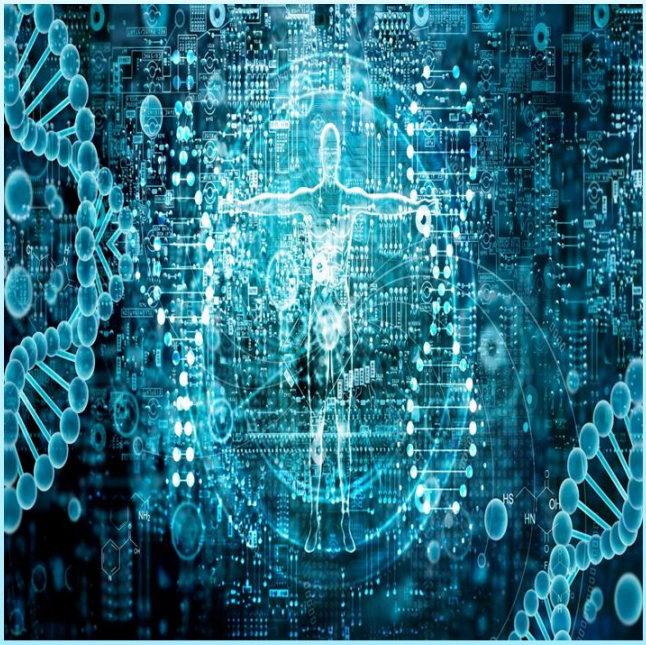
Course code: VAC BT 109

Duration: 12.05.2021 – 27.05.2021

Course offered by:
Department of Biotechnology
VALUE ADDED COURSES
SESSION 2020-21



Bioinformatics & Applied biotechnology

Objectives :

Students will get overview of the principles of Bioinformatics, software tools for sequence alignment, and applications of applied biotechnology.

Coordinator Name: Dr. Manjul Mungali
Designation: Assistant Professor
Department, Biotechnology, : KVSCOS ,SVSU, Meerut
Email ID: manu.biophysics@gmail.com
Ph No. 9149096621

VALUE ADDED COURSES Session 2020-21
REGISTRATION FORM

REGISTRATION FORM

Name:.....

Enrolment No.....

Program:.....

Sem. & Year.....

Contact No./Mobile:.....

E-mail:.....

Course Opted:.....

Course Code:.....

Signature with date:.....

Coordinator Name: Dr. Manjul Mungali
Designation: Assistant Professor
Department: Biotechnology, KVSCOS, SVSU, Meerut
Email: manu.biophysics@gmail.com
Ph No. 9149096621

Course Schedule

12.05.2020 – 27.05.2021

3.00 pm 4.00 pm

Name of Value Added Course**: Bioinformatics & Applied biotechnology**
Course Code**: VAC-BT-109**
Time**: 16 hrs.**

Objectives: The objective of the course is to introduce the concepts of bioinformatics utilizing computer fundamental & their applications for the efficient use in different software tools.

Introduction to Computers
Introduction, Characteristics of Computers, Block diagram of computer.Types of Programming Languages (Machine Languages, Assembly Languages, High Level Languages).
Data Organization, Drives, Files, Directories. Types of Memory (Primary And Secondary) RAM ROM, PROM, and EPROM. Secondary Storage Devices (FD, CD, HD, Pen drive) I/O Devices (Scanners, Plotters, LCD, Plasma Display). Number Systems Introduction to Binary, Octal, Hexadecimal system Conversion, Simple Addition, Subtraction, Multiplication

Algorithm and Flowcharts
Algorithm: Definition, Characteristics, Advantages and disadvantages, Examples Flowchart: Definition, Define symbols of flowchart, Advantages and disadvantages,

Biological database
Introduction to NCBI, PDB, UniProtKB, KEGG, DDBJ, Primary and secondary data.

BLAST
Introduction to BLAST software tools and its variants.Operating of BLAST software.

Clustalw
Multiple sequence alignment tools, creating phylogenetic tree using DNA sequences.

Biotechnology in drug design
Use of software tools in drug design, pharmacogenomics.

Outcome:

1: Understanding the concept of input and output devices of Computers and how it works and recognize the basic terminology used in computer programming

2: Analyze and understand in-depth training in use of sequence alignment tools.

3: Enhance the ability of essential for sequence analysis.

4: To understand what is bioinformatics? To understand the Basics of alignment tools.

5: To evaluate how to use software packages for sequence alignment.

Reference books:

1. Fundamentals of Computers" by ReemaThareja from Oxford University Press
2. Kumaresan, V. 2005, Biotechnology, Saras Publications, New Delhi.
3. Horizons of Biotechnology: B.D. Singh : Kalyani publications

Report

On

Value Added Course

A sixteen days (1 hour per day)value added course on BIOINFORMATICS & APPLIED BIOTECHNOLOGY was conducted in the department for B.Sc.&M.Sc.students. The course started on 12-05-2021 and 37 students registered themselves in the course. The sessions were handled by course coordinator Dr.Manjul Mungali, for improving the Bioinformatics skills of the students. The course was completed on 27-05-2021 and all the 37 students registered successfully completed the course. Students felt that the course was very much helpful and they got the basic knowledge on Bioinformatics softwares.

Registrar
Swami Vivekanand
Subharti University
MEERUT

DEAN

LIST OF ENROLLED STUDENTS

VALUE ADDED COURSE

2020-21

Name of course	Name of faculty	Semester
Bioinformatics & Applied biotechnology	Dr. ManjulMungali	Even Sem.
Course Duration	**Mode of Teaching**	**Course schedule**
Min 16 Hours	Online (Google Meet)	12 May 2021 to 27 May 2021 3:00pm to 4:00pm

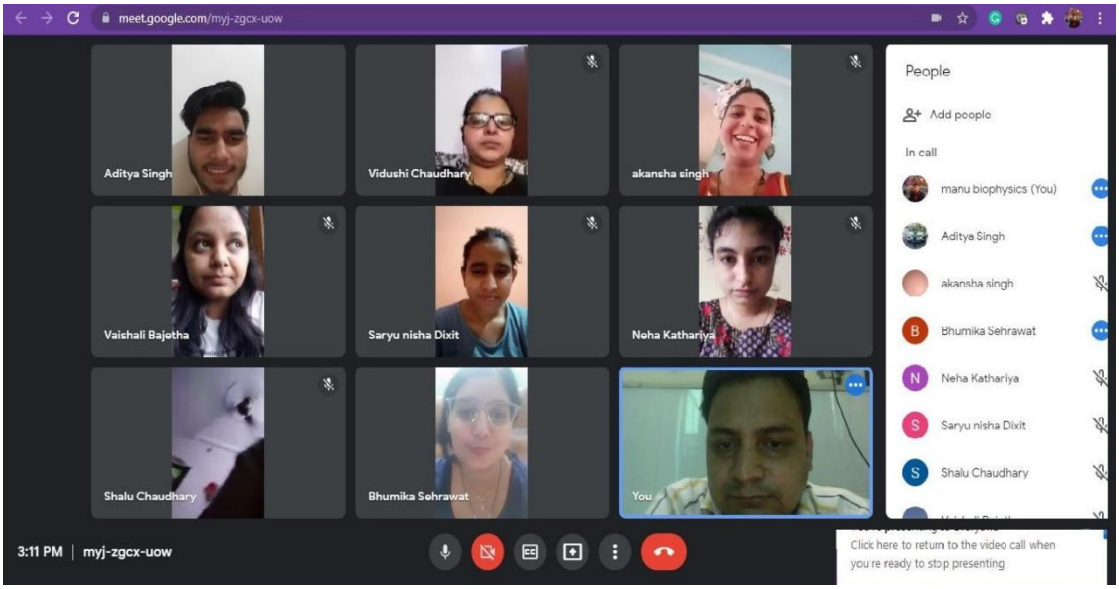
Sr. No.	Student Unique Enrolment ID	Name of the student	Programme name
1	2006000050287	Bhumika	M.Sc Biotechnology
2	2006000050311	Saryu Dixit	M.Sc Biotechnology
3	P-33580	Km Neha	M.Sc Biotechnology
4	2006000050450	Km Shalini	M.Sc Biotechnology
5	P-34133	Aditya Singh	M.Sc Biotechnology
6	2006000050440	Akansha Singh	M.Sc Biotechnology
7	P-34499	VaishaliBajetha	M.Sc Biotechnology
8	P-34543	Vidushi Chaudhary	M.Sc Biotechnology
9	1906000001142	Kanishkagarg	B.Sc Biotechnology
10	1906000001707	Aryan chahal	B.Sc Biotechnology
11	1906000001141	Shivangi Sharma	B.Sc Biotechnology
12	1906000001148	Puja Sree	B.Sc Biotechnology
13	1906000001147	Gunjan Rana	B.Sc Biotechnology
14	1906000001149	Soyab	B.Sc Biotechnology
15	1906000001143	Sumit	B.Sc Biotechnology
16	1906000001144	Kunal Saini	B.Sc Biotechnology
17	1906000001151	Nitin kumar	B.Sc Biotechnology
18	1906000001722	Sneha Singh	B.Sc Biotechnology
19	1906000001706	Anuj	B.Sc Biotechnology
20	1906000001145	Asabulhak	B.Sc Biotechnology
21	1806000021416	ALOK TYAGI	B.Sc Biotechnology
22	1806000021463	AKASH PHILLIP	B.Sc Biotechnology
23	1806000021464	MOH MUNAVVAR	B.Sc Biotechnology
24	1806000021465	VIDISHA GUPTA	B.Sc Biotechnology
25	1806000021466	ZUBER KHAN	B.Sc Biotechnology
26	1806000021467	MOHD AKRAM	B.Sc Biotechnology
27	1806000021468	HIMANI JAYANT	B.Sc Biotechnology
28	1806000021469	SHIVANI	B.Sc Biotechnology
29	1806000021470	SONAM YADAV	B.Sc Biotechnology

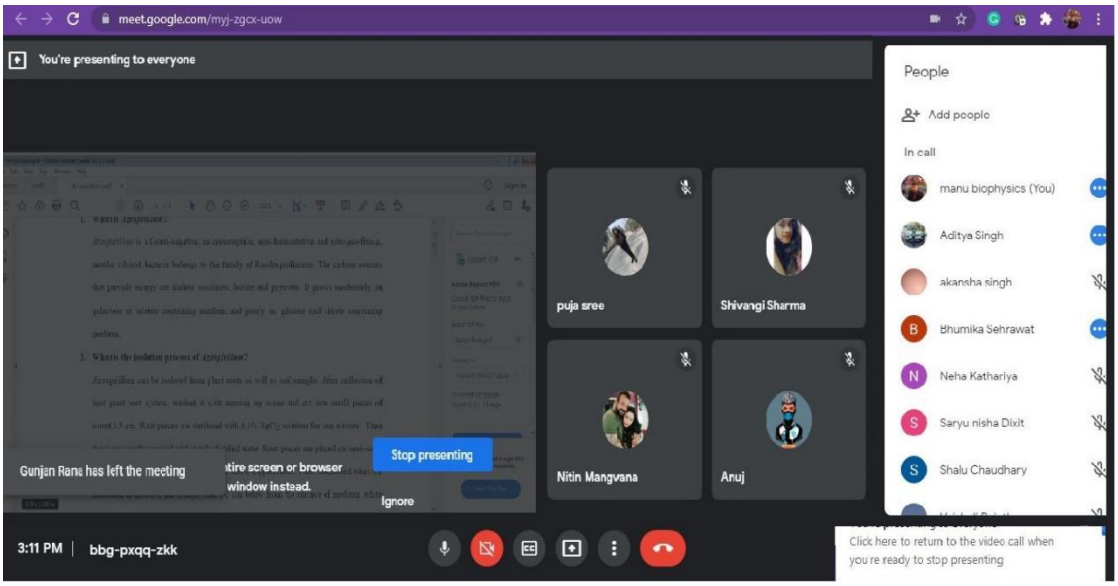
30	1806000021471	PRIYANSHU KUMAR MISHRA	B.Sc Biotechnology
31	1806000021935	AYUSHI RANA	B.Sc Biotechnology
32	1806000022035	ABHIJEET CHAUHAN	B.Sc Biotechnology
33	1806000022133	NIKHIL GUPTA	B.Sc Biotechnology
34	1806000022137	ADNAN ANSARI	B.Sc Biotechnology
35	1806000021409	KM.SIYA TOMAR	B.Sc Biotechnology
36	1806000021410	MANSI SHARMA	B.Sc Biotechnology
37	1806000021411	ANSHUL JAIN	B.Sc Biotechnology

Registrar
Swami Vivekanand
Subharti University
MEERUT

Session: 2020-21

Name of Value Added Course**:** Bioinformatics & Applied biotechnologyCourse Code**: VAC BT 109**
Faculty**: Dr. ManjulMungali** Time**: 1.0 hrs. (3:00-4:00pm)**
Date- 12-05-2021 to 27-05-2021





(An online webinar was conducted on "Bioinformatics & Applied Biotechnology" to give the knowledge to the students)

Swami Vivekanand Subharti University, Meerut

CERTIFICATE OF COMPLETION

Organized by

Department of Biotechnology,

KERAL VERMA SURABHARTI COLLEGE OF SCIENCE

This is to certify that.....Bhumika ..... *Class*...M Sc. Biotechnology *Department/College*...Biotechnology, KVSCOS *has successfully completed the Value Added Course entitled "Bioinformatics & Applied biotechnology" during, 12.05.2021 to 27.05.2021.*

Dr. Aakansha Goswami
(HOD)

Dr. Manjul Mungali
(Coordinator)

Swami Vivekanand Subharti University, Meerut

CERTIFICATE OF COMPLETION

Organized by

Department of Biotechnology,

KERAL VERMA SURABHARTI COLLEGE OF SCIENCE

This is to certify that.....Aditya Singh ..... *Class*...M Sc. Biotechnology *Department/College*...Biotechnology, KVSCOS *has successfully completed the Value Added Course entitled "Bioinformatics & Applied biotechnology" during, 12.05.2021 to 27.05.2021.*

Dr. Aakansha Goswami
(HOD)

Dr. Manjul Mungali
(Coordinator)

Swami Vivekanand Subharti University, Meerut

CERTIFICATE OF COMPLETION

Organized by

Department of Biotechnology,

KERAL VERMA SURABHARTI COLLEGE OF SCIENCE

This is to certify that..... Sonam Yadav ... *Class*...B.Sc. Biotechnology *Department/College*...Biotechnology, KVSCOS *has successfully completed the Value Added Course entitled "Bioinformatics & Applied biotechnology" during, 12.05.2021 to 27.05.2021.*

Dr. Aakansha Goswami
(HOD)

Dr. Manjul Mungali
(Coordinator)

Swami Vivekanand Subharti University, Meerut

CERTIFICATE OF COMPLETION

Organized by

Department of Biotechnology,

KERAL VERMA SURABHARTI COLLEGE OF SCIENCE

This is to certify that..... Zuber Khan ... *Class*...B.Sc. Biotechnology *Department/College*...Biotechnology, KVSCOS *has successfully completed the Value Added Course entitled "Bioinformatics & Applied biotechnology" during, 12.05.2021 to 27.05.2021.*

Dr. Aakansha Goswami
(HOD)

Dr. Manjul Mungali
(Coordinator)