



**DARBARI SETH BLOCK, INDIA HABITAT CENTRE,  
LODHI ROAD, NEW DELHI**

**SUB: EIGHTEENTH MEETING OF THE ACADEMIC COUNCIL  
AGENDA NOTES**

Date : 05 February 2008  
Venue : Conference Room, TERI  
Time : 10:00 am

Item No.	Particulars
Item No. 1	To confirm the minutes of the Seventeenth meeting of the Academic Council held on 10 <sup>th</sup> January 2008
Item No. 2	To consider and approve the new programme in M. Sc. (Plant Biotechnology).
Item No. 3	Any other item with the permission of the Chair.



**M.Sc. in Plant Biotechnology (84 credits)****Programme outline:**

The proposed academic programme has been formulated with an objective of advancing education and research in the area of Plant Biotechnology within a Regulatory framework. The programme may be deemed as one of its own kind since conceptual understanding will be imparted in cutting-edge science along with providing a preliminary exposure to regulatory issues and bioethical concerns related to plant biotechnology.

Rigorous training will be imparted to students through fourteen courses that cover various aspects of Plant Sciences, Genetic Engineering and Biotechnology. Hands-on training will be provided through commensurate bench-level training relating to the topics covered in each semester. The issues relating to scientific integrity and bioethical concern and importance of public awareness will also be covered. Additionally, the students will be acquainted with basic bio-statistical tools and techniques and trained in effective scientific communication.

The focus in the third semester will shift to specialized courses. These have been designed to highlight how the application of fundamental knowledge from the plant sciences, combined with genetic engineering tools, has addressed practical problems and furthered the expansion of basic knowledge as well. Courses have been specifically structured to impart concepts pertaining to advanced areas of research in plant biotechnology and contemporary approaches employed by molecular biologist. The course entitled "Plant Biotechnology Management and Regulatory Issues" is the hallmark of the programme. This course is included to sensitize the students to critical regulatory issues in field of plant biotechnology. The students will additionally be trained in theoretical aspects relating to Bioinformatics and Computational Biology, which provide important data-analysis and management tools in the post-genomic era. The final semester is dedicated to a major laboratory-based project to be undertaken by the student. Therefore, a graduate of this programme may be expected to have both the specialized

knowledge and practical experience required to address contemporary problems in research and industry.

**Total number of credits to be cleared in the program: 84**

1 Credit=14 Hrs Theory, 28 Hrs Practical

1 Semester: 14 Weeks

**1<sup>st</sup> Semester: 14 weeks**

Course number	Course Name	Credits	Contact Hours
1	Scientific Communications	2	28 Hrs
2	Molecular and Cell Biology – Part 1	3	42 Hrs
3	Statistics for Scientists – Part 1	3	42 Hrs
4	Molecular Plant Physiology and Biochemistry	3	42 Hrs
5	Principles of Genetic Engineering and recombinant DNA technology	3	42 Hrs
6	Plant Biotechnology Laboratory – Part 1	7	196
<b>Total credits: 21</b>			

**2<sup>nd</sup> Semester: 14 weeks**

7	Immunochemistry	3	42 Hrs
8	Molecular and Cell Biology – Part 2	4	56 Hrs
9	Molecular Markers and Breeding	4	56 Hrs
10	Statistics for Scientists – Part 2	3	42 Hrs
11	Plant Biotechnology Laboratory	7	196 Hrs
<b>Total Credits: 21</b>			

**3<sup>rd</sup> Semester: 14 weeks**

12	Plant Biotechnology Management and Regulatory Issues	4	56 Hrs
13	Plant Biotechnology and Crop improvement	3	42 Hrs
14	Genomics and Molecular Genetics	3	42 Hrs
15	Bioethics and Public Awareness	1	14 Hrs
16	Bioinformatics and Computational Biology	3	42 Hrs
17	Plant Biotechnology Laboratory – Part 3	7	196 Hrs
<b>Total Credits = 21</b>			

**4<sup>th</sup> Semester: 14 weeks**

Major Project: 21 Credits

