Department of Biotechnology

St. Edmund's College

Shillong

REPORT ON

VALUE ADDED COURSE ON

DNA & Its Applications

Organized by

Department of Biotechnology

St. Edmund's College, Shillong

Department of Biotechnology

St. Edmund's College

Acknowledgements

It gives me a deep sense of gratitude to appreciate the people who have helped the department to conduct such a wonderful certificate course. My heartfelt appreciation and the source of inspiration to

⇒ Br (Dr) Simon Coelho, Secretary (GB), St. Edmund's College, Shillong

⇒ Dr Sylvanus Lamare, Principal, St. Edmund's College, Shillong

⇒ Prof Monotosh Chakravarty, Vice Principal, St. Edmund's College, Shillong

⇒ Prof Sumit Deb, IQAC Coordinator, St. Edmund's College, Shillong

⇒ Bro S Julius, Bursar, St. Edmund's College, Shillong

⇒ Ms Darshana Sarma, Department of Biotechnology, St. Edmund's College, Shillong

⇒ Mr Arjit Das, Department of Department of Biotechnology, St. Edmund's College, Shillong

⇒ Ms Deishadaphi B Toi, Department of Department of Biotechnology, St. Edmund's College, Shillong

⇒ Ms Shabnam Barbhuiya, Department of Department of Biotechnology, St. Edmund's College, Shillong

⇒ Ms Soumyarupa Sarma, Department of Department of Biotechnology, St. Edmund's College, Shillong

⇒ Ms Priya Paul, Technical Assistant, St. Edmund's College, Shillong

⇒ Mr Erwein Khshiar, Lab Attendant, Dept of Biotechnology, St. Edmund's College, Shillong

⇒ All the students participants.

****

Contact Details: (M) +91-9862041757

1. **Title of the Course:**

Value Added Course on DNA & its Applications

2. **Course Code No:**

VACBT2021001

3. **Total Contact Hours:**

13 hrs

4. **Total Credits:**

0.65

5. **Date of Approval**

28th October 2021

5. **Opening of registration process:**

2nd November 2021

6. **Closing of Registration Process:**

5th November 2021

7. **Mode of Registration:**

Online

8. **Weblink for Registration:**

https://docs.google.com/forms/d/1izCFBeNJH1mBEaTxF1MvhXU8DYMDtpNbFewd9utWrjI/edit?usp=sharing

9. **Date for Commencement of the Course:**

8th November 2021

10. **Closing of the course:**

12th November 2021

11. **Duration:**

5 days

12. **Total No of Students Enrolled:**

41 UG Students

13. **Registration Fees:**

NIL

14. **Total Registration Fees Collected:**

NA

15. Course Coordinator:

Dr Samrat Adhikari, Head, Department of Biotechnology
St. Edmund's College, Shillong

Prof Sumit Deb, IQAC Coordinator, St. Edmund's College, Shillong

16. Resource Persons:

Ms Darshana Sarma, Department of Biotechnology, St. Edmund's College

Mr Arjit Das, Department of Biotechnology St. Edmund's College, Shillong

Ms Deishadaphi B Toi, Department of Biotechnology St. Edmund's College, Shillong

Ms Shabnam Bharbhuiya, Department of Biotechnology St. Edmund's College, Shillong

Ms Soumayarupa Sarma, Department of Biotechnology St. Edmund's College, Shillong

Course description

Ever since the discovery of the double helical structure of the DNA by Watson & Crick with its complete composition, it became an evident breakthrough in the history of Biotechnology and have opened various emerging fields to study the DNA of all individuals. Basically, many scientists and great philanthropist emphasis DNA as a basic of life and the future lies with a complete engineering of the base composition of DNA. The course intends to enlighten students about the Composition of the DNA in details its hierarchy and its interaction with various other attributes both genotypically and phenotypically.

Course structure

The VAC syllabus proposed is of 13 contact hours with 5 modules units (Module 1, Module2, Module 3, Module 4 and Module 5). Each of these contact hours has course on fundamentals of DNA, its core structure, functions, and its application in various allied fields. Furthermore, each of the units will have assessment period and finally at the end appropriatefeedback will also be implemented.

Module	Code	Name of thePaper	Contact Hours		TOTAL
			Theory	Assessments	
1	I	DNA – the basic unit of life & its structure	2	0.5	2.5
2	II	DNA as a carrier of Genetic information	2	0.5	2.5
3	III	DNA isolation	2	0.5	2.5
4	IV	DNA Mutation	2	0.5	2.5
5	V	DNA applications	2.5	0.5	3.0
				TOTAL	13

Mode of Conduct of the Course

The course will be conducted completely online using the College Linways Learning Management System (LMS). Each teacher will be assigning the roles in their respective accounts and the external faculty will be using the account of the course coordinator. The mode of presentation has been live sessions, Power point presentations, video recording which has been uploaded in the LMS system for the students to view at any time. The assessment of the students was completed using online exam tools and

the students who intend to improve the marks were given a chance to go for a retest. Each day student feedback was verbally recorded, and accordingly effective tools were implemented for making the teaching learning process in effective manner.

Each student was given a chance for their feedback after the completion of the course and the same were analyzed using appropriate tools.

Grading Policy

Students will be assigned the following grades, based on the complete course assessments.

Marks	Final Grade
90-100	A^+
80-90	A
70-80	B+
60-70	B
50-60	C^+
40-50	C
Below 50	Needs Improvement

List of Students Registered for the Certificate Course

Sl No	Student ID	Name	Semester	Subject
1	19/BIOT/411	Ankita Saikia	V	Biotechnology
2	19/BIOT/414	Proshila Rai	V	Biotechnology
3	19/BIOT/415	Jenny Moi	V	Biotechnology
4	19/BIOT/419	Diarchy Hajong	I	Biotechnology
5	19/BIOT/427	Riyas Reang	I	Biotechnology
6	19/BIOT/433	Suman Kumari Rai	I	Biotechnology
7	21/BIOT/401	Alarissa Jasmine Sawian	I	Biotechnology
8	21/BIOT/402	Jiphila Roidill Shabong	I	Biotechnology
9	21/BIOT/403	M Lhingneivah Haokip	I	Biotechnology
10	21/BIOT/405	Franky L Nongbri	I	Biotechnology
11	21/BIOT/406	Chanshim Kashung	I	Biotechnology
12	21/BIOT/410	Nisha Kumari Ray	I	Biotechnology
13	21/BIOT/412	Sakginchira Mangsang Sangma	I	Biotechnology

14	21/BIOT/414	Vanshika Jasrasaria	I	Biotechnology
15	21/BIOT/416	Nairity Goswami	I	Biotechnology
16	21/BIOT/417	Sambunki Pakem	I	Biotechnology
17	21/BIOT/418	Rosy Lallawmawmi	I	Biotechnology
18	21/BIOT/420	Susmita Das	I	Biotechnology
19	21/BIOT/421	Tapunishtha Borah	I	Biotechnology
20	21/BIOT/422	Rajdeep Paul	I	Biotechnology
21	21/BIOT/423	Amon Jyoti Goswami	I	Biotechnology
22	21/BIOT/424	Linda Zairemmawii	I	Biotechnology
23	21/BIOT/431	Ankit Dasgupta	I	Biotechnology
24	21/BIOT/436	Khusboo Sharma	I	Biotechnology
25	21/BIOT/444	Swagata Dutta	I	Biotechnology
26	21/BIOT/445	Sushang Tamang	I	Biotechnology
27	21/BIOT/446	Ashakiran D Rai	I	Biotechnology
28	21/BSWS/030	Nafisha Malngiang	I	Social Work
29	19/BIOT/404	Wandashisha Kharkongor	V	Biotechnology
30	19/BIOT/420	Babetshisha Kharnaior	V	Biotechnology
31	21/BIOT/408	Ankita Hazarika	I	Biotechnology
32	21/BIOT/413	Lhingjoujam Misao	I	Biotechnology
33	21/BIOT/429	Bhaswati Chakraborty	I	Biotechnology
34	21/BIOT/442	Uranim K C Shaiza	I	Biotechnology
35	21/BIOT/426	Rode Islary	I	Biotechnology
36	21/BIOT/433	Wilson Sutnga	I	Biotechnology
37	21/BIOT/439	Kimkimchi M Momin	I	Biotechnology
38	21/BIOT/411	Rahul Sunar	I	Biotechnology
39	21/BSWS/034	Wiancy Mary Sun	I	Social Work
40	21/BSWS/042	Darihunlang Phawa	I	Social Work
41	21/BSWS/048	Shidalin Basaiawmoit	I	Social Work

Attendance

Sl No	Student ID	Name	Semester	Total Hours	Attended	Attendance
1	19/BIOT/411	Ankita Saikia	V	13	13	100 %
2	19/BIOT/414	Proshila Rai	V	13	13	100 %
3	19/BIOT/415	Jenny Moi	V	13	13	100 %
4	19/BIOT/419	Diarchy Hajong	I	13	13	100 %
5	19/BIOT/427	Riyas Reang	I	13	13	100 %
6	19/BIOT/433	Suman Kumari Rai	I	13	13	100 %
7	21/BIOT/401	Alarissa Jasmine Sawian	I	13	13	100 %
8	21/BIOT/402	Jiphila Roidill Shabong	I	13	13	100 %
9	21/BIOT/403	M Lhingneivah Haokip	I	13	13	100 %
10	21/BIOT/405	Franky L Nongbri	I	13	13	100 %
11	21/BIOT/406	Chanshim Kashung	I	13	13	100 %
12	21/BIOT/410	Nisha Kumari Ray	I	13	13	100 %
13	21/BIOT/412	Sakginchira Mangsang Sangma	I	13	13	100 %
14	21/BIOT/414	Vanshika Jasrasaria	I	13	13	100 %
15	21/BIOT/416	Nairity Goswami	I	13	13	100 %
16	21/BIOT/417	Sambunki Pakem	I	13	13	100 %
17	21/BIOT/418	Rosy Lallawmawmi	I	13	13	100 %
18	21/BIOT/420	Susmita Das	I	13	13	100 %
19	21/BIOT/421	Tapunishtha Borah	I	13	13	100 %
20	21/BIOT/422	Rajdeep Paul	I	13	13	100 %
21	21/BIOT/423	Amon Jyoti Goswami	I	13	13	100 %
22	21/BIOT/424	Linda Zairemmawii	I	13	13	100 %
23	21/BIOT/431	Ankit Dasgupta	I	13	13	100 %
24	21/BIOT/436	Khusboo Sharma	I	13	13	100 %
25	21/BIOT/444	Swagata Dutta	I	13	13	100 %
26	21/BIOT/445	Sushang Tamang	I	13	13	100 %
27	21/BIOT/446	Ashakiran D Rai	I	13	13	100 %
28	21/BSWS/030	Nafisha Malngiang	I	13	13	100 %
29	19/BIOT/404	Wandashisha Kharkongor	V	13	11	84 %
30	19/BIOT/420	Babetshisha Kharnaior	V	13	11	84 %
31	21/BIOT/408	Ankita Hazarika	I	13	11	84 %

32	21/BIOT/413	Lhingjoujam Misao	I	13	11	84 %
33	21/BIOT/429	Bhaswati Chakraborty	I	13	11	84 %
34	21/BIOT/442	Uranim K C Shaiza	I	13	2.5	19 %
35	21/BIOT/426	Rode Islary	I	13	5	38 %
36	21/BIOT/433	Wilson Sutnga	I	13	2.5	19 %
37	21/BIOT/439	Kimkimchi M Momin	I	13	5	38 %
38	21/BIOT/411	Rahul Sunar	I	13	3	23 %
39	21/BSWS/034	Wiancy Mary Sun	I	13	3	23%
40	21/BSWS/042	Darihunlang Phawa	I	13	3	23 %
41	21/BSWS/048	Shidalin Basaiawmoit	I	13	11	84 %

RESULTS

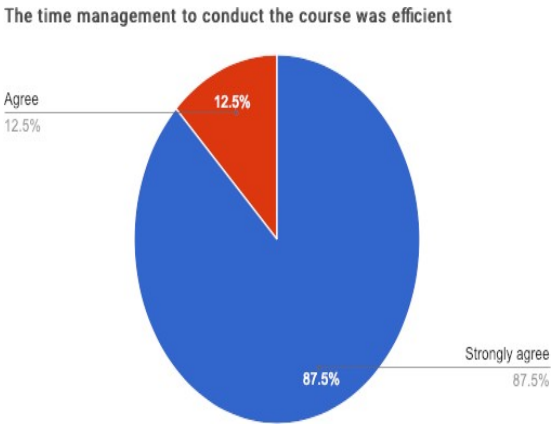
The examination (online mode) was conducted for the modules I, II, III, IV & V with a total of 100 marks with a time limit of 30 minutes. Each student has performed very well. The MCQ question was based on the reasoning ability to solve concept-based questions.

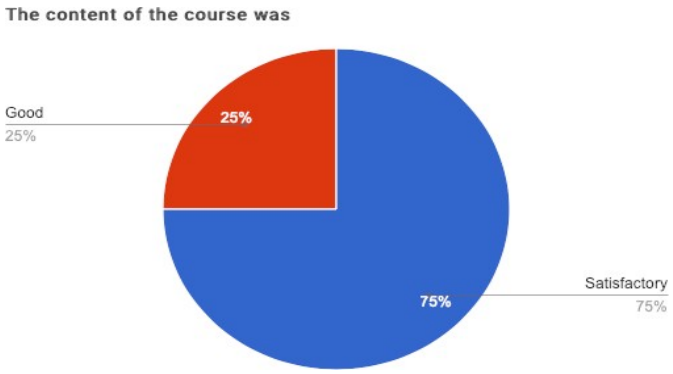
Sl	Enrollment No	Name	Module					Total	%	Grade
			I	II	III	IV	V			
			20	20	20	20	20	100		
1	19/BIOT/411	Ankita Saikia	18	17	19	19	20	93	93	A^+
2	19/BIOT/414	Proshila Rai	19	18	18	18	20	93	93	A^+
3	19/BIOT/415	Jenny Moi	19	19	18	19	20	95	95	A^+
4	19/BIOT/419	Diarchy Hajong	20	16	20	19	20	95	95	A^+
5	19/BIOT/427	Riyas Reang	17	17	20	19	20	93	93	A^+
6	19/BIOT/433	Suman Kumari Rai	18	17	20	18	19	92	92	A^+
7	21/BIOT/401	Alarissa J Sawian	16	17	19	19	11	82	82	A
8	21/BIOT/402	Jiphila Roidill Shabong	16	18	16	17	17	84	84	A
9	21/BIOT/403	M Lhingneivah Haokip	18	16	18	16	16	84	84	A
10	21/BIOT/405	Franky L Nongbri	13	17	18	17	14	79	79	B^+
11	21/BIOT/406	Chanshim Kashung	12	11	16	18	13	70	70	B^+
12	21/BIOT/410	Nisha Kumari Ray	1	17	18	17	18	71	71	B^+
13	21/BIOT/412	Sakginchira M Sangma	13	18	14	18	13	76	76	B^+
14	21/BIOT/414	Vanshika Jasrasaria	16	17	12	19	16	80	80	A
15	21/BIOT/416	Nairity Goswami	16	15	17	17	14	79	79	B^+
16	21/BIOT/417	Sambunki Pakem	15	18	18	15	18	84	84	A
17	21/BIOT/418	Rosy Lallawmawmi	2	19	18	17	16	72	72	B^+
18	21/BIOT/420	Susmita Das	13	18	17	17	18	83	83	A
19	21/BIOT/421	Tapunishtha Borah	15	16	17	18	16	82	82	A

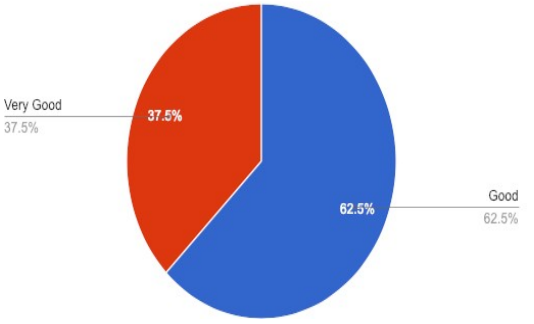
20	21/BIOT/422	Rajdeep Paul	14	18	14	13	16	75	75	B^+
21	21/BIOT/423	Amon Jyoti Goswami	5	7	3	4	8	75	75	B^+
22	21/BIOT/424	Linda Zairemmawii	5	17	15	16	18	27	27	-
23	21/BIOT/431	Ankit Dasgupta	16	16	18	17	14	71	71	B^+
24	21/BIOT/436	Khusboo Sharma	10	15	7	9	15	81	81	A
25	21/BIOT/444	Swagata Dutta	16	18	13	16	16	56	56	B
26	21/BIOT/445	Sushang Tamang	15	17	17	19	17	79	79	B^+
27	21/BIOT/446	Ashakiran D Rai	12	14	11	15	13	85	85	A
28	21/BSWS/030	Nafisha Malngiang	0	14	16	19	19	65	65	B
29	19/BIOT/404	W Kharkongor	0	14	15	19	18	68	68	B
30	19/BIOT/420	Babetshisha Kharnaior	0	17	18	18	18	66	66	B
31	21/BIOT/408	Ankita Hazarika	17	0	7	17	15	71	71	B^+
32	21/BIOT/413	Lhingjoujam Misao	0	17	16	18	17	56	56	B
33	21/BIOT/429	Bhaswati Chakraborty	13	17	11	8	0	68	68	B
34	21/BIOT/442	Uranim K C Shaiza	12	0	0	0	0	49	49	C
35	21/BIOT/426	Rode Islary	0	0	10	16	16	12	12	-
36	21/BIOT/433	Wilson Sutnga	17	0	0	0	0	42	42	C
37	21/BIOT/439	Kimkimchi M Momin	14	16	0	0	0	17	17	-
38	21/BIOT/411	Rahul Sunar	0	0	0	0	9	30	30	-
39	21/BSWS/034	Wiancy Mary Sun	0	0	0	0	14	9	9	-
40	21/BSWS/042	Darihunlang Phawa	0	15	13	1	1	14	14	-
41	21/BSWS/048	Shidalin Basaiawmoit	18	17	19	19	20	30	30	-
42										

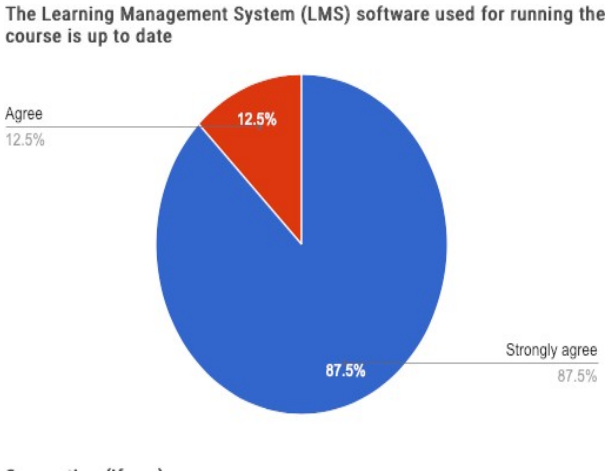
Feedback of Guest Faculty

The Feedback form for the guest faculty was designed with inputs from the IQAC cell for the participants using google form and was responded by 6 resource persons. The analysis is depicted below.



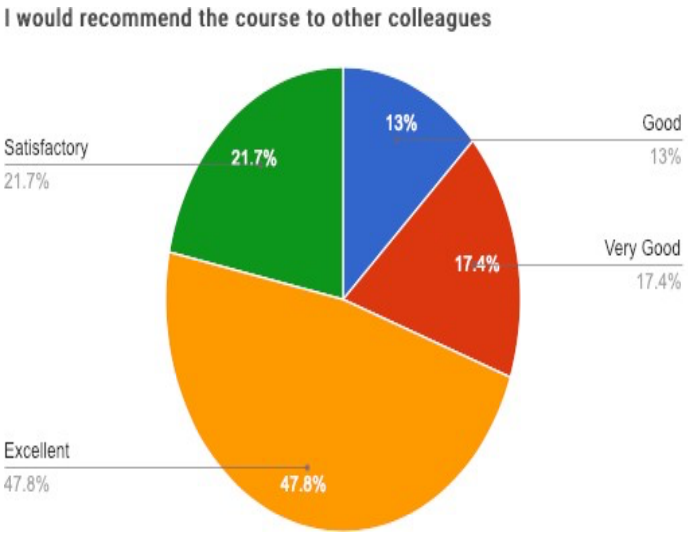


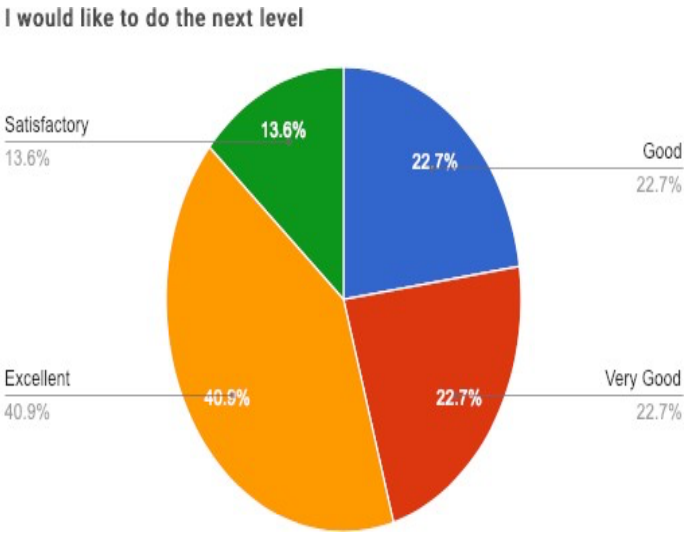




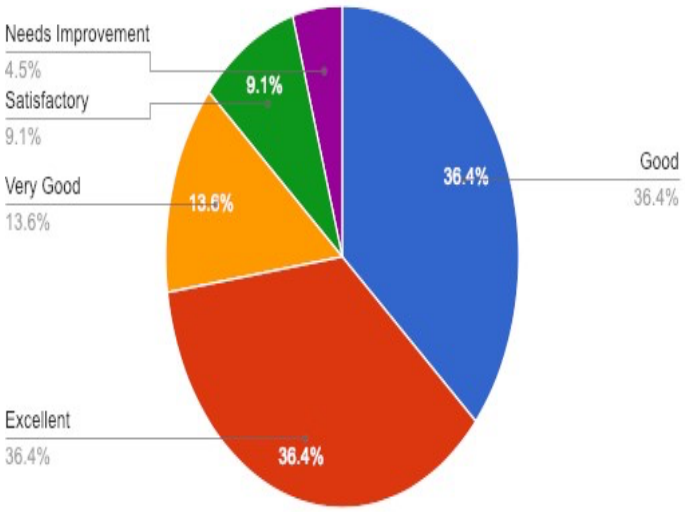
Feedback of Participants

The Feedback form was designed with inputs from the IQAC cell for the participants using google forms and was responded by 41 participants. The analysis is depicted below.



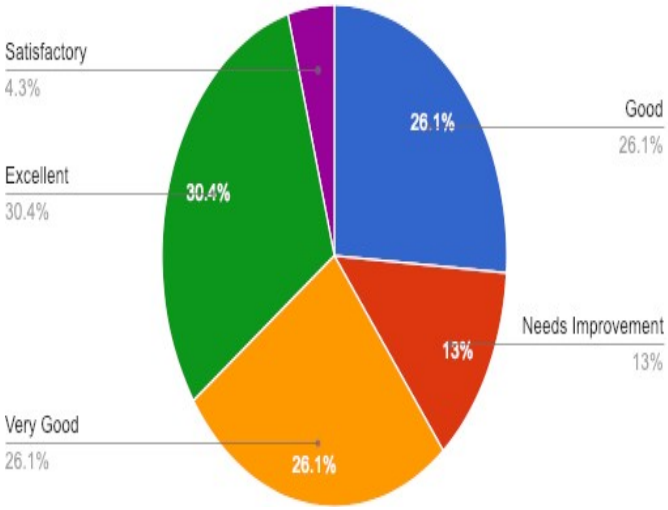


The lecture were clear and easy to understand

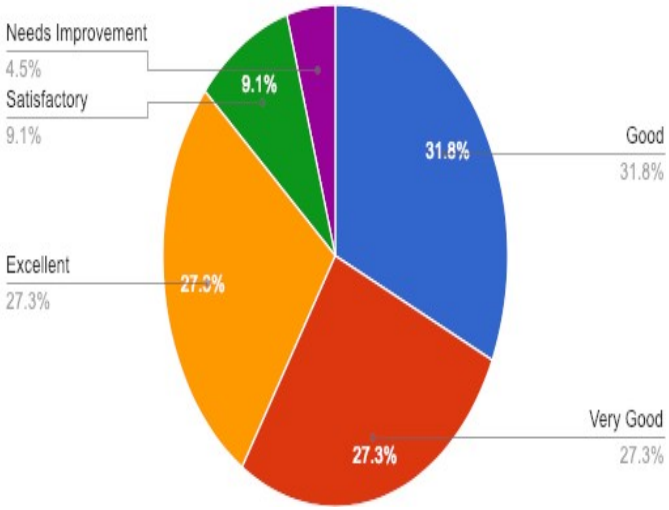


The online teaching aids were used effectively	Top results
Good	8
Excellent	7
Very Good	4
Satisfactory	3
Needs Improvement	2

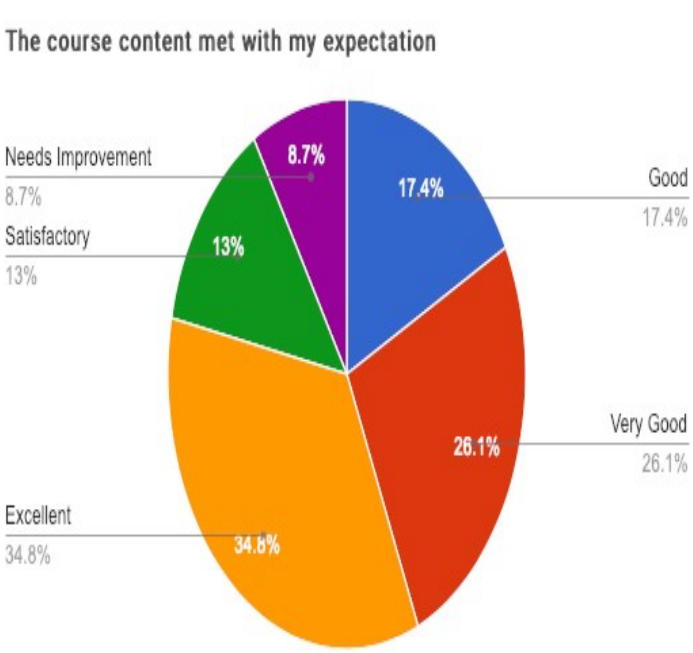
The Learning Management System (LMS) was easy to use



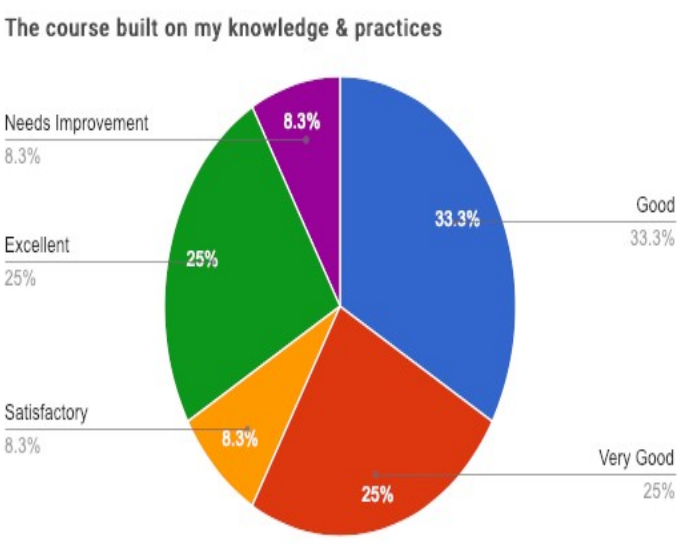
The instructor encouraged interaction and was helpful



The objective of the course clear to me	Top results
Good	8
Very Good	7
Excellent	5
Satisfactory	3
Needs Improvement	2



The lectures/videos were well planned	Top results
Excellent	9
Good	6
Satisfactory	4
Very Good	3
Needs Improvement	2



Value Added Course - DNA & its Applications

Organized by Department of Biotechnology, St. Edmund's College, Shillong

Introduction

DNA, or deoxyribonucleic acid, is the hereditary material in humans and almost all other organisms. Nearly every cell in a person's body has the same DNA. Most DNA is in the cell nucleus (where it is called nuclear DNA), but a small amount of DNA can also be found in the mitochondria (called mitochondria DNA or mtDNA). DNA has immense application in Biotechnology & allied fields and a knowing of its hierarchy is crucial for all biologist

Objectives

The following Value-Added Course designed by the Students have 5 modules- primarily aimed to address some interesting aspects about DNA.

It is believed that such course will help the participants to gather knowledge and appreciate the role of DNA in various allied subjects.

Course Content

Content	Hours
Module I	2
Module II	2
Module III	2
Module IV	2
Module V	2

A Course Designed by the students, for the students

Target Participants

The course is open to students of the College.

Course Fees

No Course Fee

Presenter(s)

- Ms Darshana Sarma, 5th Semester, Department of Biotechnology
- Mr Arjit Das, 5th Semester, Department of Biotechnology
- Ms Deishadaphi B Toi, 5th Semester, Department of Biotechnology
- Ms Shabnam Barbhuiya, 5th Semester, Department of Biotechnology
- Ms Soumyarupa Sarma, 5th Semester, Department of Biotechnology

Mode

Online LMS using Linways (www.stedmunds.in)

Contact info

Course Coordinator
St. Edmund's College, Shillong
Email id:
secbiotech@gmail.com

Assessments

Upon completion of each module (Contact hours of 2) participant will have to respond to the Questionnaire series which shall be conducted online. The results shall be graded accordingly with analysis of the feedback.

How to Apply

Register Here

Important Dates

Registration Opens	1st Nov 2021
Registration Closes	5th Nov 2021
Commencement of the Course	8th Nov 2021
Timings	6:00 PM – 8:00 PM
Module I	8th Nov 2021
Module II	9th Nov 2021
Module III	10th Nov 2021
Module IV	11th Nov 2021
Module V	12th Nov 2021

***Kindly note all correspondence will be through email only
*** e certificates will be provided subjected to completion of all module

CERTIFICATE FOR STUDENTS

St. Edmund's College
Shillong

Certificate of Merit
Awarded to

XYZ

St. Edmund's College, Shillong
for successfully completing the 5 days "Value Added Course – DNA & its Applications"
With
Grade. A
Organized by Department of Biotechnology in Collaboration with Internal Quality Assurance Cell, (IQAC) St. Edmund's College, Shillong from 8th – 12th November, 2021.
Certificate ID: VACBT2021001

DR SAMRAT ADHIKARI
HOD, BIOTECHNOLOGY

PROF SUMIT DEB
IQAC CORDINATOR

DR (BR) SIMON COELHO
SECRETARY

DR SYLVANUS LAMARE
PRINCIPAL

Grade	A+	A	B+	B	C+	C
Marks	90-100%	80-90 %	70-80 %	60-70 %	50-60 %	50-60 %

SAMPLE ONLY