JAYPEE INSTITUTE OF INFORMATION AND TECHNOLOGY

INTEGRATED M. TECH BIOTECHNOLOGY

SEMESTER- XI

Detailed Syllabus

Lecture-wise Breakup

Course Code	**17IM17BT217**	**Semester Even**	**Semester**: XI	**Session:** 2022-23
Course Name	**Industrial Project**			
Credits	16	**Contact Hours**	32	

Faculty (Names)	**Coordinator(s)**	Prof Sujata Mohanty
	Teacher(s) (Alphabetically)	Prof Sujata Mohanty

COURSE OUTCOMES		**COGNITIVE LEVELS**
C231.1	Choose an organization and relevant project as problem	Apply level 3
C231.2	Propose a research plan on acquired scientific concepts and tools to address the defined problem	Create Level 6
C231.3	Test for and analyze knowledge to construct solution for the identified problem	Evaluate level 5
C231.4	Compose and present the work done and discuss the research outcomes	Create Level 6

Project Based Learning: In this course, students apply to different Industry/ Academic Institutes with their project proposal. Therefore, the learning from this course is completely Project-based. Employability: Students expose themselves to various working environments of Industry/Academic Institutes/ Health practicing centers during the execution of their project work and this interface facilitates them in cultivating the entrepreneurial culture, R&D aspect, innovation and also motivates them towards right Employability.

Detailed Syllabus

Lecture-wise Breakup

Course Code	**17M17BT216**	**Semester Even**	**Semester**: XI **Session** 2022-23
Course Name	**Dissertation**		
Credits	16	**Contact Hours**	32

Faculty (Names)	**Coordinator(s)**	Prof Sujata Mohanty
	Teacher(s) (Alphabetically)	Prof Sujata Mohanty

COURSE OUTCOMES		**COGNITIVE LEVELS**
C230.1	Survey research-based literature to develop hypothesis	Apply Level 3
C230.2	Design the experimental outlay to address the defined problem.	Create level 6
C230.3	Evaluate and interpret key findings to provide solution	Evaluate Level 5
C230.4	Create/ design the scientific report and communicate effectively the research data	Create level 6
Project Based Learning: Under this course, the students have to complete a research project under the guidance of a mentor. Therefore, the learning from this course is completely Project-based.		

Detailed Syllabus

Lecture-wise Breakup

Project-Based Learning -1 (17M17BT112) - Dr. Ashwani Mathur				
Project-Based Learning - I (M.Tech II Sem Student & M.Tech (Integrated) XI Sem) Viva- I / Mid Term Viva: 30 Marks Viva-II / End Term Viva: 30 Marks Day to Day Marks from Supervisor: 40				
C216.1	Select biotechnological problems based on literature	Applying Level Level III	**Viva-I** (Rational of the study) - **10**, **Day to Day** (Rational of the study) - **5**	Exit Survey
C216.2	Interpret scientific data to address the biotechnological problem	Evaluate level Level V	**Viva I** (Problem statement) -**5 Marks**; Day to Day (Problem statement) -**5 Marks**; **Viva II** (Design of research strategy for identified problem / Elaboration of case studies / Literature reviewed) – **5 Marks**, **Day to Day marks from supervisor** (Design of research strategy for identified problem / Elaboration of case studies / Literature reviewed) - **5 Marks**	Exit Survey
C216.3	Design Research strategy for identified problem	Evaluate level Level VI	**Viva-I** (Literature review) **– 15 Marks**, **Day to Day from Supervisor** (Literature Review) **– 5 Marks** **Viva – II** (Analysis and interpretation of result / Analysis of results from literature / Survey outcome) – **10 Marks**, **Day to Day**	Exit Survey

			Marks from Supervisor (Analysis and interpretation of result / Analysis of results from literature / Survey outcome) – **10 Marks**	
C216.4	Analyze and present the research finding	Analyzing Level IV	**Viva-II** (Conclusion / Learning Outcome, Report) **– 15, Day to Day marks from Supervisor** (Conclusion / Learning Outcome, Report) – 10 **Marks**	Exit Survey
Project based learning: The students perform lab based, in-silico, experimental and systematic review or survey based analysis to define the problem statement and learn biotechnological and allied approaches to answer the problem statements. Such knowledge help student to develop independent thinking and inculcate the practice of following good laboratory, scientific and ethical practices in their career.				