INFORMATION BROCHURE FOR UNDER GRADUATE PROGRAMME

CHEMISTRY DEPARTMENT

NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA

TRIPURA,INDIA

AUGUST, 2022

Dr. Mitali Saha

Associate Professor and Head

HoD's Message

The Department of Chemistry aims to be the best provider of chemical education within the Northeast region and to be a leader in research, publications and scholastic excellence. The Chemistry Department is well equipped to run the under-graduate 1-year Chemistry course for B.Tech along with 5-year dual degree BS-MS in Chemistry. Our goal is to present the content of Chemistry set in a current and relevant context for engineers also. As 1st year Engineering Chemistry course is taken in the B.Tech first year, we also have goals related to the improvement of skill levels pertaining to the use of technology and communication. The Chemistry department believes in and supports the study, teaching and understanding of chemical principles across a wide spectrum of areas: inorganic, organic, physical, analytical, computational, nanotechnology, etc. I hope you will explore our website to get more information about our faculty profile and courses.

Dr. Manojit Roy
Assistant Professor

UG Coordinator's Message

As a UG coordinator, I am happy to welcome to the aspiring candidates interested in chemistry learning more about our UG course curriculum and syllabus. The UG programme will help the students not only acquire knowledge in science and chemistry, but also to apply that knowledge in industry and academia to tackle tomorrow's issues. This course will enable the students to acquire knowledge by which they can achieve their goal in life. I hope the students will like our program and be motivated to join NIT Agartala.

About NIT Agartala

National Institute of Technology is a centrally funded institute declared as Institute of National Importance by Government of India. NIT Agartala offers B.Tech, BS-MS, BT-MT in 12 branches, M.Tech, MSc in 24 specializations, MBA, MCA, and Ph.D in all branches of engineering, science, humanities and management. Up till, 9350 undergraduate, 2420 post- graduate and 207 Ph.D students have been passed out from the institute. Presently, 3409 undergraduate students, 838 post graduate students and 275 Ph.D scholars are pursuing their studies in the institute.

About Chemistry Department

The Department of Chemistry was started since the inception of the Institute. Over the years the department has developed sufficient infrastructure to run the under-graduate and post- graduate courses, viz., 5-year dual BS-MS, and 2-year M.Sc. The department has intake capacity of 13 students per session for M.Sc program and 25 students per session for dual BS- MS program. The department has successfully completed/ongoing 10 major research projects sponsored by DST, DBT, DAE-BRNS, AICTE and CPRI.

Courses offered in the Department

The Department of Chemistry offers courses in 5-year dual degree BSMS, 2- year MSc, and PhD programmes along with 1-yearEngineeringChemistrycoursein BTech.

Objectives to start the courses

The BSMS-Dual Chemistry syllabus has been created by following syllabi of various competitive exams such as NET/GATE and other common entrance examinations. Candidates enrolled in the BSMS Dual Chemistry programme at NIT Agartala will have the opportunity to acquire the fundamental concepts in Chemistry from a devoted group of faculty members with extensive experience in teaching and research. The students are being nurtured to become tomorrow's leaders in their various fields.

Course Structure of UG

Student Intake

At present in BSMS-Dual degree course, there are 8 semesters with around 18-21 students in each semester. In B.Tech course of Engineering chemistry –I, Engineering chemistry –II and Engineering Chemistry Laboratory, there are 2 semesters and in each semester there are 12 sections containing 80-85 students in each.

Course Structure-Curriculum and Syllabus

The BSMS Dual course consists of a total of 159 credits –covering all the semesters (1^{st} to 8^{th}). In these semesters, only theory and lab classes are conducted. B.Tech 1^{st} semester (Engineering chemistry–I and Engineering Chemistry Laboratory) has 4 credits (3 credit –theory and 1 credit-laboratory) and 2^{nd} semester (Engineering chemistry –II) has 2 credit.

B.TECH COURSE CURRICULUM

First Semester

S.N.	Course Name	Code	Teaching hrs/week			Credit
			L	T	P	
1	Engineering Chemistry-I	CH-101	3	0	0	3
2	Engineering Chemistry Laboratory	CH-102	0	0	2	1
Total			3	0	2	4
Total contact hrs per week = 5			**Total credit = 4**			

Second Semester

S.N.	Course Name	Code	Teaching hrs/week			Credit
			L	T	P	
1	Engineering Chemistry-II	CH-201	2	0	0	2
Total			2	0	0	2
Total contact hrs per week = 2			**Total credit = 2**			

BSMS DUAL CHEMISTRY COURSE CURRICULUM

First Semester

S.N.	Course Name	Code	Teaching hrs/week			Credit
			L	T	P	
1	General Chemistry-I	DSCY21B01	3	1	0	4
2	Physics-I	DSPH11B01	3	1	0	4
3	Mathematics-I	DSMA31B01	3	1	0	4
4	Language and Technical Writing	DSHU41B01	3	0	0	3
5	Chemistry Laboratory-I	DSCY21P01	0	0	3	2
6	Physics Laboratory-I	DSPH11P01	0	0	3	2
Total			12	3	6	19
Total contact hrs per week = 21			**Total credit = 19**			

Second Semester

S.N.	Course Name	Code	Teaching hrs/week			Credit
			L	T	P	
1	General Chemistry-II	DSCY22B02	3	1	0	4
2	Basic Environmental and Atmospheric Science	DSCY22B03	3	0	0	3
3	Physics-II	DSPH12B02	3	1	0	4
4	Mathematics-II	DSMA32B02	3	1	0	4
5	Chemistry Laboratory-II	DSCY22P02	0	0	3	2
6	Physics Laboratory-II	DSPH12P02	0	0	3	2
Total			12	3	6	19
Total contact hrs per week = 21			**Total credit = 19**			

Third Semester

S.N.	*Course Name*	*Code*	*Teaching hrs/week*			*Credit*
			L	*T*	*P*	
1	General Chemistry-III	DSCY23B04	3	1	0	4
2	General Chemistry-IV	DSCY23B05	3	1	0	4
3	Physics-III Waves & Oscillations	DSPH13B10	3	0	0	3
4	Computer Programming	DSMA33B06	2	0	0	2
5	Computer Programming Lab	DSMA33P01	0	0	3	2
6	Inorganic Chemistry Laboratory	DSCY23P05	0	0	9	6
Total			11	2	12	21
Total contact hrs per week = 25			**Total credit = 21**			

Fourth Semester

S.N.	*Course Name*	*Code*	*Teaching hrs/week*			*Credit*
			L	*T*	*P*	
1	General Chemistry-V	DSCY24B07	3	1	0	4
2	General Chemistry-VI	DSCY24B08	3	1	0	4
3	General Chemistry-VII	DSCY24B09	3	1	0	4
4	Mathematics-III	DSCY24E01	3	1	0	4
5	Organic Chemistry Laboratory	DSCY24P05	0	0	9	6
Total			12	4	9	22
Total contact hrs per week = 25			**Total credit = 22**			

Fifth Semester

S.N.	*Course Name*	*Code*	*Teaching hrs/week*			*Credit*
			L	*T*	*P*	
1	General Chemistry-VIII	DSCY25B10	3	0	0	3
2	General Chemistry-IX	DSCY25B11	3	0	0	3
3	General Chemistry-X	DSCY25B12	3	0	0	3
4	Electrochemistry	DSCY25B13	3	0	0	3
5	Physical Chemistry Laboratory	DSCY25P08	0	0	9	6
6	Materials Chemistry Laboratory	DSCY25P09	0	0	3	2
Total			12	0	12	20
Total contact hrs per week = 24			**Total credit = 20**			

Sixth Semester

S.N.	*Course Name*	*Code*	*Teaching hrs/week*			*Credit*
			L	*T*	*P*	
1	General Chemistry-XI	DSCY26B14	3	0	0	3
2	General Chemistry-XII	DSCY26B15	3	0	0	3
3	General Chemistry-XIII	DSCY26B16	3	0	0	3
4	Molecular Spectroscopy	DSCY26B17	3	0	0	3
5	Advanced Inorganic Chemistry Laboratory	DSCY26P09	0	0	9	6
Total			12	0	9	18
Total contact hrs per week = 21			**Total credit = 18**			

Seventh Semester

S.N.	Course Name	Code	Teaching hrs/week			Credit
			L	T	P	
1	General Chemistry-XIV	DSCY27B18	3	0	0	3
2	General Chemistry-XV	DSCY27B19	3	0	0	3
3	General Chemistry-XVI	DSCY27B20	3	0	0	3
4	Instrumental Methods of Analysis	DSCY27B21	3	0	0	3
5	Advanced Organic Chemistry Laboratory	DSCY27P10	0	0	9	6
Total			12	0	9	18
Total contact hrs per week = 21			**Total credit = 18**			

Eighth Semester

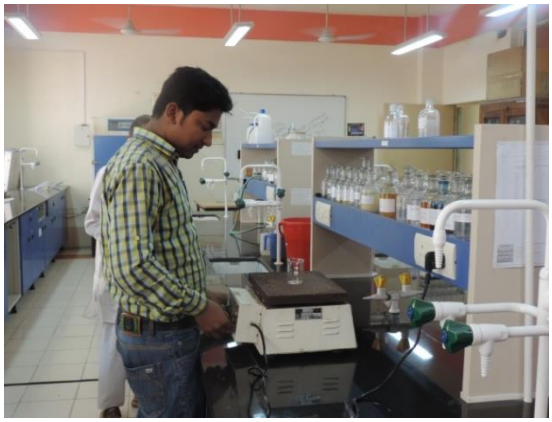
S.N.	Course Name	Code	Teaching hrs/week			Credit
			L	T	P	
1	Chemistry of Nanomaterials	DSCY28B22	3	0	0	3
2	Elective-I	*	3	0	0	3
3	Elective-II	*	3	0	0	3
4	Elective-III	*	3	0	0	3
5	Advanced Physical Chemistry Laboratory	DSCY28P11	0	0	9	6
6	Molecular Modeling Laboratory	DSCY28P12	0	0	6	4
Total			12	0	15	22
Total contact hrs per week = 27			**Total credit = 22**			

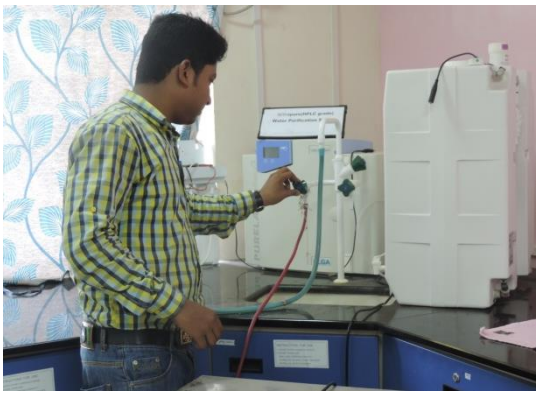
Credit evaluation system

Continuous evaluation system is followed. Credit based Cumulative Grade Point Average (CGPA) System along with SGPA (Semester Grade Point Average) system is adopted. Theory subjects are evaluated based on Internal Assessment (30 marks), Mid Term Examination (20 marks) and End Term Examination (50marks). Questions are prepared following the Bloom's Taxonomy satisfying the NBA pattern.

Facilities available in the Department

i) State-of-the-art B.TECH and BSMS laboratories





Placement and Higher Studies

The passed-out students of previous academic years that have qualified NET/GATE, pursuing higher education and currently employed are listed as under

Core Faculty Members of the course

Sl.No.	NameoftheFacultyMember	Designation	Research/Subjects taught
1	Dr.Saroj Kumar Das	Associate Professor	Analytical Chemistry
2	Dr.Tarun Kumar Misra	Associate Professor	Inorganic Chemistry
3	Dr.Mitali Saha	Associate Professor	Organic Chemistry
4	Dr. Abhishek Koner	Assistant Professor	Inorganic Chemistry
5	Dr. Venkata Bharat Nishtala	Assistant Professor	Organic Chemistry
6	Dr.Subhojit Das	Assistant Professor	Physical Chemistry
7	Dr.Manojit Roy	Assistant Professor	Inorganic Chemistry
8	Dr.Jhinuk De	Assistant Professor	Physical Chemistry
9	Dr.Sajal Kundu	Assistant Professor	Inorganic Chemistry
10	Dr.Chitraniva Datta	Assistant Professor	Inorganic Chemistry
11	Dr.Susanta Ghanta	Assistant Professor	Physical Chemistry
12	Dr.Manas Roy	Assistant Professor	Inorganic Chemistry
13	Dr.Chanchal Bhaumik	Assistant Professor	Inorganic Chemistry

Detailed Faculty profile is available on the departmental page:
https://www.nita.ac.in/NITAmain/departments/chemistryDept/chemistryFaculties.html

HoD, Department of Chemistry

Dr. Mitali Saha
Associate Professor and Head

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