



# VELS UNIVERSITY



VELS INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)

(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)

PALLAVARAM - CHENNAI - INDIA

## School of Life Sciences



# Brochure

(Programme and Courses offered)

2015-2016

PV Vaithiyalingam Road, Velan Nagar, Pallavaram, Chennai - 600117.

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## About the School

The **life sciences** comprise the branches of science that involve the scientific study of life and organisms – such as microorganisms, plants, and animals including human beings. Life science is one of the two major branches of natural science, the other being physical science, which is concerned with non-living matter. By definition, biology is the natural science that studies life and living organisms, with the other life sciences being its sub-disciplines. Some life sciences focus on a specific type of organism. For example, zoology is the study of animals, while botany is the study of plants. Other life sciences focus on aspects common to all or many life forms, such as anatomy and genetics. Some focus on the micro scale (e.g. molecular biology, biochemistry) other on larger scales (e.g. cytology, immunology, ethology, ecology). Another major branch of life sciences involves understanding the mind – neuroscience.

## SCHOOL OF LIFE SCIENCES

### Department of Biochemistry

- |    |                             |     |                       |
|----|-----------------------------|-----|-----------------------|
| 1. | B.Sc. Biochemistry          | ... | 3 years (6 semesters) |
| 2. | M.Sc. Advanced Biochemistry | ... | 2 years (4 semesters) |
| 3. | M.Phil. Biochemistry        | ... | 1 years (2 semesters) |
| 4. | Ph.D. Biochemistry          | ... | 3 years               |

### Department of Bio-informatics

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|----|------------------------|-----|-----------------------|
| 1. | B.Sc. Bio-computing    | ... | 3 years (6 semesters) |
| 2. | M.Sc. Bioinformatics   | ... | 2 years (4 semesters) |
| 3. | M.Phil. Bioinformatics | ... | 1 years (2 semesters) |
| 4. | Ph.D. Bioinformatics   | ... | 3 years               |

### Department of Biotechnology

- |    |  |     |                       |
|----|--|-----|-----------------------|
| 1. | B.Sc. Biotechnology                                  | ... | 3 years (6 semesters) |
| 2. | M.Sc. Biotechnology                                  | ... | 2 years (4 semesters) |
| 3. | M.Sc. Medical Biotechnology and<br>Clinical Research | ... | 2 years (4 semesters) |
| 4. | M.Phil. Biotechnology                                | ... | 1 years (2 semesters) |
| 5. | Ph.D. Biotechnology                                  | ... | 3 years               |

### Department of Microbiology

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|----|---------------------------------|-----|-----------------------|
| 1. | B.Sc. Microbiology              | ... | 3 years (6 semesters) |
| 2. | M.Sc. Immunology & Microbiology | ... | 2 years (4 semesters) |
| 3. | M.Phil. Microbiology            | ... | 1 years (2 semesters) |
| 4. | Ph.D. Microbiology              | ... | 3 years               |

## PROGRAM AND COURSE DETAILS 2015-2016

Programme Name	Course code	Subject Name
B.Sc. - Biochemistry	15BBC001	CELL BIOLOGY
	15BBC002	PRACTICAL - QUALITATIVE ANALYSIS
	15BBC003	PRACTICAL - MICROBIOLOGY
	15BBC101	ALLIED MICROBIOLOGY
	15LEN001	ENGLISH PAPER - I
	15LFR001	FRENCH PAPER - I
	15LHN001	HINDI PAPER - I
	15LTA001	TAMIL PAPER - I
	15BBC004	INTRODUCTION TO BIOMOLECULES
	15BBC005	PRACTICAL - TITRIMETRY
	15BBC006	PRACTICAL - CELL BIOLOGY
	15BBC102	FUNDAMENTALS OF COMPUTERS AND STATISTICS
	15LEN002	ENGLISH PAPER - II
	15LFR002	FRENCH PAPER - II
	15LHN002	HINDI PAPER - II
	15LTA002	TAMIL PAPER - II
	15NSS255	NSS - I
	15CBBC31	BIOCHEMICAL TECHNIQUES
	15CBBC32	BIOINFORMATICS

	15LENG31	ENGLISH PAPER - III
	15LFRE31	FRENCH PAPER - III
	15LHIN31	HINDI PAPER - III
	15LTAM31	TAMIL PAPER - III
	15PBBC31	PRACTICAL - BIOCHEMICAL PREPARATIONS
	15PBBC32	PRACTICAL - SEPARATION TECHNIQUES
	15SBBC31	MEDICAL LAB DIAGNOSTICS
	15UGE504	PHOTOSHOP
	15CBBC41	HUMAN PHYSIOLOGY
	15DBBC41	CLINICAL NUTRITION
	15EVS041	ENVIRONMENTAL STUDIES
	15LENG41	ENGLISH PAPER - IV
	15LFRE41	FRENCH PAPER - IV
	15LHIN41	HINDI PAPER - IV
	15LTAM41	TAMIL PAPER - IV
	15PBBC41	PRACTICAL - HEMATOLOGY
	15PBBC42	PRACTICAL - NUTRITIONAL BIOCHEMISTRY
	15UGE513	INTERNET BASICS
	15CBBC51	ENZYMES AND INTERMEDIARY METABOLISM - I
	15CBBC52	CLINICAL BIOCHEMISTRY - I
	15DBBC51	ESSENTIALS OF ENDOCRINOLOGY

	15DBBC52	BASICS OF MOLECULAR BIOLOGY
	15PBBC51	PRACTICAL - ENZYMOLOGY
	15CBBC61	ENZYMES AND INTERMEDIARY METABOLISM - II
	15CBBC62	CLINICAL BIOCHEMISTRY - II
	15DBBC61	IMMUNOBIOLOGY
	15DBBC62	BIOTECHNOLOGY
	15IBBC61	INDUSTRIAL VISIT
	15PBBC61	PRACTICAL - CLINICAL BIOCHEMISTRY
	15RBBC61	GROUP PROJECT
B.Sc. - BIO COMPUTING	15BBI001	FUNDAMENTALS OF COMPUTERS AND STATISTICAL ANALYSIS
	15BBI002	PRACTICAL - BASIC CONCEPTS IN COMPUTER
	15BBI101	FUNDAMENTALS OF MOLECULAR CELL BIOLOGY AND BIOCHEMISTRY
	15BBI102	PRACTICAL - ALLIED BIOCHEMISTRY
	15LEN001	ENGLISH PAPER - I
	15LFR001	FRENCH PAPER - I
	15LHN001	HINDI PAPER - I
	15LTA001	TAMIL PAPER - I
	15BBI003	PROGRAMMING IN C
	15BBI004	PRACTICAL - PROGRAMMING IN C
	15BBI103	MICROBIOLOGY AND IMMUNOLOGY
	15BBI104	PRACTICAL - INTRODUCTION TO MICROBIALINFORMATICS

	15BPD251	PERSONALITY DEVELOPMENT - I
	15LEN002	ENGLISH PAPER - II
	15LFR002	FRENCH PAPER - II
	15LHN002	HINDI PAPER - II
	15LTA002	TAMIL PAPER - II
	15CBCM31	PROGRAMMING WITH C++ AND DATA STRUCTURE
	15CBCM32	COMPUTER NETWORKS
	15CBCM33	FUNDAMENTALS OF PLANT BIOINFORMATICS
	15LENG31	ENGLISH PAPER - III
	15LFRE31	FRENCH PAPER - III
	15LHIN31	HINDI PAPER - III
	15LTAM31	TAMIL PAPER - III
	15PBCM31	PRACTICAL - PROGRAMMING WITH C++ AND DATA STRUCTURE
	15PBCM32	PRACTICAL - PLANT BIOINFORMATICS TECHNIQUES
	15UGE536	TOURISM MANAGEMENT
	15CBCM41	PROGRAMMING WITH VISUAL BASIC AND RDBMS
	15CBCM42	OPERATING SYSTEMS
	15DBC41	CHEMINFORMATICS
	15EVS041	ENVIRONMENTAL STUDIES
	15LENG41	ENGLISH PAPER - IV
	15LFRE41	FRENCH PAPER - IV

	15LHIN41	HINDI PAPER - IV
	15LTAM41	TAMIL PAPER - IV
	15PBCM41	PRACTICAL - PROGRAMMING WITH VISUAL BASIC AND RDBMS
	15PBCM42	PRACTICAL - CHEMINFORMATICS
	15UGE527	FOOD CHEMISTRY AND ADULTERATION
	15CBCM51	PROGRAMMING WITH JAVA
	15CBCM52	INTRODUCTION TO PERL, BIOPERL AND CGI
	15CBCM53	INTRODUCTION TO BIOINFORMATICS ALGORITHMS
	15CBCM54	GENOMICS AND PROTEOMICS
	15NSS259	NSS - V
	15PBCM51	PRACTICAL - PROGRAMMING WITH JAVA
	15PBCM52	PRACTICAL - INTRODUCTION TO PERL, BIOPERL AND CGI
	15PBCM53	PRACTICAL - INTRODUCTION TO BIOINFORMATICS
	15UGE508	FILM APPRECIATION
	15CBCM61	PYTHON FOR BIOINFORMATICS
	15CBCM62	MOLECULAR BIOLOGY DATABASES
	15CBCM63	INTRODUCTION TO MEDICAL TRANSCRIPTION AND CODING
	15CBCM64	ENZYMES AND METABOLISM
	15CBCM65	BIODIVERSITY BASICS
	15PBCM61	PRACTICAL - PYTHON FOR BIOINFORMATICS
	15PBCM62	PRACTICAL - SEQUENCE ANALYSIS

	15RBCM61	PROJECT WORK
	15UGE513	INTERNET BASICS
B.Sc. - Biotechnology	15BBT001	ADVANCED CELL BIOLOGY
	15BBT002	PRACTICAL - ADVANCED CELL BIOLOGY
	15BBT101	CHEMISTRY
	15BBT102	PRACTICAL - CHEMISTRY
	15LEN001	ENGLISH PAPER - I
	15LFR001	FRENCH PAPER - I
	15LHN001	HINDI PAPER - I
	15LTA001	TAMIL PAPER - I
	15BBT003	MOLECULAR GENETICS AND DEVELOPMENTAL BIOLOGY
	15BBT004	PRACTICAL - MOLECULAR GENETICS AND DEVELOPMENTAL BIOLOGY
	15BBT103	BIOCHEMISTRY AND BIOINSTRUMENTATION
	15BBT104	PRACTICAL - BIOCHEMISTRY
	15BPD251	PERSONALITY DEVELOPMENT - I
	15LEN002	ENGLISH PAPER - II
	15LFR002	FRENCH PAPER - II
	15LHN002	HINDI PAPER - II
	15LTA002	TAMIL PAPER - II
	15NSS255	NSS - I
	15CBBT31	CLINICAL DIAGNOSTIC TECHNIQUES



	15CBBT32	MICROBIOLOGY
	15LENG31	ENGLISH PAPER - III
	15LFRE31	FRENCH PAPER - III
	15LHIN31	HINDI PAPER - III
	15LTAM31	TAMIL PAPER - III
	15PBBT31	PRACTICAL - CLINICAL DIAGNOSTIC TECHNIQUES
	15PBBT32	PRACTICAL - MICROBIOLOGY
	15UGE515	INTRODUCTION TO NANOSCIENCE AND TECHNOLOGY
	15CBBT41	PLANT AND ANIMAL BIOTECHNOLOGY
	15DBBT41	BIOPHYSICS, BIostatISTICS AND COMPUTATIONAL BIOLOGY
	15EVS041	ENVIRONMENTAL STUDIES
	15LENG41	ENGLISH PAPER - IV
	15LFRE41	FRENCH PAPER - IV
	15LHIN41	HINDI PAPER - IV
	15LTAM41	TAMIL PAPER - IV
	15PBBT41	PRACTICAL - PLANT AND ANIMAL TECHNOLOGY
	15PBBT42	PRACTICAL - COMPUTATIONAL BIOLOGY
	15UGE513	INTERNET BASICS
	15CBBT51	GENETIC ENGINEERING, IPR AND BIOETHICS
	15CBBT52	IMMUNOTECHNOLOGY
	15DBBT51	MICROBIAL AND ENVIRONMENTAL BIOTECHNOLOGY

	15NSS256	NSS - II
	15PBBT51	PRACTICAL - GENETIC ENGINEERING
	15PBBT52	PRACTICAL - IMMUNOTECHNOLOGY
	15UGE503	WEB DESIGNING
	15CBBT61	BIOFERMENTATION AND DOWNSTREAM PROCESSING
	15CBBT62	MEDICAL CODING AND CLINICAL RESEARCH
	15DBBT61	MUSHROOM CULTIVATION AND ITS MARKETING
	15DBBT62	PHARMACEUTICAL BIOTECHNOLOGY
	15PBBT61	PRACTICAL - BIOFERMENTATION
	15RBBT61	PROJECT WORK
B.Sc. - Microbiology	15BMI001	GENERAL MICROBIOLOGY
	15BMI002	PRACTICAL - BASIC TECHNIQUES IN MICROBIOLOGY
	15BMI101	BIOCHEMISTRY
	15BMI102	PRACTICAL - METHODS IN BIOCHEMISTRY
	15LEN001	ENGLISH PAPER - I
	15LFR001	FRENCH PAPER - I
	15LHN001	HINDI PAPER - I
	15LTA001	TAMIL PAPER - I
	15BMI003	MICROBIAL TAXONOMY, ANATOMY AND PHYSIOLOGY
	15BMI004	PRACTICAL - MICROBIAL CYTOLOGY AND PHYSIOLOGY
	15BMI104	BIOINSTRUMENTATION

	15BMI105	PRACTICAL - BIOINSTRUMENTATION
	15BMI106	ENVIRONMENTAL BIOTECHNOLOGY
	15BMI107	PRACTICAL - ENVIRONMENTAL BIOTECHNOLOGY
	15BPD251	PERSONALITY DEVELOPMENT - I
	15LEN002	ENGLISH PAPER - II
	15LFR002	FRENCH PAPER - II
	15LHN002	HINDI PAPER - II
B.Sc. - Microbiology	15LTA002	TAMIL PAPER - II
	15CBMB31	MICROBIAL GENETICS AND MOLECULAR BIOLOGY
	15CBMB32	BIOINFORMATICS
	15LENG31	ENGLISH PAPER - III
	15LFRE31	FRENCH PAPER - III
	15LHIN31	HINDI PAPER - III
	15LTAM31	TAMIL PAPER - III
	15PBMB31	PRACTICAL - BIOINFORMATICS
	15PBMB32	PRACTICAL - MICROBIAL GENETICS AND MOLECULAR SEPARATION
	15UGE514	HERBAL DRUG TECHNIQUES
	15CBMB41	IMMUNOLOGY
	15DBMB41	BIOFERTILIZERS
	15EVS041	ENVIRONMENTAL STUDIES
	15LENG41	ENGLISH PAPER - IV

	15LFRE41	FRENCH PAPER - IV
	15LHIN41	HINDI PAPER - IV
	15LTAM41	TAMIL PAPER - IV
	15PBMB41	PRACTICAL - IMMUNOLOGY
	15PBMB42	PRACTICAL - BIOFERTILIZERS
	15UGE523	FOOD AND BEVERAGE MANAGEMENT
	15CBMB51	MICROBES IN SOIL AND AGRICULTURE
	15CBMB52	PHARMACEUTICAL MICROBIOLOGY
	15CBMB53	AQUATIC MICROBIOLOGY, WASTEWATER TECHNOLOGY AND AEROMICROBIOLOGY
	15CBMB54	FOOD MICROBIOLOGY
	15NSS255	NSS - I
	15PBMB51	PRACTICAL - FOOD AND AQUATIC MICROBIOLOGY
	15PBMB52	PRACTICAL - SOIL AND PHARMACEUTICAL MICROBIOLOGY
	15RBMB51	PROJECT
	15UGE508	FILM APPRECIATION
	15CBMB61	VIROLOGY
	15CBMB62	BACTERIOLOGY
	15CBMB63	PARASITOLOGY
	15CBMB64	MYCOLOGY
	15CBMB65	RDNA TECHNOLOGY AND NANOTECHNOLOGY

	15PBMB61	PRACTICAL - VIROLOGY AND BACTERIOLOGY
	15PBMB62	PRACTICAL - MYCOLOGY AND PARASITOLOGY
	15UGE531	APPRECIATION OF KARNATIC MUSIC
M.Sc. - Biotechnology	15MBT001	BIOCHEMISTRY AND ENZYMOLOGY
	15MBT002	CELL AND DEVELOPMENTAL BIOLOGY
	15MBT003	PRACTICAL - I : BIOCHEMISTRY AND ENZYMOLOGY
	15MBT004	PRACTICAL - II : CELL AND DEVELOPMENTAL BIOLOGY
	15MBT101	COMPUTATIONAL BIOLOGY, BIOPHYSICS AND BIOSTATISTICS
	15MBT102	BIOINSTRUMENTATION
	15SSK151	SOFT SKILL - I
	15MBT005	MICROBIOLOGY AND IMMUNOLOGY
	15MBT006	MOLECULAR GENETICS
	15MBT007	PRACTICAL - III MICROBIOLOGY AND IMMUNOLOGY
	15MBT008	PRACTICAL - IV MOLECULAR GENETICS
	15MBT009	INTERNSHIP
	15MBT103	TISSUE ENGINEERING AND STEM CELL BIOLOGY
	15MBT104	ENVIRONMENTAL AND NANO-BIOTECHNOLOGY
	15MBT105	MARINE AND PHARMACEUTICAL BIOTECHNOLOGY
	15UGE501	COMMERCIAL ART
	15CMBT31	PLANT AND ANIMAL BIOTECHNOLOGY
	15CMBT32	GENETIC ENGINEERING AND FERMENTATION TECHNOLOGY

	15CMBT33	MEDICAL AND HERBAL BIOTECHNOLOGY
	15CMBT34	PROJECT MANAGEMENT AND BIOTECH PRODUCTS ENTREPRENEURSHIP
	15PMBT31	PRACTICAL - V PLANT AND ANIMAL BIOTECHNOLOGY
	15PMBT32	PRACTICAL - VI GENETIC ENGINEERING AND FERMENTATION TECHNOLOGY
	15PGE520	FRONT OFFICE MANAGEMENT
	15RMBT41	PROJECT
M.Sc. - Applied Medical Biotechnology and Clinical Research	15MMB001	APPLIED MEDICAL BIOCHEMISTRY AND CELL BIOLOGY
	15MMB002	CLINICAL MICROBIOLOGY AND MEDICAL RECORD SCIENCE
	15MMB003	PRACTICAL - I : BIOCHEMISTRY
	15MMB004	PRACTICAL - II : CELL BIOLOGY
	15MMB101	HUMAN PHYSIOLOGY
	15MMB102	HUMAN GENETICS AND DEVELOPMENTAL BIOLOGY
	15SSK151	SOFT SKILL - I
	15MMB005	STATISTICS FOR CLINICAL RESEARCH AND RESEARCH METHODOLOGY
	15MMB006	GENETIC ENGINEERING AND COMPUTATIONAL BIOLOGY
	15MMB007	PRACTICAL - III GENETIC ENGINEERING
	15MMB008	PRACTICAL - IV CLINICAL MICROBIOLOGY
	15MMB009	INTERNSHIP
	15MMB104	NANO AND PHARMACEUTICAL BIOTECHNOLOGY
	15MMB105	TISSUE ENGINEERING AND STEM CELL BIOLOGY

	15UGE501	COMMERCIAL ART
	15CMAM31	ADVANCED CLINICAL AND MOLECULAR DIAGNOSTIC TECHNIQUES
	15CMAM32	MEDICAL IMMUNOLOGY AND CLINICAL RESEARCH
	15CMAM33	MEDICAL CODING AND PHARMACOVIGILANCE AND SAFETY MONITORING
	15CMAM34	CLINICAL OPERATIONS AND CLINICAL DATA MANAGEMENT
	15PMAM31	PRACTICAL - V ADVANCED CLINICAL AND MOLECULAR DIAGNOSTIC TECHNIQUES
	15PMAM32	PRACTICAL - VI MEDICAL IMMUNOLOGY
	15PGE520	FRONT OFFICE MANAGEMENT
	15RMAM41	PROJECT / DISSERTATION AND VIVA-VOCE
M.Sc. - Biochemistry	15MBC001	CHEMISTRY OF BIOMOLECULES
	15MBC002	ADVANCED INSTRUMENTAL TECHNIQUES
	15MBC003	PRACTICAL - I : BIOCHEMISTRY AND INSTRUMENTATION
	15MBC101	HUMAN PHYSIOLOGY AND BASICS OF ANATOMY
	15MBC102	FUNDAMENTALS OF COMPUTERS, BIOSTATISTICS AND RESEARCH METHODOLOGY
	15SSK151	SOFT SKILL - I
	15MBC004	ENZYMOLGY
	15MBC005	INTERMEDIARY METABOLISM
	15MBC006	PRACTICAL - II BIOTECHNOLOGY
	15MBC007	PRACTICAL - III MICROBIOLOGY
	15MBC103	MICROBIOLOGY AND IMMUNOLOGY

	15MBC104	BIOTECHNOLOGY, IPR AND MARKETING
	15SSK152	SOFT SKILL - II
	15PGE512	MOLECULAR MODELING AND DRUG DESIGNING
	15CMBC31	GENETICS AND MOLECULAR BIOLOGY
	15CMBC32	CLINICAL BIOCHEMISTRY
	15CMBC33	MODERN LIFESTYLE ASSOCIATED DISEASES
	15CMBC34	ENDOCRINOLOGY
	15IMBC31	INTERNSHIP
	15PMBC31	PRACTICAL - IV CLINICAL BIOCHEMISTRY
	15PGE514	PHOTOSHOP
	15CMBC41	TOXICOLOGY AND FORENSIC BIOCHEMISTRY
	15RMBC41	PROJECT
	15MBT001	BIOCHEMISTRY AND ENZYMOLOGY
	15MBT002	CELL AND DEVELOPMENTAL BIOLOGY
	15MBT003	PRACTICAL - I : BIOCHEMISTRY AND ENZYMOLOGY
	15MBT004	PRACTICAL - II : CELL AND DEVELOPMENTAL BIOLOGY
	15MBT101	COMPUTATIONAL BIOLOGY, BIOPHYSICS AND BIostatISTICS
	15MBT102	BIOINSTRUMENTATION
	15SSK151	SOFT SKILL - I
	15MBT005	MICROBIOLOGY AND IMMUNOLOGY
	15MBT006	MOLECULAR GENETICS



	15MBT007	PRACTICAL - III MICROBIOLOGY AND IMMUNOLOGY
	15MBT008	PRACTICAL - IV MOLECULAR GENETICS
	15MBT009	INTERNSHIP
	15MBT103	TISSUE ENGINEERING AND STEM CELL BIOLOGY
	15MBT104	ENVIRONMENTAL AND NANO-BIOTECHNOLOGY
	15MBT105	MARINE AND PHARMACEUTICAL BIOTECHNOLOGY
	15UGE501	COMMERCIAL ART
	15CMBT31	PLANT AND ANIMAL BIOTECHNOLOGY
	15CMBT32	GENETIC ENGINEERING AND FERMENTATION TECHNOLOGY
	15CMBT33	MEDICAL AND HERBAL BIOTECHNOLOGY
	15CMBT34	PROJECT MANAGEMENT AND BIOTECH PRODUCTS ENTREPRENEURSHIP
	15PMBT31	PRACTICAL - V PLANT AND ANIMAL BIOTECHNOLOGY
	15PMBT32	PRACTICAL - VI GENETIC ENGINEERING AND FERMENTATION TECHNOLOGY
	15PGE520	FRONT OFFICE MANAGEMENT
	15RMBT41	PROJECT
M.Sc. - Immunology and Microbiology	15MIM001	MICROBIOLOGY
	15MIM002	IMMUNOLOGY
	15MIM003	PRACTICAL - I : MICROBIOLOGY
	15MIM004	PRACTICAL - II : IMMUNOLOGY
	15MIM101	MICROBIAL BIOCHEMISTRY

	15MIM102	MEDICAL MICROBIOLOGY
	15MIM104	INDUSTRIAL AND PHARMACEUTICAL MICROBIOLOGY
	15SSK151	SOFT SKILL - I
	15MIM005	MICROBIAL GENETICS AND MOLECULAR BIOLOGY
	15MIM006	MOLECULAR IMMUNOLOGY AND IMMUNOGENETICS
	15MIM007	PRACTICAL - III MOLECULAR BIOLOGY
	15MIM008	PRACTICAL - IV IMMUNOTECHNOLOGY
	15MIM103	IMMUNOTECHNOLOGY
	15MIM105	CLONING STRATEGIES AND NANOMICROBIOLOGY
	15MIM111	INDUSTRIAL AND PHARMACEUTICAL MICROBIOLOGY
	15PGE504	HERBAL DRUG TECHNOLOGY
	15CMIM31	CLINICAL IMMUNOLOGY AND VACCINOLOGY
	15CMIM32	APPLIED MICROBIOLOGY
	15CMIM33	CLONING STRATEGIES AND NANOMICROBIOLOGY
	15CMIM34	CELL CULTURE AND FERMENTATION TECHNOLOGY
	15DMIM31	BIOFERTILIZERS
	15PMIM31	PRACTICAL - V VACCINES TECHNOLOGY
	15PMIM32	PRACTICAL - VI APPLIED MICROBIOLOGY
	15PGE513	FOOD AND BEVERAGE
	15RMIM41	PROJECT
M.Phil. - Biotechnology	15CRBTA1	RESEARCH METHODOLOGY

	15CRBTB1	FUNGAL BIOTECHNOLOGY
	15ERBTC1	SPECIALIZATION SUBJECT
	15RRBTA2	DISSERTATION INCLUDING VIVAVOCE
M.Phil. - Microbiology	15CRMIA1	RESEARCH METHODOLOGY
	15CRMIB1	ADVANCED MICROBIOLOGY
	15ERMIC1	SPECIALIZATION SUBJECT
	15RRMIA2	DISSERTATION INCLUDING VIVA VOCE