



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

(ಶಿಕ್ಷಣ ಮತ್ತು ತಂತ್ರಜ್ಞಾನಗಳ ರಾಜ್ಯ ಸರ್ಕಾರದ ಅಧೀನದಲ್ಲಿ ಸ್ಥಾಪಿಸಲಾದ ವಿಶ್ವವಿದ್ಯಾಲಯ)

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

(State University of Government of Karnataka Established as per the VTU Act, 1994)

"Jyoti Sagar" Belagavi-590018, Karnataka, India



Prof. Dr. B. E. Rangaswamy, Ph.D.
REGISTRAR(I/C)

Phone: (0831) 2498100
Fax : (0831) 2405467

REF: VTU/BGM/ACA/2022-23/1051

DATE: 14 NOV 2022

NOTIFICATION

Subject: - Tentative Academic Calendar of 1st semesters of B.E./B.Tech./B.Arch./B.Plan., programs of University regarding...

Reference: Dean faculty of Engineering, VTU Belagavi approval dated 10.11.2022

Hon'ble Vice-Chancellor's approval dated: 14.11.2022

The tentative academic calendar concerned to 1st semesters of B.E./B.Tech./B.Arch./B.Plan., programs of University for academic year 2022-23 are hereby notified as mentioned below;

(Tentative) Academic Calendar for I Semester of UG programs for the Academic Year 2022-23			
Details	I semester B.E./B.Tech.	I semester B.Arch.	I semester B.Plan
Commencement of I semester (*Induction Program)	21.11.2022	21.11.2022	21.11.2022
Commencement of I semester Classes	01.12.2022	01.12.2022	01.12.2022
Last Working day of I Semester	18.03.2023	18.03.2023	18.03.2023
Practical Examinations	21.03.2023 To 31.03.2023	21.03.2023 To 31.03.2023	21.03.2023 To 31.03.2023
Theory Examinations	03.04.2023 To 28.04.2023	03.04.2023 To 28.04.2023	03.04.2023 To 28.04.2023
Commencement of II Semester	02.05.2023	02.05.2023	02.05.2023

Please Note:

- The academic sessions for ODD semesters should commence on the date mentioned above.
- ** Induction Program shall be conducted for 11 days at the beginning of 1st semester and 10 days at the beginning of the 2nd semester.

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During induction program college has to brief about the new curriculum that implemented from the academic year 2022-23.

- The Institute needs to function for **six days** a week with Saturday being half working day. If required, the college can also plan to have extra classes on Saturday afternoons and Sundays full day to complete academic activities within the duration mentioned.
- The faculty/staff shall be available to undertake any work assigned by the university.
- Notification regarding the Calendar of Events relating to the conduct of University Examinations will be issued by the Registrar (Evaluation) from time to time.
- Academic Calendar **may be modified** based on guidelines/directions issued in the future by MHRD/UGC/AICTE/State Government.
- Academic Calendar is also applicable for **Autonomous Colleges**. If any changes are to be effected by Autonomous Colleges in the academic terms and examination schedule, they could do so with the approval of the University.
- The college has to conduct offline classes to cover **80%** of the syllabus of the courses; however, **20%** of the syllabus can be covered in virtual model (Online) mode. **Attendance** of the students for offline and online classes is mandatory and records should be maintained and submitted to the university whenever informed.
- AICTE Activity point details circular will be issued by the Registrar's office separately.
- If any clarification/correction, please email to - sblvtuso@yahoo.com

The Principals of Affiliated, Constituent and Autonomous Engineering Colleges, Chairpersons of the University departments are hereby informed to bring the academic calendar to the notice of all concerned.

Sd/-

REGISTRAR

To,

1. The Principals of all affiliated/ constituent /Autonomous Engineering Colleges under the ambit of VTU Belagavi.
2. The chairperson, of the Department of Mechanical Engineering /Civil Engineering /Computer Science and Engineering Electronics & Communication Engineering Dept. of the University

Copy to.

1. To the Hon'ble Vice-Chancellor through the secretary to VC, VTU Belagavi for information
2. The Registrar (Evaluation), VTU Belagavi for information.
3. The Regional Directors (I/c) of all the regional offices of VTU for circulation.
4. The Director I/c. ITI SMU, VTU Belagavi for information and to make arrangements to upload Academic Calendar on the VTU web portal.
5. The Director of Physical Education, VTU Belagavi for information
6. OS for information and make arrangements to send the circular regarding AICTE Activity Points
7. All the concerned Special Officer/s and Caseworker/s of the academic section, VTU, Belagavi

Ray 14/11/2022 *BE*

REGISTRAR

af.

**Computer Science and Engineering and allied branches
(Chemistry group)**

Course Title:	Applied Chemistry for Computer Science & Engineering stream		
Course Code:	22CHES12/22	CIE Marks	50
Course Type (Theory/Practical/Integrated)	Integrated	SEE Marks	50
		Total Marks	100
Teaching Hours/Week (L:T:P: S) ¹	2:2:2:0	Exam Hours	03
Total Hours of Pedagogy	40 hours Theory + 10 to 12 Lab slots	Credits	04
Course objectives - To enable students to acquire knowledge on principles of chemistry for engineering applications. - To develop an intuitive understanding of chemistry by emphasizing the related branches of engineering. - To provide students with a solid foundation in analytical reasoning required to solve societal problems.			
Teaching-Learning Process These are sample strategies, which teacher can use to accelerate the attainment of the various course outcomes and make Teaching-Learning more effective - Tutorial & remedial classes for needy students (not regular T/R) - Conducting Makeup classes / Bridge courses for needy students - Demonstration of concepts either by building models or by industry visit - Experiments in laboratories shall be executed in blended mode (conventional or non-conventional methods) - Use of ICT - Online videos, online courses - Use of online platforms for assignments / Notes / Quizzes (Ex. Google classroom)			
MODULE 1: Sensors and Energy Systems (8hr)			
Sensors: Introduction, working, principle and applications of Conductometric sensors, Electrochemical sensors, Thermometric sensors (Flame photometry) and Optical sensors (colorimetry). Sensors for the measurement of dissolved oxygen (DO). Electrochemical sensors for the pharmaceuticals. Electrochemical gas sensors for SO _x and NO _x . Disposable sensors in the detection of biomolecules and pesticides.			
Energy Systems: Introduction to batteries, construction, working and applications of Lithium ion and Sodium ion batteries. Quantum Dot Sensitized Solar Cells (QDSSC's)- Principle, Properties and Applications.			
Self-learning: Types of electrochemical sensor, Gas sensor - O ₂ sensor, Biosensor - Glucose sensors.			
MODULE 2: Materials for Memory and Display Systems (8hr)			
Memory Devices: Introduction, Basic concepts of electronic memory, History of organic/polymer electronic memory devices, Classification of electronic memory devices,			

1. NOTE: Wherever the contact hours is not sufficient, tutorial hour can be converted to theory hours

types of organic memory devices (organic molecules, polymeric materials, organic-inorganic hybrid materials)

Display Systems: Photoactive and electroactive materials, Nanomaterials and organic materials used in optoelectronic devices. Liquid crystals (LC's) - Introduction, classification, properties and application in Liquid Crystal Displays (LCD's). Properties and application of Organic Light Emitting Diodes (OLED's) and Quantum Light Emitting Diodes (QLED's), Light emitting electrochemical cells.

Self-learning: Properties and functions of Silicon (Si), Germanium (Ge), Copper (Cu), Aluminium (Al), and Brominated flame retardants in computers.

MODULE 3: Corrosion and Electrode System (8hr)

Corrosion Chemistry: Introduction, electrochemical theory of corrosion, types of corrosion-differential metal and differential aeration. Corrosion control - galvanization, anodization and sacrificial anode method. Corrosion Penetration Rate (CPR) - Introduction and numerical problem.

Electrode System: Introduction, types of electrodes. Ion selective electrode - definition, construction, working and applications of glass electrode. Determination of pH using glass electrode. Reference electrode - Introduction, calomel electrode - construction, working and applications of calomel electrode. Concentration cell- Definition, construction and Numerical problems.

Analytical Techniques: Introduction, principle and instrumentation of Conductometry; its application in the estimation of weak acid. Potentiometry; its application in the estimation of iron.

Self-learning: IR and UV- Visible spectroscopy.

MODULE 4: Polymers and Green Fuels (8hr)

Polymers: Introduction, Molecular weight - Number average, weight average and numerical problems. Preparation, properties, and commercial applications of kevlar. Conducting polymers - synthesis and conducting mechanism of polyacetylene and commercial applications.

Green Fuels: Introduction, construction and working of solar photovoltaic cell, advantages, and disadvantages. Generation of energy (green hydrogen) by electrolysis of water and its advantages.

Self-learning: Regenerative fuel cells

MODULE 5: E-Waste Management (8hr)

E-Waste: Introduction, sources of e-waste, Composition, Characteristics, and Need of e-waste management. Toxic materials used in manufacturing electronic and electrical products, health hazards due to exposure to e-waste. Recycling and Recovery: Different approaches of recycling (separation, thermal treatments, hydrometallurgical extraction, pyrometallurgical methods, direct recycling). Extraction of gold from E-waste. Role of stakeholders in environmental management of e-waste (producers, consumers, recyclers, and statutory bodies).

Self-learning: Impact of heavy metals on environment and human health.

PRACTICAL MODULE

A - Demonstration (any two) offline/virtual:

A1. Chemical Structure drawing using software: ChemDraw or ACD/ChemSketch

12. Determination of strength of an acid in Pb-acid battery

13. Synthesis of Iron-oxide Nanoparticles

14. Electrolysis of water

B - Exercise (compulsorily any 4 to be conducted):

B1. Conductometric estimation of acid mixture

B2. Potentiometric estimation of FeAS using $K_2Cr_2O_7$

B3. Determination of pKa of vinegar using pH sensor (Glass electrode)

B4. Determination of rate of corrosion of mild steel by weight loss method

B5. Estimation of total hardness of water by EDTA method

C - Structured Enquiry (compulsorily any 4 to be conducted):

C1. Estimation of Copper present in electroplating effluent by optical sensor (colorimetry)

C2. Determination of Viscosity coefficient of lubricant (Ostwald's viscometer)

C3. Estimation of iron in TMT bar by diphenyl amine/external indicator method

C4. Estimation of Sodium present in soil/effluent sample using flame photometry

C5. Determination of Chemical Oxygen Demand (COD) of industrial waste water sample

D - Open Ended Experiments (any two):

D1. Evaluation of acid content in beverages by using pH sensors and simulation.

D2. Construction of photovoltaic cell

D3. Design an experiment to identify the presence of proteins in given sample.

D4. Searching suitable PDB file and target for molecular docking

Course outcome (Course Skill Set)

At the end of the course the student will be able to:

CO1.	Identify the terms and processes involved in scientific and engineering applications
CO2.	Explain the phenomena of chemistry to describe the methods of engineering processes
CO3.	Solve the problems in chemistry that are pertinent in engineering applications
CO4.	Apply the basic concepts of chemistry to explain the chemical properties and processes
CO5.	Analyze properties and processes associated with chemical substances in multidisciplinary situations

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). The minimum passing mark for the SEE is 35% of the maximum marks (18 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination (SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation (CIE):

The CIE marks for the theory component of the IC shall be 30 marks and for the laboratory component 20 Marks.

CIE for the theory component of the IC

- Three Tests each of 20 Marks; after the completion of the syllabus of 35-40%, 65-70%, and 90-100% respectively.
- Two Assignments/two quizzes/ seminars/one field survey and report presentation/one-course project totalling 20 marks.

Total Marks scored (test + assignments) out of 80 shall be scaled down to 30 marks

CIE for the practical component of the IC



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Phone: 08258-262725, Fax: 08258-262726

DEPARTMENT OF CHEMISTRY

SEMESTER—I

Academic year-2022-23, Odd Semester

Course Code: 22CHES12 Course Name: Applied Chemistry for Computer Science & Engineering stream.

Course Teacher: Dr. Ravi Kumar C, Dr. Damodara N & Dr. Sakshi S. Kamath

Course Outcomes: After studying this course, students will be able to,

CO Numbers	Course Outcomes	Blooms Level	Target Level
22CHES12.1	Enumerate the working principle of different types of sensors and its engineering applications, understand working & applications of batteries and quantum dot sensitized solar cells.	L2	2
22CHES12.2	Understand the basic chemistry principles behind memory devices & display systems to describe methods of engineering processes.	L2	2
22CHES12.3	Solve the problems in Chemistry with respect to electrode system and corrosion.	L3	2
22CHES12.4	Describe the synthesis, properties and applications of polymers and green fuel.	L2	2
22CHES12.5	Analyse the need of e-waste management by the stake holders towards green environment.	L4	2
22CHES12.6	Quantitative analysis of various engineering materials.	L4	2

CO-PO Mapping Matrix:

CO Numbers	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
22CHES12.1	2	1	-	-	-	-	1	-	-	-	-	-
22CHES12.2	2	-	-	-	-	-	-	-	-	-	-	-
22CHES12.3	2	1	-	-	-	1	1	-	-	-	-	-
22CHES12.4	1	-	-	-	-	1	2	-	-	-	-	-
22CHES12.5	2	-	-	-	-	2	2	-	-	-	-	-
22CHES12.6	1	-	-	-	-	1	1	-	-	-	-	-
SUM	10	2	-	-	-	5	7	-	-	-	-	-
AVERAGE	1.66	1.00	-	-	-	1.25	1.40	-	-	-	-	-

Justification of Course Outcome and Program Outcome mapping:

CO	POs	Level	Justification
22CHES12.1	1	2	Moderately mapped as the students will be able to understand the principle of sensors and its Engineering applications
	2	1	Slightly mapped as the students will be able to identify basic principles of sensors
	7	1	Slightly mapped as the students will be able to understand the impact of the sensors in societal environmental issues
22CHES12.2	1	2	Moderately mapped as the students will be able to acquire knowledge on principles of materials for memory & display systems
22CHES12.3	1	2	Module 3 deals with study of corrosion, its types and control measures. Hence it is mapped moderately to PO1 as it involves solution to certain engineering problems.



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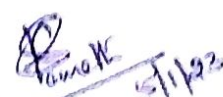
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22CHEE12.4	2	1	Using the principles of chemistry behind electrode systems, students can understand the concept for problem analysis. Hence, it is slightly mapped to PO2.
	6	1	Students can apply the knowledge gained in this module to overcome the problems in the society, hence CO3 is mapped slightly to PO6.
	7	1	CO3 is slightly mapped to PO7 as students learn the concepts and think in the perspective of sustainable society.
	1	1	Students apply the basic knowledge of chemistry gained in this module related to polymer and its application will help them in solving complex problems to some extent. Hence, it is slightly mapped to PO1.
	6	1	The green fuel generation studied in Module 4 will help students to think about the betterment of the society, Hence it is slightly mapped with PO6.
22CHEE12.5	7	2	CO4 is mapped moderately to PO7 because after studying this module student will get idea about environment sustainability as it involves green fuel synthesis.
	1	2	Need to address e-waste management matches moderately as an outcome for the PO1 -Applying knowledge of Science towards providing solutions engineering problems
	6	2	Involvement of all the stakeholders in dealing with e-waste effectively matches moderately with the Engineer and the Society
22CHEE12.6	7	2	As this CO deals with Recycling and Recovery; different approaches of recycling of e-waste, matches moderately with Environment and the Sustainability
	1	1	Various quantitative analysis done in Practical align partially with PO1 dealing with applying knowledge of Science towards providing solutions engineering problems
	6	1	Experiments performed in lab align partially with PO6 outcomes in which Engineer and the society whereby reasoning can be applied to assess health issues and responsibility towards the same
	7	1	Experiments performed demonstrate partially the knowledge of, and need for sustainable development and bringing out environment concerns


Course Teacher


Criteria 8 Coordinator


IQAC Member

Signature with date


HoD & IQAC Chairman

Signature with date

H. O. D.,

Dept. Of Chemistry

Alva's Institute of Engg. & Technology

Mijar, MOODBIDRI - 574 225



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Group	Chemistry Cycle	CLASS TIME TABLE					
Semester	First						
Academic Year	2022-2023						
Section: IT1 (A)		Room No: 401					
Class Coordinator: Dr. Sakshi S Kamath (Department of Chemistry)							
Day/ Period	P1 (9.00-9.50)	P2 (9.50-10.40)	P3 (11.00-11.50)	P4 (11.50-12.40)	P5 (1.40-2.30)	P6 (2.30-3.20)	P7 (3.30-5.00)
Monday	22ESC143	22CHES12	22MATS11 Lab (MMC+LV+LA)		22CHES12 A1 batch-Chemistry Lab A2 batch-Library		
Tuesday	22CED13				22MATS11	22ESC143	Mentor Meeting
Wednesday	22CHES12	22PLC15B (Lab)			22PWS16	22ESC143	Library
Thursday	22ESC143	22CHES12 (SSK + NA) A2 batch-Chemistry Lab A1 batch-Library			22CHES12	22MATS11	Library
Friday	22MATS11	22CHES12	22KBK17	22ESC143	22CED13		
Saturday	22CHES12	22MATS11	22PWS16	Library			
COURSE	COURSE CODE	COURSE TITLE				FACULTY	
ASC(IC)	22MATS11	Applied Science Course Mathematics for CSE Stream-I				Mrs. Kavitha Mrs. Melita Mary Cardoza (MMC) Mrs. Lata Vaman Das(LV) Ms.Lavanya(LA)	
ASC(IC)	22CHES12	Applied Science Course Chemistry for CSE Stream-I				Dr. Sakshi S Kamath (SSK) Ms.Nandini (NA)	
ESC	22CED13	Engineering Science Course Computer-Aided Engineering Drawing				Dr. G B Vaggar	
ESC-I	22ESC143	Engineering Science Course-I (Introduction to Electronics Engineering)				Mrs. Ansha Prathiba	
PLC-I	22PLC15B	Programming language Course-I (Introduction to Python Programming)				Ms.Rashmi Suvarna	
AEC	22PWS16	Ability Enhancement Course Professional Writing Skills in English				Mr. Ajith Peter	
HSMS	22KBK17	Humanity & Social Science & Management Course Balake Kannada				Dr. Jyothi Rai	
A1 batch-Roll No 1-32, A2 batch-Roll No 33-64							

Timetable Co-ordinator

H.O.D.
Dept. Of Chemistry
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

Principal
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
Mijar, MOODBIDRI - 574 225, D.K.

STUDENT LIST

A SECTION

Sl. No.	BRANCH	NAME
1	4AL22CS001	Abhishek B
2	4AL22CS002	Abhishek Gowda G R
3	4AL22CS003	Abhishek R Allapur
4	4AL22CS004	Adhya H Shetty
5	4AL22CS005	Advith V Suvarna
6	4AL22CS009	Alan C Raju
7	4AL22CS010	Amith Gowda H M
8	4AL22CS011	Amrutha M
9	4AL22CS012	Ansil Kumar
10	4AL22CS018	Arvind Kumar Ojha
11	4AL22CS019	Ashritha
12	4AL22CS020	Ayeshatul Hafeeza
13	4AL22CS021	B B Naik
14	4AL22CS023	Bharath H D
15	4AL22CS027	Charan Kumar V
16	4AL22CS028	Charishma G
17	4AL22CS032	Chinmay Gowda H V
18	4AL22CS041	Diya Rai
19	4AL22CS042	Elluri Chaitanya Srinivas
20	4AL22CS043	Faiza
21	4AL22CS044	Gagan
22	4AL22CS047	Glanil Tauro
23	4AL22CS049	Gowda Miilee Madankumar
24	4AL22CS051	H I Akshay
25	4AL22CS055	Harsha C R
26	4AL22CS056	Harshith L S
27	4AL22CS057	Harshitha D Bangera
28	4AL22CS060	Harshitha M
29	4AL22CS061	Heetha Shree S
30	4AL22CS064	Indrajith S
31	4AL22CS066	Jeevan K
32	4AL22CS067	K Jeevan Kumar
33	4AL22CS069	Kanishka Shetty
34	4AL22CS073	Kavya S



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35	4AL22CS076	Keerthana R S
36	4AL22CS078	Kiran Kumar
37	4AL22CS081	Lohith B R
38	4AL22CS086	Meghana N K
39	4AL22CS088	Merlyn Luvis Almeida
40	4AL22CS089	Mohammed Ahazar
41	4AL22CS090	Mohidin Ahmed Kabeer
42	4AL22CS091	Nausha Tendulkar
43	4AL22CS092	Neha N Rao
44	4AL22CS097	Padmaraj Praphull Kurundwade
45	4AL22CS105	Pranav Tirakanagoudar
46	4AL22CS107	Prathi U Shetty
47	4AL22CS108	Preetham Devadiga
48	4AL22CS109	Preety Kakchingtabam
49	4AL22CS115	Rakshith V Rao
50	4AL22CS117	Rashmitha M S
51	4AL22CS118	Ravitej C Neeli
52	4AL22CS119	Rithika P Shetty
53	4AL22CS121	Roshan S
54	4AL22CS124	Sakshi
55	4AL22CS125	Sakshi B K
56	4AL22CS128	Sameeksha Shetty
57	4AL22CS143	Shetty Samay Deepak
58	4AL22CS150	Shodhan Kumar Shetty
59	4AL22CS168	Sumanth
60	4AL22CS171	Suraj
61	4AL22CS190	Yumlembam Henba Singh
62	4AL22IS001	Adarsh
63	4AL22IS022	Meghana Mohan Naik
64	4AL22IS028	Nisarga Shridhar Naik


IQAC CHAIRMAN & HOD
H. O. D.

Dept. Of Chemistry
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ACADEMIC YEAR- 2022-23

(ODD SEMESTER)

FACULTY INCHARGE	Dr. Sakshi S Kamath
Semester & Section	First semester, A Section
Date of Commencement	01-12-2022
Last working day of the Semester	31-03-2023

Source Materials List

1. Wiley Engineering Chemistry, Wiley India Pvt.Ltd.NewDelhi,2013-2ndEdition.
2. Engineering Chemistry,Satyaprakash&ManishaAgrawal,KhannaBookPublishing,Delhi
3. A Text Book of Engg. Chemistry,ShashiChawla,DhanpatRai&Co.(P)Ltd.
4. Essentials of Physical Chemistry, Bahl&Tuli,S.ChandPublishing
5. Applied Chemistry,SunitaRattan,Kataria5.EngineeringChemistry,Baskar,Wiley
6. Engineering Chemistry-I,D.Groukrishana,VikasPublishing
7. A Text book of Engineering Chemistry,SSDara&Dr.SSUmare,SChand&CompanyLtd.,12thEdition,2011.
8. A Text Book of Engineering Chemistry,R.V.GadagandNityanandaShetty,I.K.InternationalPublishinghouse. 2ndEdition,2016.
9. Text Book of Polymer Science, F.W.Billmeyer,JohnWiley&Sons,4thEdition,1999.
10. Nanotechnology A Chemical Approach to Nanomaterials,G.A.Ozin&A.C.Arsenault,RSCPublishing,2005
11. Laboratory Manual Engg. Chemistry, Anupma Rajput, Dhanpat Rai&Co.

Subject/Course Name- Applied Chemistry for CSE stream/BCHES102

Lesson Planned				Lesson Execution		
Period	Date	Topic	Source material needed	Topic	Date	Source material referred
1.	12-12-22	MODULE 1: Sensors and Energy Systems-General introduction	1-10	MODULE 3: Corrosion and Electrode System- general introduction	12-12-22	1-10
2.	14-12-22	Sensors: Introduction, working, principle and applications of Conductometric sensors, Electrochemical sensors.	1-10	Corrosion Chemistry: Introduction, electrochemical theory of corrosion,	12-12-22	1-10
3.	15-12-22	Thermometric sensors and Optical sensors (Colorimetry).	1-10	Types of corrosion- differential metal and differential aeration.	14-12-22	1-10
4.	16-12-22	Sensors for the measurement of dissolved oxygen (DO). Electrochemical sensors for the pharmaceuticals.	1-10	Corrosion control-galvanization, anodization and sacrificial anode method.	16-12-22	1-10
5.	17-12-22	Electrochemical gas sensors for Sox and NOx.	1-10	Corrosion Penetration Rate (CPR) - Numericals	17-12-22	1-10
6.	19-12-22	Disposable sensors in the detection of biomolecules and pesticides.	1-10	Electrode system: Introduction to reference electrode Calomel electrode-construction, working and applications	18-12-22	1-10
7.	21-12-22	Energy Systems: Introduction to batteries, construction, working and applications of	1-10	Ion selective electrode-construction, working and applications	21-12-22	1-10



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		Lithium ion and Sodium ion batteries				
8.	22-12-22	Quantum Dot Sensitized Solar Cells (QDSSC's)-Principle, Properties and Applications	1-10	pH determination using glass electrode	28-12-22	1-10
9.	23-12-22	MODULE 2: Materials for Memory and Display Systems-general introduction	1-10	Concentration cells and Numericals	29-12-22	1-10
10.	24-12-22	Memory Devices: Introduction, Basic concepts of electronic memory, History of Organic/polymer electronic memory devices, Classification of electronic memory devices	1-10	Analytical Techniques: Introduction, principle and instrumentation of Conductometry; its application in the estimation of weak acid.	30-12-22	1-10
11.	26-12-22	Types of organic memory devices	1-10	Potentiometry; its application in the estimation of iron.	31-12-22	1-10
12.	28-12-22	Display Systems: Photoactive and electro active materials	1-10	MODULE 4: Polymers & green fuels-general introduction	2-1-23	1-10
13.	29-12-22	Nano materials and organic materials used in optoelectronic devices	1-10	Polymers: Introduction, Molecular weight- Number average, weight average- Numericals	4-1-23	1-10
14.	30-12-22	Nano materials and organic materials used in optoelectronic devices	1-10	Synthesis, properties and applications of Kevlar	5-1-23	1-10
15.	31-12-22	Liquid crystals (LC's) - Introduction, classification, properties and application in Liquid Crystal Displays (LCD's)	1-10	Conducting polymers- Synthesis and conducting mechanism of polyacetylene and commercial applications.	6-1-23	1-10
16.	2-1-23	Properties and application of Organic Light Emitting Diodes (OLED's) and Quantum Light Emitting Diodes (QLED's), Light emitting electro chemical cells.	1-10	Green Fuels: Introduction, construction and working of solar photovoltaic cell, advantages, and disadvantages	7-1-23	1-10
17.	4-1-23	MODULE 3: Corrosion and Electrode System- general introduction	1-10	Generation of energy (green hydrogen) by electrolysis of water and its advantages.	14-1-23	1-10
18.	5-1-23	Corrosion Chemistry: Introduction, electrochemical theory of corrosion,	1-10	MODULE 5: E-waste management-general introduction	18-1-23	1-10
19.	6-1-23	Types of corrosion- differential metal and differential aeration.	1-10	Introduction, sources of e-waste, Composition, Characteristics, and Need of e- waste management.	19-1-23	1-10
20.	7-1-23	Corrosion control- galvanization, anodization and sacrificial anode method.	1-10	Toxic materials used in manufacturing electronic and electrical products,	20-1-23	1-10
21.	9-1-23	Corrosion Penetration Rate (CPR) - Numericals	1-10	Health hazards due to exposure of e-waste	21-1-23	1-10



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22	11-1-23	Electrode system: Introduction in reference electrode Calomel electrode construction, working and applications	1-10	Different approaches of recycling separation, thermal treatments	27-1-23	1-10
23	12-1-23	Ion selective electrodes: construction, working and applications	1-10	Hydrometallurgical extraction, pyro metallurgical methods, direct recycling.	28-1-23	1-10
24	13-1-23	pH determination using glass electrode	1-10	Extraction of gold from E-waste.	30-1-23	1-10
25	14-1-23	Concentration cells and Numericals	1-10	Role of stakeholders in environmental management of e-waste (producers, consumers, recyclers, and statutory bodies)	8-2-23	1-10
26	18-1-23	Analytical Techniques: Introduction, principle and instrumentation of Conductometry; its application in the estimation of weak acid.	1-10	MODULE1: Sensors and Energy Systems-General introduction	9-2-23	1-10
27	19-1-23	Potentiometry; its application in the estimation of iron.	1-10	Sensors: Introduction, working, principle and applications of Conductometric sensors, Electrochemical sensors.	10-2-23	1-10
28	20-1-23	MODULE 4: Polymers & green fuels-general introduction	1-10	Thermometric sensors and Optical sensors (Colorimetry).	11-2-23	1-10
29	21-1-23	Polymers: Introduction, Molecular weight- Number average, weight average- Numericals	1-10	Sensors for the measurement of dissolved oxygen (DO). Electrochemical sensors for the pharmaceuticals.	13-2-23	1-10
30	1-2-23	Synthesis, properties and applications of Kevlar	1-10	Electrochemical gas sensors for Sox and NOx.	15-2-23	1-10
31	2-2-23	Conducting polymers- Synthesis and conducting mechanism of polyacetylene and commercial applications.	1-10	Disposable sensors in the detection of biomolecules and pesticides.	16-2-23	1-10
32	3-2-23	Green Fuels: Introduction, construction and working of solar photovoltaic cell, advantages, and disadvantages	1-10	Energy Systems: Introduction to batteries, construction, working and applications of Lithium ion and Sodium ion batteries	1-3-23	1-10
33	6-2-23	Generation of energy (green hydrogen) by electrolysis of water and its advantages.	1-10	Quantum Dot Sensitized Solar Cells (QDSSC's)-Principle, Properties and Applications	2-3-23	1-10
34	8-2-23	MODULE 5: E-waste management-general introduction	1-10	MODULE 2: Materials for Memory and Display Systems-general introduction	3-3-23	1-10
35	9-2-23	Introduction, sources of e-waste, Composition, Characteristics, and Need of e-waste management.	1-10	Memory Devices: Introduction, Basic concepts of electronic memory, History of Organic/polymer electronic memory devices, Classification of electronic memory devices	04-3-23	1-10
36	10-2-23	Toxic materials used in manufacturing electronic and electrical products,	1-10	Types of organic memory devices	06-3-23	1-10



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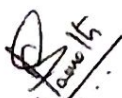
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37.	11-2-23	Health hazards due to exposure of e-waste	1-10	Display Systems: Photoactive and electro active materials	02-3-23	1-10
38.	13-2-23	Different approaches of recycling separation, thermal treatments	1-10	Nano materials and organic materials used in optoelectronic devices	09-3-23	1-10
39.	15-2-23	Hydrometallurgical extraction, pyro metallurgical methods, direct recycling.	1-10	Nano materials and organic materials used in optoelectronic devices	10-3-23	1-10
40.	16-2-23	Extraction of gold from E-waste.	1-10	Liquid crystals (LC's) - Introduction, classification, properties and application in Liquid Crystal Displays (LCD's)	11-3-23	1-10
41.	17-2-23	Role of stakeholders in environmental management of e-waste (producers, consumers, recyclers, and statutory bodies).	1-10	Properties and application of Organic Light Emitting Diodes (OLED's) and Quantum Light Emitting Diodes (QLED's), Light emitting electro chemical cells.	13-3-23	1-10
42.	20-2-23	Conductometric estimation of acid mixture	11	Conductometric estimation of acid mixture	Conducted according to the time table (2 batches-1 lab slot for each batch per week)	11
43.	22-2-23	Potentiometric estimation of FAS	11	Potentiometric estimation of PAS		11
44.	01-3-23	Determination of pKa using pH sensors	11	Determination of pKa using pH sensors		11
45.	02-3-23	Estimation of total hardness of water using EDTA method	11	Estimation of total hardness of water using EDTA method		11
46.	03-3-23	Estimation of Copper present in electroplating effluent by optical sensor	11	Estimation of Copper present in electroplating effluent by optical sensor		11
47.	04-3-23	Determination of viscosity co-efficient of the lubricant	11	Determination of viscosity co-efficient of the lubricant		11
48.	06-3-23	Estimation of iron in TMT bar using external indicator	11	Estimation of iron in TMT bar using external indicator		11
49.	08-3-23	Determination of COD of industrial waste water sample	11	Determination of COD of industrial waste water sample		11
50.	09-3-23	Demonstration experiments (any two)	11	Demonstration experiments (any two)		11
51.	10-03-2023	Revision until last working day		15-03-2023 to last working day (31-03-2023)- revision classes conducted		


Faculty in-charge


HoD Chemistry & IQAC Co-ordinator
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ACADEMIC YEAR 2022-23 (ODD SEMESTER)

A SECTION

FACULTY INCHARGE-Dr. Sakshi S Kamath

APPLIED CHEMISTRY FOR CSE STREAM (BCHES102)

Sl No	USN	STUDENT NAME	First IA	Second IA	Third IA	Assignment	Total	Average	Theory Round off for 30	Lab IA for 20	Total IA for 50
01	4AL22CS001	Abhishek B	10	16	14	20	60	22.5	23	19	42
02	4AL22CS002	Abhishek Gowda G R	15	11	16	20	62	23.25	24	10	34
03	4AL22CS003	Abhishek R Allapur	9	10	11	20	50	18.75	19	9	28
04	4AL22CS004	Adhya H Shetty	8	16	18	20	62	23.25	24	18	42
05	4AL22CS005	Advith V Suvarna	16	8	8	20	52	19.5	20	18	38
06	4AL22CS009	Alan C Raju	19	13	19	20	71	26.625	27	19	46
07	4AL22CS010	Amith Gowda H M	14	15	20	20	69	25.875	26	18	44
08	4AL22CS011	Amrutha M	19	16	17	20	72	27	27	18	45
09	4AL22CS012	Ansil Kumar	20	18	20	20	78	29.25	30	18	48
10	4AL22CS018	Arvind Kumar Ojha	20	13	15	20	68	25.5	26	19	45
11	4AL22CS019	Ashritha	20	17	20	20	77	28.875	29	20	49
12	4AL22CS020	Ayeshatul Hafeeza	11	10	13	20	54	20.25	21	18	39
13	4AL22CS021	B B Naik	20	15	19	20	74	27.75	28	19	47
14	4AL22CS023	Bharath H D	15	12	18	20	65	24.375	25	19	44
15	4AL22CS027	Charan Kumar V	19	19	17	20	75	28.125	29	20	49
16	4AL22CS028	Charishma G	20	18	20	20	78	29.25	30	20	50
17	4AL22CS032	Chinmay Gowda H V	6	8	6	20	40	15	15	13	28
18	4AL22CS041	Diya Rai	19	16	20	20	75	28.125	29	19	48
19	4AL22CS042	Elluri Chaitanya Srinivas	14	20	20	20	74	27.75	28	19	47
20	4AL22CS043	Faiza	16	18	20	20	74	27.75	28	18	46



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25	61.0.71.3166	Cagan	18	15	20	20	73	27.375	28	20	48
26	61.0.71.3167	Canil Pours	14	13	15	20	62	23.25	24	20	44
27	61.0.71.3168	Carola Vales Madankumar	20	11	18	20	69	25.875	26	20	46
28	61.0.71.3169	Chil Archey	11	20	20	20	71	26.625	27	18	45
29	61.0.71.3170	Chosha C. R	9	6	15	20	50	18.75	19	18	37
30	61.0.71.3171	Charitha E. S	8	4	8	20	40	15	15	17	32
31	61.0.71.3172	Charitha D. Rangera	17	11	13	20	61	22.875	23	19	42
32	61.0.71.3173	Charitha M	15	12	15	20	62	23.25	24	19	43
33	61.0.71.3174	Chosha Suresh S	9	4	20	20	53	19.875	20	19	39
34	61.0.71.3175	Chiranjith S	7	12	15	20	54	20.25	21	17	38
35	61.0.71.3176	Chiranjith K	8	10	9	20	47	17.625	18	18	36
36	61.0.71.3177	K. Chiranjith Kumar	19	15	20	20	74	27.75	28	18	46
37	61.0.71.3178	Karishika Shetty	11	10	15	20	56	21	21	18	39
38	61.0.71.3179	Karya S	13	17	20	20	70	26.25	27	19	46
39	61.0.71.3180	Keechana K S	12	11	20	20	63	23.625	24	19	43
40	61.0.71.3181	Kiran Kumar	14	17	18	20	69	25.875	26	20	46
41	61.0.71.3182	Lakshmi R R	20	14	20	20	74	27.75	28	17	45
42	61.0.71.3183	Meghana N K	18	18	20	20	76	28.5	29	19	48
43	61.0.71.3184	Melina Lavin Almeida	17	20	20	20	77	28.875	29	19	48
44	61.0.71.3185	Mohammed Akbar	15	12	14	20	61	22.875	23	15	38
45	61.0.71.3186	Mohammed Ahmed Kabir	13	17	15	20	65	24.375	25	19	44
46	61.0.71.3187	Nandha Tendulkar	19	14	20	20	73	27.375	28	19	47
47	61.0.71.3188	Nisha N Rao	10	8	14	20	52	19.5	20	19	39
48	61.0.71.3189	Padmanab Prabhakar	17	17	18	20	72	27	27	17	44
49	61.0.71.3190	Prasanna Prakashgoudar	13	14	16	20	63	23.625	24	15	39
50	61.0.71.3191	Prasanna C. Shetty	18	18	16	20	72	27	27	19	46
51	61.0.71.3192	Prashant Devadiga	14	13	12	20	59	22.125	23	20	43



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48	4AL22CS109	Preety Kakchingtabam	10	16	18	20	64	24	24	17	41
49	4AL22CS115	Rakshith V Rao	17	16	17	20	70	26.25	27	20	47
50	4AL22CS117	Rashmitha M S	20	10	20	20	70	26.25	27	19	46
51	4AL22CS118	Ravitej C Neeli	12	12	12	20	56	21	21	11	32
52	4AL22CS119	Rithika P Shetty	20	20	20	20	80	30	30	19	49
53	4AL22CS121	Roshan S	16	16	17	20	69	25.875	26	18	44
54	4AL22CS124	Sakshi	17	14	18	20	69	25.875	26	19	45
55	4AL22CS125	Sakshi B K	12	12	13	20	57	21.375	22	20	42
56	4AL22CS128	Sameeksha Shetty	17	17	20	20	74	27.75	28	19	47
57	4AL22CS143	Shetty Samay Deepak	20	18	20	20	78	29.25	30	20	50
58	4AL22CS150	Shodhan Kumar Shetty	20	16	18	20	74	27.75	28	17	45
59	4AL22CS168	Sumanth	15	13	19	20	67	25.125	26	20	46
60	4AL22CS171	Suraj	17	17	15	20	69	25.875	26	19	45
61	4AL22CS190	Yunlembam Henba Singh	15	15	16	20	66	24.75	25	20	45
62	4AL22IS001	Adarsh	19	18	20	20	77	28.875	29	19	48
63	4AL22IS022	Meghana Mohan Naik	20	20	20	20	80	30	30	19	49
64	4AL22IS028	Nisarga Shridhar Naik	15	18	19	20	72	27	27	18	45

Dr. Sakshi S Kamath

HoD & IQAC Chairman

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