

POST GRADUATE DIPLOMA IN BIO-INFORMATICS
(PGDBI)

Collaborative Diploma from

**Sri Padmavati Mahila Visvavidyalayam*,
Tirupati**

And



Deccan Education Society's

Fergusson Centre for Higher Learning

**Kurrakalva (V), Papanaidupeta (P), Renigunta (M), 517526, Chittoor Dist.,
Andhra Pradesh, India**

***Important Note: Diploma will be awarded by Sri Padmavati Mahila Visvavidyalayam only to lady students completing the course/programme successfully. In case of male students the diploma will be awarded only by Fergusson Centre for Higher Learning, on successful completion of the course/programme.**

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Significance of the course:

Bioinformatics is an area arising from the demands of information analysis and management in the areas of biology and biotechnology. The growth of computer science and biotechnology in the country and other parts of the world has spawned research groups and industries. Bioinformatics, which involves diverse aspects of molecular modeling, macromolecular sequence analysis, online database access, bibliographic searches and software development, is relevant and useful for the researchers to do the topical and profitable work.

Genomic sequence information and Proteome analysis have given a new dimension to bioinformatics. The effective use of bioinformatics tools for applications and analysis in Life Sciences is expected to create significant job opportunities in India. Against this backdrop the Deccan Education Society is conducting an Advanced Diploma Course in Bioinformatics keeping in mind a better interaction between University research/man-power training and industrial R & D.

Objectives of the Course:

Students having knowledge of Life Sciences, Physical and Mathematical Sciences – will be given an integrated outlook of bioinformatics and will be trained so as to be able to:

- Cater to the information needs of the researchers in life sciences;
- Comprehend and utilize existing computer software in Life Sciences;
- Offer computing skills to develop or extend software for sequence analysis, database management and molecular modeling;
- Utilize their skills in school, college and research libraries to provide scientific support;
- Appreciate and participate in research work involving life sciences and the molecular level and function as effective, information analysis in industries, especially in those involved in biotechnology research and development.

Job Opportunities:

- Individual contributor - Many scientific labs, both in the academic and commercial sector, are hiring people trained in bioinformatics to support the research of the lab.

Positions are available for various levels and types of training. People in these positions generally work on a specific area of research.

- Core facilities - Many institutions create a central resource for labs in an institution. These resources are called core facilities. Members of such groups often have a mix of skills and work on many different research projects with researchers in many different labs.
- Educators - There is a demand for teaching bioinformatics at many different levels. Some Ph.D. level bioinformaticians will pursue an academic career, build their own research agenda and teach at the university level.
- In addition, there are a number of institutions who host a dedicated facility to teach bioinformatics to people inside the institution as well as to the greater community.

Infrastructure and Equipments:

Necessary infrastructure and equipments are available with DES's FCHL, A.P.

Eligibility for Admission:

B.Sc., degree (50% minimum) in any Life Sciences Branch / Physical Sciences / Mathematical and Computer Sciences, B. Pharmacy, B.Sc. Agriculture, or M.B.B.S., M.Sc. (Life Sciences), M. Pharmacy, M.Tech., (Biotechnology and Bioinformatics) or any equivalent Degree of a recognized Indian or Foreign University.

Duration of the Course: One Semester (Six Months)

5 months teaching

1 month project work / field work

Intake capacity: 30 students

Course Fees: Rs. 12,500/- (GST as applicable)

Name of the Course: Post Graduate Diploma in Bioinformatics:

Paper Code	Title of the Paper	No. Of Credits	Exams hours.	Internal Assessment Marks	External Marks	Total Marks
BIT- 101	BIOINFORMATICS METHODS AND APPLICATIONS	4	3	20	80	100
BIT-102	BIOINFORMATICS DATABASES, TOOLS & ALGORITHMS	4	3	20	80	100
BIP- 103	PRACTICLAS IN BIOINFORMATICS -I	2	4	--	50	50
BIT-104	PERL PROGRAMMING FOR BIOINFORMATICS	4	3	20	80	100
BIT-105	BIOINFORMATICS COMPUTING	4	3	20	80	100
BIP-106	PRACTICLAS IN BIOINFORMATICS -II	2	4	--	50	50
PW	Project Work including INTERNSHIP & INDUSTRIAL VISIT	4	4	--	100	100
	Total	24				600

Evaluation Criteria:

Title of the Paper	Marks	Evaluation
Post Graduate Diploma In Bioinformatics (Theory) – Each Paper	100	<ul style="list-style-type: none"> • Internal Assessment – 20 marks • Written Examination – 80 marks
Post Graduate Diploma In Bioinformatics (practical's) – Each practical	50	<ul style="list-style-type: none"> • Performance at the time of examination – 30 marks. (Major/ Minor Questions) • Record – 10 marks • Viva – 10 marks
Project Work	100	<ul style="list-style-type: none"> • Dissertation – 60 marks • Presentation – 20 marks • Viva – 20 marks

