



**MARUDHAR KESARI JAIN COLLEGE FOR WOMEN
(AUTONOMOUS), VANIYAMBADI
PG DEPARTMENT OF CHEMISTRY
BRIDGE COURSE 2025-2026**

COURSE NAME: BASIC CHEMISTRY: CONCEPTS & COMPETENCIES

Course objectives

1. To reinforce foundational chemical principles.
2. To solidify understanding of basic concepts in inorganic, organic, and physical chemistry.
3. To identify and classify key chemical compounds and functional groups, and to develop foundational practical skills in chemical instrumentation and laboratory techniques.
4. To inculcate laboratory safety protocols and ethical conduct in chemical experimentation.
5. To apply the knowledge to develop cosmetic products with desired properties.

Session	Topic	Pedagogy Activity	Staff incharge
1.	Curriculum Structure of the Degree Programme. Career Opportunities & Higher Education in Chemistry.	Presentation	Dr.M.Charumathy
2.	Introduction to Chemistry: Scope, branches, and relevance.	Group Discussion	Ms.S.Baranipriya
3.	Basic Chemistry:Balancing chemical equations, Acids, Bases, and pH, Buffers and Molar solutions, Normality solutions,Percent solutions (%) and its stoichiometric calculations. Great Chemists/ Researchers/Scientist.	Lecture method	Ms.C.Thamilmozhi
4.	Atomic Structure & Periodicity:Subatomic particles, Electron configuration, Periodic trends.	Lecture method	Ms.M.Kaviya
5.	Laboratory Skills and Safety: Handling Hazardous Chemicals, Waste Disposal, Emergency Procedures, Accurate Weighing & Volumetric Analysis, Titration Techniques, Data Handling. Laboratory rules: Do's and Lab Don'ts.	Lab Visit	Ms.A.Boomika
6.	Organic Chemistry Fundamentals: Hydrocarbon Nomenclature, Functional Groups, Isomerism, Basic Reaction Types.	Presentation	Ms.Sangeetha
7.	Use Quiz platforms (Kahoot/Quizizz) for reaction naming,mechanism steps, and functional group identification.	Gamification	Dr.Logeswari

8.	Use diagrams, flowcharts, and concept maps to help students visualize complex chemical processes and relationships.	Concept Mapping and Visual Learning	Ms.R.Ramya
9.	Instrumentation: Analytical & Electronic Weighing Balance, Hot Air Oven, Potentiometry, pH metry, Conductometry, Colorimetry, Flame Photometry and Centrifuge.	Laboratory Demonstration	Dr.Perumal
10.	Chemistry in Consumer Products: Soaps, Detergents, Cosmetics, Shampoo, hair dye, skin and hair care products. Formulation and preparation of anyone consumer products.	Laboratory Demonstration	Ms.P.Tamilaruvi

COURSE OUTCOMES

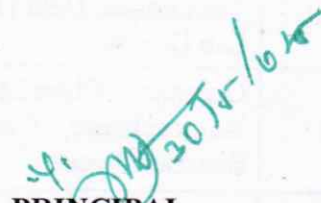
Students will be able to

- To apply fundamental chemical principles to describe and predict the behavior of matter and chemical reactions.
- To differentiate and explain core concepts across inorganic, organic, and physical chemistry, demonstrating a unified understanding of basic chemical phenomena.
- To correctly identify and classify major chemical compounds and functional groups, and perform basic laboratory procedures using common chemical instrumentation and techniques.
- To demonstrate adherence to standard laboratory safety protocols and apply ethical principles in planning and executing chemical experiments.
- To articulate the interdisciplinary nature of chemistry and provide examples of its practical applications in diverse scientific fields and everyday life.

Assesment

Quiz/PPTs/Multiple Choice Questions.


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PG DEPARTMENT OF CHEMISTRY

BRIDGE COURSE TIME TABLE - (2025 -2026)

Hour /Day order	1	2	3	4	5
Day 1	Beyond the curriculum and exam Pattern Dr.M.Srinivasan	Curriculum Structure of Degree Program Dr.M.Charumathy	Communicative English Ms.Revathi	Functional group identification Dr.J.Logeswari	Organic Chemistry Fundamentals Ms.Sangeetha
Day 2	Motivational Class Dr.Merlin Mythili	Lab Skills and Safety Ms.Boomika	Communicative English Ms.Revathi	Scope of Chemistry Ms.Baranipriya	Sports
Day 3	Introduction of Chemistry Ms.Baranipriya	Organic Chemistry Fundamentals Ms.Sangeetha	Communicative English Ms.Revathi	Idea about of Chemical Process Ms.R.Ramya	Atomic Structure Ms.M.Kaviya
Day 4	Communicative English Ms.Revathi	Atomic Structure Ms.M.Kaviya	Communicative English Ms.Revathi	Lab Demo Dr.Perumal	Basic Chemistry Ms.C.Thamilmozhi
Day 5	Communicative English Ms.Revathi	Basic Chemistry Ms.C.Thamilmozhi	Communicative English Ms.Revathi	Lab Demo Dr.Perumal	Chemistry in Consumer Products Ms.P.Tamilaruvi

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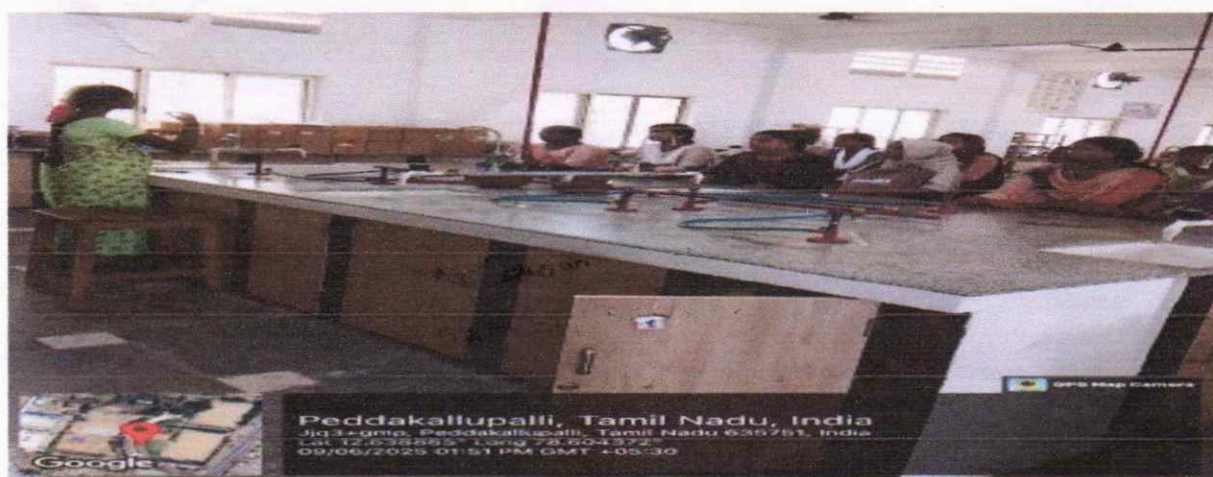
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VANIYAMBADI

PG DEPARTMENT OF CHEMISTRY

BRIDGE COURSE 2025-2026

CLASS : I B.Sc Chemistry



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Marudhar Nagar, Chinnakallupalli, Vaniyambadi – 635751, Tirupattur District.



BRIDGE COURSE ATTENDANCE

Department : Chemistry

Academic Year :2025-2026

Class: I B.Sc Chemistry

Course Name: Basic Chemistry: Concepts & Competencies

S.No	Name of the Student	Signature				
		9.6.25	10.6.25	11.6.25	12.6.25	13.6.25
1	Archana M	Archana	Archana	Archana	Archana	Archana
2	Arthi K	K.Arthi	K.Arthi	K.Arthi	K.Arthi	K.Arthi
3	Dhaanushree S	Dhaanushree	a	a	Dhaanushree	Dhaanushree
4	Diya Deogam				Diya	a
5	Gayathri R	R.Gayathri	R.GAYATHRI	R.GAYATHRI	R.GAYATHRI	R.GAYATHRI
6	Gayathri T					T.Gayathri
7	Gopika K					K. Gopika
8	Harini U	a	a	a	a	a
9	Indhumathi T	Indhumathi	Indhumathi	Indhumathi	Indhumathi	Indhumathi
10	Keerthika N	a	a	a	a	a
11	Kokila Vani G	Kokila	Kokila	Kokila	Kokila	Kokila
12	Komathi K					K.Komathi
13	Nithyapriya S	Nithyapriya	Nithyapriya	Nithyapriya	Nithyapriya	Nithyapriya
14	Punitha V	Punitha	Punitha	Punitha	Punitha	Punitha
15	Renuka K	Renuka	Renuka	Renuka	Renuka	Renuka
16	Shaishtha Muskan M	Shaishtha	Shaishtha	Shaishtha	Shaishtha	Shaishtha
17	Sindhu S	Sindhu	S.Sindhu	S.Sindhu	Sindhu	S.Sindhu
18	Umm E Kulsum A S	Umm E Kulsum	Umm E Kulsum	Umm E Kulsum	Umm E Kulsum	Umm E Kulsum
19	Yamuna Devi M	M.Yamuna	M.Yamuna	M.Yamuna	M.Yamuna	M.Yamuna

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Class Incharge

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BRIDGE COURSE FEEDBACK

Department : Chemistry

Academic Year :2025-2026

Class: I B.Sc Chemistry

Course Name: Basic Chemistry: Concepts & Competencies

S.No	Name of the Student	Feedback
1	Archana M	Good, helpful to recap the before studies
2	Arthi K	very very useful and important calls in for class
3	Dhaanushree S	very useful and interesting and will learn new ones.
4	Diya Deogam	Good, helpful to recap the before studies.
5	Gayathri R	interesting and very important and the before studies.
6	Gayathri T	Very helpful and learn my English words, good
7	Gopika K	very important and useful class.
8	Harini U	Absent.
9	Indhumathi T	very interesting and useful class
10	Keerthika N	very very useful and important calls in for
11	Kokila Vani G	The way of start the course is too good
12	Komathi K	Its very interesting and capable to read.
13	Nithyapriya S	Very Important and useful class
14	Punitha V	very useful and important class
15	Renuka K	very useful and important class
16	Shaishta Muskan M	very useful class, thank you for remembering all..
17	Sindhu S	Good, helpful to recap the before studies
18	Umm E Kulsum A S	It is very helpful and interesting
19	Yamuna Devi M	It is very helpful to gain our knowledge

C. Thy
SUBJECT INCHARGE

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