

M.Sc. Nanotechnology Internship Programme

Internship Programme (Semester-IV)

Total Marks: 550; Total Credits:20

A Research Based Project/ Internship (CR) worth 200 marks (8-credits) is undertaken by the MSc students in their 4th semester. The students are assigned mentors as per their choice/ and or availability of specialization, and have an option to work in the Department of Nanotechnology or at any Laboratory of repute within or outside the UT of JK. The project is submitted before the conduct of examination and evaluated by a University approved external expert. Prior to declaration of the results, a Project Presentation worth 100 marks (4 credits) and Viva voce worth 50 marks (2 credits) is conducted in presence of an external examiner and the departmental faculty members. In addition, the interneers also submit a project proposal worth 100 marks (4 credits) as part of their internship programme and also undertake a Lab Biosafety course worth 50 marks (2 credits).

Core Courses for Semester – IV

1.	MSNT401-CR	Research Proposal writing
	4 Credits	
2.	MSNT402-CR	Project-RESEARCH BASED
	8 Credits	

Discipline Centric Courses for Semester-IV

1.	MSNT403-DCE	Project Presentation
	4 Credits	

2.	MSNT404-DCE	Laboratory Bio Safety Course- Self Study
	2 Credits	
Unit-I		
Biosafety- Introduction; Historical Background; Introduction to Biological Safety Cabinets; Primary Containment for Biohazards; Biosafety Levels; Biosafety Levels of Specific Microorganisms; Recommended Biosafety Levels for Infectious Agents and Infected Animals; Biosafety guidelines - Government of India;		

Unit-II

Definition of GMOs & LMOs; Roles of Institutional Biosafety Committee, RCGM, GEAC etc. for GMO applications in food and agriculture; Environmental release of GMOs; Risk Analysis; Risk Assessment; Risk management and communication; Overview of National Regulations and relevant International Agreements including Cartagena Protocol.

Books Recommended

1. *John E. Smith, Biotechnology, 3rd Ed. Cambridge University Press.*
2. *Tutorials*

3.	MSNT405-DCE	VIVA-VOCE
	2 Credits	