

DEPARTMENT OF APPLIED CHEMISTRY
FEEDBACK FROM STAKE HOLDERS AND ACTION TAKEN
(2019-2020)

The department has the formal and informal mechanisms to obtain the feedback from stakeholders through various sources.

1a) Student's feedback

- Course credits can be redesigned (The topics in some of the courses having 4 credits may be distributed to two different courses).
- Topics related to placement requirement can be increased.
- Suggestions for further reading can be improved.

1b) Alumni Feedback

- More choice to be provided to select elective courses and inter departmental courses
- The course content related to acquiring of skills relevant to placement opportunities should be increased

1c) Parents feedback

- The standard of education through Curriculum can be improved
- Course content can be revised to face competitive exams
- More courses can be added related to improving Employability / Entrepreneurship skills

1d) Teacher's feedback

- Courses handled should caters to the Regional/ National / Global needs
- Course contents are relevant to the societal need and include recent topics
- Courses involving problem solving / analytical / creative and innovative skills required for the students may be improved

Feed back 1a) From Students

IQAC - Student Feedback on Academic Quality

Department: Applied Chemistry

Reg. No. of Student: PRK18CH1008

| # | Criteria | 1. Very Good 2. Good 3. Average 4. Poor 5. Very Poor | | | | |
|----------------------------|--|--|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| A) Academic Course | | | | | | |
| 1 | Choice Based Credit System and Course Design | ✓ | | | | |
| 2 | Choice of course content to meet placement requirement | | ✓ | | | |
| 3 | Knowledge and intellectual enhancement through course content | | ✓ | | | |
| 4 | Teaching hours per week and credits allotted for each course | ✓ | | | | |
| 5 | Syllabus and suggestion of resources for further reading | | ✓ | | | |
| 6 | Freedom in selecting elective and inter-departmental courses | | ✓ | | | |
| B) Teaching and Evaluation | | | | | | |
| 7 | Teaching method followed by teachers | ✓ | | | | |
| 8 | Focus on practical knowledge, assignments and activities | ✓ | | | | |
| 9 | Preparation, communication and attitude of teachers | ✓ | | | | |
| 10 | Weightage given to different components of continuous internal assessment and its implementation | | ✓ | | | |
| 11 | Fairness of evaluation method followed for continuous assessment and semester exam | ✓ | | | | |
| 12 | Availability of faculty for interaction and guidance | ✓ | | | | |
| 13 | Mechanisms available to redress academic grievances | | ✓ | | | |
| 14 | Helpful attitude of administrators and non-teaching staff to provide conducive atmosphere for learning | ✓ | | | | |
| C) Facilities | | | | | | |
| 15 | Library facilities | ✓ | | | | |
| 16 | Lab / ICT facilities | ✓ | | | | |
| 17 | Residence facilities | ✓ | | | | |
| 18 | Recreational and student counselling facilities | | ✓ | | | |
| D) Guidance | | | | | | |
| 19 | Procedure followed in extension activities | | | ✓ | | |
| E) Extension | | | | | | |
| 20 | Extracurricular activities available and student participation | | | ✓ | | |
| 21 | scope offered for enhancing knowledge and skills through various clubs | | | ✓ | | |
| F) Overall | | | | | | |
| 22 | Overall rating of the program and other facilities provided | ✓ | | | | |

1b) Feedback from Alumni

Internal Quality Assurance Cell (IQAC)
Karunya Institute of Technology and Sciences
Coimbatore – 641 114

IQAC – Alumni Feedback

| # | Criteria | Very Good | Good | Average | Poor | Very Poor |
|--|---|-----------|------|---------|------|-----------|
| A) Course Content of Program Attended | | | | | | |
| 1 | The level of knowledge enrichment achieved through the course content | ✓ | | | | |
| 2 | Allotment of credits for each course and teaching hours per week | | ✓ | | | |
| 3 | The syllabus, design, resource and outcome of each course | ✓ | | | | |
| 4 | Choice provided to select elective courses and inter departmental courses | | ✓ | | | |
| 5 | The course content enabled acquiring of skills relevant to placement opportunities | | ✓ | | | |
| B) Industry Relevance of Course Content | | | | | | |
| 6 | Courses give more importance to ethical practices so as to mould the personality traits of learners | ✓ | | | | |
| 7 | Courses taught link the knowledge they gain with the real world situations | ✓ | | | | |
| 8 | Courses impart more practical knowledge than theory | ✓ | | | | |
| 9 | Course design narrows the gap between Industry and academia | | ✓ | | | |
| C) Teaching and Evaluation | | | | | | |
| 10 | Teaching method followed by teachers | ✓ | | | | |
| 11 | Syllabus portions for each course given for self-study and learning in forms of assignments, seminars, etc. | | ✓ | | | |
| 12 | Preparation, communication, and helpful attitude of teachers in assisting the learners | ✓ | | | | |
| 13 | Weightage given to different components of continuous internal assessment and the way in which they are implemented | | ✓ | | | |
| 14 | Fairness of evaluation method followed for continuous internal assessment and semester exam | ✓ | | | | |
| 15 | Availability of faculty for interaction and guidance | ✓ | | | | |
| 16 | Mechanisms available to redress academic grievances | | ✓ | | | |
| 17 | Helpful attitude of administrators, staff and non-teaching staff to provide suitable campus culture | ✓ | | | | |

| | | | | | | |
|-------------------------------|--|---|---|--|--|--|
| | and atmosphere | | | | | |
| D) Facilities | | | | | | |
| 18 | Library facilities | ✓ | | | | |
| 19 | Lab / ICT facilities | ✓ | | | | |
| 20 | Day Scholar facilities / Hostel facilities | ✓ | | | | |
| 21 | The recreational and student counselling facilities | ✓ | | | | |
| E) Outreach Activities | | | | | | |
| 22 | Methodology followed in extension activities | ✓ | | | | |
| 23 | Extracurricular activities available and student participation in them | ✓ | | | | |
| 24 | The scope offered for enhancing knowledge and skills through various clubs | | ✓ | | | |
| F) Overall | | | | | | |
| 25 | Overall rating of the program and its implementation | ✓ | | | | |

D. Govithajane

Signature

1c) Feedback from Parents

Parent Feedback

1. PARENT'S DETAIL

| | Name | | | | Age | Qualification | Occupation |
|---------------|---|--|----|-------------------------------------|--------------------------|--------------------------|-----------------------|
| Father | K. Sivaji | | | | 45 | 12 th Std | Branch post master |
| Mother | S. Radha | | | | 37 | Diploma in Publishing | House wife |
| Communication | House Address | | | | Office Address | | |
| | 6/317, Bithemora village Masakkal post, Kotagiri (via) The Nilgiris-643217 Mobile No.: 8489656508 Email ID: | | | | Mobile No.: Email ID: | | |
| Alumni | Yes | | No | <input checked="" type="checkbox"/> | Year of Study | Department | |

2. YOUR WARD'S DETAIL

| Name | | Department | Reg. No. | Day Scholar/ Campus Hostel/ Outside Hostel |
|-------------------|--|------------|------------------------|--|
| S. Sowmya | | Chemistry | PRK18CH1018 | Campus hostel |
| Mobile No. | 8489159601 | Email ID | sowmyabablu7@gmail.com | |
| HOSTEL DETAILS | Room No.: 335 Name of the Hostel: DMR | | | |
| | Address: Dakshinamoorthy Residence, Karunya Ladies hostel, Karunya nagar, Karunya, Coimbatore - 64104. | | | |

3. Your views on the Working of Autonomy in the Design of Curriculum & Teaching, Learning and Evaluation

| Karunya Institution of Technology and Sciences has brought in several changes in the Design of Curriculum. Tick your options | | | | | | |
|--|---|-------------------------------------|-------------------------------------|------|---------|------|
| S. No. | Particulars | Excellent | Very Good | Good | Average | Poor |
| 1 | Raising the standard of education through Curriculum | <input checked="" type="checkbox"/> | | | | |
| 2 | Competency of the Teachers in imparting the Course content and Skills effectively | <input checked="" type="checkbox"/> | | | | |
| 3 | Importance given to practical aspects in curriculum | | <input checked="" type="checkbox"/> | | | |
| 4 | Courses in the curriculum are socially relevant | <input checked="" type="checkbox"/> | | | | |
| 5 | Education provided creates confidence to face competitive exams | <input checked="" type="checkbox"/> | | | | |

| | | | | | | |
|---|--|---|---|--|--|--|
| 6 | Courses in the curriculum are suitable for Employability / Entrepreneurship | | ✓ | | | |
| 7 | The interaction between staff and students inside and outside the classrooms | ✓ | | | | |
| 8 | Usage of Technologies by faculty relevant to the course | ✓ | | | | |
| 9 | Evaluation system in exams followed in the Institution | ✓ | | | | |

4. Your views on the Education, Facilities and Resources in Karunya Institute of Technology and Sciences

| Karunya Institution of Technology and Sciences provides lots of facilities and resources to encourage and motivate the students to learn more. Some of them are mentioned below. | | | | | | |
|--|--|-----------|-----------|------|---------|------|
| S. No. | Particulars | Excellent | Very Good | Good | Average | Poor |
| 1 | The Institution offers quality education in a holistic way | ✓ | | | | |
| 2 | The overall facilities available in the Institution | ✓ | | | | |
| 3 | Placement training and facilities | ✓ | | | | |
| 4 | Internet and Wi-Fi facility | | ✓ | | | |
| 5 | Library facilities | ✓ | | | | |
| 6 | Sanitation facilities | ✓ | | | | |
| 7 | Facilities in the Residences | ✓ | | | | |
| 8 | Co-curricular activities | ✓ | | | | |
| 9 | Mentoring and counselling system | ✓ | | | | |
| 10 | Bridge courses in English / Computer / Mathematics conducted in the First year | ✓ | | | | |
| 11 | Training programmes to impart life skills | ✓ | | | | |
| 12 | Fee Structure | ✓ | | | | |

5a. What is the unique feature of Karunya Institute of Technology and Sciences?

Infrastructure

5b. Are you willing to contribute to the development of the Institution? In what way?

No

5c. How do you rate the developmental activities organized by the department / institution?

Excellent

5d. What do you expect from the Institution for your son / daughter towards education?

Application based learning

S. Radha
Signature

1d) Feedback from Teachers

TEACHER FEEDBACK ON CURRICULAR DESIGN AND DEVELOPMENT 19-20 ODD

| | | | |
|---------------------|-----------------------|------------|---------------|
| Name of the Faculty | | Department | Academic year |
| | | | |
| Programme | Course Handled | | Course code |
| UG | Engineering Chemistry | | 19CH1002 |

Note : The scales mentioned in the questionnaire are as follows:

1. Commendable 2. Highly Satisfactory 3. Satisfactory 4. To be improved 5. Poor

| S. No | Questions | 1 | 2 | 3 | 4 | 5 |
|-------|---|---|---|---|---|---|
| 1 | Courses handled by me caters to the Regional/ National / Global needs | | ✓ | | | |
| 2 | Courses integrate / augment Professional and Employable skills | ✓ | | | | |
| 3 | Course contents are relevant to the societal need and include recent topics | | ✓ | | | |
| 4 | Courses involve problem solving / analytical / creative and innovative skills required for the students | ✓ | | | | |
| 5 | Courses involve sufficient lab work / case studies/ field trips etc. | ✓ | | | | |
| 6 | Courses motivate the students to use the resources such as library and e-gadgets for their learning | ✓ | | | | |
| 7 | Curriculum contains wide range of courses under CBCS including Core, Core Electives, Value Additions, Projects, etc. | ✓ | | | | |
| 8 | The credit and grading system followed are indicative of the weightage of the courses offered | | ✓ | | | |
| 9 | The Curriculum design, Teaching-Learning-Evaluation and examination transactions are effectively carried on time | | | | ✓ | |
| 10 | The evaluation schemes fulfils the learning system as student-centric | | ✓ | | | |
| 11 | The opportunity given to me to design the courses as per the common objective of the department for the benefit of students | ✓ | | | | |

Signature with date

ACTION TAKEN

- All 4 credit courses have been changed to 3 credits

Table 1(e) M.Sc. Chemistry Programme Course Structure

| Sl. No | Sub Code | Program Core – 52 credits & Part/Full semester project | Credits |
|--------|----------|--|---------|
| 1 | 20CH3001 | Chemical Kinetics and Chemical Thermodynamics | 3:0:0 |
| 2 | 20CH3002 | Theories of Chemical Bonding | 3:0:0 |
| 3 | 20CH3003 | Organic Reaction Mechanism and Stereochemistry | 3:0:0 |
| 4 | 20CH3004 | Statistical Thermodynamics and Quantum Chemistry | 3:0:0 |
| 5 | 20CH3005 | Coordination Chemistry of Transition Elements | 3:0:0 |
| 6 | 20CH3006 | Principles of Molecular Spectroscopy | 3:0:0 |
| 7 | 20CH3007 | Synthetic Reagents and Methodology | 3:0:0 |
| 8 | 20CH3008 | Group Theory and Applied Physical Chemistry | 3:0:0 |
| 9 | 20CH3009 | Organometallic and Bioinorganic Chemistry | 3:0:0 |
| 10 | 20CH3010 | Pericyclic Reactions and Biomolecules | 3:0:0 |

- Topics related to placement requirement can be increased.
- The course content related to acquiring of skills relevant to placement opportunities should be increased (Both part semester and full semester project options are provided)
- The standard of education through Curriculum can be improved
- Course content can be revised to face competitive exams
- Courses handled should caters to the Regional/ National / Global needs
- Course contents are relevant to the societal need and include recent topics
- Courses involving problem solving / analytical / creative and innovative skills required for the students may be improved

The courses have been revised and more number of elective courses related to placements have been increased (BoS Minutes attached at the end)

List of Other Electives for M.Sc. Chemistry (2020-21 batch)

| Sl. No | Sub Code | Other Electives | Credits |
|--------|----------|--|---------|
| 1 | 20CH3023 | Research Methodology and IPR | 3:0:0 |
| 2 | 20CH3024 | Applied Polymer Chemistry | 3:0:0 |
| 3 | 20CH3025 | Laboratory Chemistry for the daily life | 0:0:2 |
| 4 | 20CH3026 | Forensic Chemistry | 3:0:0 |
| 5 | 20CH3027 | Advanced Photo and Electrocatalysis | 3:0:0 |
| 6 | 20CH3028 | Medicinal Chemistry | 3:0:0 |
| 7 | 20CH3029 | Photophysical Chemistry | 3:0:0 |
| 8 | 20CH3030 | Bioanalytical Chemistry and Biosensors | 3:0:0 |
| 9 | 20CH3031 | Nanomaterials Synthesis and Characterization | 3:0:0 |
| 10 | 20CH3032 | Stereoselective synthesis | 3:0:0 |
| 11 | 20CH3033 | Chemistry of Biofuels | 3:0:0 |
| 12 | 20CH3034 | Glass Forensic Science | 3:0:0 |
| 13 | 20CH3035 | Applied Chemical Crystallography | 3:0:0 |
| 14 | 20CH3036 | Chemistry of Carbenes | 3:0:0 |
| 15 | 20CH3037 | Metal-Organic Framework Materials | 3:0:0 |

| | | | |
|----|----------|---|-------|
| 16 | 20CH3038 | Advanced Main Group Chemistry | 3:0:0 |
| 17 | 20CH3039 | Chromatography | 3:0:0 |
| 18 | 20CH3040 | Water Treatment Technologies | 3:0:0 |
| 19 | 20CH3041 | Bioorganometallic Chemistry | 3:0:0 |
| 20 | 20CH3042 | Supramolecular Chemistry | 3:0:0 |
| 21 | 20CH3043 | Analytical Chemistry | 3:0:0 |
| 22 | 20CH3060 | Electrochemical Devices for Electric Vehicles | 3:0:0 |

- Suggestions for further reading can be improved.

More number of courses have been added. Students have been encouraged to study MOOC courses

ACTION TAKEN REPORT 2019-20

The stakeholders have appraised the updated course contents, knowledge of the students, willingness towards continuous learning, communication skills, satisfactory level of response from the Institution, etc. The action taken report on the following feedback is mentioned here.

| S. No. | Action Points | Actions Taken |
|--------|--|---|
| 1 | Some of the courses are having 4 credits which are lengthy and the topics may be distributed to two different courses. For example, the lanthanides and actinides unit may be removed from the coordination chemistry course and can be added in some other paper. | Most of the 4 credit courses have been converted to 3 Credit courses lanthanides and actinides have been removed from the coordination chemistry The unit solid state chemistry has been removed from the course 17CH3008 and added to Nuclear chemistry as a separate course |
| 2 | The following labs can be rearranged. Present courses Qualitative and quantitative inorganic analysis lab Qualitative and quantitative organic analysis lab Inorganic preparation lab Organic preparation lab These lab courses may be rearranged as Qualitative analysis and Inorganic preparation lab Inorganic quantitative analysis lab Qualitative analysis and organic preparation lab Organic quantitative analysis lab | Suggestions carried out |
| 3 | Chemistry of metal-metal multiple bonds should be included. | The topics have been included in 20CH3005 |

| | | |
|----|--|--|
| 4 | The course quantum theory and group theory is lengthy and the unit group theory may be added to any other physical chemistry course | Suggestions carried out |
| 5 | Kinetics and thermodynamics can be taught in the same semester | 20CH3001 - Chemical Kinetics and Chemical Thermodynamics |
| 6 | The course contents related to nuclear chemistry and solid state chemistry can be expanded | 20CH3019-Nuclear Chemistry and Solid State Chemistry |
| 7 | A unit on nanochemistry can be introduced. | A unit on nanomaterials has been included in the course 20CH3019-Nuclear Chemistry and Solid State Chemistry |
| 8 | In 2nd semester one more course can be added. | Number of credits in 2 nd and 3 rd semester has been distributed |
| 9 | Some more concepts in NMR spectroscopy can be added in the course molecular spectroscopy | Added |
| 10 | Electronic spectroscopy of diatomic molecules can be added | Included |
| 11 | Asymmetric synthesis can be included | Included |
| 12 | Molecular rearrangement can be included | Added |
| 13 | More reagents used in organic synthesis can be included | More reagents have been added |
| 14 | Total synthesis of natural products can be included | Included |
| 15 | Instead of taking spectroscopy studies in second and third semester, it could be better if spectroscopy together (theory and instrumentation) in one semester. | Modern instrumental analysis lab has been brought to 2 nd semester along with the molecular spectroscopy course |
| 16 | Include the last two theory papers into any of the semester and convert the half semester project into full semester | Full semester project has been given as an option |
| 17 | A course on instrumental training can be added. So that all the students will get hands on training. | Training is provided during various semesters |
| 18 | Chemistry in everyday life lab can include in the first year. so that the students will get more interested with the daily life application in chemistry | Included in 4 th Semester |
| 19 | Computational chemistry - course can be added to the curriculum. | Will be provided as elective |
| 20 | Synthesis and extraction of Natural products - course can be added | Included |

FEEDBACK ANALYSIS 2019-20

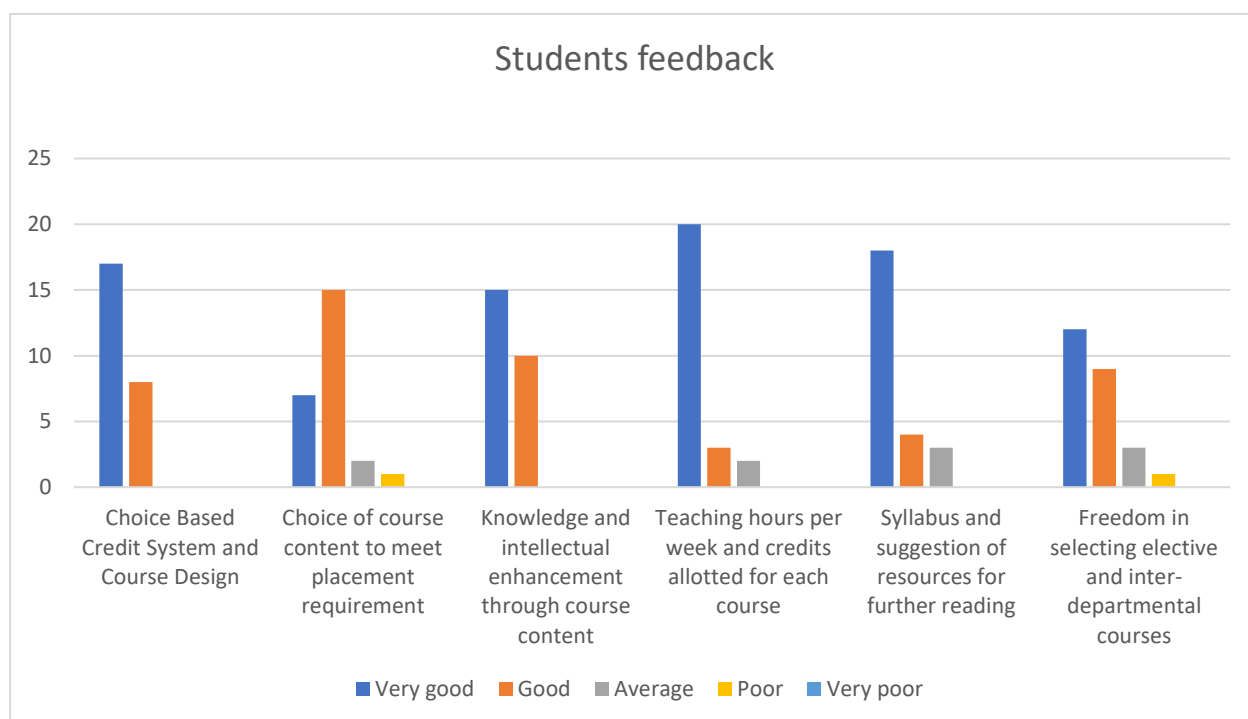
The feedback from the parents, employers, alumnus, students and faculty members are analyzed using various criterions and evaluated below.

1. Feedback from students:

Feedback from the students are collected for the improvement of the curriculum based on the following criterions.

| # | Criteria | 1 | 2 | 3 | 4 | 5 |
|--------------------|---|---|---|---|---|---|
| A) Academic Course | | | | | | |
| 1 | Choice Based Credit System and Course Design | | | | | |
| 2 | Choice of course content to meet placement requirement | | | | | |
| 3 | Knowledge and intellectual enhancement through course content | | | | | |
| 4 | Teaching hours per week and credits allotted for each course | | | | | |
| 5 | Syllabus and suggestion of resources for further reading | | | | | |
| 6 | Freedom in selecting elective and inter-departmental courses | | | | | |

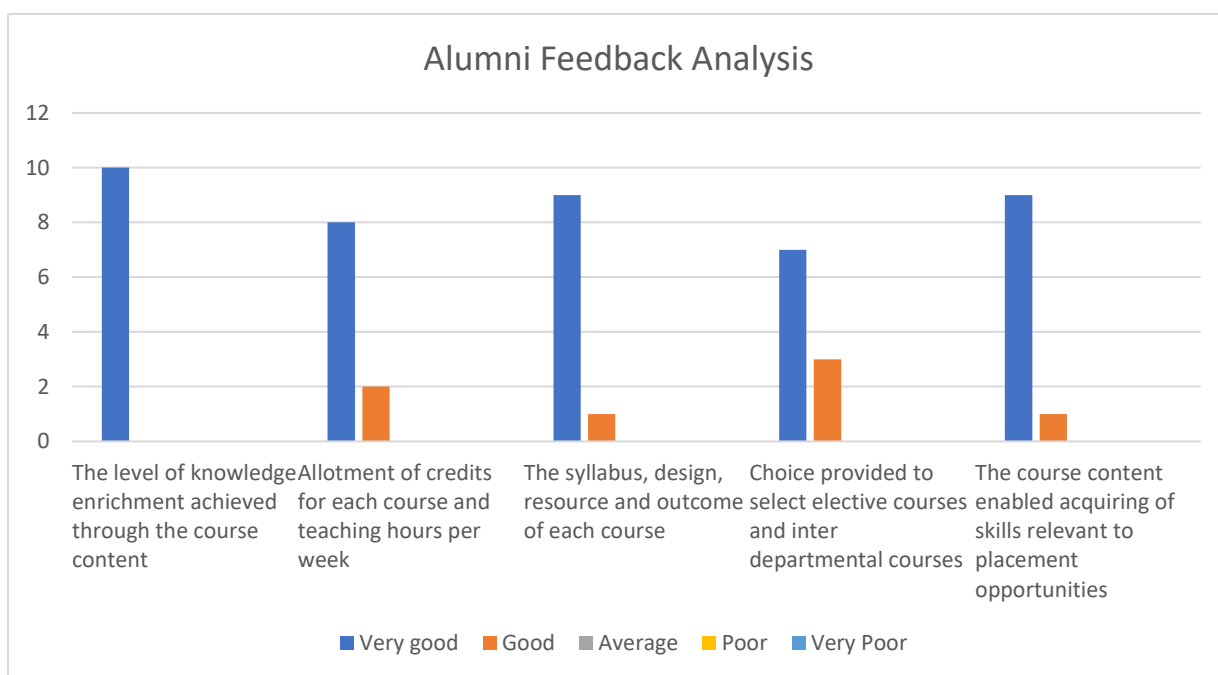
1. Very Good 2. Good 3. Average 4. Poor 5. Very Poor



2. Feedback from Alumni:

Feedback from the Alumni are collected during alumni meetings for the improvement of the curriculum based on the following criterions.

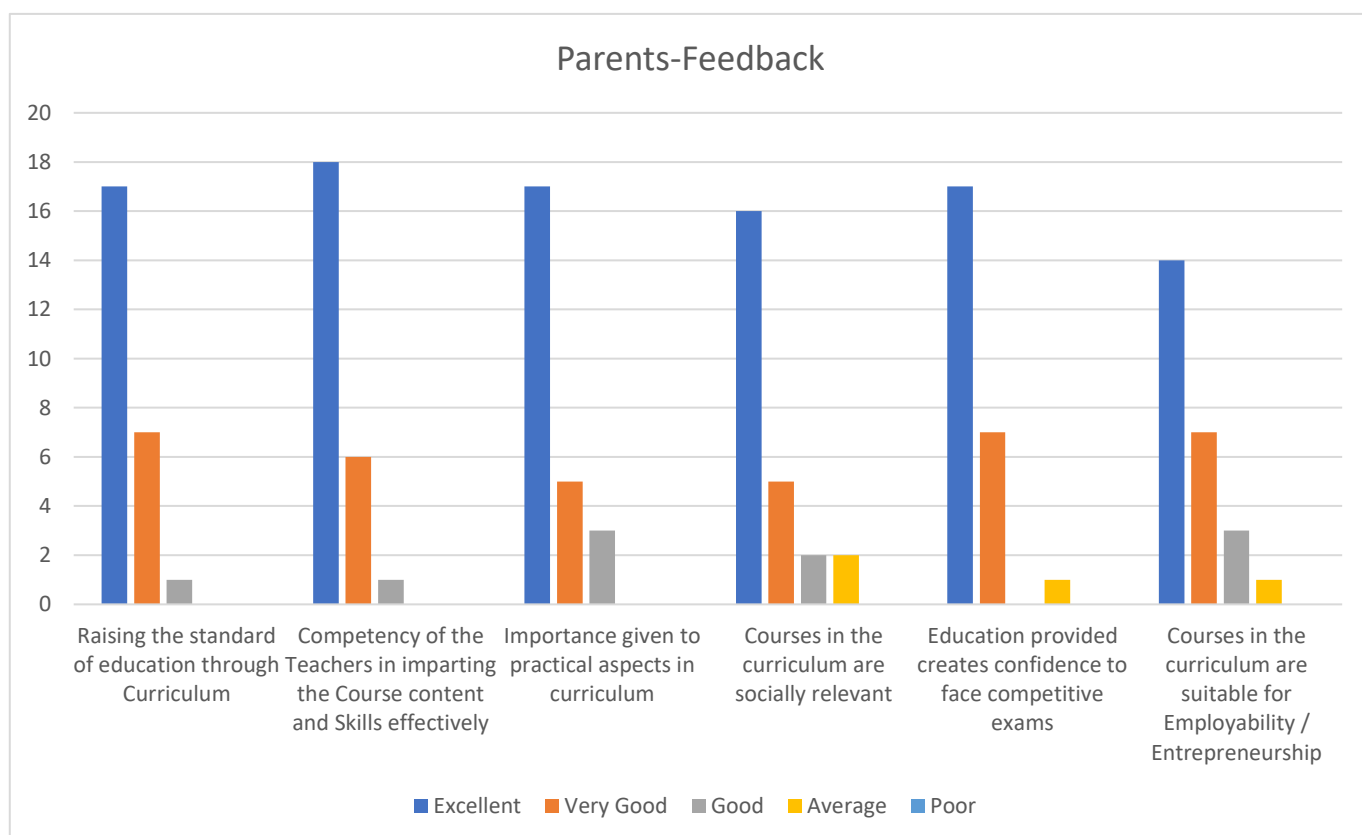
| # | Criteria | Very Good | Good | Average | Poor | Very Poor |
|--|--|-----------|------|---------|------|-----------|
| A) Course Content of Program Attended | | | | | | |
| 1 | The level of knowledge enrichment achieved through the course content | | | | | |
| 2 | Allotment of credits for each course and teaching hours per week | | | | | |
| 3 | The syllabus, design, resource and outcome of each course | | | | | |
| 4 | Choice provided to select elective courses and inter departmental courses | | | | | |
| 5 | The course content enabled acquiring of skills relevant to placement opportunities | | | | | |



3. Feedback from parents

Feedback from the parents are collected during the parents-teacher meeting meeting where the feedback about the curriculum is also collected for analysis and improvement based on the following criterion

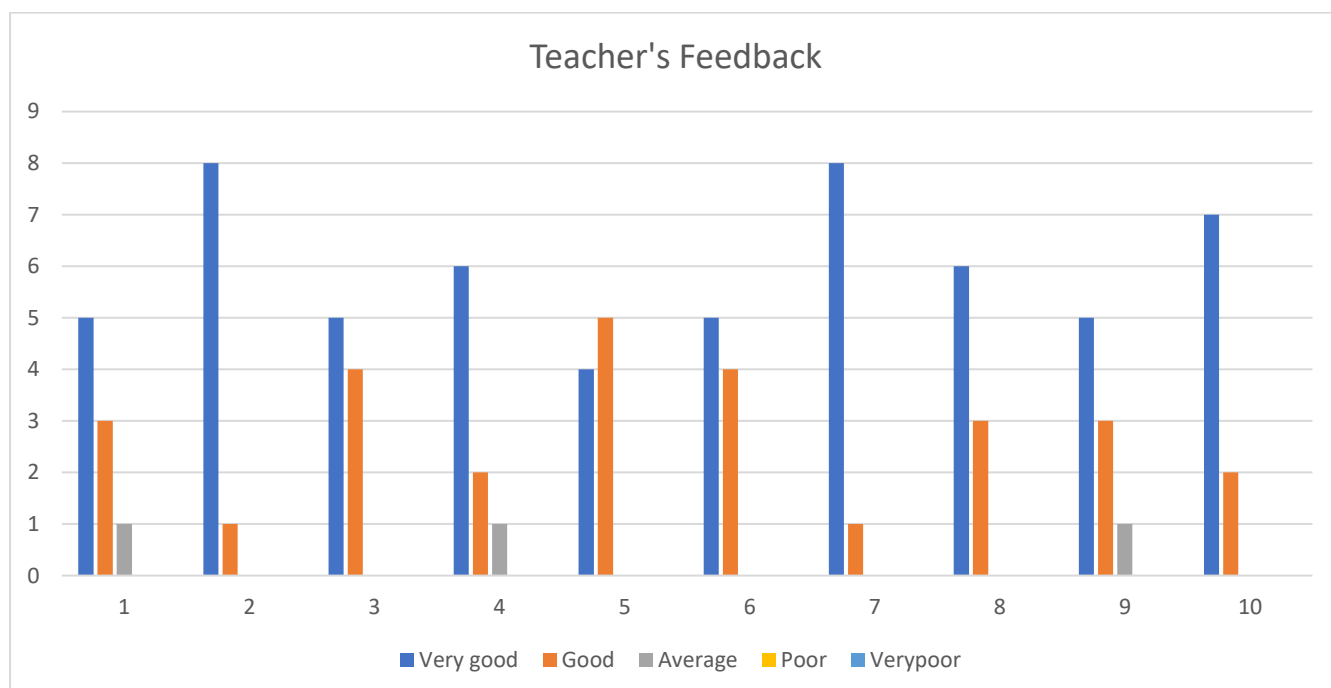
| Karunya Institution of Technology and Sciences has brought in several changes in the Design of Curriculum. Tick your options | |
|--|---|
| S. No. | Particulars |
| 1 | Raising the standard of education through Curriculum |
| 2 | Competency of the Teachers in imparting the Course content and Skills effectively |
| 3 | Importance given to practical aspects in curriculum |
| 4 | Courses in the curriculum are socially relevant |
| 5 | Education provided creates confidence to face competitive exams |
| 6 | Courses in the curriculum are suitable for Employability / Entrepreneurship |



4. Feedback from Teachers

Feedback from the teachers are collected every year for analysis and improvement based on the following criterion

| S. No | Questions |
|-------|---|
| 1 | Courses handled by me caters to the Regional/ National / Global needs |
| 2 | Courses integrate / augment Professional and Employable skills |
| 3 | Course contents are relevant to the societal need and include recent topics |
| 4 | Courses involve problem solving / analytical / creative and innovative skills required for the students |
| 5 | Courses involve sufficient lab work / case studies/ field trips etc. |
| 6 | Courses motivate the students to use the resources such as library and e-gadgets for their learning |
| 7 | Curriculum contains wide range of courses under CBCS including Core, Core Electives, Value Additions, Projects, etc. |
| 8 | The credit and grading system followed are indicative of the weightage of the courses offered |
| 9 | The Curriculum design, Teaching-Learning-Evaluation and examination transactions are effectively carried on time |
| 10 | The opportunity given to me to design the courses as per the common objective of the department for the benefit of students |







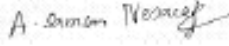

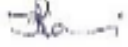


Department of Applied Chemistry
Karunya Institute of Technology and Sciences,
Karunya Nagar – 641 114.


Minutes of the meeting of the Board of Studies (BoS) of the Department of Applied Chemistry

Date: 21-08-2020, 4.00 PM

Venue: through Zoom Platform

Members Present

| S.No | Members | Signature |
|------|--|---|
| 1. | Dr. C. Joseph Kennedy, Chairman, The Dean, SSAMM, and Head i/c –Department of Applied Chemistry KITS, Coimbatore |  |
| 2. | Dr. L. Vishnu Varthini, Assistant Professor Department of Biochemistry KR College of Arts and Science Kovilpatti |  |
| 3. | Mr. S Jeyakumar, Sr. DGM Head R&D, AMCO Batteries Industrial Expert, External Division of TAFE Plant II CMDA Industrial Estate Maraimalai Nagar |  |
| 4. | Dr. Devi Radhika, Assistant Professor Alumni Department of Chemistry Faculty of Engineering and Technology Jain Deemed-to-be University, Jakkasandra (PO) - 562 112 |  |
| 5. | Dr. A. Samson Nesaraj, Professor Department of Applied Chemistry KITS, Coimbatore |  |
| 6. | Dr. R. Nandhakumar, Associate Professor Department of Applied Chemistry KITS, Coimbatore |  |
| 7. | Dr. K. Parameswari, Associate Professor, Department of Applied Chemistry KITS, Coimbatore |  |
| 8. | Dr. V. Vijaikanth, Associate Professor Department of Applied Chemistry KITS, Coimbatore |  |
| 9. | Dr. B. Jebasingh, Associate Professor Department of Applied Chemistry KITS, Coimbatore |  |

| | | |
|-----|---|---|
| 10. | Dr. V. Madhu, Assistant Professor Department of Applied Chemistry KITS, Coimbatore |  |
|-----|---|---|

The meeting started with prayer by Dr.K. Parameswari
Prof. C. Joseph Kennady, The Dean, SSAMM and the Head i/c of the Department welcomed all the members.

Agenda:

- POs, PSOs and revamping the syllabi for the M.Sc Chemistry program for 2020-21 batch
- POs, PSOs, Course structure and formation of syllabi for the program B.Sc Forensic Science (2020-21) batch
- POs, PSOs, Course structure and formation of syllabi for the program M.Sc Forensic Science (2020-21) batch
- Chemistry Syllabi for the first year B.Tech program
- Any other matter

1. Curriculum and Syllabi for M.Sc Chemistry (2020-21) batch

The Program outcomes (POs), Program specific objectives (PSOs), Programme course structure, the curriculum and the syllabi of M.Sc Chemistry program have been discussed. The syllabi of the courses framed by the faculty members based on the comments and feedbacks from the alumni, the employers, the parents and from the students have been discussed. Based on the suggestions, the POs, PSOs, mapping of PSOs with the mission of the department, the credit distribution, Program course structure and Semester wise curriculum for M.Sc Chemistry Program are given in tables 1(a) to 1(f) respectively. The syllabi of the various courses given at the end have been discussed.

Table 1(a). Programme Outcomes (POs) for the M.Sc Program

| | |
|-----|--|
| PO1 | Acquire problem solving, initiative and enterprise skills that contribute to productive and innovative outcomes. |
| PO2 | Develop and update domain knowledge relevant to the chosen field to succeed in highly competitive and rapidly changing work environments. |
| PO3 | Prepare to utilize the acquired knowledge leading to innovation and entrepreneurship in order to eliminate the problems of the society. |
| PO4 | Demonstrate the ability to design and conduct experiments, demos, create models to analyze and interpret data |
| PO5 | Design and perform experiments related to scientific and computational theories and conceive potential technological applications. |
| PO6 | Demonstrate ability for collaborative research and scientific communication through projects, internship and on-site training. |
| PO7 | Conceive the ways and means to address various social, economic, environmental, human rights and other critical issues faced by humanity at the local, national and global levels. |

Table 1(b). Programme Specific Objectives (PSOs)

| | |
|-------|--|
| PSO 1 | Demonstrate quality chemistry knowledge with solid fundamentals to understand and solve global problem |
| PSO 2 | Exhibit professional efficiency as chemists, academicians and researchers. |

| | |
|-------|--|
| PSO 3 | Hold professional ethics as chemists, entrepreneurs in facing the challenges at the global level |
|-------|--|

Table 1(c). Mapping of PSOs with the mission of the department

| Key Components of Mission Statements | PSO | | |
|--|------|------|------|
| | PSO1 | PSO2 | PSO3 |
| Solutions to human problems | √ | √ | √ |
| Academic Excellence | √ | √ | |
| Professional competence and exemplary values | | √ | √ |

Table 1(d). Credit distribution

| | Credits | |
|---|-----------|--|
| Core | 52 | |
| Professional Electives | 12 | |
| Other Electives | 14/6 | |
| Part Semester Project/ Full Semester project | 12/20 | To be offered in 4 th Semester only |
| Total | 90 | |

Table 1(e) M.Sc. Chemistry Programme Course Structure

| Sl. No | Sub Code | Program Core – 52 credits & Part/Full semester project | Credits |
|--------|---------------------|--|------------------|
| 1 | 20CH3001 | Chemical Kinetics and Chemical Thermodynamics | 3:0:0 |
| 2 | 20CH3002 | Theories of Chemical Bonding | 3:0:0 |
| 3 | 20CH3003 | Organic Reaction Mechanism and Stereochemistry | 3:0:0 |
| 4 | 20CH3004 | Statistical Thermodynamics and Quantum Chemistry | 3:0:0 |
| 5 | 20CH3005 | Coordination Chemistry of Transition Elements | 3:0:0 |
| 6 | 20CH3006 | Principles of Molecular Spectroscopy | 3:0:0 |
| 7 | 20CH3007 | Synthetic Reagents and Methodology | 3:0:0 |
| 8 | 20CH3008 | Group Theory and Applied Physical Chemistry | 3:0:0 |
| 9 | 20CH3009 | Organometallic and Bioinorganic Chemistry | 3:0:0 |
| 10 | 20CH3010 | Pericyclic Reactions and Biomolecules | 3:0:0 |
| 11 | 20CH3011 | Qualitative and Quantitative Organic Analysis Lab | 0:0:4 |
| 12 | 20CH3012 | Qualitative Analysis and Inorganic Preparation Lab | 0:0:4 |
| 13 | 20CH3013 | Physical Chemistry Lab | 0:0:4 |
| 14 | 20CH3014 | Inorganic Quantitative Analysis lab | 0:0:2 |
| 15 | 20CH3015 | Modern Instrumental Analysis Lab | 0:0:2 |
| 16 | 20CH3016 | Synthetic Organic Chemistry Lab | 0:0:2 |
| 17 | 17VE3002 | Value Education | 0:0:2 |
| | | Entrepreneurship and Business plan | 2:0:0 |
| | | Total Credits | 52 |
| | PSP3998/ FSP3999 | Part Semester Project (or) Full Semester Project | 0:0:12 0:0:20 |
| | | Total | 64/72 |

List of Professional Elective Courses for M.Sc. Chemistry (2020-21 batch)

| Sl No | Sub Code | Professional Electives – Minimum 12 credits to be earned | Credits |
|-------|----------|--|---------|
| 1 | 20CH3017 | Instrumental Methods of Chemical Analysis | 3:0:0 |
| 2 | 20CH3018 | Chemistry of non-transition elements | 3:0:0 |
| 3 | 20CH3019 | Nuclear Chemistry and Solid State Chemistry | 3:0:0 |
| 4 | 20CH3020 | Organic Spectroscopy | 3:0:0 |
| 5 | 20CH3021 | Supramolecular Chemistry and Green Chemistry | 3:0:0 |
| 6 | 20CH3022 | Applied Electrochemistry | 3:0:0 |

List of Other Electives for M.Sc. Chemistry (2020-21 batch)

| Sl No | Sub Code | Other Electives | Credits |
|-------|----------|---|---------|
| 1 | 20CH3023 | Research Methodology and IPR | 3:0:0 |
| 2 | 20CH3024 | Applied Polymer Chemistry | 3:0:0 |
| 3 | 20CH3025 | Laboratory Chemistry for the daily life | 0:0:2 |
| 4 | 20CH3026 | Forensic Chemistry | 3:0:0 |
| 5 | 20CH3027 | Advanced Photo and Electrocatalysis | 3:0:0 |
| 6 | 20CH3028 | Medicinal Chemistry | 3:0:0 |
| 7 | 20CH3029 | Photophysical Chemistry | 3:0:0 |
| 8 | 20CH3030 | Bioanalytical Chemistry and Biosensors | 3:0:0 |
| 9 | 20CH3031 | Nanomaterials Synthesis and Characterization | 3:0:0 |
| 10 | 20CH3032 | Stereoselective synthesis | 3:0:0 |
| 11 | 20CH3033 | Chemistry of Biofuels | 3:0:0 |
| 12 | 20CH3034 | Glass Forensic Science | 3:0:0 |
| 13 | 20CH3035 | Applied Chemical Crystallography | 3:0:0 |
| 14 | 20CH3036 | Chemistry of Carbenes | 3:0:0 |
| 15 | 20CH3037 | Metal-Organic Framework Materials | 3:0:0 |
| 16 | 20CH3038 | Advanced Main Group Chemistry | 3:0:0 |
| 17 | 20CH3039 | Chromatography | 3:0:0 |
| 18 | 20CH3040 | Water Treatment Technologies | 3:0:0 |
| 19 | 20CH3041 | Bioorganometallic Chemistry | 3:0:0 |
| 20 | 20CH3042 | Supramolecular Chemistry | 3:0:0 |
| 21 | 20CH3043 | Analytical Chemistry | 3:0:0 |
| 22 | 20CH3060 | Electrochemical Devices for Electric Vehicles | 3:0:0 |

Table 1(f). Semester wise Curriculum for M.Sc. Chemistry (2020-21 batch)

| Sl. No | | Sub Code | Name of the Subject | Credits |
|---------------------|------|----------|---|---------|
| SEMESTER ONE | | | | |
| 1 | Core | 20CH3001 | Chemical Kinetics and Chemical Thermodynamics | 3:0:0 |
| 2 | Core | 20CH3002 | Theories of Chemical Bonding | 3:0:0 |
| 3 | Core | 20CH3003 | Organic Reaction Mechanism and Stereochemistry | 3:0:0 |
| 4 | Core | 20CH3011 | Qualitative and Quantitative Organic Analysis Lab | 0:0:4 |
| 5 | Core | 20CH3014 | Inorganic Quantitative Analysis lab | 0:0:2 |
| 6 | | | Professional Elective 1 | 3:0:0 |
| 7 | | | Professional Elective 2 | 3:0:0 |
| 8 | | | Entrepreneurship and Business plan | 2:0:0 |
| | | | Credits | 23 |

| SEMESTER TWO | | | | |
|----------------|------|---------------------|---|-------------------|
| 1 | Core | 20CH3004 | Statistical Thermodynamics and Quantum Chemistry | 3:0:0 |
| 2 | Core | 20CH3005 | Coordination Chemistry of Transition Elements | 3:0:0 |
| 3 | Core | 20CH3006 | Principles of Molecular Spectroscopy | 3:0:0 |
| 4 | Core | 20CH3007 | Synthetic Reagents and Methodology | 3:0:0 |
| 5 | Core | 20CH3012 | Qualitative Analysis and Inorganic Preparation Lab | 0:0:4 |
| 6 | Core | 20CH3015 | Modern Instrumental Analysis Lab | 0:0:2 |
| 7 | | | Professional Elective 3 | 3:0:0 |
| 8 | | | Value education | 0:0:2 |
| | | | Credits | 23 |
| SEMESTER THREE | | | | |
| 1 | Core | 20CH3008 | Group Theory and Applied Physical chemistry | 3:0:0 |
| 2 | Core | 20CH3009 | Organometallic and Bioinorganic Chemistry | 3:0:0 |
| 3 | Core | 20CH3010 | Pericyclic Reactions and Biomolecules | 3:0:0 |
| 4 | Core | 20CH3013 | Physical Chemistry Lab | 0:0:4 |
| 5 | Core | 20CH3016 | Synthetic Organic Chemistry Lab | 0:0:2 |
| 6 | | | Professional Elective - 4 | 3:0:0 |
| 7 | | | Other Elective 1 | 3:0:0 |
| 8 | | | Other Elective 2 | 3:0:0 |
| | | | Credits | 24 |
| SEMESTER FOUR | | | | |
| 1 | | | Other Elective 3 | 3:0:0 |
| 2 | | | Other Elective 4 | 3:0:0 |
| 3 | | | Other Elective 5 | 0:0:2 |
| 4 | | PSP3998/ FSP3999 | Part Semester Project (or) Full Semester Project | 0:0:12/ 0:0:20 |
| | | | Credits | 20 |
| | | | Total Credits | 90 |

2. Curriculum and Syllabi for B.Sc Forensic Science (2020-21) batch

The Program outcomes (POs), Program specific objectives (PSOs), Programme course structure, the curriculum and the syllabi of B.Sc Forensic Science program have been discussed. The syllabi of the courses framed by the faculty members based on the comments and feedbacks from the alumni, the employers, the parents and from the students have been discussed. Based on the suggestions, the POs, PSOs, mapping of PSOs with the mission of the department, the credit distribution, Semester wise credit distribution, Program course structure and Semester wise curriculum for B.Sc Forensic Science Program are given in tables 2(a) to 2(g) respectively followed by the eligibility criteria (2(h))for B.Sc Forensic Science program. The syllabi of the various courses given at the end have been discussed.

Table 2(a). Programme Outcomes (POs) for the B.Sc Forensic Sciences program

| | |
|-----|--|
| PO1 | students will communicate competently through writing, reading, speaking and listening. |
| PO2 | students will demonstrate scientific proficiency, including analytical and computational skills. |
| PO3 | students will increase their understanding of the scientific community in which they live and prepare themselves to contribute to the community. |
| PO4 | students will increase their understanding of the need of the society and focus their |

| | |
|-----|--|
| | academic deliverables towards eliminating problems of mankind |
| PO5 | students will increase their knowledge to build-up a progressive and successful career in academics and industry. |
| PO6 | students will uphold the moral and ethical values inculcated by the institution throughout their professional and personal life. |

Table 2(b). Programme Specific Objectives (PSOs)

| | |
|-------|--|
| PSO 1 | Become professionals equipped with the knowledge and skills necessary to take part in a forensic investigation. |
| PSO 2 | Develop the laboratory skills in examining different types of evidences found at the crime scene. |
| PSO 3 | Work and communicate effectively in inter-disciplinary environment, either independently or in a team, and demonstrate leadership qualities. |

Table 2(c). Mapping of PSOs with the mission of the department

| Key Components of Mission Statements | PSO | | |
|--|------|------|------|
| | PSO1 | PSO2 | PSO3 |
| Solutions to human problems | √ | √ | |
| Academic Excellence | √ | √ | √ |
| Professional competence and exemplary values | | √ | √ |

Table 2(d). Credit distribution of the program B.Sc Forensic Science

| General core | Program Core | Electives | Project | Mandatory courses | Total |
|--------------|--------------|-----------|---------|-------------------|-------|
| 15 | 83 | 21 | 12 | 05 | 136 |

Table 2(e). Semester wise credit distribution

| Courses | Total Credits | I | II | III | IV | V | VI |
|-----------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Part 1 (general core) | 15 | 06 | 06 | 03 | - | - | - |
| Departmental Core | 83 | 16 | 14 | 18 | 15 | 15 | 05 |
| Electives | 21 | - | - | 03 | 06 | 09 | 03 |
| Project | 12 | - | - | - | - | - | 12 |
| Mandatory courses | 05 | - | 03 | - | 02 | - | - |
| Total Credits | 136 | 22 | 23 | 24 | 23 | 24 | 20 |

Table 2(f). Course components for B.Sc Forensic Science (2020-21) batch

| Sl. No. | Course Code | General Core – 15 credits | Credits |
|---------|------------------------------------|-----------------------------------|---------|
| | | Name of the Course | |
| 1 | 17LN2005/ 17LN2001/ 16LN2009 | Tamil – I / French I / Hindi I | 3:0:0 |
| 2 | 17EN2003 | General English | 3:0:0 |
| 3 | 17LN2006/ 17LN2002/ 16LN2010 | Tamil – II / French II / Hindi II | 3:0:0 |
| 4 | 17EN2004 | Creative English | 3:0:0 |

| | | | |
|--------------|----------|---|-----------|
| 5 | 20FS2028 | Foundation Course on Computer Fundamentals and Office | 3:0:0 |
| Total | | | 15 |

| Sl. No. | Course Code | Mandatory Courses – 5 credits | Credits |
|--------------|-------------|-------------------------------|-----------|
| | | Name of the Course | |
| 1 | 17CH1004 | Environmental Studies | 3:0:0 |
| 2 | 17VE2002 | Value Education | 0:0:2 |
| Total | | | 05 |

| Sl. No. | Course Code | DEPARTMENTAL CORE – 83 credits & part semester project | Credits |
|-----------------------|-------------|--|-----------|
| | | Name of the Course | |
| 1 | 20CH2001 | Complementary Chemistry | 3:0:0 |
| 2 | 20CH2002 | Physical Chemistry Laboratory | 0:0:2 |
| 3 | 20CH2003 | Inorganic Chemistry for Forensic Science | 3:0:0 |
| 4 | 20CH2004 | Inorganic Chemistry Laboratory | 0:0:2 |
| 5 | 20CH2005 | Analytical Chemistry for Forensic Science | 3:0:0 |
| 6 | 20CH2006 | Organic Chemistry for Forensic Science | 3:0:0 |
| 7 | 20CH2007 | Instrumentation Techniques for Forensic Science | 3:0:0 |
| 8 | 20CH2008 | Analytical Chemistry Laboratory | 0:0:2 |
| 9 | 20CH2009 | Forensic Chemistry | 3:0:0 |
| 10 | 20CH2010 | Forensic Toxicology | 3:0:0 |
| 11 | 20CH2011 | Forensic Toxicology Laboratory | 0:0:2 |
| 12 | 20CH2012 | Crime Investigation Techniques | 3:0:0 |
| 13 | 20CH2013 | Nanochemistry for Forensic Science | 3:0:0 |
| 14 | 20FS2001 | Fundamentals of Forensic Science | 3:0:0 |
| 15 | 20FS2002 | Crime and Society | 3:0:0 |
| 16 | 20FS2003 | Forensic Physics | 3:0:0 |
| 17 | 20FS2004 | Fundamentals of Forensic Science Laboratory | 0:0:2 |
| 18 | 20FS2005 | Indian Constitution, Fundamental Laws and Procedure | 4:0:0 |
| 19 | 20FS2006 | Forensic Dermatoglyphics | 3:0:0 |
| 20 | 20FS2007 | Forensic Science Laboratory | 0:0:2 |
| 21 | 20FS2008 | Forensic Science and Criminal Justice System | 3:0:0 |
| 22 | 20FS2009 | Forensic Physics Laboratory | 0:0:2 |
| 23 | 20FS2010 | Cyber Forensics Laboratory | 0:0:2 |
| 24 | 20FS2011 | Questioned Documents | 3:0:0 |
| 25 | 20FS2012 | Questioned Documents Laboratory | 0:0:2 |
| 26 | 20FS2013 | Forensic Dermatoglyphics Laboratory | 0:0:2 |
| 27 | 20FS2014 | Forensic Biology and Serology -I | 3:0:0 |
| 28 | 20FS2015 | Forensic Biology and Serology Laboratory | 0:0:2 |
| 29 | 20FS2016 | Forensic Ballistics | 3:0:0 |
| 30 | 20FS2017 | Forensic Ballistics Laboratory | 0:0:2 |
| 31 | 20FS2018 | Moot Court for Forensic Science | 0:0:2 |
| Total | | | 83 |
| Part Semester Project | | | 12 |
| Total Credits | | | 95 |

| Sl. No. | Course Code | ELECTIVES–21 credits (min of 21 credits to be earned) | |
|---------|-------------|--|---------|
| | | Name of the Course | Credits |
| 1 | 20FS2019 | Cyber Crimes and Cyber Forensic | 3:0:0 |
| 2 | 20FS2020 | Fundamentals of Forensic Psychology | 3:0:0 |
| 3 | 20FS2021 | Crime Scene Investigation | 3:0:0 |
| 4 | 20FS2022 | DNA Typing | 3:0:0 |
| 5 | 20FS2023 | Forensic Medicine | 3:0:0 |
| 6 | 20FS2024 | Forensic Anthropology and Odontology | 3:0:0 |
| 7 | 20FS2025 | Accident Investigation | 3:0:0 |
| 8 | 20FS2026 | Forensic Biology And Serology -II | 3:0:0 |
| 9 | 20FS2027 | Modern Techniques in Explosives and Bomb Detection | 3:0:0 |

Table 2(g) Semester wise Curriculum for B.Sc Forensic Science Program

| S.No | | Code | Name of the Subject | Credit | Hours |
|-----------------------|------------------|------------------------------------|---|-----------|-----------|
| Semester I | | | | | |
| 1 | General Core | 17LN2005/ 17LN2001/ 16LN2009 | Tamil-1/ French I / Hindi-I | 3:0:0 | 3 |
| 2 | General Core | 17EN2003 | General English | 3:0:0 | 3 |
| 3 | Core | 20FS2001 | Fundamentals of Forensic Science | 3:0:0 | 3 |
| 4 | Core | 20FS2002 | Crime and Society | 3:0:0 | 3 |
| 5 | Core | 20CH2001 | Complementary Chemistry | 3:0:0 | 3 |
| 6 | Core | 20FS2003 | Forensic Physics | 3:0:0 | 3 |
| 7 | Core | 20FS2004 | Fundamentals of Forensic Science Laboratory | 0:0:2 | 3 |
| 8 | Core | 20CH2002 | Physical Chemistry Laboratory | 0:0:2 | 3 |
| SEMESTER TOTAL | | | | 22 | 24 |
| Semester II | | | | | |
| 1 | General Core | 17LN2006/ 17LN2002/ 16LN2010 | Tamil –2 / French II / Hindi II | 3:0:0 | 3 |
| 2 | General Core | 17EN2004 | Creative English | 3:0:0 | 3 |
| 3 | Core | 20FS2005 | Indian Constitution, Fundamental Laws and Procedure | 4:0:0 | 4 |
| 4 | Core | 20CH2003 | Inorganic Chemistry for Forensic Science | 3:0:0 | 3 |
| 5 | Core | 20FS2006 | Forensic Dermatoglyphics | 3:0:0 | 3 |
| 6 | Mandatory Course | 17CH1004 | Environmental Studies | 3:0:0 | 3 |
| 7 | Core | 20CH2004 | Inorganic Chemistry Laboratory | 0:0:2 | 3 |
| 8 | Core | 20FS2007 | Forensic Science Laboratory | 0:0:2 | 3 |
| SEMESTER TOTAL | | | | 23 | 25 |
| Semester III | | | | | |
| 1 | General Core | 20FS2028 | Foundation Course on Computer Fundamentals and Office | 3:0:0 | 3 |
| 2 | Core | 20CH2005 | Analytical Chemistry for Forensic Science | 3:0:0 | 3 |

| | | | | | |
|--------------------|------------------|----------|---|------------|-----------|
| 3 | Core | 20FS2008 | Forensic Science and Criminal Justice System | 3:0:0 | 3 |
| 4 | Core | 20CH2006 | Organic Chemistry for Forensic Science | 3:0:0 | 3 |
| 5 | Core | 20FS2011 | Questioned Documents | 3:0:0 | 3 |
| 6 | | | Elective-1 | 3:0:0 | 3 |
| 7 | Core | 20CH2008 | Analytical Chemistry Laboratory | 0:0:2 | 3 |
| 8 | Core | 20FS2009 | Forensic Physics Laboratory | 0:0:2 | 3 |
| 9 | Core | 20FS2010 | Cyber Forensics Laboratory | 0:0:2 | 3 |
| | | | SEMESTER TOTAL | 24 | 27 |
| Semester IV | | | | | |
| 1 | Core | 20CH2007 | Instrumentation Techniques for Forensic Science | 3:0:0 | 3 |
| 2 | Core | 20CH2009 | Forensic Chemistry | 3:0:0 | 3 |
| 3 | Core | 20FS2014 | Forensic Biology and Serology -I | 3:0:0 | 3 |
| 4 | | | Elective-2 | 3:0:0 | 3 |
| 5 | | | Elective-3 | 3:0:0 | 3 |
| 6 | Mandatory Course | 17VE2002 | Value Education | 0:0:2 | 3 |
| 7 | Core | 20FS2012 | Questioned Documents Laboratory | 0:0:2 | 3 |
| 8 | Core | 20FS2013 | Forensic Dermatoglyphics Laboratory | 0:0:2 | 3 |
| 9 | Core | 20FS2015 | Forensic Biology and Serology Laboratory | 0:0:2 | 3 |
| | | | SEMESTER TOTAL | 23 | 27 |
| Semester V | | | | | |
| 1 | Core | 20CH2010 | Forensic Toxicology | 3:0:0 | 3 |
| 2 | Core | 20CH2012 | Crime Investigation Techniques | 3:0:0 | 3 |
| 3 | Core | 20FS2016 | Forensic Ballistics | 3:0:0 | 3 |
| 4 | | | Elective-4 | 3:0:0 | 3 |
| 5 | | | Elective-5 | 3:0:0 | 3 |
| 6 | | | Elective-6 | 3:0:0 | 3 |
| 7 | Core | 20CH2011 | Forensic Toxicology Laboratory | 0:0:2 | 3 |
| 8 | Core | 20FS2017 | Forensic Ballistics Laboratory | 0:0:2 | 3 |
| 9 | Core | 20FS2018 | Moot Court for Forensic Science | 0:0:2 | 3 |
| | | | SEMESTER TOTAL | 24 | 27 |
| Semester VI | | | | | |
| 1 | Core | 20CH2013 | Nanochemistry for Forensic Science | 3:0:0 | 3 |
| 2 | | | Elective-7 | 3:0:0 | 3 |
| 3 | Core | | Entrepreneurship and Business plan | 2:0:0 | 2 |
| 4 | Core | | Project Work | 0:0:12 | 18 |
| | | | SEMESTER TOTAL | 20 | 26 |
| | | | GRAND TOTAL | 136 | |

2(h) Eligibility Criteria for B.Sc. Forensic Science:

Higher Secondary (10+2) or equivalent qualification from a recognized educational Board, with Physics, Chemistry and Biology and/ or Maths as main subjects and a minimum aggregate score of 50%.

3. Curriculum and Syllabi for M.Sc Forensic Science Programme (2020-21) batch

The Program outcomes (POs), Program specific objectives (PSOs), Programme course structure, the curriculum and the syllabi of M.Sc Forensic Science program have been discussed. The syllabi of the courses framed by the faculty members based on the comments and feedbacks from the alumni, the employers, the parents and from the students have been discussed. Based on the suggestions, the POs, PSOs, mapping of PSOs with the mission of the department, the credit distribution, Program course structure and Semester wise curriculum for M.Sc Forensic Science Program are given in tables 3(a) to 3(f) respectively followed by the eligibility criteria (3(g)) for M.Sc Forensic Science program. The syllabi of the various courses given at the end have been discussed.

Table 3(a). Programme Outcomes (POs) for the M.Sc Program

| | |
|-----|--|
| PO1 | Acquire problem solving, initiative and enterprise skills that contribute to productive and innovative outcomes. |
| PO2 | Develop and update domain knowledge relevant to the chosen field to succeed in highly competitive and rapidly changing work environments. |
| PO3 | Prepare to utilize the acquired knowledge leading to innovation and entrepreneurship in order to eliminate the problems of the society. |
| PO4 | Demonstrate the ability to design and conduct experiments, demos, create models to analyze and interpret data |
| PO5 | Design and perform experiments related to scientific and computational theories and conceive potential technological applications. |
| PO6 | Demonstrate ability for collaborative research and scientific communication through projects, internship and on-site training. |
| PO7 | Conceive the ways and means to address various social, economic, environmental, human rights and other critical issues faced by humanity at the local, national and global levels. |

Table 3(b). Programme Specific Objectives (PSOs)

| | |
|-------|---|
| PSO 1 | Demonstrate quality forensic knowledge with solid fundamentals to understand and solve global problem |
| PSO 2 | Exhibit professional efficiency as scientist, academicians and researchers. |
| PSO 3 | Hold professional ethics and as entrepreneurs in facing the challenges at the global level |

Table 3(c). Mapping of PSOs with the mission of the department

| Key Components of Mission Statements | PSO | | |
|--|------|------|------|
| | PSO1 | PSO2 | PSO3 |
| Solutions to human problems | √ | √ | √ |
| Academic Excellence | √ | √ | |
| Professional competence and exemplary values | | √ | √ |

Table 3(d). Credit distribution

| | Credits | |
|------------------------|---------|--|
| Core | 52 | |
| Professional Electives | 12 | |
| Other Electives | 14/6 | |

| | | |
|---|-------|---|
| Part Semester Project/ Full Semester project | 12/20 | To be offered in 4 th Semester only |
| Total | 90 | |

Table 3(e). M.Sc. Forensic science Programme Course Structure

| Sl. No | Sub Code | Program Core – 52 credits & Part/Full semester project | Credits |
|--------|---------------------|--|--------------------------|
| 1 | 20FS3001 | Forensic Science and Criminal Justice System | 3:0:0 |
| 2 | 20CH3044 | Essentials of Forensic Chemistry | 3:0:0 |
| 3 | 20CH3045 | Forensic Tools and Techniques | 3:0:0 |
| 4 | 20CH3046 | Instrumental methods of analysis - I | 3:0:0 |
| 5 | 20CH3047 | Advanced Forensic Toxicology and Pharmacology | 3:0:0 |
| 6 | 20FS3002 | Forensic Physics and Advanced Ballistics | 3:0:0 |
| 7 | 20FS3003 | Forensic Biology | 3:0:0 |
| 8 | 20CH3048 | Instrumental Methods of Analysis - II | 3:0:0 |
| 9 | 20FS3004 | Advanced Questioned Documents | 3:0:0 |
| 10 | 20FS3005 | Finger Prints and other Impressions | 3:0:0 |
| 11 | 20CH3049 | Forensic Chemistry Lab | 0:0:2 |
| 12 | 20CH3050 | Forensic Tools and Techniques Lab | 0:0:2 |
| 13 | 20FS3006 | Crime Scene Management Lab | 0:0:2 |
| 14 | 20CH3051 | Forensic Toxicology Lab | 0:0:2 |
| 15 | 20FS3007 | Forensic Physics and Ballistics Lab | 0:0:2 |
| 16 | 20CH3052 | Instrumental Analysis Lab | 0:0:2 |
| 17 | 20FS3008 | Questioned Documents and Finger Print Analysis Lab | 0:0:2 |
| 18 | 20CH3053 | Modern Instrumental Analysis Lab | 0:0:2 |
| 19 | | Industrial Training / Internship / Miniproject / Summer Internship Program | 0:0:2/ (0:0:1+ 0:0:1) |
| 20 | 17VE3002 | Value Education | 0:0:2 |
| 21 | | Entrepreneurship and Business plan | 2:0:0 |
| | | Total Credits | 52 |
| | PSP3998/ FSP3999 | Part Semester Project (or) Full Semester Project | 0:0:12 0:0:20 |
| | | Total | 64/72 |

List of Professional Elective Courses for M.Sc. Forensic science (2020-21 batch)

| Sl. No | Sub Code | Professional Electives – Minimum 12 credits to be earned | Credits |
|--------|----------|---|---------|
| 1 | 20FS3009 | Cyber Crime | 3:0:0 |
| 2 | 20FS3010 | Forensic Psychology | 3:0:0 |
| 3 | 20CH3054 | Biochemistry and Biochemical Applications | 3:0:0 |
| 4 | 20FS3011 | Forensic Serology and Molecular Genetics | 3:0:0 |
| 5 | 20CH3055 | Standards, Quality Management, Laboratory Management and Safety | 3:0:0 |
| 6 | 20FS3012 | Forensic Phonetics, Voice Analysis and Speaker Recognition | 3:0:0 |

List of Other Electives for M.Sc. Forensic science (2020-21 batch)

| Sl. | Sub Code | Other Electives | Credits |
|-----|----------|-----------------|---------|
|-----|----------|-----------------|---------|

| No | | | |
|----|----------|---|-------|
| 1 | 20FS3013 | Microscopy in Forensic Science | 3:0:0 |
| 2 | 20FS3014 | Biological Instrumental Methods | 3:0:0 |
| 3 | 20CH3056 | IPR, Ethics And Research Methodology | 3:0:0 |
| 4 | 20CH3057 | Forensic Analysis of Drugs | 3:0:0 |
| 5 | 20CH3058 | Advanced Pharmaceutical Toxicology | 3:0:0 |
| 6 | 20CH3059 | Analytical Forensic Toxicology | 3:0:0 |
| 7 | 20FS3015 | Statistics and Forensic Applications | 2:0:0 |
| 8 | 20FS3016 | Molecular Biology & Immunology | 3:0:0 |
| 9 | 20FS3017 | Medical Jurisprudence | 3:0:0 |
| 10 | 20FS3018 | Human Anatomy, Physiology and Forensic Medicine | 3:0:0 |

Table 2(f). Semester wise Curriculum for M.Sc. Forensic Science (2020-21 batch)

| Sl. No | | Sub Code | Name of the Subject | Credits |
|-----------------------|------|----------|--|--------------------------|
| SEMESTER ONE | | | | |
| 1 | Core | 20FS3001 | Forensic Science and Criminal Justice System | 3:0:0 |
| 2 | Core | 20CH3044 | Essentials of Forensic Chemistry | 3:0:0 |
| 3 | Core | 20CH3045 | Forensic Tools and Techniques | 3:0:0 |
| 4 | Core | 20CH3049 | Forensic Chemistry Lab | 0:0:2 |
| 5 | Core | 20CH3050 | Forensic Tools and Techniques Lab | 0:0:2 |
| 6 | Core | 20FS3006 | Crime Scene Management Lab | 0:0:2 |
| 7 | | | Professional Elective 1 | 3:0:0 |
| 8 | | | Professional Elective 2 | 3:0:0 |
| 9 | | | Entrepreneurship and Business plan | 2:0:0 |
| | | | Credits | 23 |
| SEMESTER TWO | | | | |
| 1 | Core | 20CH3046 | Instrumental Methods of Analysis - I | 3:0:0 |
| 2 | Core | 20CH3047 | Advanced Forensic Toxicology and Pharmacology | 3:0:0 |
| 3 | Core | 20FS3002 | Forensic Physics and Advanced Ballistics | 3:0:0 |
| 4 | Core | 20FS3003 | Forensic Biology | 3:0:0 |
| 5 | Core | 20CH3051 | Forensic Toxicology Lab | 0:0:2 |
| 6 | Core | 20FS3007 | Forensic Physics and Ballistics Lab | 0:0:2 |
| 7 | Core | 20CH3052 | Instrumental Analysis Lab | 0:0:2 |
| 8 | | | Professional Elective 3 | 3:0:0 |
| 9 | Core | 17CH3002 | Value education | 0:0:2 |
| | | | Credits | 23 |
| SEMESTER THREE | | | | |
| 1 | Core | 20CH3048 | Instrumental Methods of Analysis - II | 3:0:0 |
| 2 | Core | 20FS3004 | Advanced Questioned Documents | 3:0:0 |
| 3 | Core | 20FS3005 | Finger Prints and other Impressions | 3:0:0 |
| 4 | Core | 20FS3008 | Questioned Documents and Finger Print Analysis Lab | 0:0:2 |
| 5 | Core | 20CH3053 | Modern Instrumental Analysis Lab | 0:0:2 |
| 6 | Core | | Industrial Training / Internship / Miniproject / Summer Internship Program | 0:0:2/ (0:0:1+ 0:0:1) |
| 7 | | | Professional Elective 4 | 3:0:0 |
| 8 | | | Other Elective 1 | 3:0:0 |
| 9 | | | Other Elective 2 | 3:0:0 |

| | | | | |
|----------------------|--|---------------------|---|-------------------|
| | | | Credits | 24 |
| SEMESTER FOUR | | | | |
| 1 | | | Other Elective 3 | 3:0:0 |
| 2 | | | Other Elective 4 | 3:0:0 |
| 3 | | | Other Elective 5 | 2:0:0 |
| 4 | | PSP3998/ FSP3999 | Part Semester Project (or) Full Semester Project | 0:0:12/ 0:0:20 |
| | | | Credits | 20 |
| | | | Total Credits | 90 |

3(g) Eligibility Criteria for M.Sc. Forensic Science:

Bachelor degree in Science / Forensic Science/ Medicine / Veterinary Science / Dental Science / Pharmacy / Engineering or Equivalent degree with a minimum 50 % marks from a recognized University.

4. Chemistry courses for the 2020-21 batch B.Tech Students

The chemistry syllabi for the following B.Tech courses have been discussed (Table 4).

Table 4. List of New Courses for 2020-21 Batch B.Tech Programs

| S. No | Sub Code | NAME OF THE COURSE | Credits | | | |
|-------|----------|---|---------|---|---|-----|
| | | | L | T | P | C |
| 1 | 20CH1001 | Essentials of Chemistry for Aerospace Engineers | 3 | 0 | 0 | 3 |
| 2 | 20CH1002 | Applied Chemistry for Electrical and Computer Engineering | 2 | 0 | 2 | 3 |
| 3 | 20CH1003 | Applied Chemistry for Food Processing Technology | 2 | 0 | 0 | 2 |
| 4 | 20CH1004 | Applied Chemistry Laboratory for Food Processing Technology | 0 | 0 | 3 | 1.5 |
| 5 | 20CH1005 | Environmental Chemistry | 3 | 0 | 0 | 3 |
| 6 | 20CH1006 | Environmental Chemistry Laboratory | 0 | 0 | 2 | 1 |

5. Other Agenda

The course outcome for the 19CH1007 has been discussed. The following course outcomes have been decided for the course 19CH1007 and included.

Course Outcomes for the course 19CH1007- Applied Chemistry Lab

The student will be able to

1. Understand the kinetics of a chemical reaction
2. Analyze the water quality
3. Apply the electrochemistry principles.
4. Measure molecular/system properties such as surface tension, viscosity, conductance of solutions, redox potentials
5. Synthesize a small drug molecule
6. Analyze a salt sample

General Comments by the External Experts

- The external members appreciated the program course structure, curriculum and syllabi of all the programs and the courses.

Dr. Vishnu Varthini:

- POs are well matched with PSOs.
- All the necessary areas of Forensic Science have been covered at the UG and PG level.

- The syllabi are standard and updated.
- All the core courses are important and the course “Cyber Crimes and Cyber Forensic” course should be offered as a compulsory elective for the B.Sc. Forensic science program.
- The laboratory course “Forensic Dermatoglyphics and Questioned Documents laboratory” can be offered as two separate courses and the laboratory course ‘Forensic dermatology’ may be removed.
Action taken: As per the suggestion the necessary changes have been incorporated.
- The laboratory course “Moot court” may be moved from 3rd semester to 5th Semester.
Action taken: As per the suggestion, the course has been moved to 5th Semester and necessary changes have been incorporated.
- For the M.Sc. Forensic science program, the course “20FS3009-Cyber Crimes” should be offered as a compulsory elective for the M.Sc. Forensic science program.

Mr. S Jeyakumar:

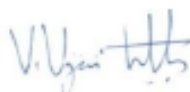
- Syllabus on application of batteries in Electric vehicles can be included.
Action taken: A keyword has been added in the course “20CH3022-Applied Electrochemistry” and a course “20CH3060-Electrochemical Devices for Electric Vehicle” has been included.
- While teaching courses related materials chemistry, importance should be given for material characterization and crystallography.
Action taken: The suggested topics have been included in the courses “20CH3019-Nuclear Chemistry and Solid State Chemistry”, “20CH3031-Nanomaterials Synthesis and Characterization” and “20CH3037-Metal-Organic Framework Materials”Metal-Organic Framework Materials”

Dr. Devi Radhika:

- The syllabi are of good standard.
- The topics for the courses of B.Tech programmes have been chosen well

The meeting ended with prayer by Dr. A. Samson Nesaraj

Minutes prepared by:



Dr.V.Vijaikanth

Approved by:



HOD i/c - Chemistry

List of Courses

| S. No | Sub Code | NAME OF THE COURSE | Credits | | | |
|-------|----------|---|---------|---|---|-----|
| | | | L | T | P | C |
| 1 | 20CH1001 | Essentials of Chemistry for Aerospace Engineers | 3 | 0 | 0 | 3 |
| 2 | 20CH1002 | Applied Chemistry for Electrical and Computer Engineering | 2 | 0 | 2 | 3 |
| 3 | 20CH1003 | Applied Chemistry for Food Processing Technology | 2 | 0 | 0 | 2 |
| 4 | 20CH1004 | Applied Chemistry Laboratory for Food Processing Technology | 0 | 0 | 3 | 1.5 |
| 5 | 20CH1005 | Environmental Chemistry | 3 | 0 | 0 | 3 |
| 6 | 20CH1006 | Environmental Chemistry Laboratory | 0 | 0 | 2 | 1 |

| | | | | | | |
|----|----------|---|---|---|---|---|
| 7 | 20CH2001 | Complementary Chemistry | 3 | 0 | 0 | 3 |
| 8 | 20CH2002 | Physical Chemistry Laboratory | 0 | 0 | 3 | 2 |
| 9 | 20CH2003 | Inorganic Chemistry for Forensic Science | 3 | 0 | 0 | 3 |
| 10 | 20CH2004 | Inorganic Chemistry Laboratory | 0 | 0 | 3 | 2 |
| 11 | 20CH2005 | Analytical Chemistry for Forensic Science | 3 | 0 | 0 | 3 |
| 12 | 20CH2006 | Organic Chemistry for Forensic Science | 3 | 0 | 0 | 3 |
| 13 | 20CH2007 | Instrumentation Techniques for Forensic Science | 3 | 0 | 0 | 3 |
| 14 | 20CH2008 | Analytical Chemistry Laboratory | 0 | 0 | 3 | 2 |
| 15 | 20CH2009 | Forensic Chemistry | 3 | 0 | 0 | 3 |
| 16 | 20CH2010 | Forensic Toxicology | 3 | 0 | 0 | 3 |
| 17 | 20CH2011 | Forensic Toxicology Laboratory | 0 | 0 | 3 | 2 |
| 18 | 20CH2012 | Crime Investigation Techniques | 3 | 0 | 0 | 3 |
| 19 | 20CH2013 | Nanochemistry for Forensic Science | 3 | 0 | 0 | 3 |
| 20 | 20FS2001 | Fundamentals of Forensic Science | 3 | 0 | 0 | 3 |
| 21 | 20FS2002 | Crime and Society | 3 | 0 | 0 | 3 |
| 22 | 20FS2003 | Forensic Physics | 3 | 0 | 0 | 3 |
| 23 | 20FS2004 | Fundamentals of Forensic Science Laboratory | 0 | 0 | 3 | 2 |
| 24 | 20FS2005 | Indian Constitution, Fundamental Laws and Procedure | 4 | 0 | 0 | 4 |
| 25 | 20FS2006 | Forensic Dermatoglyphics | 3 | 0 | 0 | 3 |
| 26 | 20FS2007 | Forensic Science Laboratory | 0 | 0 | 3 | 2 |
| 27 | 20FS2008 | Forensic Science & Criminal Justice System | 3 | 0 | 0 | 3 |
| 28 | 20FS2009 | Forensic Physics Laboratory | 0 | 0 | 3 | 2 |
| 29 | 20FS2010 | Cyber Forensics Laboratory | 0 | 0 | 3 | 2 |
| 30 | 20FS2011 | Questioned Documents | 3 | 0 | 0 | 3 |
| 31 | 20FS2012 | Questioned Documents Laboratory | 0 | 0 | 3 | 2 |
| 32 | 20FS2013 | Forensic Dermatoglyphics Laboratory | 0 | 0 | 3 | 2 |
| 33 | 20FS2014 | Forensic Biology and Serology -I | 3 | 0 | 0 | 3 |
| 34 | 20FS2015 | Forensic Biology and Serology Laboratory | 0 | 0 | 3 | 2 |
| 35 | 20FS2016 | Forensic Ballistics | 3 | 0 | 0 | 3 |
| 36 | 20FS2017 | Forensic Ballistics Laboratory | 0 | 0 | 3 | 2 |
| 37 | 20FS2018 | Moot Court for Forensic Science | 0 | 0 | 3 | 2 |
| 38 | 20FS2019 | Cyber Crimes and Cyber Forensic | 3 | 0 | 0 | 3 |
| 39 | 20FS2020 | Fundamentals of Forensic Psychology | 3 | 0 | 0 | 3 |
| 40 | 20FS2021 | Crime Scene Investigation | 3 | 0 | 0 | 3 |
| 41 | 20FS2022 | DNA Typing | 3 | 0 | 0 | 3 |
| 42 | 20FS2023 | Forensic Medicine | 3 | 0 | 0 | 3 |
| 43 | 20FS2024 | Forensic Anthropology and Odontology | 3 | 0 | 0 | 3 |
| 44 | 20FS2025 | Accident Investigation | 3 | 0 | 0 | 3 |
| 45 | 20FS2026 | Forensic Biology And Serology -II | 3 | 0 | 0 | 3 |
| 46 | 20FS2027 | Modern Techniques In Explosives and Bomb Detection | 3 | 0 | 0 | 3 |
| 47 | 20FS2028 | Foundation Course on Computer Fundamentals and Office | 3 | 0 | 0 | 3 |
| 48 | 20CH3001 | Chemical Kinetics and Chemical Thermodynamics | 3 | 0 | 0 | 3 |
| 49 | 20CH3002 | Theories of Chemical Bonding | 3 | 0 | 0 | 3 |
| 50 | 20CH3003 | Organic Reaction Mechanism and Stereochemistry | 3 | 0 | 0 | 3 |
| 51 | 20CH3004 | Statistical Thermodynamics and Quantum Chemistry | 3 | 0 | 0 | 3 |
| 52 | 20CH3005 | Coordination Chemistry of Transition Elements | 3 | 0 | 0 | 3 |
| 53 | 20CH3006 | Principles of Molecular Spectroscopy | 3 | 0 | 0 | 3 |
| 54 | 20CH3007 | Synthetic Reagents and Methodology | 3 | 0 | 0 | 3 |
| 55 | 20CH3008 | Group Theory and Applied Physical Chemistry | 3 | 0 | 0 | 3 |
| 56 | 20CH3009 | Organometallic and Bioinorganic Chemistry | 3 | 0 | 0 | 3 |
| 57 | 20CH3010 | Pericyclic Reactions and Biomolecules | 3 | 0 | 0 | 3 |
| 58 | 20CH3011 | Qualitative and Quantitative Organic Analysis Lab | 0 | 0 | 6 | 4 |

| | | | | | | |
|-----|----------|---|---|---|---|-----|
| 59 | 20CH3012 | Qualitative Analysis and Inorganic Preparation Lab | 0 | 0 | 6 | 4 |
| 60 | 20CH3013 | Physical Chemistry Lab | 0 | 0 | 6 | 4 |
| 61 | 20CH3014 | Inorganic Quantitative Analysis lab | 0 | 0 | 3 | 2 |
| 62 | 20CH3015 | Modern Instrumental Analysis Lab | 0 | 0 | 3 | 2 |
| 63 | 20CH3016 | Synthetic Organic Chemistry Lab | 0 | 0 | 3 | 2 |
| 64 | 20CH3017 | Instrumental Methods of Chemical Analysis | 3 | 0 | 0 | 3 |
| 65 | 20CH3018 | Chemistry of non-transition elements | 3 | 0 | 0 | 3 |
| 66 | 20CH3019 | Nuclear Chemistry and Solid State Chemistry | 3 | 0 | 0 | 3 |
| 67 | 20CH3020 | Organic Spectroscopy | 3 | 0 | 0 | 3 |
| 68 | 20CH3021 | Supramolecular Chemistry and Green Chemistry | 3 | 0 | 0 | 3 |
| 69 | 20CH3022 | Applied Electrochemistry | 3 | 0 | 0 | 3 |
| 70 | 20CH3023 | Research Methodology and IPR | 3 | 0 | 0 | 3 |
| 71 | 20CH3024 | Applied Polymer Chemistry | 3 | 0 | 0 | 3 |
| 72 | 20CH3025 | Laboratory Chemistry for the daily life | 0 | 0 | 3 | 2 |
| 73 | 20CH3026 | Forensic Chemistry | 3 | 0 | 0 | 3 |
| 74 | 20CH3027 | Advanced Photo and Electrocatalysis | 3 | 0 | 0 | 3 |
| 75 | 20CH3028 | Medicinal Chemistry | 3 | 0 | 0 | 3 |
| 76 | 20CH3029 | Photophysical Chemistry | 3 | 0 | 0 | 3 |
| 77 | 20CH3030 | Bioanalytical Chemistry and Biosensors | 3 | 0 | 0 | 3 |
| 78 | 20CH3031 | Nanomaterials Synthesis and Characterization | 3 | 0 | 0 | 3 |
| 79 | 20CH3032 | Stereoselective synthesis | 3 | 0 | 0 | 3 |
| 80 | 20CH3033 | Chemistry of Biofuels | 3 | 0 | 0 | 3 |
| 81 | 20CH3034 | Glass Forensic Science | 3 | 0 | 0 | 3 |
| 82 | 20CH3035 | Applied Chemical Crystallography | 3 | 0 | 0 | 3 |
| 83 | 20CH3036 | Chemistry of Carbenes | 3 | 0 | 0 | 3 |
| 84 | 20CH3037 | Metal-Organic Framework Materials | 3 | 0 | 0 | 3 |
| 85 | 20CH3038 | Advanced Main Group Chemistry | 3 | 0 | 0 | 3 |
| 86 | 20CH3039 | Chromatography | 3 | 0 | 0 | 3 |
| 87 | 20CH3040 | Water Treatment Technologies | 3 | 0 | 0 | 3 |
| 88 | 20CH3041 | Bioorganometallic Chemistry | 3 | 0 | 0 | 3 |
| 89 | 20CH3042 | Supramolecular Chemistry | 3 | 0 | 0 | 3 |
| 90 | 20CH3043 | Analytical Chemistry | 3 | 0 | 0 | 3 |
| 91 | 20CH3044 | Essentials of Forensic Chemistry | 3 | 0 | 0 | 3 |
| 92 | 20CH3045 | Forensic Tools and Techniques | 3 | 0 | 0 | 3 |
| 93 | 20CH3046 | Instrumental Methods of Analysis - I | 3 | 0 | 0 | 3 |
| 94 | 20CH3047 | Advanced Forensic Toxicology and Pharmacology | 3 | 0 | 0 | 3 |
| 95 | 20CH3048 | Instrumental methods of analysis - II | 3 | 0 | 0 | 3 |
| 96 | 20CH3049 | Forensic Chemistry Lab | 0 | 0 | 3 | 1.5 |
| 97 | 20CH3050 | Forensic Tools and Techniques Lab | 0 | 0 | 3 | 1.5 |
| 98 | 20CH3051 | Forensic Toxicology Lab | 0 | 0 | 3 | 1.5 |
| 99 | 20CH3052 | Instrumental Analysis Lab | 0 | 0 | 3 | 1.5 |
| 100 | 20CH3053 | Modern Instrumental Analysis Lab | 0 | 0 | 3 | 1.5 |
| 101 | 20CH3054 | Biochemistry and Biochemical Applications | 3 | 0 | 0 | 3 |
| 102 | 20CH3055 | Standards, Quality Management, Laboratory Management and Safety | 3 | 0 | 0 | 3 |
| 103 | 20CH3056 | IPR, Ethics and Research Methodology | 3 | 0 | 0 | 3 |
| 104 | 20CH3057 | Forensic Analysis of Drugs | 3 | 0 | 0 | 3 |
| 105 | 20CH3058 | Advanced Pharmaceutical Toxicology | 3 | 0 | 0 | 3 |
| 106 | 20CH3059 | Analytical Forensic Toxicology | 3 | 0 | 0 | 3 |
| 107 | 20CH3060 | Electrochemical Devices for Electric Vehicles | 3 | 0 | 0 | 3 |
| 108 | 20FS3001 | Forensic Science and Criminal Justice System | 3 | 0 | 0 | 3 |
| 109 | 20FS3002 | Forensic Physics and Advanced Ballistics | 3 | 0 | 0 | 3 |

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|-----|----------|--|---|---|---|-----|
| 110 | 20FS3003 | Forensic Biology | 3 | 0 | 0 | 3 |
| 111 | 20FS3004 | Advanced Questioned Documents | 3 | 0 | 0 | 3 |
| 112 | 20FS3005 | Finger Prints and other Impressions | 3 | 0 | 0 | 3 |
| 113 | 20FS3006 | Crime Scene Management Lab | 0 | 0 | 3 | 1.5 |
| 114 | 20FS3007 | Forensic Physics and Ballistics Lab | 0 | 0 | 3 | 1.5 |
| 115 | 20FS3008 | Questioned Documents and Finger Print Analysis Lab | 0 | 0 | 3 | 1.5 |
| 116 | 20FS3009 | Cyber Crime | 3 | 0 | 0 | 3 |
| 117 | 20FS3010 | Forensic Psychology | 3 | 0 | 0 | 3 |
| 118 | 20FS3011 | Forensic Serology and Molecular Genetics | 3 | 0 | 0 | 3 |
| 119 | 20FS3012 | Forensic Phonetics, Voice Analysis and Speaker Recognition | 3 | 0 | 0 | 3 |
| 120 | 20FS3013 | Microscopy in Forensic Science | 3 | 0 | 0 | 3 |
| 121 | 20FS3014 | Biological Instrumental Methods | 3 | 0 | 0 | 3 |
| 122 | 20FS3015 | Statistics and Forensic Applications | 2 | 0 | 0 | 2 |
| 123 | 20FS3016 | Molecular Biology & Immunology | 3 | 0 | 0 | 3 |
| 124 | 20FS3017 | Medical Jurisprudence | 3 | 0 | 0 | 3 |
| 125 | 20FS3018 | Human Anatomy, Physiology and Forensic Medicine | 3 | 0 | 0 | 3 |