M.Phil. Biotechnology

Semester – II

W.E.F. Nov. 2013

Course No.	Name of Course	Theory Exam	Internal Exam	Total Marks	Credit
BT – 201	Research Methodology – II	70	30	100	4
Diss	Dissertation	150	50	200	8
			TOTAL	300	12

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M.Phil. Biotechnology

SEMESTER - II

Module – I: Research Methodology – II (70 marks)

UNIT I

Microscopy and different techniques in Microscopy

UNIT- II

Electrophoresis

Applications of different electrophoresis techniques

UNIT - III

Principles and techniques of hybridization.

Principles and applications of PCR

Unit - IV

Applications of Biostatistics in Modern Biology

Basic Bioinformatics and software used in Biology.

Suggested readings:

1. Biostatistics : A foundation for Analysis in the Health Sciences 7/E Wayne W. Daniel, Wiley Series in Probability and Statistics.

2. Prem S. Mann, 2004. Introductory Statistics.Fifth Edition. John Wiley and Sons (ASIA) Pvt. Ltd.

3. S. C. Rastogi, N. Mendiratta, and P. Rastogi. Bioinformatics Methods and Applications Genomics, Proteomics, and Drug Discovery.

4. Introduction to Bioinformatics, (Atwood, T. K. and Parry-Smith, D. J).

5. Protein Purification by Robert Scopes, Springer Verlag Publication, 1982

6. Tools in Biochemistry David Cooper

7. Methods of Protein and Nucleic acid Research, OstermanVol I – III 8

8. Joseph Sambrook&David W.Russell, Molecular Cloning – A laboratory Manual (Third Edition) –Cold Spring Harbor laboratory Press, Cold Spring Habor, New York.

9. M.Prakash, C.K.Arora , Laboratory Instrumentation,– Anmol Publications Pvt Ltd.,

10. Charles N.Relly, Donals.T.Saweyer, Robert E.Krieger Huntington Experiments of Instrumental methods, A Laboratory Manual, New York.

11. Hoburt, H.Willard, Lynme L.Meritt J.R.John Dean, Instrumental Methods of Analysis, East West Press Pvt Ltd.

12. Gelvin, Plant Molecular Biology, A Laboratory Manual, Kluwer Academic Press.

13. P.N.Arora and P.K.Malhotra, Biostatistics

14. Norman T.S. Bailey, Statistical Methods in Biology. Cambridge University Press,

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M.Phil. Biotechnology

Semester – II

M. Phil Thesis

Thesis submission marks: 150 Marks

Viva-voce: 50 marks

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