**

1. General Chemistry-I (U1R3CHCC1) (It the Core Course of previous curriculum but the unit contents are changed)
2. Quantitative Inorganic Estimation and Inorganic Preparation (U1R3CHCC2P) (It is the Core Course of previous curriculum but the unit contents are changed)

#### **Semester –II**

3. General Chemistry-II (U2R3CHCC3) (The Core Course of previous curriculum but the unit contents are changed)
4. Qualitative Organic Analysis and Preparation of Organic Compounds (U2R3CHCC4P) (The Core Course of previous curriculum but the unit contents are changed)

#### **Semester-III**

5. General Chemistry -III (U3R3CHCC5) (The Core Course of previous curriculum as it is, but the unit contents are changed)
6. Qualitative Inorganic Analysis (U3R3CHCC6P) (The Core Course of previous curriculum retained as it is)



#### **Semester-IV**

7. General Chemistry -IV (U4R3CHCC7) (The Core Course of previous curriculum retained as it is, but unit contents are changed )
8. Physical Chemistry Practical-I (U4R3CHCC8P) ( The Core Course of previous curriculum retained as it is, but unit contents are changed )

#### **Semester-V**

9. Organic Chemistry-I (U5R3CHCC9) (The Core Course of previous curriculum but the unit contents are changed)
10. Inorganic Chemistry-I (U5R2CHCC10) (The Core Course of previous curriculum but the unit contents are changed)
11. Physical Chemistry-I (U5R3CHCC11) (The Core Course of Previous curriculum, but unit contents are changed)
12. Project with Viva Voce (U5R3CHCC12) ( Newly introduced)

#### **Semester-VI**

13. Organic Chemistry -II (U6R3CHCC13) (The Core Course of previous curriculum but unit contents are changed)
14. Inorganic Chemistry -II (U6R3CHCC14) (The Core Course of previous curriculum but unit contents are changed)
15. Physical Chemistry-II (U6R3CHCC15) (The Core Course of Previous curriculum, but unit contents are changed)
16. Physical Chemistry Practical-II (U6R3CHCC16P) (The Core Course of previous curriculum but unit contents are changed)

### **II. Resolved to have the following 6 Allied Course for B.Sc. Chemistry**

First Allied Course in First two semesters (2 Courses), Syllabi designed and passed in BOS in Mathematics

- 1) Allied Mathematics -I (U1R3MAAC1) (The Course of previous curriculum but unit contents are changed)
- 2) Allied Mathematics -II (U2R3MAAC2) (The course of previous curriculum but unit contents are changed)

Second Allied Course in III and IV semesters (4 Courses), Syllabi designed and passed in BOS in Physics

- 1) Allied Physics -I (U3R3PHAC3) ( It is the Allied Course of previous curriculum but unit contents are changed)
- 2) Allied Physics Practical-I (U3R3PHAC4P) ( Newly introduced)
- 3) Allied Physics -II (U4R3PHAC5) ( It is the Allied Course of previous curriculum but unit contents are changed)
- 4) Allied Physics Practical-II (U4R3PHAC6P) (Newly introduced)

**III. Resolved to offer the following Allied Course to the Departments of Biochemistry and Physics**

- 1) Chemistry-I (U1R3CHAC1) ( Newly introduced for Biochemistry)
- 2) Allied Practical-I (U1R3CHAC2P) ( Newly introduced for Biochemistry)
- 3) Chemistry-II (U2R3CHAC3) ( Newly introduced for Biochemistry)
- 4) Allied Practical-II (U2R3CHAC4P) (Newly introduced for Biochemistry)
- 5) Chemistry-I (U3R3CHAC3) (Newly introduced for Physics)
- 6) Allied Practical-I (U3R3CHAC4P) ( Newly introduced for Physics)
- 7) Chemistry-II (U4R3CHAC5) (Newly introduced for Physics)
- 8) Allied Practical-II (U4R3CHAC6P) ( Newly introduced for Physics)

**IV. Resolved to have the following Discipline Specific Elective Course for UG**

- 1) Cosmetic and Personal Grooming ( Newly introduced)
- 2) Pesticide Chemistry ( Newly introduced)
- 3) Instrumental Methods of Chemical Analysis ( Newly introduced)
- 4) Forensic Science (Newly introduced)
- 5) Chemical Instrumentation (Newly introduced)

**V. Resolved to have the following Non-major Elective Courses**

- 1) Food Chemistry (Newly introduced)
- 2) Role of Chemistry (Newly introduced)
- 3) Dairy Chemistry (Newly introduced)

**VI. Resolved to have the following Skill Enhancement Course**

- 1) Experimental Skills in Chemistry ( Newly introduced)
- 2) Industrial Chemistry (Newly introduced)
- 3) Biochemistry ( Newly introduced)
- 4) Fundamentals of Spectroscopy (Newly introduced)
- 5) Nanoscience/Polymerscience/Pharmaceutical Chemistry ( Newly introduced)

**VII. It is resolved to newly introduce the “Foundation Course” in the first semester for the undergraduate students.**

**VIII. It is resolved to newly introduce “Ability Enhancement Compulsory Courses” in the first 4 semesters for the undergraduate students.**

**IX. It is resolved to newly introduce “Project with Viva Voce” for the undergraduate students in their 5<sup>th</sup> semester for the undergraduate students.**

**X. It is resolved to newly introduce “Professional competency skill” in the 6<sup>th</sup> semester for the undergraduate students.**

**XI. Resolved to have the following 13 Core Courses for PG Semester wise**



### **Semester-I**

- 1) Organic Reaction Mechanism -I(P1R3CHCC1) (The Core Course of previous curriculum, but unit contents are changed)
- 2) Structure and Bonding (P1R3CHCC2) (The Core Course of previous curriculum, but unit contents are changed)
- 3) Organic Chemistry Practical (P1R3CHCC3P) (The Core Course of previous curriculum retained as it is)

### **Semester-II**

- 4) Organic Reaction Mechanism-II (P2R3CHCC4) (The Core Course of previous curriculum, but unit contents are changed)
- 5) Physical Chemistry-I (P2R3CHCC5) (The Core Course of previous curriculum, but unit contents are changed)
- 6) Inorganic Chemistry Practical (P2R3CHCC6P) ( The Core Course of previous curriculum retained as it is)

### **Semester -III**

- 7) Organic Synthesis and Photochemistry (P3R3CHCC7) (Newly introduced)
- 8) Coordination Chemistry -I (P3R3CHCC8) (The Core Course of previous curriculum, but unit contents are changed)
- 9) Physical Chemistry Practical (P3R3CHCC9P) (The Core Course of Previous curriculum retained as it is)
- 10) Core Industry Module (P3R3CHCIM) ( Newly introduced )

### **Semester-IV**

- 11) Coordination Chemistry-II (P4R3CHCC10) ( Newly introduced)
- 12) Physical Chemistry-II (P2R3CHCC11) (The Core Course of previous curriculum, but unit contents are changed)
- 13) Analytical Instrumentation Techniques (P4R3CHCC12P) (The Core Course of previous curriculum, but unit contents are changed)
- 14) Project and Viva (P4R3CHCC13PW) (This Core Course of previous curriculum is retained as such)

**IX. Resolved to have the following Discipline Specific Elective Courses, Skill Enhancement Courses and Soft Skill Courses for PG Programme**

#### **Discipline Specific Elective Course**

- 1) **Pharmaceutical Chemistry** (The Course of Previous curriculum retained as it is)
- 2) **Nanomaterial and Nanotechnology** (The Course of Previous curriculum retained as it is)
- 3) **Electro Chemistry** (Newly introduced)
- 4) **Molecular Spectroscopy** (Newly introduced)

- 5) **Medicinal Chemistry** (The Course of Previous curriculum retained as it is)
- 6) **Green Chemistry** (The Course of Previous curriculum retained as it is)
- 7) **Bioinorganic Chemistry** (The Course of Previous curriculum retained as it is)
- 8) **Material Science** (The Course of Previous curriculum retained as it is)
- 9) **Pharmacognosy and Phytochemistry** (Newly introduced)
- 10) **Biomolecules and Heterocyclic Compound** (Newly introduced)
- 11) **Chemistry of Natural Products** (The Course of Previous curriculum retained as it is)
- 12) **Polymer Chemistry** (Newly introduced)

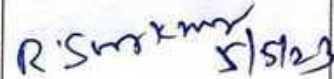
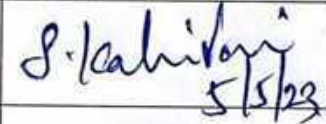
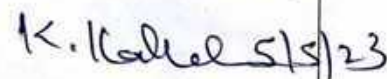
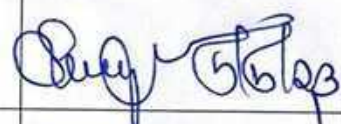
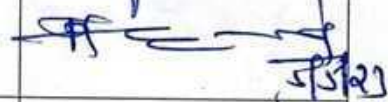
#### **Skill Enhancement Courses**

- 1) **Computational Chemistry** (Newly introduced)
- 2) **3D printing in Chemistry** (Newly introduced)
- 3) **Preparation of Consumer Products** (Newly introduced)
- 4) **Chemistry in Everyday life** (Newly introduced)
- 5) **Cosmetic Chemistry** (Newly introduced)
- 6) **Origin Lab** (Newly introduced)
- 7) **Industrial Chemistry** (Newly introduced)
- 8) **Research Tools and Technique** (Newly introduced)

#### **Soft Skill Courses**

- 1) **Chemistry for Life Sciences** (Newly introduced)
- 2) **Chemical Conservation** (Newly introduced)
- 3) **Chemistry in Food Preservation** (Newly introduced)
- 4) **Chemistry for Social Studies** (Newly introduced)
- 5) **Chemistry in Consumer Products** (Newly introduced)



| S.No. | Name                                                                                                                         | Designation                     | Signature                                                                                    |
|-------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------|
| 1.    | <b>Dr.C.Muthukumar</b><br>Assistant Professor and Head<br>Department of Chemistry                                            | Chairman                        |  5/5/23   |
| 2.    | <b>Dr.R.Ramesh</b><br>Professor and Chair, School of Chemistry<br>Bharathidasan University,<br>Tiruchirappalli – 620 024     | University Nominee              |  5/5      |
| 3.    | <b>Dr.T.Stalin</b><br>Associate Professor,<br>Department of Industrial Chemistry<br>Alagappa University, Karaikudi – 630 003 | Subject Expert                  |  5/5/2023 |
| 4.    | <b>Dr.N.Dinakaran</b><br>Assistant Professor of Chemistry<br>Alagappa Government Arts College<br>Karaikudi – 630 003         | Subject Expert                  |                                                                                              |
| 5.    | <b>Dr.R.Sivakumar</b><br>Assistant Professor                                                                                 | Faculty Member                  |  5/5/23   |
| 6.    | <b>Ms.S.Kalaivani</b><br>Assistant Professor                                                                                 | Faculty Member                  |  5/5/23 |
| 7.    | <b>Ms.K.Kalaichelvi</b><br>Assistant Professor                                                                               | Faculty Member                  |  5/5/23 |
| 8.    | <b>Ms.K.R.Ulagu</b><br>Assistant Professor                                                                                   | Faculty Member                  |  5/5/23 |
| 9.    | <b>Dr.P.Jagajeevanram</b><br>Assistant Professor                                                                             | Faculty Member                  |  5/5/23 |
| 10.   | <b>Mr.M.SalaiVadamalai</b><br>Proprietor, Universe Food Products,<br>256 D, AV Road, Annavasal,<br>Pudukkottai – 622 101     | Representative from<br>Industry |         |
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**J.J COLLEGE OF ARTS AND SCIENCE (Autonomous)**

**DEPARTMENT OF CHEMISTRY**

**M.Sc. CHEMISTRY**

Proposed Course Structure based on UGC-LOCF and TANSCH

(Choice Based Credit System)

(Applicable for the candidates admitted from academic year 2023-2024 onwards)

| SEMESTER – I  |             |                                                                        |            |        |           |       |      |       |
|---------------|-------------|------------------------------------------------------------------------|------------|--------|-----------|-------|------|-------|
|               | Course Code | Course Title                                                           | Hrs./ Week | Credit | Exam Hrs. | Marks |      | Total |
|               |             |                                                                        |            |        |           | Int.  | Ext. |       |
| PART A        | PIR3CHCC1   | CC1–Organic Reaction Mechanism-I                                       | 5          | 4      | 3         | 25    | 75   | 100   |
|               | PIR3CHCC2   | CC2–Structure and Bonding in Inorganic Compounds                       | 5          | 4      | 3         | 25    | 75   | 100   |
|               | PIR3CHCC3P  | CC3– Organic Chemistry Practical                                       | 5          | 4      | 3         | 25    | 75   | 100   |
|               | PIR3CHDSE1  | Elective I (Pharmaceutical Chemistry/Nanomaterials and Nanotechnology) | 5          | 3      | 3         | 25    | 75   | 100   |
|               | PIR3CHDSE2  | Elective II Electrochemistry/MolecularSpectroscopy                     | 5          | 3      | 3         | 25    | 75   | 100   |
| PART B        | PIR3CHAECC1 | Ability Enhancement Compulsory Course(AECC1)SoftSkill-1                | 2          | 2      | 3         | 25    | 75   | 100   |
|               | PIR3CHSEC1  | Skill Enhancement Course-SEC1                                          | 3          | 2      | 3         | 25    | 75   | 100   |
|               | Total       |                                                                        | 30         | 22     |           |       | 700  |       |
| SEMESTER – II |             |                                                                        |            |        |           |       |      |       |
| PART A        | P2R3CHCC4   | CC4–Organic Reaction Mechanism-II                                      | 5          | 4      | 3         | 25    | 75   | 100   |
|               | P2R3CHCC5   | CC5–PhysicalChemistry-I                                                | 5          | 4      | 3         | 25    | 75   | 100   |
|               | P2R3CHCC6P  | CC6–Inorganic Chemistry Practical                                      | 5          | 4      | 3         | 25    | 75   | 100   |
|               | P2R3CHDSE3  | Elective III: Medicinal Chemistry/Green Chemistry                      | 5          | 3      | 3         | 25    | 75   | 100   |
|               | P2R3CHDSE4  | Elective-IV: Bioinorganic Chemistry/Material Science                   | 5          | 3      | 3         | 25    | 75   | 100   |
| PART B        | P2R3CHSEC2  | Skill Enhancement Course-SEC2                                          | 3          | 2      |           |       |      | 100   |
|               | P2R3CHAECC2 | Ability Enhancement Compulsory Course(AECC2) SoftSkill-2               | 2          | 2      |           |       |      | 100   |
| Total         |             |                                                                        | 30         | 22     |           |       | 700  |       |

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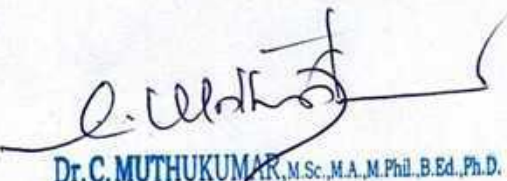
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Associate Professor  
Dept. of Industrial Chemistry  
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| SEMESTER – III |              |                                                                                                                                                   |            |           |   |    |    |             |
|----------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|---|----|----|-------------|
| PART A         | P3R3CHCC7    | CC7–Organic Synthesis and Photochemistry                                                                                                          | 5          | 4         | 3 | 25 | 75 | 100         |
|                | P3R3CHCC8    | CC8–Coordination Chemistry-I                                                                                                                      | 5          | 4         | 3 | 25 | 75 | 100         |
|                | P3R3CHCC9P   | CC9–Physical Chemistry Practical                                                                                                                  | 5          | 4         | 3 | 25 | 75 | 100         |
|                | P3R3CHDSE5   | Elective V(Generic/Discipline Specific) Pharmacognosy and Phytochemistry/ Biomolecules and Heterocyclic Compounds                                 | 5          | 3         | 3 | 25 | 75 | 100         |
|                | P3R3CH CIM   | Core Industry Module                                                                                                                              | 5          | 3         | 3 | 25 | 75 | 100         |
| PART B         |              |                                                                                                                                                   |            |           |   |    |    |             |
|                | P3R3CHSEC3   | SEC3:Professional Communication Skill-Term paper & Seminar presentation                                                                           | 3          | 2         | 3 | 25 | 75 | 100         |
|                | P3R3CHAECC3  | (AECC3)Soft Skill-3                                                                                                                               | 2          | 2         | 3 | 25 | 75 | 100         |
|                |              | Internship/Industrial Activity<br>(Carried out in Summer Vacation at the end of I year–30hours)                                                   | -          | 2         | - | 25 | 75 | 100         |
|                |              | <b>Total</b>                                                                                                                                      | <b>30</b>  | <b>24</b> |   |    |    | <b>800</b>  |
| SEMESTER – IV  |              |                                                                                                                                                   |            |           |   |    |    |             |
| PART A         | P4R3CHCC10   | CC10–Coordination Chemistry-II                                                                                                                    | 5          | 4         | 3 | 25 | 75 | 100         |
|                | P4R3CHCC11   | CC11– Physical Chemistry-II                                                                                                                       | 5          | 4         | 3 | 25 | 75 | 100         |
|                | P4R3CHCC12P  | CC12–Analytical Instrumentation Technique Practicals                                                                                              | 5          | 4         | 3 | 25 | 75 | 100         |
|                | P4R3CHDSE6   | Elective VI (Generic/ Discipline Specific) Chemistry of Natural products/Polymer Chemistry                                                        | 5          | 3         | 3 | 25 | 75 | 100         |
|                | P4R3CHCC13PW | Core Project with viva voce                                                                                                                       | 6          | 3         | 3 | 25 | 75 | 100         |
| PART B         | P4R3CHSEC4   | SEC4:Professional Competency Skill Enhancement Course-Training for Competitive Examinations (or) Chemistry for Advanced Research Studies (4hours) | 4          | 2         | - |    |    | 100         |
|                | P4R3CHAECC4  | (AECC4) Soft Skill-4                                                                                                                              |            | 2         |   |    |    | 100         |
| PART C         |              | Extension Activity                                                                                                                                |            | 1         |   |    |    |             |
|                |              | <b>Total</b>                                                                                                                                      | <b>30</b>  | <b>23</b> |   |    |    | <b>700</b>  |
|                |              | <b>Grand Total</b>                                                                                                                                | <b>120</b> | <b>91</b> |   |    |    | <b>2900</b> |

## Elective Courses

- 1) Pharmaceutical Chemistry
- 2) Nanomaterial and Nanotechnology
- 3) Electro Chemistry
- 4) Molecular Spectroscopy
- 5) Medicinal Chemistry
- 6) Green Chemistry
- 7) Bioinorganic Chemistry
- 8) Material Science
- 9) Pharmacognosy and Phytochemistry
- 10) Biomolecules and Heterocyclic Compound
- 11) Chemistry of Natural Products
- 12) Polymer Chemistry

  
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**DEPARTMENT OF CHEMISTRY**  
**B.Sc. CHEMISTRY**

Proposed Course Structure based on UGC-LOCF and TANSCH  
 (Choice Based Credit System)

(Applicable for the candidates admitted from academic year 2023-2024 onwards)

| SEMESTER-I  |                                |                                                                                              |              |        |             |       |     |                |
|-------------|--------------------------------|----------------------------------------------------------------------------------------------|--------------|--------|-------------|-------|-----|----------------|
| Part        | Course Code                    | Courses Title                                                                                | Hrs/<br>Week | Credit | Exam<br>Hrs | Marks |     | Total<br>Marks |
|             |                                |                                                                                              |              |        |             | Int   | Ext |                |
| Part-I      | U1R3TL1/HL1/<br>FL1/SL1/ABL1   | Language                                                                                     | 6            | 3      | 3           | 25    | 75  | 100            |
| Part-II     | U1R3EL1                        | English                                                                                      | 4            | 3      | 3           | 25    | 75  | 100            |
| Part-III    | U1R3CHCC1                      | General Chemistry-I (CC1)                                                                    | 5            | 5      | 3           | 25    | 75  | 100            |
|             | U1R3CHCC2P                     | Quantitative Inorganic<br>Estimation (Titrimetry)<br>and Inorganic Preparation<br>(CC2)      | 3            | 2      | 3           | 25    | 75  | 100            |
|             | U1R3MADSE1                     | Mathematics (or) Botany/<br>Zoology (EC1)                                                    | 6            | 4      | 3           | 25    | 75  | 100            |
| Part-IV     | U1R3CHSEC1                     | Non Major Elective (Food<br>Chemistry/ Role of<br>Chemistry in Daily life)                   | 2            | 2      | 3           | 25    | 75  | 100            |
|             | U1R3CHFC                       | Foundation Course (FC)                                                                       | 2            | 2      | 3           | 25    | 75  | 100            |
|             | U1R3CHAECC1                    | Soft Skill-1                                                                                 | 2            | 2      | 3           | 25    | 75  | 100            |
|             |                                |                                                                                              | 30           | 23     |             |       |     | 800            |
| SEMESTER-II |                                |                                                                                              |              |        |             |       |     |                |
| Part        | Course Code                    | Courses Title                                                                                | Hrs/<br>Week | Credit | Exam<br>Hrs | Marks |     | Total<br>Marks |
|             |                                |                                                                                              |              |        |             | Int   | Ext |                |
| Part-I      | U2R3TL2/HL2/<br>FL2/ SL2/ ABL2 | Language                                                                                     | 6            | 3      | 3           | 25    | 75  | 100            |
| Part-II     | U2R3EL2                        | English                                                                                      | 4            | 3      | 3           | 25    | 75  | 100            |
| Part-III    | U2R3CHCC3                      | General Chemistry-II(CC3)                                                                    | 5            | 5      | 3           | 25    | 75  | 100            |
|             | U2R3CHCC4P                     | Qualitative Organic<br>Analysis and Preparation of<br>Organic compounds (CC4)                | 3            | 2      | 3           | 25    | 75  | 100            |
|             | U2R3MADSE2                     | Mathematics (or) Botany/<br>Zoology (EC2)                                                    | 6            | 4      | 3           | 25    | 75  | 100            |
| Part-IV     | U2R3CHSEC2                     | Non Major Elective<br>(Dairy Chemistry)                                                      | 2            | 2      | 3           | 25    | 75  | 100            |
|             | U2R3CHSEC3                     | Skill Enhancement Course<br>SEC-3 (Discipline<br>Specific) Cosmetic and<br>Personal Grooming | 2            | 2      | 3           | 25    | 75  | 100            |
|             | U2R3CHAECC2                    | Soft Skill-2                                                                                 | 2            | 2      | 3           | 25    | 75  | 100            |
|             |                                |                                                                                              | 30           | 23     |             |       |     | 800            |

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**SEMESTER-III**

| Part     | Course Code                  | Courses Title                                                                  | Hrs/<br>Week | Credit    | Exam<br>Hrs | Marks |     | Total<br>Marks |
|----------|------------------------------|--------------------------------------------------------------------------------|--------------|-----------|-------------|-------|-----|----------------|
|          |                              |                                                                                |              |           |             | Int   | Ext |                |
| Part-I   | U3R3TL3/HL3/<br>FL3/SL3/ABL3 | Language                                                                       | 6            | 3         | 3           | 25    | 75  | 100            |
| Part-II  | U3R3EL3                      | English                                                                        | 4            | 3         | 3           | 25    | 75  | 100            |
| Part-III | U3R3CHCC5                    | General Chemistry-III (CC5)                                                    | 5            | 5         | 3           | 25    | 75  | 100            |
|          | U3R3CHCC6P                   | Quantitative Inorganic<br>Analysis (CC6)                                       | 4            | 2         | 3           | 25    | 75  | 100            |
|          | U3R3PHDSE3                   | Physics (EC3)                                                                  | 5            | 4         | 3           | 25    | 75  | 100            |
| Part-IV  | U3R3CHSEC4                   | Skill Enhancement Course<br>SEC-4 Experimental Skills in<br>Chemistry          | 1            | 1         | 3           | 25    | 75  | 100            |
|          | U3R3CHSEC5                   | Skill Enhancement Course<br>SEC-5 (Discipline Specific)<br>Pesticide Chemistry | 2            | 2         | 3           | 25    | 75  | 100            |
|          | U3R3CHAECC3                  | Soft Skill-3                                                                   | 2            | 2         | 3           | 25    | 75  | 100            |
|          |                              | EVS                                                                            | 1            | -         |             |       |     |                |
|          |                              |                                                                                | <b>30</b>    | <b>22</b> |             |       |     | <b>800</b>     |

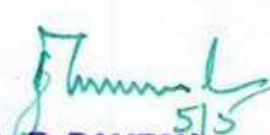
**SEMESTER-IV**

| Part     | Course Code                  | Courses Title                                                                                           | Hrs/<br>Week | Credit    | Exam<br>Hrs | Marks |     | Total<br>Marks |
|----------|------------------------------|---------------------------------------------------------------------------------------------------------|--------------|-----------|-------------|-------|-----|----------------|
|          |                              |                                                                                                         |              |           |             | Int   | Ext |                |
| Part-I   | U4R3TL4/HL4/<br>FL4/SL4/ABL4 | Language                                                                                                | 6            | 3         | 3           | 25    | 75  | 100            |
| Part-II  | U4R3EL4                      | English                                                                                                 | 4            | 3         | 3           | 25    | 75  | 100            |
| Part-III | U4R3CHCC7                    | General Chemistry-IV(CC7)                                                                               | 4            | 4         | 3           | 25    | 75  | 100            |
|          | U4R3CHCC8P                   | Physical Chemistry Practical-1<br>(CC8)                                                                 | 3            | 3         | 3           | 25    | 75  | 100            |
|          | U4R3PHDSE4                   | Physics (EC4)                                                                                           | 5            | 4         | 3           | 25    | 75  | 100            |
| Part-IV  | U4R3CHSEC6                   | Skill Enhancement Course<br>SEC-6 (Discipline Specific)<br>Instrumental Methods of<br>Chemical Analysis | 2            | 2         | 3           | 25    | 75  | 100            |
|          | U4R3CHSEC7                   | Skill Enhancement Course<br>SEC-7 (Discipline<br>Specific)Forensic Science                              | 2            | 2         | 3           | 25    | 75  | 100            |
|          | U4R3CHAECC4                  | Ability Enhancement<br>Compulsory Course (AECC)<br>Soft Skill-4                                         | 2            | 2         | 3           | 25    | 75  | 100            |
|          | U4R3CHEVS                    | EVS                                                                                                     | 2            | 2         |             | 25    | 75  | 100            |
|          |                              |                                                                                                         | <b>30</b>    | <b>25</b> |             |       |     | <b>900</b>     |



| SEMESTER-V  |                  |                                                                                                           |              |        |             |       |     |                |
|-------------|------------------|-----------------------------------------------------------------------------------------------------------|--------------|--------|-------------|-------|-----|----------------|
| Part        | Course Code      | Courses Title                                                                                             | Hrs/<br>Week | Credit | Exam<br>Hrs | Marks |     | Total<br>Marks |
|             |                  |                                                                                                           |              |        |             | Int   | Ext |                |
| Part-III    | U5R3CHCC9        | Organic Chemistry-I<br>(CC9)                                                                              | 5            | 4      | 3           | 25    | 75  | 100            |
|             | U5R3CHCC10       | Inorganic Chemistry-I<br>(CC10)                                                                           | 4            | 4      | 3           | 25    | 75  | 100            |
|             | U5R3CHCC11       | Physical Chemistry-I<br>(CC11)                                                                            | 5            | 4      | 3           | 25    | 75  | 100            |
|             | U5R3CHCC12<br>PW | Project with viva voce<br>(CC12)                                                                          | 4            | 4      | 3           | 25    | 75  | 100            |
|             | U5R3CHDSE5       | Biochemistry (EC5)                                                                                        | 4            | 3      | 3           | 25    | 75  | 100            |
|             | U5R3CHDSE6       | Industrial Chemistry<br>(EC6)                                                                             | 4            | 3      | 3           | 25    | 75  | 100            |
| Part-IV     | U5R3CHVE         | Value Education                                                                                           | 2            | 2      | 3           | 25    | 75  | 100            |
|             |                  | Internship/ Industrial<br>Visit/Field visit<br>(Carried out in during IV<br>semester vacation - 30 hours) | 2            | 2      | -           | 25    | 75  | 100            |
|             |                  |                                                                                                           | 30           | 26     | -           | -     | -   | 800            |
| SEMESTER-VI |                  |                                                                                                           |              |        |             |       |     |                |
| Part        | Course Code      | Courses Title                                                                                             | Hrs/<br>Week | Credit | Exam<br>Hrs | Marks |     | Total<br>Marks |
|             |                  |                                                                                                           |              |        |             | Int   | Ext |                |
| Part-III    | U6R3CHCC13       | Organic Chemistry-II<br>(CC13)                                                                            | 5            | 3      | 3           | 25    | 75  | 100            |
|             | U6R34HCC14       | Inorganic Chemistry-II<br>(CC14)                                                                          | 4            | 3      | 3           | 25    | 75  | 100            |
|             | U6R3CHCC15       | Physical Chemistry-II<br>(CC15)                                                                           | 5            | 4      | 3           | 25    | 75  | 100            |
|             | U6R3CHCC16P      | Physical Chemistry<br>Practical-II (CC16)                                                                 | 3            | 2      | 3           | 25    | 75  | 100            |
|             | U6R3CHDSE7       | Fundamentals of<br>Spectroscopy (EC7)                                                                     | 5            | 3      | 3           | 25    | 75  | 100            |
|             | U6R3CHDSE8       | Nanoscience /Polymer<br>Science/ Pharmaceutical<br>Chemistry (EC8)                                        | 4            | 3      | 3           | 25    | 75  | 100            |
| Part-IV     | U6R3CHSEC8       | Professional Competency<br>Skill                                                                          | 4            | 2      | 3           | 25    | 75  | 100            |
| Part-V      |                  | Extension Activity                                                                                        | -            | 1      | -           | -     | -   | -              |
|             |                  |                                                                                                           | 30           | 21     |             |       |     | 700            |
|             |                  |                                                                                                           | Total        | 140    |             |       |     | 4800           |

  
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