



# St. Joseph's College (Autonomous)

College with Potential for Excellence

NAAC accredited at A grade in the third cycle

Irinjalakuda-680 121, Thrissur (Dt.), Kerala

Telephone: 0480 - 2825358, M.No. 8301000125

Email: [info@stjosephs.edu.in](mailto:info@stjosephs.edu.in)

Website: [www.stjosephs.edu.in](http://www.stjosephs.edu.in)

## Department of Chemistry

### Curriculum feedback analysis and action taken report 2016-17

#### Feedback

- The subject experts provided quality feedback for the updation of curriculum with respect to the current educational scenario. Teachers suggested in the modification of certain modules in the UG and PG syllabus.
- Suggestions were given by alumnae and students to incorporate coaching for prominent national and university level examination.
- The parents and students suggested in the incorporation of certificate courses in the curriculum.
- The stakeholders recommended the encouragement of interdisciplinary activities.
- Subject experts recommended in organizing beneficial and quality programs that could contribute to student's academic enrichment. Topics of relevance were sought to analyze the current trends in chemistry.

#### Actions taken

- Experts were assigned to gather propositions regarding the modifications of the curriculum. In the meantime, board of studies decided to incorporate micromodules to the curriculum to compliment the UG and PG syllabus
- Regular coaching for competitive exams like JAM and NET was introduced for Under Graduate and Post Graduate students respectively.
- Two certificate courses - 'Gemology' and 'CISCOM', were made compulsory for all the UG students. 'CISCOM' was arranged, to make soaps, detergents, liquid wash, shampoo, balm, cleaning lotion and Gemology dealt with the study of precious stones.
- Interdisciplinary individual projects were proposed for all PG students.
- In collaboration with Indian Academy of Science & National academy of Science, Indian national Science Academy a lecture series on 'Advances in Supramolecular Chemistry and Nanoscience' was conducted from 03-03-2017 to 04-03-2017.

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## Department of Chemistry

### Curriculum feedback analysis and action taken report 2017-18

#### Feedback

- College management suggested to implement the Outcome Based Education by incorporating CO for all the UG and PG courses.
- The provision of ICT based learning and teaching was highly suggested by alumnae and employers
- MOUs with industries were recommended by the employers for the students to gain familiarity with working conditions and orient themselves to better employment opportunities.
- The teachers discussed and considered the scope in the introduction of a course relating to skill development. Subject experts discussed certain strategies to enrich the existing syllabus.

#### Actions taken

- The Board of studies formulated and approved the CO for each and every course of B.Sc. Chemistry and M.Sc. Chemistry programs and incorporated into the syllabus. Programs Specific Outcomes for the programs are also developed and approved.
- Lesson plans accompanied by PowerPoint and Video presentation were introduced for Under Graduate and Post Graduate courses.
- After consultation and discussions with various firms, an MOU was signed with Flame diamonds, Thrissur to provide training in analysis of various types of gems. An MOU was also signed with Science Centre, Kodungallur in 2018 for the duration of 3 years
- Successfully achieved the task of preparation and sale of CISCOM products.
- In addition to the syllabus, Micro-modules were introduced for both Under Graduate and Post Graduate courses. Micro-modules are only considered for internal evaluation. Micro-modules are decided to be taken in the tutorial hours without disturbing the workload.

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## Department of Chemistry

### Curriculum feedback analysis and action taken report 2018-19

#### Feedback

- Students and subject experts expressed their opinion in prioritizing Internships and Field Projects in their respective curriculum. Students requested in providing orientation on the possible intern opportunities.
- The teachers requested in the removal of repeated and irrelevant topics in the syllabus for the students to gain clarity of the subjects. Also, topics beneficial to the students were considered to be included into the curriculum.
- The students suggested in the provision of more skill based courses. They also sought for the incorporation of ICT enabled training which would be affordable and flexible.

#### Actions taken

- Internships and field projects for PG students were made compulsory. Industrial visit was prioritized and made compulsory for the students to gain an orientation on the work setting.
- Irrelevant topics were removed and beneficial topics were incorporated into the PG syllabus.

Course Code	Course Name	Revisions
SJCHE1C01	Quantum Mechanics and Computational Chemistry	Title and code of the paper changed from CHECO1 – “Quantum Chemistry And Group Theory” into “Quantum Mechanics and Computational Chemistry” Introduced two modules of computational chemistry and removed the modules of group theory.
SJCHE1C02	Elementary Inorganic Chemistry	Title and code of the paper changed from CH1C02 – “Elements of Chemistry” into SJCHE1C02: “Elementary Inorganic Chemistry”. Introduced the module of “chemistry of nanomaterials” and removed the module “Molecular Structure and Bonding”
SJCHE2C05	Group Theory And Chemical Bonding	Title and code of the paper changed from CH2C05 – “Applications Of Quantum Mechanics and Group Theory” into SJCHE2C05 – “Group Theory And Chemical Bonding”. Modules of quantum mechanics removed



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SJCHE3C09	Molecular Spectroscopy	Two new modules of NMR spectroscopy are introduced.
SJCHE3C11	Reagents And Transformations in Organic Chemistry	Introduced the topics of supramolecular chemistry in module V
SJCHE4E08	Organometallic Chemistry (Elective)	Removed the paper of CH4C13- Advanced Topics in Chemistry and introduced another elective course SJCHE4E08 – Organometallic Chemistry (Elective)

- For easily accessing requisite skills and knowledge, MOOC (Massive Online Open Course) was incorporated for the enhancement of curricular activities and advancement of career and delivery of quality educational experience.
- KSCSTE Co-sponsored National Seminar on Recent Trends in Computational Chemistry and Drug Design on Jan 28 , 2019

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## Department of Chemistry

### Curriculum feedback analysis and action taken report 2019-20

#### Feedback

- The students recommended the replacement of previous topics by recent areas of study for the Undergraduate courses
- The stakeholders recommended in the incorporation of novel courses in the curriculum with respect to their relevance and employment opportunities.
- Alumnae suggested to increase number of elective courses .The Teachers proposed innovative and relevant elective courses relating to the discipline of chemistry in medicine and health sectors of the society.

#### Actions taken

- Audit courses were introduced for the UG students in the first four semesters – Environmental Studies and Disaster Management. Ability enhancement course(AEC) for first sem PG and Professional competency course (PCC) for II sem PG were introduced.
- One more elective paper (Organometallic chemistry) was added by omitting one core course in PG fourth semester. Two new elective courses 'Medicinal and combinatorial chemistry' and 'Food and nutritional chemistry' were introduced.
- Previously studied topics were integrated as prerequisites for UG. Syllabus was revised according to the changes in the discipline and improving the quality of curriculum.

Course Code	Course Name	Revision
CHE6B12	Advanced And Applied Chemistry	Topics of colloids added in module I. A new module of "Introduction to Computational Chemistry" introduced. "Renewable energy Sources" removed.
SJCHE1B01	Theoretical and Inorganic Chemistry- I	Introduced the prerequisites in all modules. Introduced a new module of "Representative elements" and removed the module of "Atomic structure"
SJCHE2B02	Theoretical and Inorganic Chemistry- II	Introduced the prerequisites topics for all the modules.



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SJCHE3B03	Physical Chemistry - I	Introduced the prerequisites in all modules. The topic statistical thermodynamics was introduced in module III. Introduced a new module of "Molecular Symmetry and Group Theory" and removed the module of "Liquid state"
SJCHE4B04	Organic Chemistry-I	Introduced the prerequisites in all modules.
SJCHE5B06	Inorganic Chemistry – III	Introduced the prerequisites in all modules. Modules "Metallurgy", "Interhalogen compounds ", "Noble Gases" are introduced. Removed the modules of Representative elements I & II.
SJCHE5B07	Organic Chemistry – II	Introduced the prerequisites in all modules
SJCHE5B08	Physical Chemistry – II	Introduced the prerequisites in all modules. Removed "Molecular Symmetry and Group Theory", "Chromatography" modules.
SJCHE6B09	Inorganic Chemistry – IV	Introduced the prerequisites in all modules. Removed "Metallurgy" and introduced "Instrumental Methods of Analysis"
SJCHE6B10	Organic Chemistry – III	Introduced the prerequisites in all modules. Introduced the topics of chromatography in module I.
SJCHE6B11	Physical Chemistry – III	Introduced the prerequisites in all modules.

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## Department of Chemistry

### Curriculum feedback analysis and action taken report 2020-21

#### Feedback

- The Parents expressed their concern in the new phase of e-learning. The board members suggested various methods to ensure the participation of all students and also in the provision of online materials
- Feedbacks were suggested to help the students to reach out to online academic resources and online certificate courses. Teachers and parents discussed ways to promote international and national webinar series. Parents requested to avail free e-books for students.
- Due to the COVID 19 backlash, industrial visits were at stake and there were suggestions for alternative ideas. The students suggested conducting online sessions replacing their physical visits.
- The teachers expressed their concern in lab practical sessions. Substitute methods were suggested for practical sessions.

#### Actions taken

- Online courses were made compulsory to all Under Graduate and Post Graduate students especially in SWAYAM portal. The department took initiatives to bring awareness about the pandemic situation. College Made Hand Sanitizer: A Covid-19 'Break The Chain' Initiative By PG & Research Department Of Chemistry was successfully organized.
- International and national webinar series were made compulsory to all UG and Post Graduate students. The teachers direct the students to quality contents and discussions. Involvement of e-books was made part of references.
- For further advancements in the curriculum, syllabus revision was considered and a team was entrusted for the same.
- As an alternative to the usual industrial visits, the students were encouraged to visit premier institutes nearby and accomplish their task.
- Practical sessions were replaced by virtual sessions promoting better understanding.

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