

### Chemistry Department Write-up

#### Number of teaching posts:

Category	Sanctioned	Filled
Professors	<b>NIL, since there is no promotion to this rank in the state for colleges</b>	<b>NIL</b>
Associate Professors	<b>7</b>	<b>2</b>
Asst. Professors		<b>5</b>

#### Faculty Strength and Support Staffs

Number of sanctioned posts and current status			
Serial No.	Post	Sanctioned	Filled
1	Teaching Faculty	7	7
2	Laboratory Assistants	2	2

#### Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt/Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Service	Date of Joining	Contact No.
Shri Isaac W. Momin	MSc	Associate Professor	Organic Chemistry	25 years	08/11/1993	9436114971
Smt. Donme L.A. sangma	MSc	Associate Professor	Physical Chemistry	22 years	20/02/1996	9436316360
Shri Bithingkon G. Momin	MSc, NET	Assistant Professor	Inorganic Chemistry	10 years	24/11/2008	9436995524
Dr. Kiewshaphrang Kharnaor	MSc, NET Ph.D	Assistant Professor	Physical Organic Chemistry	10 years	02/03/2009	9612001485
Miss Lisa Valerie K. Marak	MSc, NET	Assistant Professor	Analytical Chemistry	2 (as part time)	24/09/2018	8413026482
Shri. Smarling Suting	MSc, NET	Assistant Professor	Physical Chemistry	2 months	01/10/2018	8974366083
Dr. Pynsakhiat Miki Gashnga	MSc/SLET/PhD	Assistant Professor	Physical Chemistry	2 months	01/10/2018	9863018832

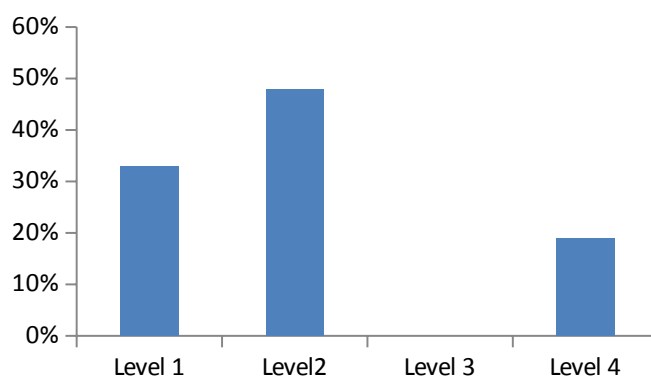
### Faculty participation in Institutional Responsibility and Extension Activities

Name of the Faculty	Programme involved	Year
Shri. Isaac W. Momin	Member UGC Committee	2014 (Only)
	Member Purchase Committee	2014 (Only)
	Convener UGC	2016 till date
	Chairman Examination Committee	2015-2016
	Convener Purchase committee	2016 till date
Smt. Donme L. A. Sangma	Convener NAAC Committee Criterion-II	2014 till date
Shri Bithingkon G. Momin	Resource Person for Workshop on Recent Trends in Teaching Science.	4-9 July2016, 12-17 June 2017, 16-21April 2018
	Programme Officer, NSS, Tura Govt. College	2009-2016
	Member Examination Committee	2010-2011 2011-2012 2012-2013 2013-2014 2014-2015
	IGNOU Academic Counsellor for BDP-Programme Tura Govt. College study centre	2014 till date
	Examination superintendent-NIELIT (MGTRA)-Tura	2017 -2018
	Member, NAAC Steering Committee	Aug 2018 till date
	Member Examination Committee	2009-2010
Dr. Kiewshaphrang Kharnaier	Member, NAAC Committee Criterion-I	till date
	Member, IQAC	2016 – 2018
	Member Committee of redistribution of marks in the syllabus and revision of syllabus	Oct. 2017 till date
	Member, NAAC Committee Counselling cells	Sep. 2018 till date
Miss Lisa Valerie K. Marak	Member, NAAC Committee Criterion-II	Sep. 2018 till date
Shri. Smarling Suting	Member, IQAC	Sep. 2018 till date
	Member, NAAC Committee Counselling cells	Sep. 2018 till date
Dr. Pynsakhia Miki Gashnga	Member, NAAC Committee Criterion-II	Sep. 2018 till date
	Member, NAAC Committee Counselling cells	Sep. 2018 till date
	Member, IQAC	Sep. 2018 till date

### Faculty Workload Data

Total Number of working days as per academic calender - 224

Sl. No.	Name	Designation	Number of classes per week as per routine	Total number of casual leaves	Number of working day per academic year	Total Number of working hours per academic year (A)	Number hours on administrative /exam related work per academic year (B)	Number of working hours spent on other institutional responsibilities per academic year (C)	Total Number of hours spent on other responsibilities other than academic (B +C =D)	Total Number of working hours per academic year (A+D)
1	Shri Isaac W. Momin	Associate Professor	15	3	221	497	205	200	405	902
2	Smt Donme Lizana A. sangma	Associate Professor	15	4	220	497	207	202	409	906
3	Shri Bithingkon G. Momin	Assistant Professor	15	3	221	497	209	202	411	908
4	Dr. Kiewshaphrang Kharnaor	Assistant Professor	15	3	221	497	209	202	411	908
5	Miss Lisa Valerie K. Marak	Lecturer	15	2	61	137	60	70	130	267
6	Dr. Pynsakhiat Miki Gashnga	Lecturer	15	2	54	121	50	57	107	228
7	Mr. Smarling Suting	Lecturer	15	2	54	121	50	57	107	228



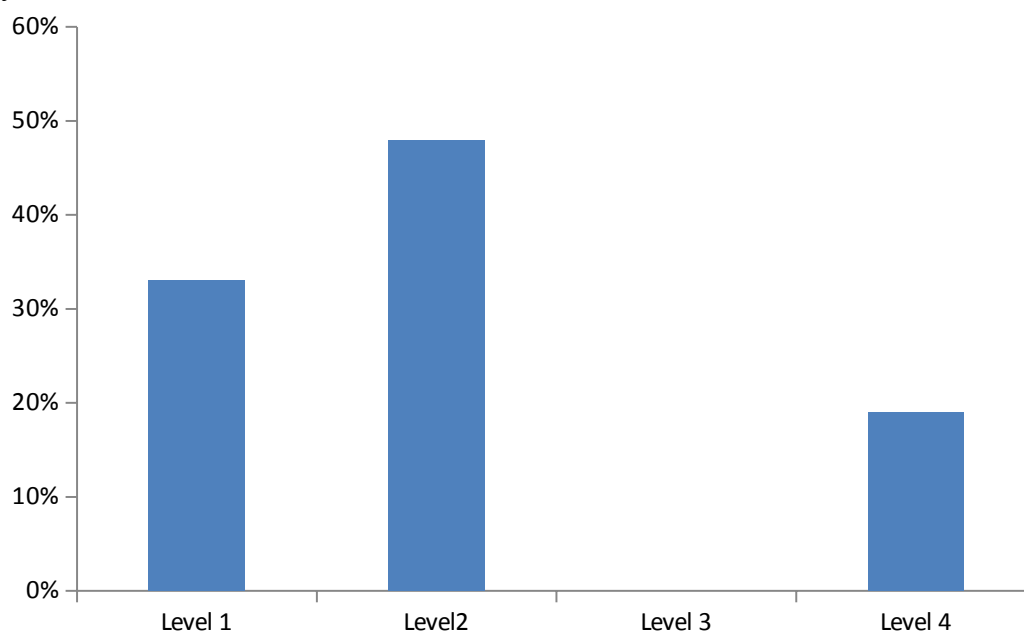
Graphical Presentation of Faculty work load

TIME TABLE: DEPTT. OF CHEMISTRY TURA GOVT. COLLEGE, TURA 2018-2019

DAYS	Class	9:30 to 10:15	10:15 to 11:00	11:00 to 11:45	11:45 to 12:30		12:45 to 1:30	1:30 to 2:15	2:15to 3:00	3:00 to 3:45	3:45 to 4:30
Monday	<i>I Semester</i>					B R E A K	Practical <b>SS/KK</b>		<b>LKM</b>		
	<i>II Semester</i>						Practical <b>PMG/DAS</b>		<b>LKM</b>		
	<i>III Semester</i>			<b>LKM</b>						Practical <b>BG/LKM</b>	
	<i>IV Semester</i>			<b>LKM</b>						Practical <b>BG/LKM</b>	
	<i>V Semester</i>		<b>DAS</b>	<b>DAS</b>	<b>IWM</b>		<b>ENG</b>	<b>BG</b>	<b>SS</b>	<b>LKM</b>	
	<i>VI Semester</i>		<b>DAS</b>	<b>DAS</b>	<b>IWM</b>		<b>EVS</b>	<b>BG</b>	<b>SS</b>	<b>LKM</b>	
Tuesday	<i>I Semester</i>	<b>SS</b>				B R E A K	Practical <b>SS/KK</b>			Practical <b>SS/KK</b>	
	<i>II Semester</i>	<b>SS</b>					Practical <b>PMG/DAS</b>			Practical <b>PMG/DAS</b>	
	<i>III Semester</i>			<b>DAS</b>			<b>BG</b>			Practical <b>BG/LKM</b>	
	<i>IV Semester</i>			<b>DAS</b>			<b>BG</b>			Practical <b>BG/LKM</b>	
	<i>V Semester</i>		<b>PMG</b>	<b>BG</b>	<b>IWM</b>		<b>ENG</b>	<b>IWM</b>	<b>IWM</b>	<b>SS</b>	
	<i>VI Semester</i>		<b>PMG</b>	<b>BG</b>	<b>IWM</b>		<b>EVS</b>	<b>IWM</b>	<b>IWM</b>	<b>SS</b>	
Wed nesday	<i>I Semester</i>			<b>KK</b>		B R E A K	<b>DAS</b>	<b>PMG</b>			
	<i>II Semester</i>			<b>KK</b>			<b>DAS</b>	<b>PMG</b>			
	<i>III Semester</i>	<b>SS</b>			<b>KK</b>					Practical <b>BG/ LKM</b>	
	<i>IV Semester</i>	<b>SS</b>			<b>KK</b>					Practical <b>BG/ LKM</b>	
	<i>V Semester</i>		<b>PMG</b>	<b>SS</b>	<b>SS</b>		<b>ENG</b>	Practical <b>KK/SS</b>		<b>BG</b>	
	<i>VI Semester</i>		<b>PMG</b>	<b>SS</b>	<b>SS</b>		<b>EVS</b>	Practical <b>KK/SS</b>		<b>BG</b>	
Thursday	<i>I Semester</i>			Practical <b>SS/KK</b>		B R E A K	<b>KK</b>		<b>PMG</b>		
	<i>II Semester</i>			Practical <b>DAS/PMG</b>			<b>KK</b>		<b>PMG</b>		
	<i>III Semester</i>	<b>PMG</b>			<b>DAS</b>					Practical <b>BG/ LKM</b>	
	<i>IV Semester</i>	<b>PMG</b>			<b>DAS</b>					Practical <b>BG/ LKM</b>	
	<i>V Semester</i>		<b>LKM</b>	<b>LKM</b>	<b>BG</b>		<b>ENG</b>	<b>DAS</b>	<b>DAS</b>	<b>PMG</b>	
	<i>VI Semester</i>		<b>LKM</b>	<b>LKM</b>	<b>BG</b>		<b>EVS</b>	<b>DAS</b>	<b>DAS</b>	<b>PMG</b>	
Friday	<i>I Semester</i>	<b>BG</b>	<b>BG</b>			B R E A K		<b>LKM</b>			
	<i>II Semester</i>	<b>BG</b>	<b>BG</b>					<b>LKM</b>			
	<i>III Semester</i>			<b>KK</b>				<b>SS</b>	<b>PMG</b>		
	<i>IV Semester</i>			<b>KK</b>				<b>SS</b>	<b>PMG</b>		
	<i>V Semester</i>		<b>PMG</b>	<b>SS</b>	<b>KK</b>		Practical <b>SS/KK</b>		<b>KK</b>	<b>PMG</b>	
	<i>VI Semester</i>		<b>PMG</b>	<b>SS</b>	<b>KK</b>		Practical <b>SS/KK</b>		<b>KK</b>	<b>PMG</b>	

Copy: To IWM, DAS, BG, KK, LKM, PMG, SS and Dept.

### Faculty Work Distribution



### Faculty Publications:

Author Name	Titles of the paper	International /National	Vol. No./Year	Name of Journal
Z. PACHUAU, K. S. KHARNAIOR and R.H. D. LYNGDOH	Isomerization of propargyl cation to cyclopropenyl cation: Mechanistic elucidations and effects of lone pair donors	International ISSN 0974-3626 Print	Vol. 125, No. 2, 2013, pp. 365–378	<i>J. Chem. Sci.</i>
K. S. KHARNAIOR and R. H D. LYNGDOH	Exploration of minima on the $C_7H_7^+$ surface: Structural, stability and charge-related considerations	International ISSN 0974-3626 Print	Vol. 126, No. 4, 2014, pp. 1181–1195	<i>J. Chem. Sci.</i>
K. S. KHARNAIOR, M. Devi and R. H D. LYNGDOH	Generation and isomerization reactions of $C_7H_7^+$ cations in gas phase: An ab initio study	International ISSN 2210-271X	Vol. 1091, 2016, pp 150-164	<i>Comp. Theo. Chem.</i>
K. S. KHARNAIOR, A. K. Chandra and R. H D. LYNGDOH	$C_4H_4^+$ radical cation isomers: generation, structure, stability and isomerisation reaction.	International ISSN 2210-271X	Vol. 1115, 2017, pp 158-168	<i>Comp. Theo. Chem.</i>
Pynsakhiat Miki Gashnga, T. Sanjoy Singh, Sivaprasad Mitra	Modulation of ESIPT fluorescence in o-hydroxy acetophenone derivatives: A comparative study in different bio-mimicking		Vol. 218. 2016, pp 549-557	<i>Journal of Molecular Liquids</i>

	aqueous interfaces			
M. M Islam, V. K Sonu, P. M Gashnga, N. S Moyon and S. Mitra	Caffeine and Sulphadiazine interact differently with human serum albumin: A combined fluorescence and molecular docking study		Vol. 152, 2016, pp 23-33	<i>Spectrochimica Acta Part- A: Molecular and Biomolecular Spectroscopy</i>
P. M Gashnga, T. S. Singh, T. S Basu Baul, and S. Mitra	Photophysical Properties and Excited state intramolecular proton transfer in 2-hydroxy-5-[(E)-(4-methoxy phenyl)diazenyl]benzoic acid in homogeneous solvent and micro-heterogeneous environment		Vol. 128. 2014. Pp-134-142	<i>Journal of Luminescence</i>
M. M Islam, N. S Moyon, P. M Gashnga, S. Mitra	Interaction of Sulphadiazine with model water soluble protein: A Combined fluorescence spectroscopic and molecular modeling approach			<i>Journal of Fluorescence</i>
N. S Moyon. P. M Gashnga. S. Phukan, S. Mitra	Specific Solvent effect on lumazine photophysics: A Combined fluorescence and intrinsic reaction coordinate analysis		vol. 421. 2013, pp 22-31	<i>Chemical Physics</i>
S. Mitra, A. K Chandra. P. M Gashnga. S. Jenkin, S.R Kirk	Exploring hydrogen bond in the excited state leading toward intramolecular proton transfer: Detailed analysis of the structure and charge density topology along the reaction path using QTAIM		vol- 18(9), 2012, pp-4225-4236	<i>Journal of Molecular Modeling</i>

### Student Data:

Session	I Sem.	II Semester			III Semester			IV Semester			V Semester			VI Semester		
	No. of students	No. of students	No. of Dropouts	Dropout %	No. of students	No. of Dropouts	Dropout %	No. of students	No. of Dropouts	Dropout %	No. of students	No. of Dropouts	Dropout %	No. of students	No. of Dropouts	Dropout %
2015-16	26	17	9	35	18	0	0	18	0	0	18	0	0	18	0	0
2016-17	39	22	17	44	22	0	0	22	0	0	22	0	0			
2017-18	35	17	18	51	17	0	0	17	1	6	16					
2018-19	28	13	15	54												

### Student Data - Examination Results

Year	No. of students who appear in the final examination	No. of students who cleared the examination	No. of students with first division	No. of students with second division	Pass %
2014	2	2		2	100
2015	0				
2016	5	3		3	60
2017	5	3		3	60
2018	17	8	2	6	47.1

### Students' Progression

Year	Name of the students who pass final year examination	Higher studies in	University	Division secured	Present status
2014	John Sandip D. Sangma	M.Sc	Anamalay, Tamilnadu	II	Asst. Teacher Dalu Govt. School.
	Dipankar Mahanta	B.Sc	NEHU	II	Asst. Teacher Sasengpara School Dalu .
2016	Durantha M. Sangma	B.Sc.	NEHU	II	B.Ed (I-semester)
	Chiripchi M. Momin	M.Sc			Pursuing Ph.D
2017	Denisha N Sangma	M.Sc	Doon PG College of Agriculture Science & Technolgy Deradune		<i>I-Semester</i>
2018	Sugara M. Marak	M.Sc	Mizoram		<i>I- Semester</i>
	Nikrang K. Marak	M.Sc	Mizoram		<i>I- Semester</i>
	Bamseng K Marak	M.Sc	Assam Don Bosco		<i>I- Semester</i>
	Salgira D. Sangma	M.Sc	Assam Don Bosco		<i>I- Semester</i>
	Sunmerry T. Sangma	M.Sc	Assam Don Bosco		<i>I- Semester</i>
	Nodilchi Ch.Marak	M.Sc	Assam Don Bosco		<i>I- Semester</i>
	Tamami Ch. Sangma	M.Sc	Doon PG College of Agriculture Science & Technolgy Deradune		<i>I- Semester</i>

**DOON GROUP OF COLLEGES**




**DENISHA N SANGMA**

Student ID : 18011700002  
 Course : M.Sc CHEMISTRY  
 D.O.B : 10/05/1995  
 Mobile No. : 7085326278  
 Grp. : O+ve  
 Batch : 2018-2020



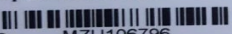
**Mizoram University**  
 (A Central University, accredited 'A' grade by NAAC in 2014)



**Student Card**


Name : Sugara M Marak  
 Course : Master of Science  
 Department : Chemistry  
 Valid upto : 30-07-2020

ID No. **MZU106796**



*Registrar*  
 Registrar

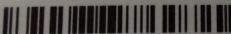
**Mizoram University**  
 (A Central University, accredited 'A' grade by NAAC in 2014)



**Student Card**

Name : Nikrang K Marak  
 Course : Master of Science  
 Department : Chemistry  
 Valid upto : 30-07-2020


ID No. **MZU106521**



*Registrar*  
 Registrar

**ASSAM DON BOSCO UNIVERSITY**  
 Tapesia Gardens, Kamarkuchi  
 Sonapur, Assam - 782402

Phone: 09435545754, 0361 2139291/92




**BAMSENG K MARAK**  
 MSC-CHE 1 Yr.  
 ID No. DU2018MSC0129  
 Valid upto 31 July 2019  
 Date of Birth 16-01-1997

**A+**


9089950550  
 8794705813

*Registrar*  
 Issuing Authority  
 Registrar, ADBU



**ASSAM DON BOSCO UNIVERSITY**  
 Tapesia Gardens, Kamarkuchi  
 Sonapur, Assam - 782402

Phone: 09435545754, 0361 2139291/92




**SALGIRA D SANGMA**  
 MSC-CHE 1 Yr.  
 ID No. DU2018MSC0130  
 Valid upto 31 July 2019  
 Date of Birth 30-11-1997

**A+**


8256920735  
 9402313602

*Registrar*  
 Issuing Authority  
 Registrar, ADBU



**ASSAM DON BOSCO UNIVERSITY**  
 Tapesia Gardens, Kamarkuchi  
 Sonapur, Assam - 782402

Phone: 09435545754, 0361 2139291/92



**SUNMERRY T SANGMA**  
 MSC-CHE 1 Yr.  
 ID No. DU2018MSC0047  
 Valid upto 31 July 2019  
 Date of Birth 07-12-1998

**A+**


8787300871  
 8787591770

*Registrar*  
 Issuing Authority  
 Registrar, ADBU



**ASSAM DON BOSCO UNIVERSITY**  
 Tapesia Gardens, Kamarkuchi  
 Sonapur, Assam - 782402

Phone: 09435545754, 0361 2139291/92




**NODILCHI CH MARAK**  
 MSC-CHE 1 Yr.  
 ID No. DU2018MSC0135  
 Valid upto 31 July 2019  
 Date of Birth 09-11-1996

**AB+**

8415821076  
 9678060077

*Registrar*  
 Issuing Authority  
 Registrar, ADBU



**DOON GROUP OF COLLEGES**



**TAMAMI CH SANGMA**

Student ID : 18011700003  
 Course : M.Sc CHEMISTRY  
 D.O.B : 01/12/1997  
 Mobile No. : 9366006632  
 Blood Grp. : B+ve  
 Batch : 2018-2020



**Successful Alumni of the Department:**

Name of Alumni	Qualification	Present Status	Present Address	Contac No.
Mr. Isaac W. Momin	M.Sc	HOD, Chemistry Tura Govt. College, Tura	Tura Govt. College, Tura	943611497 1
Smt. Donme L. A. Sangma	M.Sc.	Asso. Prof. Tura Govt. College	Tura Govt. College, Tura	943631636 0
Mr. Bithingkon G. Momin	M.Sc, NET	Asst. Professor Tura Govt. College, Tura	Tura Govt. College, Tura	9436995524
Mr. John Sandip D. Sangma	M.Sc	Asst. Teacher Dalu Govt. School.	Dobasipara Tura	8787324453
Mr. Nirmal Sarkar	B.Sc	Asst. Teacher Don Bosco School Mendal.	Mendal Don Bosco	9862665147
Mr. Dipankar Mahanta	B.Sc	Asst. Teacher Sasengpara School Dalu.	Dalu	8787892248
Mr. Nabakrishna Hajong	M.Sc	Asst. lecturer Govt Girls Hr. Sec-Tura	Tura	8787629077

**PROGRAM OUTCOMES: Bachelor Of Science (B.Sc.)**

After graduating in B.Sc. students should have:

- Acquired the knowledge of theory and practical related to the subjects of Physics, Chemistry, Mathematics, Botany and Zoology which if offered in the college by the following combination.
  1. Physics Chemistry and Maths
  2. Chemistry, Botany and Zoology
- Understood the basic concepts, fundamental principles and scientific theory related to various topics as outlined in the syllabus.
- Acquired the skill of handling scientific instruments to execute laboratory experiments.
- Obtained the skills of observations, analysis of a given scientific data and draw logical conclusions.
- To build positive attitude towards sustainable development.
- Developed scientific outlook not only with respect to science subjects but also in all aspects related to life
- Imbibe ethical, moral and social values in personal and social life.
- Develop various communication skills such as reading, listening, speaking etc., which will be necessary in expressing ideas and views clearly and effectively.
- To understand the various types of environmental issues such as global warming and pollution the impact it has on ecology and biological life.

- To understand that pursuit of knowledge is a lifelong activity and to acquire positive attitude and other qualities which will lead us to a successful life?

### **Program Specific Outcome for UG Chemistry Honours**

Students graduating with a B.Sc. Honours in Chemistry should be able to:

- PSO1. Imparting the knowledge that Chemistry is the centre of Science
- PSO2. Developing the knowledge that Chemistry plays an important role in our daily lives
- PSO3. Imparting knowledge of theoretical and experimental background in Chemistry
- PSO4. Developing proficiency in the Chemistry laboratory
- PSO5. Creating awareness about Chemical pollutions
- PSO6. Students are able to clearly articulate basic chemical information
- PSO7. Pursue further studies in chemistry and its application

### **Measurement of Attainment for PSOs**

**Percentage of Marks obtained in a semester (I Sem.)**

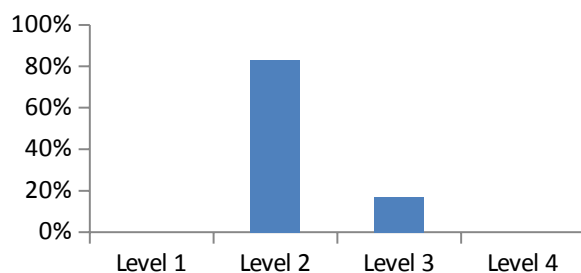
<b>Level I</b>	<b>60% and above</b>	<b>I DIVISION</b>
<b>Level II</b>	<b>45% and above but below 60%</b>	<b>II DIVISION</b>
<b>Level III</b>	<b>Below 45% but secured pass marks i.e. 30</b>	<b>Simple PASS</b>
<b>Level IV</b>	<b>Below 30%</b>	<b>Failed</b>

*\*Level determined as per University criteria for awarding DIVISION*

**CLASS -V SEMESTER**

Sl No	Roll No.	Students Name	Marks Obtained	Level I	Level II	Level III	Level IV
1	S1602623	SILCHIRA CH. MARAK	47		1		
2	S1602624	CHENGRAK P. SANGMA	55		1		
3	S1602625	JINNA MARCY CH. MARAK	53		1		
4	S1602626	CHEJRING K. MARAK	73	1			
5	S1602627	OLIVIA M. MARAK	45		1		
6	S1602628	JACKNO MERRY T. SANGMA	60	1			
7	S1602629	MARSAL JAKSRAM M. SANGMA	45		1		
8	S1602630	MIBANI N. SANGMA	44			1	
9	S1602631	NORACHI M. SANGMA	56		1		
10	S1602632	WALCHERA A. MARAK	56		1		
11	S1602634	TENGSRANG D. SANGMA	50		1		
12	S1602635	TARIANG D. SHIRA	52		1		
13	S1602637	BENIBERT I. SANGMA	F				1
14	S1602638	JUNIA R. MARAK	44			1	

15	S1602639	BRENEY THINDHA A. SANGMA	50		1		
16	S1602640	BALTUSH N. MARAK	51		1		
17	S1602642	TENGKIM B. MARAK	39			1	
18	S1602645	NAMESA CH. MARAK	59		1		
19	S1602647	CHINGKI MESAME M. SANGMA	47		1		
20	S1602649	WANDASA A. MARAK	F				1
21	S1602650	TESITHA M. SANGMA	46		1		
<b>Total No of Students = 21</b>				<b>2</b>	<b>14</b>	<b>3</b>	<b>2</b>
<b>Percentage of Students</b>				<b>10</b>	<b>67</b>	<b>14</b>	<b>10</b>



**Percentage of Marks obtained in a semester (II Sem.)**

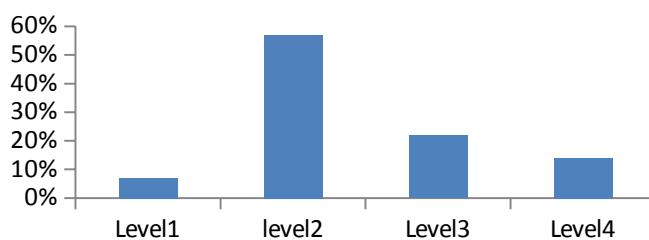
<b>Level I</b>	<b>60% and above</b>	<b>I DIVISION</b>
<b>Level II</b>	<b>45% and above but below 60%</b>	<b>II DIVISION</b>
<b>Level III</b>	<b>Below 45% but secured pass marks i.e. 30</b>	<b>Simple PASS</b>
<b>Level IV</b>	<b>Below 30%</b>	<b>Failed</b>

*\*Level determined as per University criteria for awarding DIVISION*

**CLASS -V SEMESTER**

Sl No	Roll No.	Students Name	Marks Obtained	Level I	Level II	Level III	Level IV
1	S1602623	SILCHIRA CH. MARAK	50		1		
2	S1602624	CHENGRAK P. SANGMA	F				1
3	S1602625	JINNA MARCY CH. MARAK	61	1			
4	S1602626	CHEJRING K. MARAK	79	1			
5	S1602627	OLIVIA M. MARAK	F				1
6	S1602628	JACKNO MERRY T. SANGMA	57		1		
7	S1602629	MARSAL JAKSRAM M. SANGMA	42			1	
8	S1602630	MIBANI N. SANGMA	F				1
9	S1602631	NORACHI M. SANGMA	50		1		
10	S1602632	WALCHERA A. MARAK	50		1		
11	S1602634	TENGSRANG D. SANGMA	44			1	

12	S1602635	TARIANG D. SHIRA	51		1		
13	S1602637	BENIBERT I. SANGMA	F				1
14	S1602638	JUNIA R. MARAK	46			1	
15	S1602639	BRENEY THINDHA A. SANGMA	46		1		
16	S1602640	BALTUSH N. MARAK	46		1		
17	S1602642	TENGKIM B. MARAK	F				1
18	S1602645	NAMESA CH. MARAK	49		1		
19	S1602647	CHINGKI MESAME M. SANGMA	48		1		
20	S1602649	WANDASA A. MARAK	40			1	
21	S1602650	TESITHA M. SANGMA	52		1		
<b>Total No of Students = 21</b>				<b>2</b>	<b>10</b>	<b>4</b>	<b>6</b>
<b>Percentage of Students</b>				<b>10</b>	<b>48</b>	<b>19</b>	<b>24</b>



**Percentage of Marks obtained in a semester (III Sem.)**

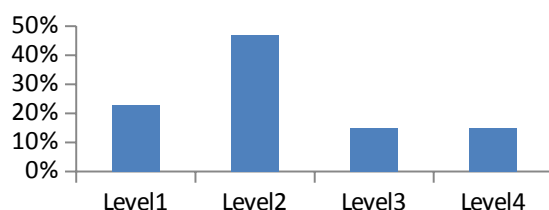
<b>Level I</b>	<b>60% and above</b>	<b>I DIVISION</b>
<b>Level II</b>	<b>45% and above but below 60%</b>	<b>II DIVISION</b>
<b>Level III</b>	<b>Below 45% but secured pass marks i.e. 30</b>	<b>Simple PASS</b>
<b>Level IV</b>	<b>Below 30%</b>	<b>Failed</b>

*\*Level determined as per University criteria for awarding DIVISION*

**CLASS -V SEMESTER**

Sl No	Roll No.	Students Name	Marks Obtained	Level I	Level II	Level III	Level IV
1	S1602623	SILCHIRA CH. MARAK	57		1		
2	S1602624	CHENGRAK P. SANGMA	F				1
3	S1602625	JINNA MARCY CH. MARAK	83	1			
4	S1602626	CHEJRING K. MARAK	91	1			
5	S1602627	OLIVIA M. MARAK	F				1
6	S1602628	JACKNO MERRY T. SANGMA	75	1			
7	S1602629	MARSAL JAKSRAM M. SANGMA	F				1
8	S1602630	MIBANI N. SANGMA	F				1

9	S1602631	NORACHI M. SANGMA	57		1		
10	S1602632	WALCHERA A. MARAK	57		1		
11	S1602634	TENGSRANG D. SANGMA	51		1		
12	S1602635	TARIANG D. SHIRA	56		1		
13	S1602637	BENIBERT I. SANGMA	45		1		
14	S1602638	JUNIA R. MARAK	62	1			
15	S1602639	BRENEY THINDHA A. SANGMA	49		1		
16	S1602640	BALTUSH N. MARAK	63	1			
17	S1602642	TENGKIM B. MARAK	42		1		
18	S1602645	NAMESA CH. MARAK	46		1		
19	S1602647	CHINGKI MESAME M. SANGMA	54		1		
20	S1602649	WANDASA A. MARAK	F				1
21	S1602650	TESITHA M. SANGMA	60	1			
<b>Total No of Students = 21</b>				<b>6</b>	<b>10</b>	<b>0</b>	<b>5</b>
<b>Percentage of Students</b>				<b>29</b>	<b>48</b>	<b>0</b>	<b>23</b>



#### Percentage of Marks obtained in a semester (IV Sem.)

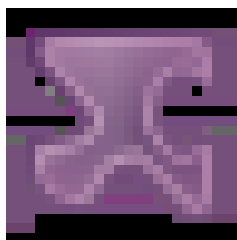
<b>Level I</b>	<b>60% and above</b>	<b>I DIVISION</b>
<b>Level II</b>	<b>45% and above but below 60%</b>	<b>II DIVISION</b>
<b>Level III</b>	<b>Below 45% but secured pass marks i.e. 30</b>	<b>Simple PASS</b>
<b>Level IV</b>	<b>Below 30%</b>	<b>Failed</b>

*\*Level determined as per University criteria for awarding DIVISION*

#### CLASS -V SEMESTER

Sl No	Roll No.	Students Name	Marks Obtained	Level I	Level II	Level III	Level IV
1	S1602623	SILCHIRA CH. MARAK	58		1		
2	S1602624	CHENGRAK P. SANGMA	F				1
3	S1602625	JINNA MARCY CH. MARAK	83	1			
4	S1602626	CHEJRING K. MARAK	83	1			
5	S1602627	OLIVIA M. MARAK	52		1		
6	S1602628	JACKNO MERRY T. SANGMA	69	1			

7	S1602629	MARSAL JAKSRAM M. SANGMA	50		1		
8	S1602630	MIBANI N. SANGMA	F				1
9	S1602631	NORACHI M. SANGMA	52		1		
10	S1602632	WALCHERA A. MARAK	64	1			
11	S1602634	TENGSRANG D. SANGMA	55		1		
12	S1602635	TARIANG D. SHIRA	62	1			
13	S1602637	BENIBERT I. SANGMA	49		1		
14	S1602638	JUNIA R. MARAK	F				1
15	S1602639	BRENEY THINDHA A. SANGMA	55		1		
16	S1602640	BALTUSH N. MARAK	61	1			
17	S1602642	TENGKIM B. MARAK	46		1		
18	S1602645	NAMESA CH. MARAK	56		1		
19	S1602647	CHINGKI MESAME M. SANGMA	48		1		
20	S1602649	WANDASA A. MARAK	F				1
21	S1602650	TESITHA M. SANGMA	70	1			
<b>Total No of Students = 21</b>				<b>7</b>	<b>10</b>	<b>0</b>	<b>4</b>
<b>Percentage of Students</b>				<b>33</b>	<b>48</b>	<b>0</b>	<b>19</b>



### Conclusion:

With few exemption for some students who failed in either theory or absent in practical the departmental attainment of PSO is good despite having the highest percentages of 2<sup>nd</sup> division students but this is not being rule out as the department also have an almost equally number of good parentage 1<sup>st</sup> division students which is reflected in the result present above.

### Course Outcomes

1. Courses are Inorganic, Organic and Physical Chemistry.
2. Courses are relevant as students can further study in broad areas of chemistry like Pharmaceutical Chemistry, Food Chemistry and Industrial Chemistry etc.
3. Syllabus: The Syllabus is well updated and is frame by N.E.H.U

### **Inorganic Chemistry**

**Course Code: (Chem EH 101, Chem EH 201, Chem EH 301, Chem 302 Chem EH 401, Chem EH 402, Chem H 501, Chem 601, Chem H 604)**

#### **Aim in:**

1. Developing the ability to apply the knowledge on contents of principles of Inorganic Chemistry
2. Establishing an appreciation for the role of Inorganic Chemistry in the Chemical Sciences

3. Developing expertise relevant to the professional practice of Inorganic Chemistry
4. Developing an understanding of the role of the students in measurement and problem solving involving Inorganic Chemical systems
5. Exposure to different processors used in Industries and their applications
6. Developing an understanding of the safety responsibilities involved with Inorganic Chemistry

#### Organic Chemistry

**Course Code:** (Chem EH 101, Chem E 102, Chem H 103, Chem EH 201, Chem EH 301, Chem EH 401, Chem H 502, Chem H 504, Chem 602,)

**Aim in:**

1. Developing spectral knowledge
2. Developing proper aptitude towards the subject
3. Creating scientific approach towards various chemical reactions
4. Developing sustainable and green approach to chemical synthesis
5. Developing better and cheaper medicines

#### Physical chemistry

**Course Code:** (Chem EH 101, Chem EH 201, Chem 202, Chem EH 301, Chem EH 401, Chem H 503, Chem H 505, Chem 603)

**Aim in:**

1. Developing problem solving skills
2. Developing scientific knowledge
3. Developing working knowledge of instrument
4. Developing a working formula and theory

#### Measurement of Attainment for CO

**Percentage of knowledge obtained from learning.**

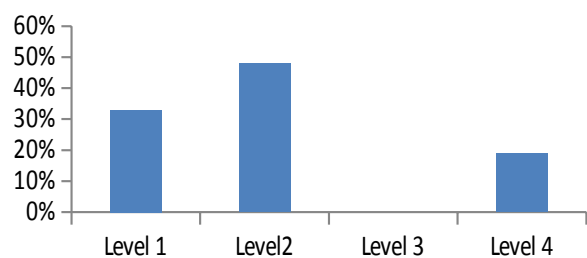
<b>Level I</b>	<b>91%-100%</b>	<b>Excellent</b>
<b>Level II</b>	<b>80%-90%</b>	<b>Very good</b>
<b>Level III</b>	<b>60%-79%</b>	<b>Good</b>
<b>Level IV</b>	<b>40%-59%</b>	<b>Average</b>

*\*Level determined as per Question answered by the students*

#### CLASS -I SEMESTER Inorganic Chemistry

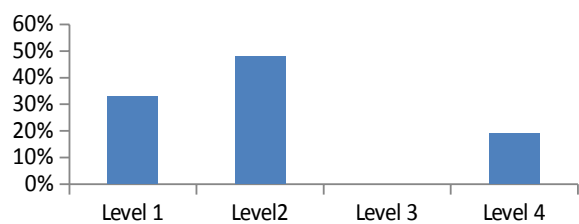
Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	80%-90%		1		
2	80%-90%		1		
3	80%-90%		1		
4	80%-90%		1		
5	80%-90%		1		
6	80%-90%		1		
7	60%-70%			1	
8	80%-90%		1		
9	60%-70%			1	
10	60%-70%			1	

11	60%-70%			1	
12	60%-70%			1	
<b>Total</b>		<b>0</b>	<b>7</b>	<b>5</b>	
<b>Percentage</b>		<b>0%</b>	<b>58%</b>	<b>42%</b>	<b>0%</b>



#### CLASS -I SEMESTER Organic Chemistry

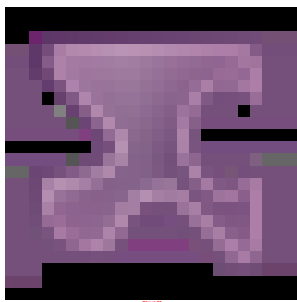
Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	80%-90%		1		
2	60%-70%			1	
3	80%-90%		1		
4	80%-90%		1		
5	60%-70%			1	
6	60%-70%			1	
7	60%-70%			1	
8	60%-70%			1	
9	60%-70%			1	
10	60%-70%			1	
11	60%-70%			1	
12	60%-70%			1	
<b>Total</b>		<b>0</b>	<b>3</b>	<b>9</b>	<b>0</b>
<b>Percentage</b>		<b>0%</b>	<b>25%</b>	<b>75%</b>	<b>0%</b>



#### CLASS -I SEMESTER Physical Chemistry

Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	80%-90%		1		

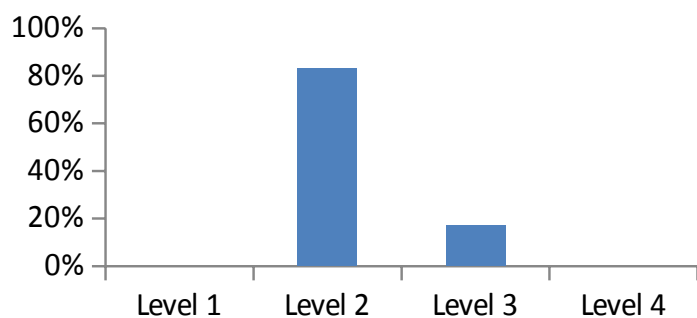
2	80%-90%		1		
3	80%-90%		1		
4	80%-90%		1		
5	80%-90%		1		
6	80%-90%		1		
7	80%-90%		1		
8	80%-90%		1		
9	60%-70%			1	
10	60%-70%			1	
11	80%-90%		1		
12	80%-90%		1		
<b>Total</b>		<b>0</b>	<b>10</b>	<b>2</b>	<b>0</b>
<b>Percentage</b>		<b>0%</b>	<b>83%</b>	<b>17%</b>	<b>0%</b>



### CLASS -III SEMESTER Inorganic Chemistry

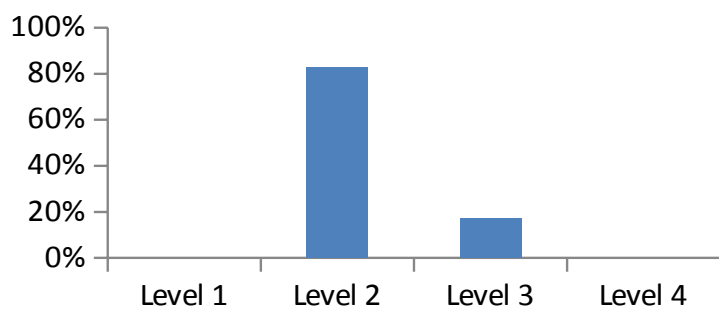
Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	60%-70%			1	
2	40%-59%				1
3	80%-90%		1		
4	60%-70%			1	
5	80%-90%		1		
6	80%-90%		1		
7	40%-59%				1
8	40%-59%				1
9	60%-70%			1	
10	80%-90%		1		
11	40%-59%				1
12	40%-59%				1
13	80%-90%		1		
14	80%-90%		1		

<b>Total</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>5</b>
<b>Percentage</b>	<b>0%</b>	<b>43%</b>	<b>21%</b>	<b>36%</b>



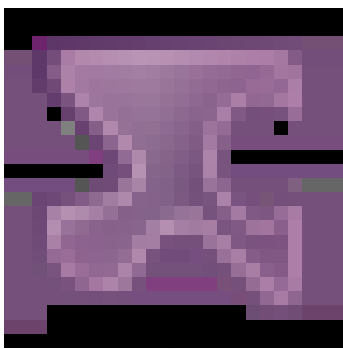
**CLASS -III SEMESTER Organic Chemistry**

Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	40%-59%				1
2	40%-59%				1
3	60%-70%			1	
4	80%-90%		1		
5	80%-90%		1		
6	40%-59%				1
7	40%-59%				1
8	40%-59%				1
9	40%-59%				1
10	60%-70%			1	
11	40%-59%				1
12	40%-59%				1
13	60%-70%			1	
14	60%-70%			1	
<b>Total</b>		<b>0</b>	<b>2</b>	<b>4</b>	<b>8</b>
<b>Percentage</b>		<b>0%</b>	<b>14%</b>	<b>29%</b>	<b>57%</b>



**CLASS -III SEMESTER Physical Chemistry**

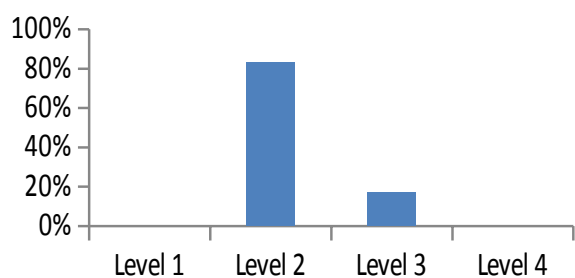
Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	60%-70%			1	
2	60%-70%			1	
3	80%-90%		1		
4	80%-90%		1		
5	80%-90%		1		
6	80%-90%		1		
7	40%-59%				1
8	40%-59%				1
9	80%-90%		1		
10	60%-70%			1	
11	91%-100%	1			
12	80%-90%		1		
13	80%-90%		1		
14	80%-90%		1		
<b>Total</b>		<b>1</b>	<b>8</b>	<b>3</b>	<b>2</b>
<b>Percentage</b>		<b>7%</b>	<b>57%</b>	<b>22%</b>	<b>14%</b>



#### CLASS -V SEMESTER Inorganic Chemistry

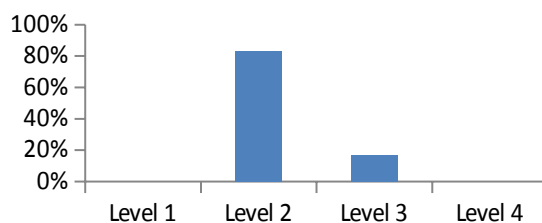
Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	60%-70%			1	
2	91%-100%	1			
3	80%-90%		1		
4	60%-70%			1	
5	60%-70%			1	
6	80%-90%		1		
7	60%-70%			1	

8	60%-70%			1	
9	60%-70%			1	
10	80%-90%		1		
11	60%-70%			1	
12	60%-70%			1	
13	60%-70%			1	
<b>Total</b>		<b>1</b>	<b>3</b>	<b>9</b>	
<b>Percentage</b>		<b>8%</b>	<b>23%</b>	<b>69%</b>	<b>0%</b>



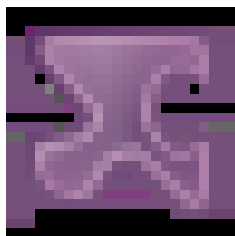
#### CLASS -V SEMESTER Organic Chemistry

Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	60%-70%			1	
2	91%-100%	1			
3	91%-100%	1			
4	60%-70%			1	
5	60%-70%			1	
6	80%-90%		1		
7	60%-70%			1	
8	40%-59%				1
9	80%-90%		1		
10	80%-90%		1		
11	60%-70%			1	
12	40%-59%				1
13	60%-70%			1	
<b>Total</b>		<b>2</b>	<b>3</b>	<b>6</b>	<b>2</b>
<b>Percentage</b>		<b>15%</b>	<b>23%</b>	<b>47%</b>	<b>15%</b>



#### CLASS -V SEMESTER Physical Chemistry

Sl No	Average Scores Obtained	Level I	Level II	Level III	Level IV
1	60%-70%			1	
2	91%-100%	1			
3	80%-90%		1		
4	80%-90%		1		
5	80%-90%		1		
6	91%-100%	1			
7	80%-90%		1		
8	40%-59%				1
9	91%-100%	1			
10	80%-90%		1		
11	80%-90%		1		
12	40%-59%				1
13	60%-70%			1	
<b>Total</b>		<b>3</b>	<b>6</b>	<b>2</b>	<b>2</b>
<b>Percentage</b>		<b>23%</b>	<b>47%</b>	<b>15%</b>	<b>15%</b>



#### Conclusion:

The departmental attainment of CO is good despite having some smaller number of students who have gain almost 100% knowledge about the courses but a majority of students have gain almost 60% to 80% knowledge about the courses, except a few irregular students which have only gain below 60% knowledge about the courses, this reflected in the result present above.

#### **Details on student enrichment programmes (special lectures/workshops /seminar) with external experts –**

- Departmental Seminar Conducted annually

- b. Special lecture by visiting scientists.

### ***Seminar***

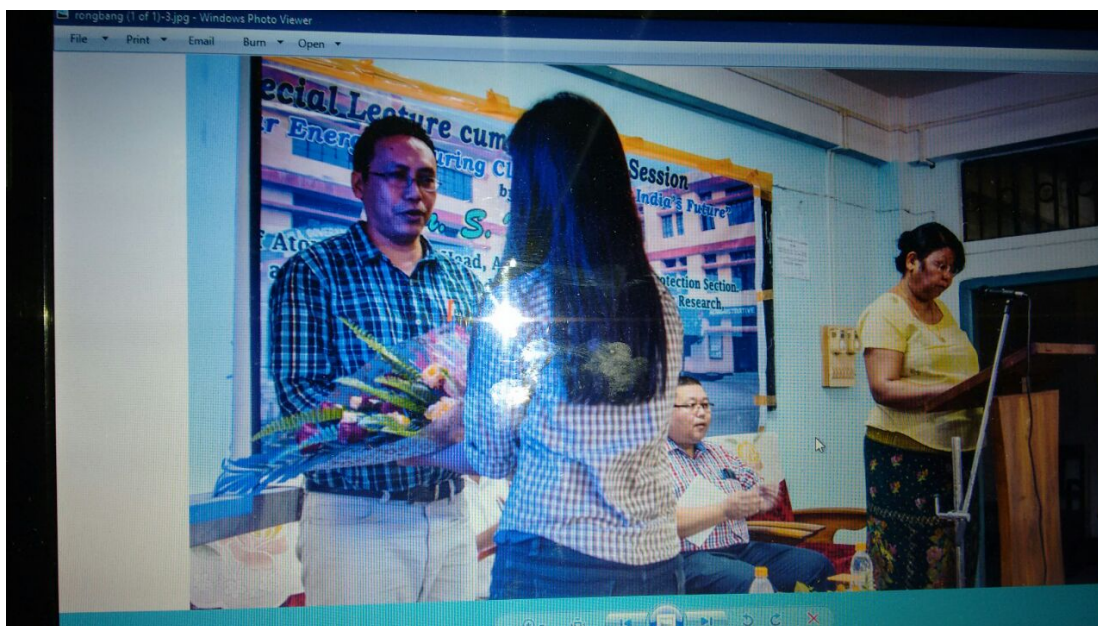
Course Code: (Chem H 605)

**Aim:**

1. To inculcate a sense of confidence in terms of public speaking and knowledge of the subject.
2. To draw conclusion whether the students have acquire in- depth knowledge of the topic presented.
3. Improving communication skills
4. Gaining expert and knowledge in the subject
5. Developing networking with others
6. Renewing motivation

**List of eminent academicians and scientists / visitors to the department -**

*Dr. S. Ningshen of the Department of Atomic Energy, Head Aqueous Corrosion and Protection Section. Metallurgy and Material Group. Indira Gandhi Center for Atomic Research, Kalpakkam, Tamilnadu, India.*



### **Best Practices**

**Mentoring:**

- The department of chemistry introduced “Mentor-Mentee Relationship” with the aim of improving their academic performance as well as overall development.
- **Objective:**
  - > To achieve greater clarity around their career goals and how to achieve them.
  - > To learn more about themselves.
  - > To gain greater self confidence and self belief.
  - > To pursue personal and professional development and practical learning.

**Action deployed:** Students are grouped in equal numbers and Mentors are appointed. Mentees are informed that they are welcome to approach concerned teachers/any other

teacher for

Guidance/Counselling

Feedback

Assessment of their performance in test, examinations, etc

finding solution to specific problem areas of individual students.

### Exposure Visits

Year	Duration of trip	Places of visit	Beneficiaries	Escorts
2014	24 <sup>th</sup> Nov.-6 <sup>th</sup> Dec.	Chennai & Bangalore	Final year students	Shri. B. G. Momin
2017	20 <sup>th</sup> -28 <sup>th</sup> May	Delhi & Manali	do	Shri. B. G. Momin
2018	3 <sup>rd</sup> – 7 <sup>th</sup> July	Shillong, Dawki & Sohra	VI Sem. Students	Shri. B. G. Momin Dr. K. Kharnaioir
	3 <sup>rd</sup> Dec.	Vigro Cement Factory, Damas Garo Hills	All Sem. Hons. Students	Shri. B. G. Momin Shri. S. Suting



Bangalore



Manali



Shillong



Vigro Cement Factory

### Details of Infrastructural Facilities

- Class rooms with ICT facility –**One**
- Laboratories – *2 Laboratories (1 organic and Physical & 1 inorganic)*

**Number of students receiving financial assistance from college, government or other agencies** - All ST Students receive scholarship form State Government

### Teaching methods adopted to improve student learning –

- Reading material are provide in addition to lectures deliver.  
Practical write up are provided.
- Use of ITC to enhance teaching learning process.  
Group interaction to address students problem and weakness

**Participation in Institutional Social Responsibility (ISR) and Extension activities –**

Students of the department used to take part in Cleaning Drives organized by the College.

### **SWOC OF CHEMISTRY**

#### ***S-STRENGTH***

- Dedicated faculty.
- Varied Specialization of faculty.
- Experienced, Qualified and Trained Teachers in teaching profession.
- Caring and supportive role in the educational endeavors of students.
- Recommended text books are available in college library as well in the department.
- Regular mentoring/counseling of students.
- Being a Government college, it has a low fee structure so students from economically poor background can afford to study.
- Remedial classes are regularly conducted.

#### ***W-Weakness***

- Student's enrolment is affected due to the fact that students who opted for science left for professional courses outside the state.
- Space constraint.
- Lack in maintenances as it involved a lengthy official procedure as the Education Department of Meghalaya does not have an Engineering wing of its own, but rely on PWD Department.
- Financial support is never on time due to long official formalities.
- Access to science research journal is not sufficient.

#### ***O-OPPORTUNITY***

- It is the only Government College having science stream and offering chemistry in the entire Garo Hills region.
- It educates students from economically poor families.
- It is located in the head-quarter of the district.
- Departmental exposure trip for final semester students are conducted regularly as when sanction of money is granted by the government.

#### ***C-CHALLENGES***

- Congestion in the laboratory
- Teachers are involved in other activities of college.
- Chemistry being a common subject in the under graduate level, the department has the largest number of students in the B.Sc. level.
- On the contrary being a government college, when any transfer, retirement and promotion of faculty member's take place, the filling up of these vacant posts by the government usually take long time.
- No laboratory technician
- Being in the District where literacy rate is low with only few brilliant students, but brilliant students pursue professional line after 10 + 2 standard, so large number of below average students continue their study in the college and this is a major

challenge to teach chemistry for below average students although extra care are taken through remedial classes.

- Since the students from the area are poor in English. Communication barrier is also one of the main challenges.

**Future Plan of the department:**

1. Introducing new practical to enhance practical skill in students.
2. Undertake study tour/fields trips.
3. To start carrier guidance classes.