

Advanced Postgraduate Program in Biotechnology (APGP-BT)

An Autonomous Full-Time Residential Postgraduate Program (24 months)

"India plants seeds for future biotech growth as sector remains healthy during the current downturn."

- M. Daghlian, *The J. Life Sciences, Global Economy*, December 11, 2008



Biotechnology industry in India is continuing to expand as a series of Biotechnology Parks throughout the country, despite the global economic meltdown. The launching of the Biotech Parks is viewed as the key to promote Biotech research. The industry in 2007-08 clocked US\$2.5 billion (Rs. 10,273.7 crore) in revenues, registering 30.98 percent growth, over the previous year's figure of US\$2.08 billion (Rs. 8,541 crore). The Biopharma segment continues as the largest contributor to the Biotech industry revenues. During 2007-08, it recorded sales in excess of US\$1.72 billion (Rs. 6,899 crore) and accounted for 67 percent of the total industry revenues, registering 16 percent growth. The Biotech exports grew to Rs. 5,733.7 crore. The share of exports in the total Biotech pie is close to 56 percent. Exports from Biopharma alone accounted for over 70 percent of the total industry, while the Bioservices sector had 26 percent share in exports (Rs. 1,502 crore). The Bioservices sector registered 53 percent growth. The Bioagri sector grew by 30 percent to Rs. 1,202 crore, the Bioindustrial sector by 4 percent to Rs. 410 crore and the Bioinformatics sector by 31 percent to clock Rs. 190 crore in revenues. In 2007-08, the investments touched Rs. 2,750 crore, up by over 21 percent compared to the previous fiscal. Based on the current trends and the new progressive biotech policy in place, the forecast for 2015 is that the Indian Biotech industry would be about US\$13-16 billion in revenues.

The major sectors of Biotech industry demanding for expertise and manpower in the area are Molecular Biology, Biomarker Technology, Recombinant Proteins, Industrial Biotechnology, Nanobiotechnology, Biotech IPR Issues, Biotech Regulatory Affairs, cGMP and Clinical Research Management and Biosupply segment.

This Advanced Postgraduate Program in Biotechnology addresses above issues and transforms Life Sciences postgraduates into Biotech professionals with extremely high potential for job opportunities in R&D labs and in the Biotech industry at the national and international level.

ELIGIBILITY

Bachelors Degree in faculty of Life Science / Chemistry / Medicine / Pharmacy or B.Tech in Biotechnology with minimum 55 percent marks

FOCUS AREAS

- ▶ Genomics
- ▶ Proteomics
- ▶ Transgenics
- ▶ BioMarker Technology
- ▶ DNA technology

Advanced Postgraduate Program in Biotechnology (APGP-BT)

COURSE STRUCTURE

	CODE	COURSE NAME	CREDITS*
BRIDGE	BT001	Cell Biology	
	BT002	Genetics	
	BT003	Organic Chemistry	
COMMON	COM001	Life Skills Development – I	2
	COM002	Life Skills Development – II	2
FOUNDATION	BT501	Molecular Biology	3
	BT502	Biochemistry	3
	BT503	Basic Bioinformatics	3
	BT504	Advanced Cell Biology	3
	BT505	Microbiology and Virology	3
	BT506	Biostatistics and Biomath	3
CORE	BT601	Genetic Engineering	3
	BT602	Fermentation Technology	3
	BT603	Immunotechnology	3
	BT604	Enzyme Technology	3
	BT605	Bioinstrumentation	3
ADVANCED	BT701	Synthetic Biology	2
	BT702	Genomics	2
	BT703	Proteomics	2
	BT704	IP and Regulatory Affairs in Biotechnology	1
	BT705	Industry Perspective Seminar	1
ELECTIVES (Choose any one)	BT801	Plant Biotechnology	3
	BT802	Animal Biotechnology	3
(Choose any two)	BT803	Recombinant Protein Production	3
	BT804	Vaccine Production	3
	BT805	Bionanotechnology	3
	BT806	Environmental Biotechnology	3
	BT807	Industrial Biotechnology	3
PROJECT	BT901	Seminar / Mini Project – I	1
	BT902	Research Methodology and Mini Project - II	2
	BT903	Main Project	32

*1 Credit Hr = 16 Class Hrs / 32 Lab Hrs in a semester