



Dharampeth M.P.Deo Memorial Science College, Nagpur

“Add on Career Oriented Course in Bioinformatics”

(UGC Sponsored XIth Plan)

Certificate Course

DIRECTOR



DR. A.V. PESHWE, PRINCIPAL

**COURSE
CO-ORDINATOR**



**DR. MRS. ARCHANA
KULKARNI, VICE PRINCIPAL**

FACULTY



**DR. MRS. SNEHAL
NARALE**



**DR. MRS. RICHA
BAFNA**

About the Bioinformatics Course

Bioinformatics is an interdisciplinary field that develops methods and software tools for understanding biological data. As an interdisciplinary field of science, bioinformatics combines computer science, statistics, mathematics, and engineering to analyze and interpret biological data. It is a new emerging field that helps in collecting, linking, and manipulating different types of biological information to discover new biological insight. This programme is targeted towards imparting theoretical as well as practical knowledge of bioinformatics to the students.

This Add on Career Oriented Course in Bioinformatics is UGC sponsored (XI Plan) Course and granted to the college in the year 2007-2008.

After completion of the course participant is expected to have knowledge and better understanding of sequence analysis, prediction of protein structure, genome annotation, comparative genomics, health and drug discovery, microarray profiling.

The curriculum has been designed to introduce the students to the various aspects of bioinformatics, its need and benefits in biological research.

The college is offering **Certificate course at Semester I level** and

Diploma Course at Semester III level

Curriculum of Certificate Course in Bioinformatics

Bioinformatics certification Course Details

Paper I Computer Aided Bioinformatics *2 nehal*

UN Detail Syllabus of the Unit

- | | |
|---|---|
| 1 | Communicating Electronically: Email and Web Sites: Using Email, Observe the email conventions where you work, Keep your messages brief, Make your messages easy to read on screen, Provide an informative, specific subject line, Take time to revise, Remember that email isn't private, Creating Web Site, Begin by defining your site's objectives, Provide quick and easy access to the information your readers want, Design pages that are easy to read and attractive, Design your site for international and multicultural readers, Enable readers with disabilities to use your site, Help readers find your site on the Internet, Test your site on multiple platforms and browsers before launching it, Keep your site up to date, Ethics Guideline: Respect intellectual property and provide valid information, Exercises website creation |
| 2 | Fundamentals of Computing: Introduction to operating Systems: WINDOWS, NT, UNIX/Linux operating systems. Comparative Advantages of Security (hacking, cracking) Installation. Portability and Programming of these operating systems. Computer Viruses |
| 3 | Computer Networking: LAN, WAN, MODEM. Optical Vs. Electronic Networking. Security of the network, Fire-walls. Network Goals, Applications Network, Network structure, Network architecture, Hierarchical networks, Ethernet and TCP / IP family of protocols, <u>Transport protocol design</u> |
| 4 | programming language: what is program, algorithms, introduction to various programming languages like C, C++, python, cobol, java, bioprograming languages perl, bioperl, biojava, etc, markup languages . XML.HTML |
| 5 | assignments |

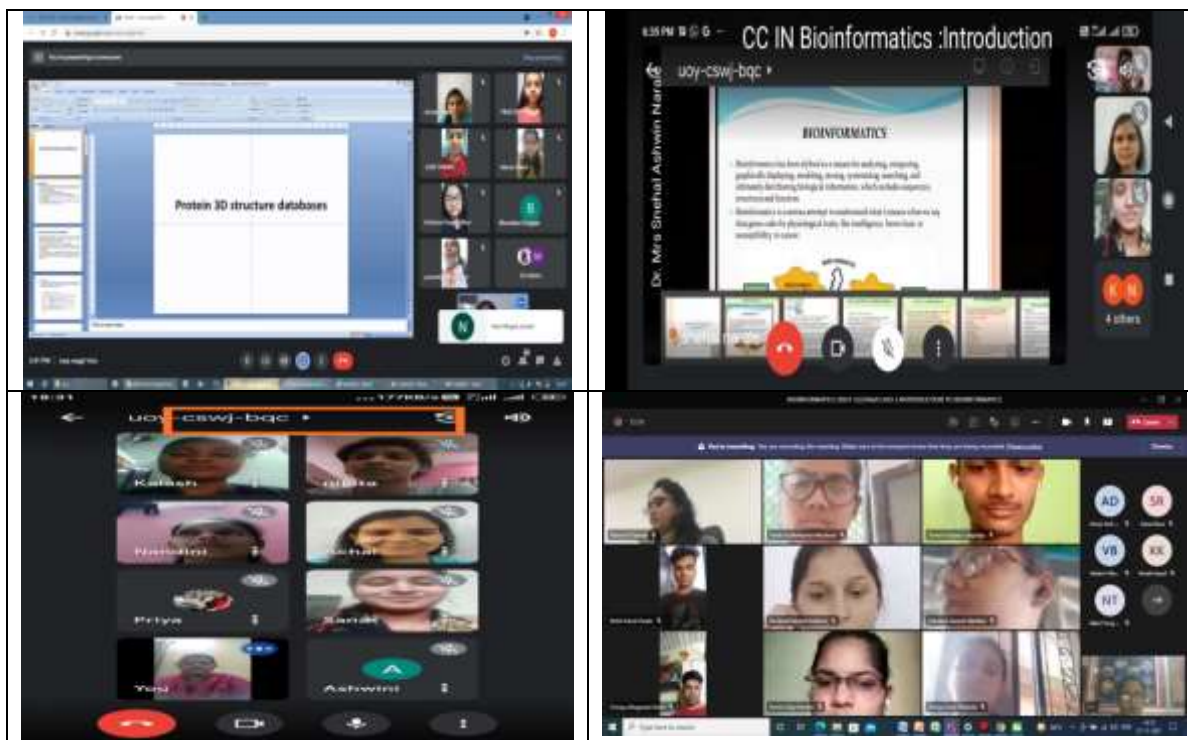
No. of Students Enrolled

Sr. No	Year	No of students Admitted
1.	2019-2020	09
2.	2020-2021	79
3.	2021-2022	88

Continuous Evaluation through Unit Test /Quizzes

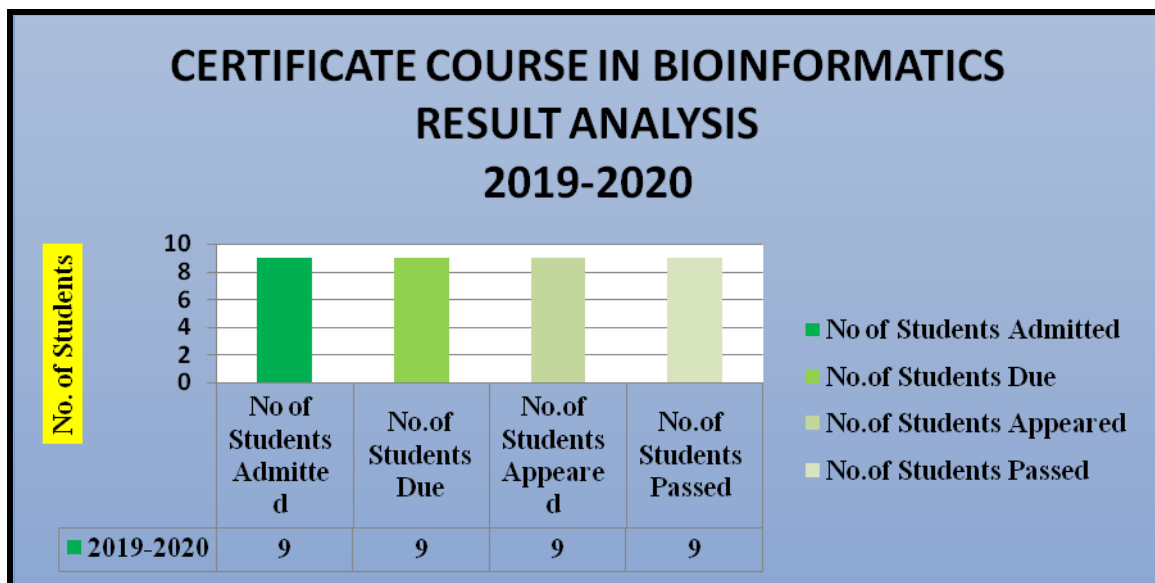
Unit Test No.	Unit	Paper	Date
I	II	I	23/6/2021
II	III	I	23/6/2021
III	IV	I	27/6/2021
IV	I	II	3/7/2021
V	I	I	15/7/2021
I,II,III,IV	I,II,III,IV	II & III	14/7/2021

Glimpses of Online Certificate Course Underway

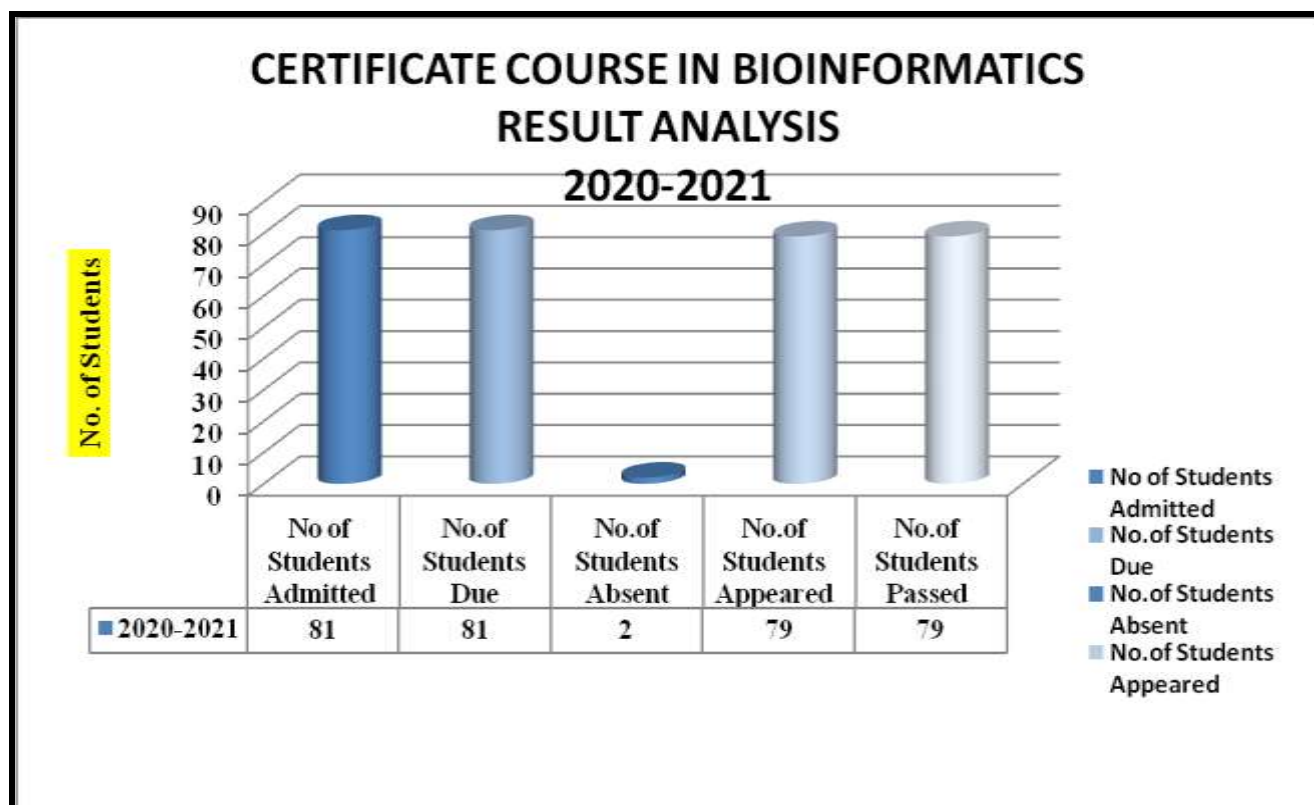


Result Analysis

2019-2020

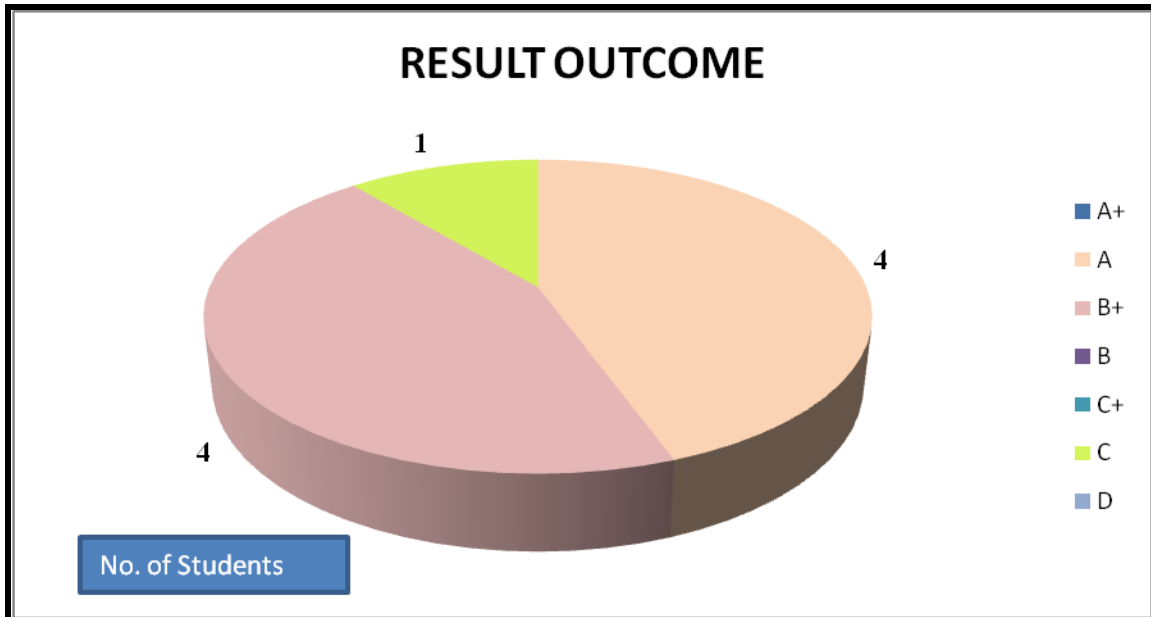


2020-2021

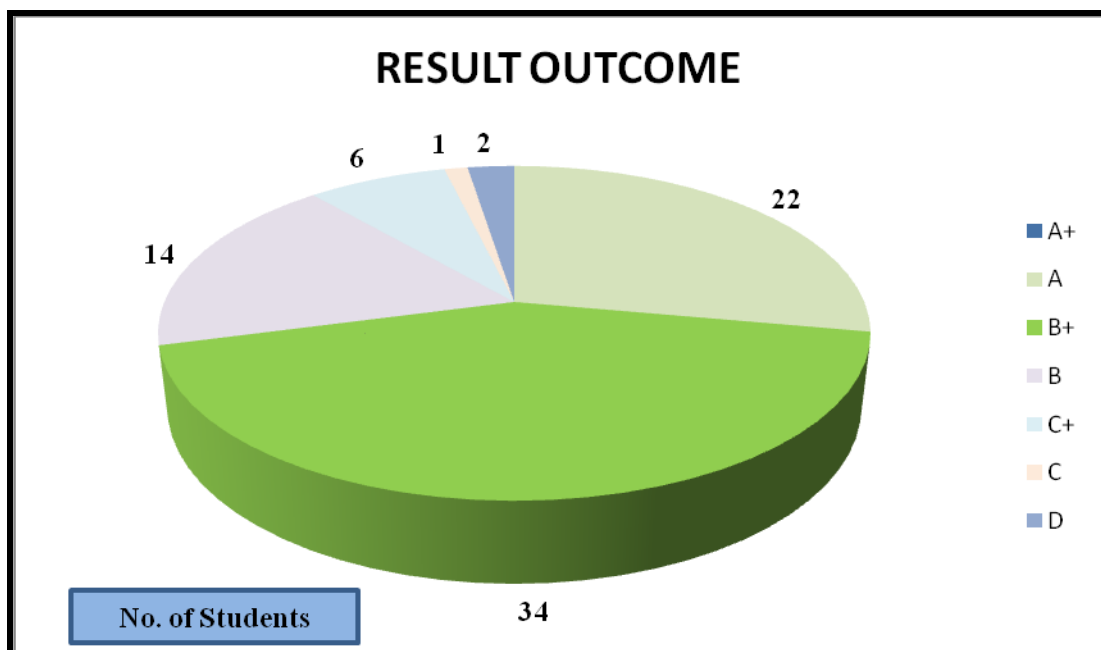


Result Outcome

2019-2020

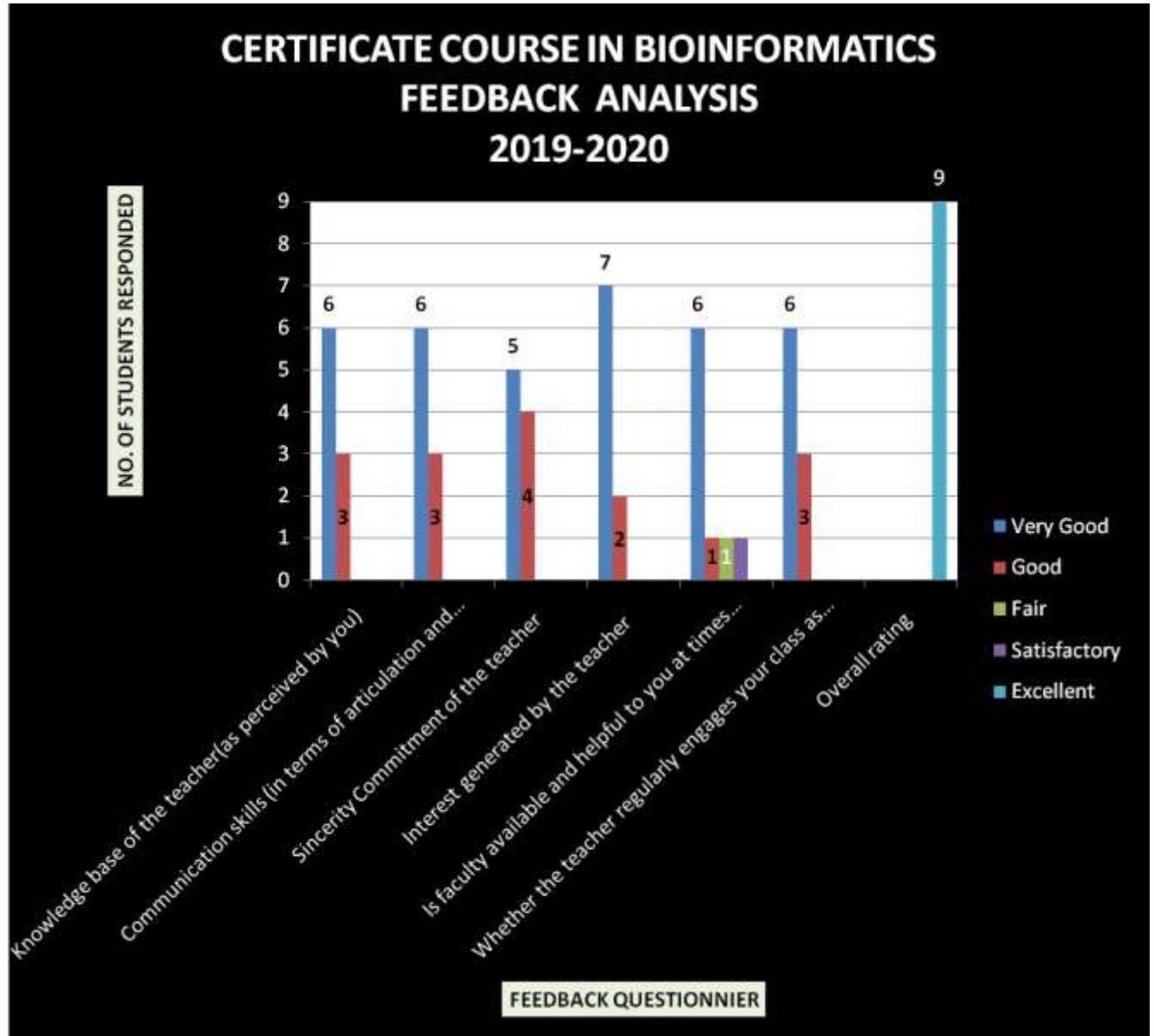


2020-2021

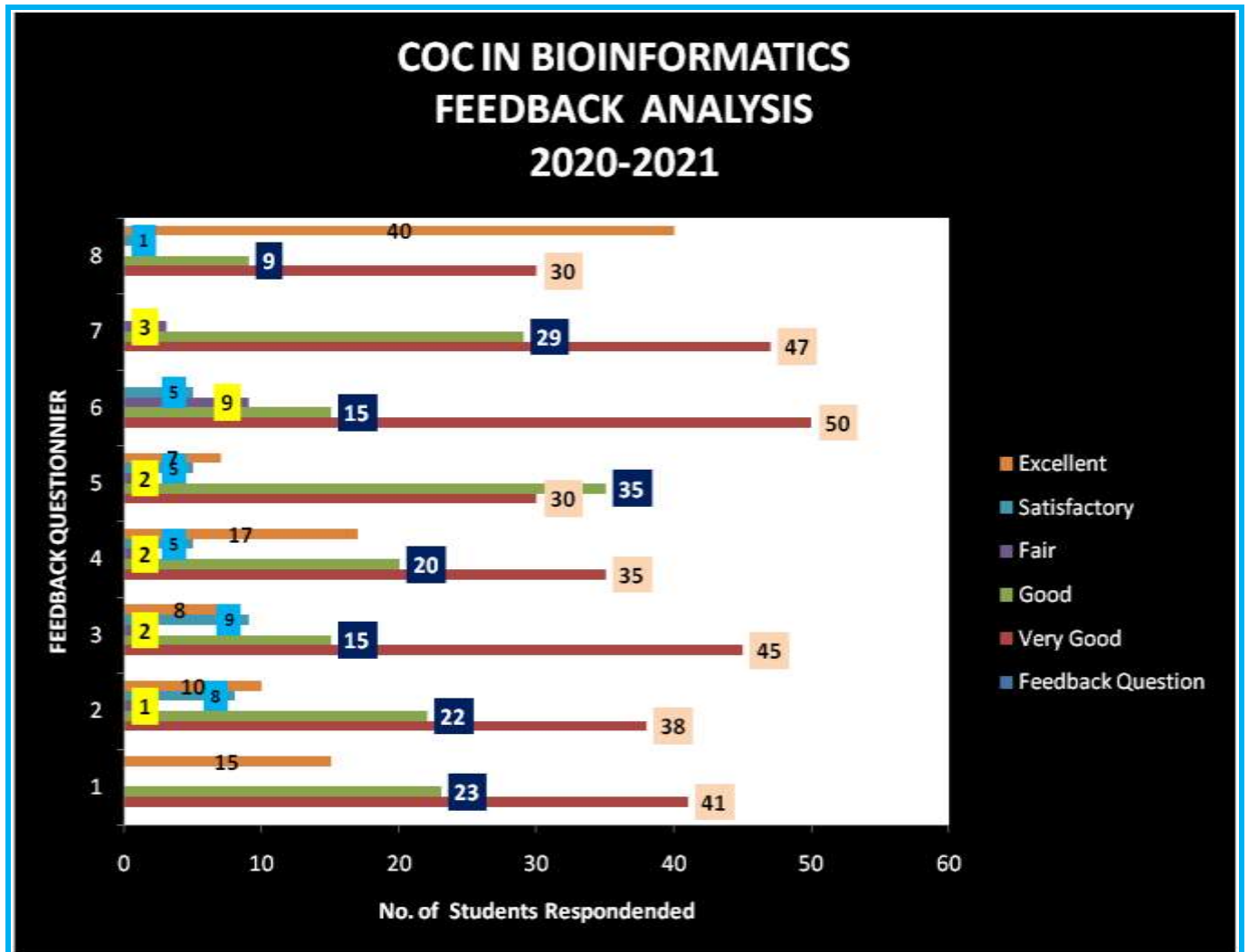


Feedback Analysis

2019-2020




2020-2021




Certificates Awarded

2019-2020



Dharampeth M. P. Deo Memorial Science College
and
R.T.M. Nagpur University, Nagpur
UGC Sponsored Career Oriented Course in
Bioinformatics



Certificate

This is to certify that Mr./ Ms. _____ has completed UGC Sponsored Career Oriented Certificate Course in Bioinformatics during the session 2019 - 2020.
He / She is awarded _____ grade by the college.


Director Board of Innovation
and Incubation
RTM Nagpur University

Dr. Archana Kulkarni
Course Co-ordinator


Dr. Akhilesh Peshwe
Principal

Grades : A+=91-100 , A=81-90 , B+=71-80 , B=61-70 , C+=51-60 , C=41-50 , D=33-40

2020-2021



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College
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in Bioinformatics



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Course Outcome

On completion of this course, students will develop their skills regarding:

- Software's used in Bioinformatics.
- Different computational methods used in basic biostatistics.
- Biological databases for proteins and nucleic acids and its sequence analysis, prediction of protein structure, genome annotation, comparative genomics, health and drug discovery, microarray profiling.
- Multivariate analysis of bioinformatics.
- Students gain knowledge about extensible markup languages to develop basic web page.
- Students learnt about basics of programming languages like C, CPP, JAVA, Bioperl etc... which would help them to develop different tools in bioinformatics.

Career Opportunities

- They become entrepreneurs
- IT Industry
- Government sector and many more