

**Program: Post-M.Sc. Diploma in
Biotech Entrepreneurship Development**

**Dept of Microbiology and Biotechnology Centre (in collaboration with
Dept of Commerce and Business Management)**

Course objectives and outcomes

Entrepreneurship education promotes students think outside the box and nurture unconventional talents and skills for development of viable commercial product. This course aims at teaching the skills of converting basic biology knowledge into sustainable business by providing novel/innovative solutions to the existing challenges in the field of biotechnology and by providing better alternatives to the existing approaches. For attaining these goals, our course aims to enhance the knowledge and entrepreneurial capabilities and competence of the life science graduates. The course will impart training about entrepreneurial world so that the biotechnology inspired business can be encouraged and guided to maximize their success. Hence through this course, the life science graduates will be motivated to convert their subject knowledge, skills, and ideas into a profitable and sustainable business which can provide more desirable alternatives with mass appeal to address the real world needs and challenges.

This course aims at educating the life science graduates by providing them a clear understanding of the field of entrepreneurship and helping them to acquire skills to succeed in the commercial world and promoting students for translating discoveries in Biotechnology, Pharmaceuticals, Nutraceuticals, Agriculture and other related field into profitable businesses. An important aspect of entrepreneurship is to understand business economics, market demands and strategies and legal as well as proprietorship aspects. This course will provide an ideal interdisciplinary knowledge of biotechnology, economics, business management and legal framework for an aspiring entrepreneur.

Upon completion of this course, the students should acquire entrepreneurial skills, understand the various operations involved in venture creation, identify scope for entrepreneurship in biosciences and utilize the schemes promoted through knowledge centers and various agencies. The knowledge pertaining to management should also help students to be able to build up a strong network within the industry. Altogether, after successfully completing this course, students should feel more prepared and motivated to transform their life science knowledge into biotech business (starting their start-up) and will gain necessary knowledge for making their start-up a success.

Programme details

- This is a 2 semester (1 year) Diploma course under High Payment program
- Conducted jointly by The Department of Microbiology and Biotechnology Centre and The Department of Commerce & Business Management, Faculty of Commerce, The Maharaja Sayajirao University of Baroda, Vadodara
- Has collaborators from various Biotech Companies and startups
- Students will get opportunity to do internship in these companies/startups

- Students will get opportunity to do preliminary research on their innovative ideas under the guidance of mentors
- Intake capacity 15 students per year
- Admission criteria: Based on entrance exam
- Eligibility for admission : Masters in any branch of Life Sciences, Pharmacy or allied subjects
- Fees: approx. Rs. 24,000/- per Semester

CURRICULUM DETAILS

Total Duration: 1 year (2 SEMESTERS)

Total Credits: 50

SEMESTERWISE TEACHING/LEARNING MODULES

	Semester-I	Semester-II	Total
Theory	12	08	20
Practical	05	00	05
Term Paper/Assignments (Industry Visit etc)	03	00	03
Seminar& Case Study Presentation	03	03	06
Dissertation/Internship	00	12	12
Viva	02	02	04
Total.....	25	25	50

SEMESTER 1

Course Number	TYPE	COURSE CODE	TITLE	CREDITS
1	THEORY PAPER 1	MBY-PMD 101	<i>Entrepreneurship opportunities in Biotechnology</i>	2
2	THEORY PAPER 2	MBY-PMD 102	<i>Business Opportunity Identification and Start-up</i>	2
3	THEORY PAPER 3	MBY-PMD 103	<i>Business Plan, Business Modeling and Project Profile</i>	2
4	THEORY PAPER 4	MBY-PMD104	<i>Pharma and Biotech Business: An Introduction</i>	2
5	THEORY PAPER 5	MBY-PMD 105	<i>Biotechnological innovations and their Commercial Potential</i>	4
6	SEMINAR	MBY-PMD106	<i>Seminar presentation (2 Credits) + Elevator Pitch Seminar (1 Credit)</i>	3
7	PRACTICALS	MBY-PMD107	<i>Practical/Project work</i>	5
8	ASSIGNMENT	MBY-	<i>Term Paper/Industry visit report</i>	3

		PMD108		
9	VIVA	MBY-PMD109	Viva	2
TOTAL CREDITS				25

SEMESTER 2

Course Number	TYPE	COURSE CODE	TITLE	CREDITS
1	THEORY PAPER 1	MBY-PMD201	<i>Funding and Venture Capital</i>	2
2	THEORY PAPER 2	MBY-PMD202	<i>Marketing Plan and Management</i>	2
3	THEORY PAPER 3	MBY-PMD203	<i>Protecting the Idea and The Legal Framework</i>	2
4	THEORY PAPER 4	MBY-PMD204	<i>Managing the Human Resources</i>	2
5	SEMINAR	MBY-PMD205	<i>Case study of Biotech Company</i>	3
7	INTERNSHIP	MBY-PMD206	<i>Practical training in Biotech Company</i>	12
9	VIVA	MBY-PMD207	Viva	2
TOTAL CREDITS				25

Syllabus of Practicals and other Non-theory courses

Semester 1

Activity	Credits	Description
Practical	05	<ul style="list-style-type: none"> Health Sciences: Molecular Diagnostics, AgriBiotech: Biocontrol agents, Biofertilizers Bioinformatics service solutions Drug discovery Cell culture Protein purification Protein characterization
Assignments/Term Paper	03	<ul style="list-style-type: none"> Interactive session with experts from Industry & Report Compilation Technology Incubators and Start-Ups: Visit to the Technology Incubators and Biotech Start-Up Companies . Report Compilation of the On-going Business Model
Seminar & Case Study Presentation	03	Project Profile Preparation & Funding Sources (2 Credits) <ul style="list-style-type: none"> Project Profile – Project Profile Preparation and Funding

		<p>Opportunities, Feasibility Study and its Importance, Ingredients of a Business Plan, Writing a Project Profile, Components of Project Profile and Business Model, Entrepreneur Profile, Detailed preparation of Project Profile for a Business</p> <ul style="list-style-type: none"> • <i>Proposal Submission, Biotech Ignition Grant (BIG), Other grant opportunities and Funding sources from Industry or Private sectors</i> <p>Elevator Pitch and Seminar (1 Credit)</p>
Total Credits	11	

Semester 2

Activity & Code	Credits	Description
Dissertation/Internship	12	<p><i>Internship in a Life Science Company</i> Practical (hands-on) experience of entrepreneurship process through Internship opportunity in a Life Science/Pharma Company) To be evaluated by the host institution (50%) and Viva voce and report presentation at Department (50%)(Assessment of the knowledge gained by the students in the Internship programme and during the course work)</p>
Seminar	03	Case Study of a Biotech Company
Total Credits	15	