

K.M.G. COLLEGE OF ARTS AND SCIENCE



(AUTONOMOUS)

R.S.ROAD, AMMANANGKUPPAM, GUDIYATTAM – 635 803.
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P.G. AND RESEARCH DEPARTMENT OF CHEMISTRY

Minutes of the 4th Board of Studies (UG & PG)

The fourth board of Studies meeting of the Chemistry (both UG & PG) were held on 05.11.2025, Wednesday at 11.00 a.m. The committee members and member of university nominee, subject experts from outside institutions, industrial expert and alumni were participated.

Dr. S. Praveen Kumar, Head, Department of Chemistry welcomed the committee members.

Board of Studies Members:

S. No	Category	Name
1	Chairperson	Dr. S. Praveen Kumar
2	Subject Expert nominated by the Vice-Chancellor of Thiruvalluvar University	Dr. K. Geetha
3	Subject experts from outside the parent University	Dr. P. Gandeepan
4	Subject experts from outside the parent University	Dr. B. Muthuraaman
5	Faculty member	Mrs. K. Gandhimathi
6	Faculty member	Mr. V. Umamageswaran
7	Faculty member	Mr. E. Jagan
8	Faculty member	Mr. B. Balaji
9	Faculty member	Ms. P. Pavithra
10	Faculty member	Ms. M. Bhuvaneshwari
11	Faculty member	Ms. R. Anithalakshmi
12	Industrialist	Dr. V. Sivakumar
13	Alumnus	Mr. A. Sobanbabu

The Agenda Presented were:

1. To seek approval for the minutes of third Board of Studies meeting held on 21.03.2025.
2. To review, approve and pass the courses offered by the Department of Chemistry for fourth semester for B.Sc., Chemistry and M.Sc., Chemistry Programme.
3. To review the feedback on syllabus and course outcomes in the year 2024-25 for B.Sc., Chemistry and M.Sc., Chemistry Programme in the third semester.
4. To review, approve and pass the components of Credits for PG Chemistry.
5. To review the course outcomes for 4th Semester Subject with different cognitive levels (K1....K6) in the U.G. & P.G. Curriculum.
6. Any other matters brought by the BoS Members.

Discussions and Suggestions:

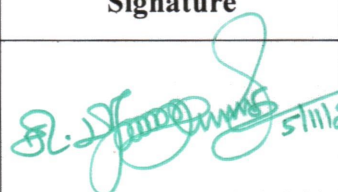
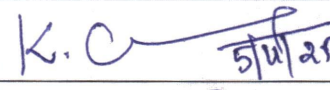
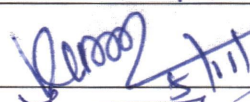
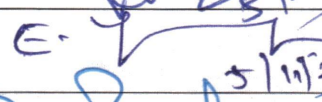
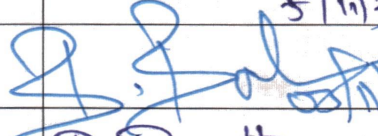
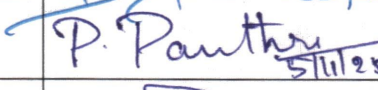
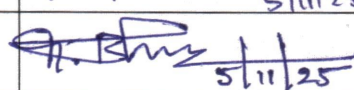
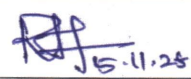
1. It was suggested that proper lower script notation be consistently used in all molecular formulae mentioned in the syllabus to ensure scientific accuracy and standard presentation.
2. In the Skill Enhancement Course – III, the topic “Characteristics of Research” in Unit I may be replaced with “Research Ethics” to enhance students’ understanding of ethical practices in scientific investigations.
3. In Unit V of the same course, it was recommended to include references to journals published by the American Chemical Society (ACS) and the Royal Society of Chemistry (RSC) under the topic “Computer Searches of Literature,” so as to familiarize students with authentic and reputed sources of scientific information.

Resolutions:-

1. The Members of Board of Studies approve the Minutes of third Board study Meeting held on 21.03.2025.
2. The Members of Board of Studies approve the course outcomes of B.Sc., and M.Sc., Chemistry programmes for fourth Semester after discussion and incorporation of suggestions.
3. The Board reviewed and approved the Fourth Semester syllabus for B.Sc. and M.Sc. Chemistry with the following changes suggested by the external members: use lower scripts correctly in molecular formulae, include "Research Ethics" instead of "Characteristics of Research" in Unit I of Skill Enhancement Course – III, and add American Chemical Society (ACS) and Royal Society of Chemistry (RSC) journals in Unit V under "Computer Searches of Literature." In addition, in the General Chemistry – IV, Unit IV on Ethers, Thioethers, and Epoxides, it was suggested to modify the description by removing the repetition of the terms "alkyl group" and "ethereal oxygen," as they convey the same meaning. The revised syllabus was approved by the Board.
4. The Members of Board of Studies approve the scheme of evaluation in the UG Physical Chemistry practical.
5. It was resolved to approve the revised curriculum for the academic year 2024-25 batch students.
6. The Members of Board of Studies approve the three parts of credits splitting in M.Sc., Chemistry Part – I (82 credits Core and elective); Part – II (12 credits Skill papers, MOOC, HR and internship) and Part – III (1 credit for Extension Activity).

The Meeting was concluded with the vote of thanks by Ms. M. Bhuvaneshwari. All the members were present.

Members Present

S.No	Category	Name & Designation	Signature
1	Chairperson	Dr. S. Praveen Kumar Head Department of Chemistry	
2	Subject Expert nominated by the Vice-Chancellor of Thiruvalluvar University	Dr. K. Geetha Head of the Department, PG and Research Department of Chemistry, Muthurangam Government Arts College (Autonomous), Vellore – 632 002,	Online
3	Subject experts from outside the parent University	Dr. P. Gandeepan Associate Professor of Chemistry, Indian Institute of Technology Tirupati, Andhra Pradesh.	Online
4	Subject experts from outside the parent University	Dr. B. Muthuraaman Head of the Department, Department of Energy, University of Madras, Guindy Campus, Chennai – 600 025.	Online
5	Faculty member	Mrs. K. Gandhimathi Assistant Professor of Chemistry	
6	Faculty member	Mr. V. Umamageswaran Assistant Professor of Chemistry	
7	Faculty member	Mr. E. Jagan Assistant Professor of Chemistry	
8	Faculty member	Mr. B. Balaji Assistant Professor of Chemistry	
9	Faculty member	Ms. P. Pavithra Assistant Professor of Chemistry	
10	Faculty member	Ms. M. Bhuvaneshwari Assistant Professor of Chemistry	
11	Faculty member	Ms. R. Anithalakshmi Assistant Professor of Chemistry	
12	Industrialist	Dr. V. Sivakumar Senior Scientist, Analytical Research and Development, Pfizer Health Care India Pvt.Ltd., Chennai – 600 113.	Online
13	Alumnus	Mr. A. Sobanbabu Senior Research Scientist, Research and Development,	Online

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UNIT-I

Chemistry of organometallic compounds:

Bonding in metal-olefin complexes (example: Ziegler's salt), metal-acetylene and metal-alkyl complexes; Metal-cyclopentadienyl complexes - Examples and MO approach to bonding in metallocenes; functional isomerism. Metal-carbonyl complexes: MO diagram of CO; Structure and bonding - bonding modes, MO approach of M-CO bonding, π -acceptor nature of carbonyl group, synergistic effect (stabilization of lower oxidation states of metals.)

UNIT-II

Reactions and catalysis of organometallic compounds:

Reactions of organometallic compounds: Oxidative addition, reductive elimination (α and β eliminations), migratory insertion reaction and metathesis reaction. Organometallic catalysis: Hydrogenation of olefins (Wilkinson's catalyst), hydroformylation of olefins using cobalt or rhodium catalysts (oxo process), oxidation of olefin (Wacker process), olefin isomerisation, water gas shift reaction, cyclo-oligomerisation of acetylenes using Reppe's catalysts, Monsanto process.

K1, K2

K3

CO1

CO2

K1, K2

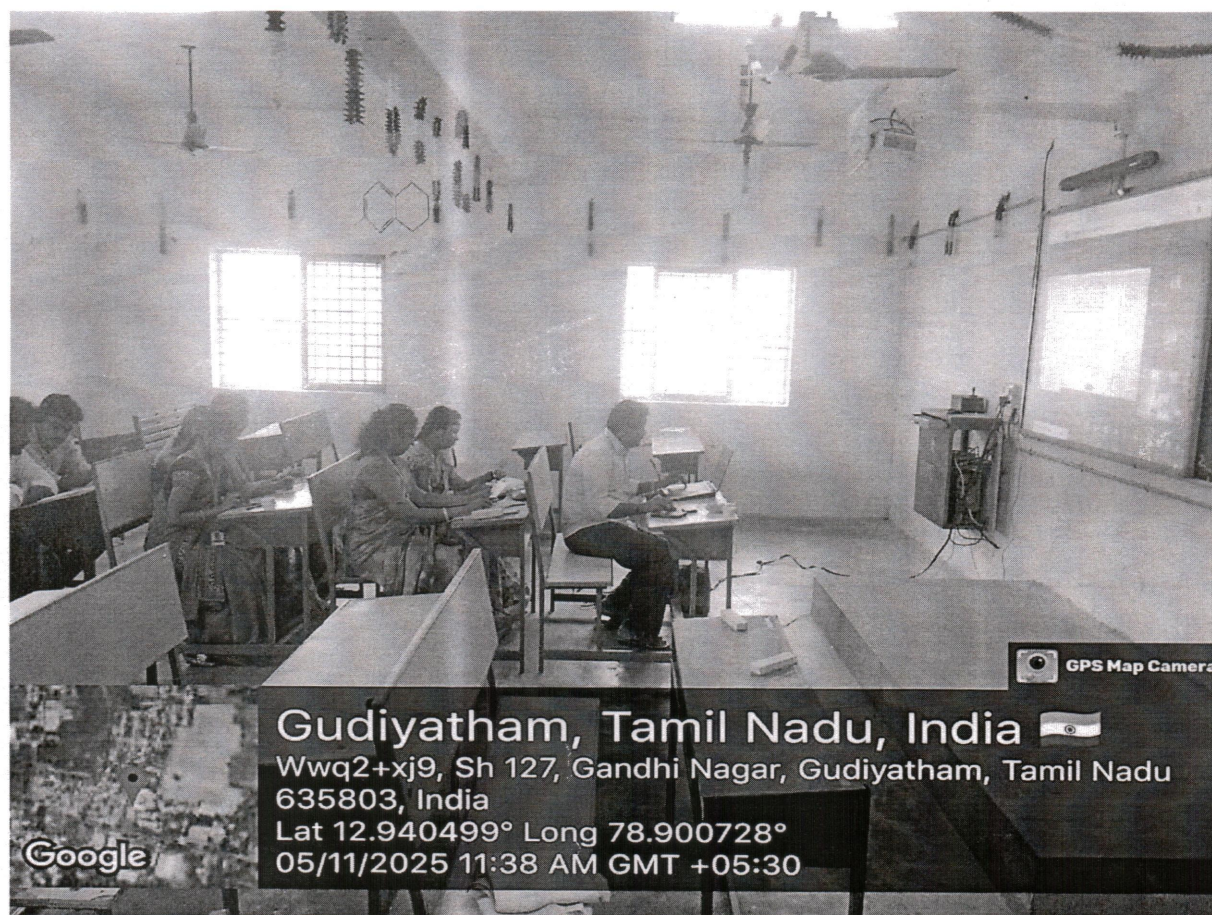
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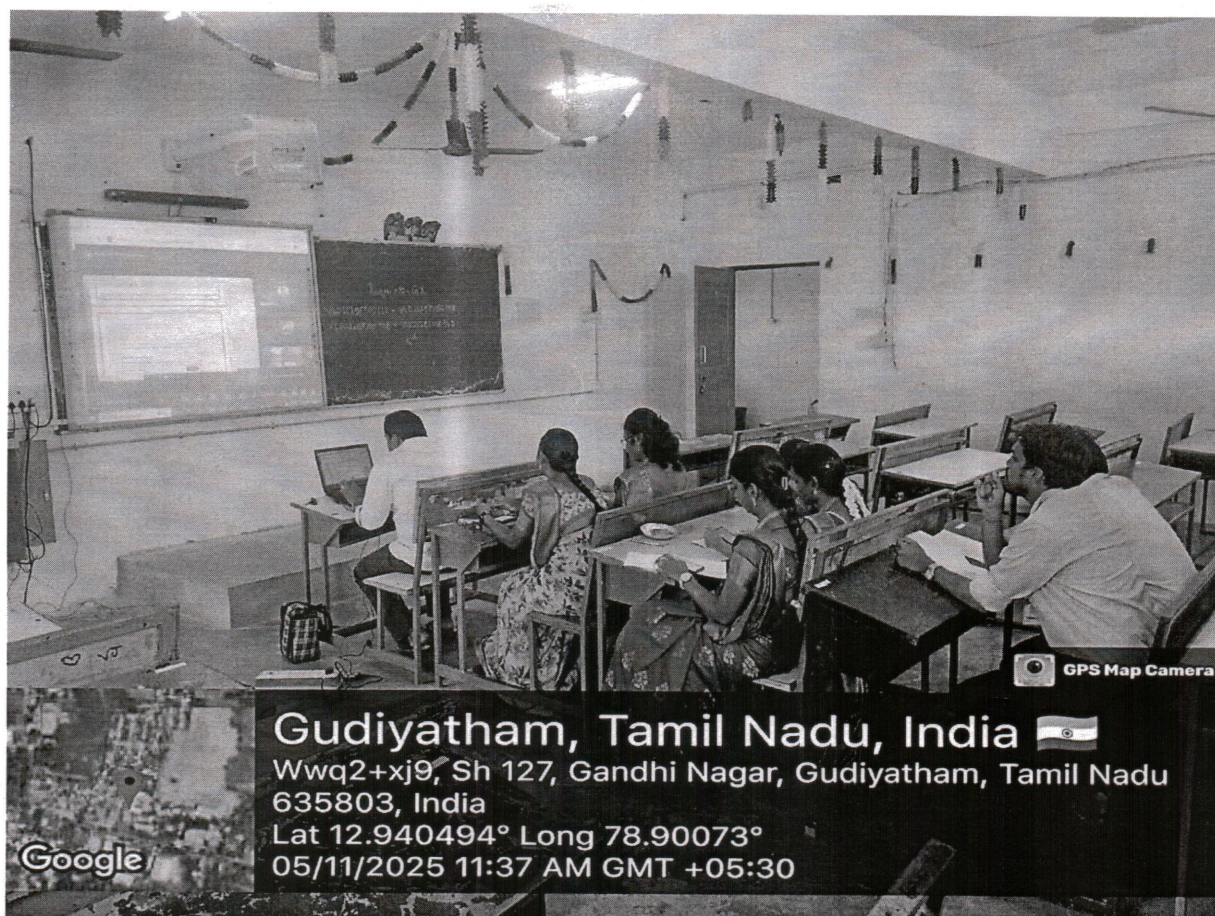
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05/11/2025





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 Head of the Department
HEAD OF THE DEPARTMENT
PG & RESEARCH DEPARTMENT OF CHEMISTRY
K.M.G. COLLEGE OF ARTS AND SCIENCE
(AUTONOMOUS)
GUDIYATTAM - 635 803

[Signature] 5/11/25
 Principal
PRINCIPAL,
K.M.G. COLLEGE OF ARTS AND SCIENCE
(AUTONOMOUS),
GUDIYATTAM, VELLORE DISTRICT - 635 803