

ORGANIZATION OF COURSE CONTENTS & CREDIT REQUIREMENTS

Code Numbers

- All courses are divided into two series: 500-series courses pertain to Master's level, and 600-series to Doctoral level. A Ph. D. student must take a minimum of two 600 series courses, but may also take 500-series courses if not studied during Master's programme.
- Credit seminar for Master's level is designated by code no. 591, and the two seminars for Doctoral level are coded as 691 and 692, respectively.
- Similarly, 599 and 699 codes have been given for Master's research and Doctoral research, respectively.

Course Contents

The contents of each course have been organized into:

- Objective – to elucidate the basic purpose.
- Theory units – to facilitate uniform coverage of syllabus for paper setting.
- Suggested Readings – to recommend some standard books as reference material. This does not unequivocally exclude other such reference material that may be recommended according to the advancements and local requirements.
- A list of journals pertaining to the discipline is provided at the end which may be useful as study material for 600-series courses as well as research topics.
- E-Resources - for quick update on specific topics/events pertaining to the subject.
- Broad research topics provided at the end would facilitate the advisors for appropriate research directions to the PG students.

Minimum Credit Requirements

Subject	Master's programme	Doctoral programme
Major	20	15
Minor	09	08
Supporting	05	05
Seminar	01	02
Research	20	45
Total Credits	55	75
Compulsory Non Credit Courses	See relevant section	

Major subject: The subject (department) in which the students takes admission

Minor subject: The subject closely related to students major subject (e.g., if the major subject is Entomology, the appropriate minor subjects should be Plant Pathology & Nematology).

Supporting subject: The subject not related to the major subject. It could be any subject considered relevant for student's research work.

Non-Credit Compulsory Courses: Please see the relevant section for details. Six courses (PGS 501-PGS 506) are of general nature and are compulsory for Master's programme. Ph. D. students may be exempted from these courses if already studied during Master's degree.

COMPULSORY NON-CREDIT COURSES

(Compulsory for Master's programme in all disciplines; Optional for Ph.D. scholars)

CODE	COURSE TITLE	CREDITS
PGS 501	LIBRARY AND INFORMATION SERVICES	0+1
PGS 502	TECHNICAL WRITING AND COMMUNICATIONS SKILLS	0+1
PGS 503 (e-Course)	INTELLECTUAL PROPERTY AND ITS MANAGEMENT IN AGRICULTURE	1+0
PGS 504	BASIC CONCEPTS IN LABORATORY TECHNIQUES	0+1
PGS 505 (e-Course)	AGRICULTURAL RESEARCH, RESEARCH ETHICS AND RURAL DEVELOPMENT PROGRAMMES	1+0
PGS 506 (e-Course)	DISASTER MANAGEMENT	1+0

Course Contents

PGS 501 LIBRARY AND INFORMATION SERVICES 0+1

Objective

To equip the library users with skills to trace information from libraries efficiently, to apprise them of information and knowledge resources, to carry out literature survey, to formulate information search strategies, and to use modern tools (Internet, OPAC, search engines etc.) of information search.

Practical

Introduction to library and its services; Role of libraries in education, research and technology transfer; Classification systems and organization of library; Sources of information- Primary Sources, Secondary Sources and Tertiary Sources; Intricacies of abstracting and indexing services (Science Citation Index, Biological Abstracts, Chemical Abstracts, CABI Abstracts, etc.); Tracing information from reference sources; Literature survey; Citation techniques/Preparation of bibliography; Use of CD-ROM Databases, Online Public Access Catalogue and other computerized library services; Use of Internet including search engines and its resources; e-resources access methods.

PGS 502 TECHNICAL WRITING AND COMMUNICATIONS SKILLS 0+1

Objective

To equip the students/scholars with skills to write dissertations, research papers, etc.

To equip the students/scholars with skills to communicate and articulate in English (verbal as well as writing).

BIOCHEMISTRY

Course Structure –at a Glance

CODE	COURSE TITLE	CREDITS
BIOCHEM 501*^	BASIC BIOCHEMISTRY	3+1
BIOCHEM 502*	INTERMEDIARY METABOLISM	3+0
BIOCHEM 503*	ENZYMOLGY	2+1
BIOCHEM 504	MOLECULAR BIOLOGY	2+1
BIOCHEM 505*	BIOCHEMICAL TECHNIQUES	1+2
BIOCHEM 506	IMMUNO CHEMISTRY	2+1
BIOCHEM 507	PLANT BIOCHEMISTRY	3+0
BIOCHEM 508	ANIMAL BIOCHEMISTRY	3+0
BIOCHEM 509	FOOD AND NUTRITIONAL BIOCHEMISTRY	2+1
BIOCHEM 510	CARBON AND NITROGEN METABOLISM	2+1
Biochemistry 511	BIOCHEMISTRY OF CEREAL,OILSEEDS AND PULSES	2+0
BIOCHEM 591	MASTER’S SEMINAR	1+0
BIOCHEM 599	MASTER’S RESEARCH	20
BIOCHEM 601**	ADVANCED ENZYMOLOGY	2+0
BIOCHEM 602**	ADVANCED MOLECULAR BIOLOGY	3+0
BIOCHEM 603	BIOCHEMISTRY OF BIOTIC AND ABIOTIC STRESS	3+0
BIOCHEM 604**	CURRENT TOPICS IN BIOCHEMISTRY	1+0
BIOCHEM 605	FUNCTIONAL GENOMICS AND METABOLOMICS	3+0
BIOCHEM 606	BIOMEMBRANES	2+0
BIOCHEM 607**	ADVANCED TECHNIQUES IN BIOCHEMISTRY	0+2
BIOCHEM 691	DOCTORAL SEMINAR I	1+0
BIOCHEM 692	DOCTORAL SEMINAR II	1+0
BIOCHEM 699	DOCTORAL RESEARCH	45

*Compulsory for Master’s programme; ** Compulsory for Doctoral programme

^ Open for PG students of other discipline

Note: BBIOCHEM 501 BASIC BIOCHEMISTRY be considered as optional course for those who had obtained degree in Biochemistry /Microbiology /Biotechnology at B.Sc /M.Sc level

MICROBIOLOGY
Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
MICRO 501*	PRINCIPLES OF MICROBIOLOGY	3+1
MICRO 502*	MICROBIAL PHYSIOLOGY AND METABOLISM	3+1
MICRO 503*	MICROBIAL GENETICS	2+1
MICRO 504*#	SOIL MICROBIOLOGY	2+1
MICRO 505*@	MICROBIAL BIOTECHNOLOGY	2+1
MICRO 506*	FOOD AND DAIRY MICROBIOLOGY	2+1
MICRO 507	BACTERIOPHAGES	1+1
MICRO 508	ENVIRONMENTAL MICROBIOLOGY	2+1
MICRO 509**	PLANT-MICROBE INTERACTIONS	3+0
MICRO 510	INDUSTRIAL MICROBIOLOGY	2+1
MICRO 511	BIOFERTILIZER TECHNOLOGY	1+1
MICRO 512	CYANOBACTERIAL AND ALGAL BIOTECHNOLOGY	2+0
MICRO 591	MASTER'S SEMINAR	1+0
MICRO 599	MASTER'S RESEARCH	20
MICRO 601**	ADVANCES IN FERMENTATION	2+1
MICRO 602**	ADVANCED MICROBIAL PHYSIOLOGY	2+0
MICRO 603**	REGULATION OF MICROBIAL BIOSYNTHESIS	2+0
MICRO 604**	CURRENT TOPICS IN SOIL MICROBIOLOGY	2+0
MICRO 691	DOCTORAL SEMINAR I	1+0
MICRO 692	DOCTORAL SEMINAR II	1+0
MICRO 699	DOCTORAL RESEARCH	45

*Compulsory for Master's programme; **Compulsory for Doctoral programme
#Can be cross-listed with Soil Science; @Can be cross-listed with Biotechnology

PLANT PHYSIOLOGY
Course Structure –at a Glance

CODE	COURSE TITLE	CREDITS
PP 501*	PRINCIPLES OF PLANT PHYSIOLOGY	3+1
PP 502*	PLANT DEVELOPMENTAL BIOLOGY – PHYSIOLOGICAL AND MOLECULAR BASIS	2+0
PP 503*	PHYSIOLOGICAL AND MOLECULAR RESPONSES OF PLANTS TO ABIOTIC STRESSES	2+1
PP 504*	HORMONAL REGULATION OF PLANT GROWTH AND DEVELOPMENT	2+1
PP 506*	PHYSIOLOGY OF GROWTH AND YIELD AND MODELING	1+1
PP 507	GENOME ORGANIZATION IN HIGHER PLANTS	2+1
PP 508*	MORPHOGENESIS, TISSUE CULTURE AND TRANSFORMATION	2+1
PP 509	PHYSIOLOGY OF CROP PLANTS –SPECIFIC CASE STUDIES	2+0
PP 510	PHYSIOLOGICAL AND MOLECULAR ASPECTS OF PHOTOSYNTHESIS- CARBON AND NITROGEN ASSIMILATION	2+1
PP 511	MINERAL NUTRITION	2+1
PP 591	MASTER’S SEMINAR	1+0
PP 599	MASTER’S RESEARCH	20
PP 601**	FUNCTIONAL GENOMICS AND GENES ASSOCIATED WITH A FEW PHYSIOLOGICAL PROCESSES	2+0
PP602**	SIGNAL PERCEPTIONS AND TRANSDUCTION AND REGULATION OF PHYSIOLOGICAL PROCESSES	2+0
PP 603**	MOLECULAR APPROACHES FOR IMPROVING PHYSIOLOGICAL TRAITS	2+1
PP 604	TECHNIQUES IN PLANT PHYSIOLOGY	1+2
PP 605	CLIMATE CHANGE AND CROP GROWTH	2+0
PP 606	POST HARVEST PHYSIOLOGY	2+0
PP 607	WEED PHYSIOLOGY AND HERBICIDE ACTION	1+1
PP 608	SEED PHYSIOLOGY	2+1
PP 691	DOCTORAL SEMINAR I	1+0
PP 692	DOCTORAL SEMINAR II	1+0
PP 699	DOCTORAL RESEARCH	45

*Compulsory for Master’s programme; ** Compulsory for Ph. D. programme

PLANT MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
MBB 501**	PRINCIPLES OF BIOTECHNOLOGY	2+1
MBB 502**	FUNDAMENTALS OF MOLECULAR BIOLOGY	3+0
MBB 503**	MOLECULAR CELL BIOLOGY	3+0
MBB 504	PLANT TISSUE CULTURE & GENETIC TRANSFORMATION	1+2
MBB 505**	TECHNIQUES IN MOLECULAR BIOLOGY I	0+3
MBB 506	MICROBIAL/ INDUSTRIAL BIOTECHNOLOGY	2+1
MBB 507	MOLECULAR BREEDING	2+0
MBB 508	GENOMICS & PROTEOMICS	2+0
MBB 509	TECHNIQUES IN MOLECULAR BIOLOGY II	0+3
MBB 510*	BIOSAFETY, IPR AND BIOETHICS	2+0
MBB 511*	ANIMAL BIOTECHNOLOGY	3+0
MBB 512*	IMMUNOLOGY AND MOLECULAR DIAGNOSTICS	2+1
MBB 513*	NANO-BIOTECHNOLOGY	3+0
MBB 551*^	PRINCIPLES OF GENETICS	2+1
MBB 552*#	BASIC BIOCHEMISTRY	2+1
MBB 553*,	BIOSTATISTICS AND COMPUTERS	2+1
MBB 554*\$	PRINCIPLES OF MICROBIOLOGY	2+1
MBB 555**	INTRODUCTION TO BIOINFORMATICS	2+1
MBB 556	ENVIRONMENTAL BIOTECHNOLOGY	3+0
MBB 557	MOLECULAR CYTOGENETICS	2+1
MBB 558	MOLECULAR FARMING	1+1
MBB 591**	MASTER'S SEMINAR	1+0
MBB 599**	MASTER'S RESEARCH	20
MBB 601	ADVANCES IN PLANT MOLECULAR BIOLOGY	3+0
MBB 602	ADVANCES IN GENETIC ENGINEERING	3+0
MBB 603	ADVANCES IN MICROBIAL BIOTECHNOLOGY	3+0
MBB 604	ADVANCES IN CROP BIOTECHNOLOGY	3+0
MBB 605	ADVANCES IN FUNCTIONAL GENOMICS AND PROTEOMICS	2+0
MBB 606	COMMERCIAL PLANT TISSUE CULTURE	2+0
MBB 607	ADVANCES IN ANIMAL BIOTECHNOLOGY	2+0
MBB 691	DOCTORAL SEMINAR I	1+0
MBB 692	DOCTORAL SEMINAR II	1+0
MBB 699	DOCTORAL RESEARCH	45

*May be taken as minor/supporting courses; **Compulsory for M.Sc. Programme

^ cross listed with GP 501;

cross listed with Biochemistry 501

\$ cross listed with MICRO 501

GENETICS AND PLANT BREEDING (Integrated)
Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
GP501*^	PRINCIPLES OF GENETICS	2+1
GP502*	PRINCIPLES OF CYTOGENETICS	2+1
GP503*	PRINCIPLES OF PLANT BREEDING	2+1
GP504*	PRINCIPLES OF QUANTITATIVE GENETICS	2+1
GP505	MUTAGENESIS AND MUTATION BREEDING	2+1
GP506	POPULATION GENETICS	1+1
GP507	HETEROSIS BREEDING	1+1
GP508*	CELL BIOLOGY AND MOLECULAR GENETICS	2+1
GP509*	BIOTECHNOLOGY FOR CROP IMPROVEMENT	2+1
GP510	BREEDING FOR BIOTIC AND ABIOTIC STRESS RESISTANCE	2+1
GP511*	BREEDING CEREALS, FORAGES AND SUGARCANE	2+1
GP512*	BREEDING LEGUMES, OILSEEDS AND FIBRE CROPS	2+1
GP513	BREEDING FOR QUALITY TRAITS	1+1
GP514	GENE REGULATION AND EXPRESSION	2+0
GP515	MAINTENANCE BREEDING, CONCEPTS OF VARIETY RELEASE AND SEED PRODUCTION	1+1
GP 516@	GERMPLASM COLLECTION, EXCHANGE AND QUARANTINE	2 +1
GP 517	DATA BASE MANAGEMENT, EVALUATION AND UTILIZATION OF PGR	2+1
GP 518	GENETIC CONTROL OF PLANT REPRODUCTION	2+1
GP 519	BREEDING FOR VEGETABLE CROPS	2+1
GP591	MASTER'S SEMINAR	1+0
GP599	MASTER'S RESEARCH	20
GP601	PLANT GENETIC RESOURCES AND THEIR UTILIZATION	2+0
GP602	ADVANCES IN QUANTITATIVE GENETICS	2+1
GP603**	GENOMICS IN CROP IMPROVEMENT	2+1
GP604**	CELLULAR AND CHROMOSOMAL MANIPULATIONS IN CROP IMPROVEMENT	2+1
GP605**	ADVANCED PLANT BREEDING SYSTEMS	2+0
GP606	CROP-EVOLUTION	2+1
GP607	BREEDING DESIGNER CROPS	1+1
GP608	ADVANCES IN BREEDING OF MAJOR FIELD CROPS	3+0
GP609	MICROBIAL GENETICS	2+1
GP610@@	IN SITU AND EX SITU CONSERVATION OF GERMPLASM	2 +1
GP 691	DOCTORAL SEMINAR I	1+0
GP 692	DOCTORAL SEMINAR II	1+0
GP 699	DOCTORAL RESEARCH	45

*Compulsory for Master's programme; ** Compulsory for Ph. D. programme

@ Cross listed with SST 515; @@ Cross listed with SST 602

^ cross listed with MBB 511

SEED SCIENCE AND TECHNOLOGY

Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
SST 501*	FLORAL BIOLOGY, SEED DEVELOPMENT & MATURATION	1+1
SST 502*	PRINCIPLES OF SEED PRODUCTION	2+0
SST 503*	SEED PRODUCTION IN FIELD CROPS	2+1
SST 504	SEED PRODUCTION IN VEGETABLES	2+1
SST 505	SEED PRODUCTION IN FLOWER, MEDICINAL FRUITS AND PLANTATION CROPS	2+1
SST 506*	SEED LEGISLATION AND CERTIFICATION	2+1
SST 507*	SEED PROCESSING AND STORAGE	2+1
SST 508*	SEED QUALITY TESTING	2+1
SST 509	SEED PHYSIOLOGY	2+1
SST 510	SEED PATHOLOGY	2+1
SST 511	SEED ENTOMOLOGY	2+1
SST 512	SEED PRODUCTION IN PASTURE, FORAGE AND GREEN MANURE CROPS	2+1
SST 513	SEED STORAGE AND DETERIORATION	1+1
SST 514	SEED MARKETING AND MANAGEMENT	1+1
SST 515	EMERGING TRENDS IN SEED QUALITY ENHANCEMENT	1+1
SST 516 [@]	DATA BASE MANAGEMENT, EVALUATION AND UTILIZATION OF PGR	2+1
SST 591	MASTER'S SEMINAR	1+0
SST 599	MASTER'S RESEARCH	20
SST 601**	HYBRID SEED PRODUCTION	1+1
SST 602 ^{@@}	<i>IN SITU</i> AND <i>EX SITU</i> CONSERVATION OF GERMPLASM	2+1
SST 603	TESTING FOR GENUINENESS & PURITY OF CULTIVARS	1+1
SST 604**	DUS TESTING FOR PLANT VARIETY PROTECTION	2+1
SST 605**	ADVANCES IN SEED SCIENCE RESEARCH	1+0
SST 691	DOCTORAL SEMINAR I	1+0
SST 692	DOCTORAL SEMINAR II	1+0
SST 699	DOCTORAL RESEARCH	45

*Compulsory for Master's programme; ** Compulsory for Ph. D. programme,
 @ Cross listed with GP 516; @@ Cross listed with GP 609

AGRICULTURAL METEOROLOGY

Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
AGM 501*	FUNDAMENTALS OF METEOROLOGY AND CLIMATOLOGY	2+1
AGM 502*	FUNDAMENTALS OF AGRICULTURAL METEOROLOGY	2+1
AGM.503*	MICROMETEOROLOGY	2+1
AGM 504*	AGRO-METEOROLOGICAL MEASUREMENTS AND INSTRUMENTATION	1+2
AGM 505	SOIL WATER BALANCE CLIMATOLOGY	2+1
AGM 506	CROP WEATHER MODELS	1+2
AGM 507	WEATHER MODIFICATION AND RISK MANAGEMENT STRATEGIES	2+0
AGM 508	PRINCIPLES OF REMOTE SENSING AND ITS APPLICATIONS IN AGRICULTURE	2+1
AGM 509	APPLIED AGRICULTURAL CLIMATOLOGY	1+2
AGM 591	MASTER'S SEMINAR	1+0
AGM 599	MASTER'S RESEARCH	20
AGM 601	CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT	2+1
AGM 602	WEATHER FORECASTING	2+1
AGM 603	AIR POLLUTION METEOROLOGY	2+1
AGM 604	WEATHER, CLIMATE AND LIVESTOCK	2+1
AGM 605	ANALYTICAL TOOLS AND METHODS FOR AGRO-METEOROLOGY	2+1
AGM 606	STRATEGIC USE OF CLIMATIC INFORMATION	2+1
AGM 607	MATHEMATICS IN AGRICULTURE AND BIOLOGY	2+1
AGM 608	DATABASE MANAGEMENT AND COMMERCIALIZATION OF AGROMETEOROLOGICAL DATA IN E-SERVICES	1+2
AGM 691	DOCTORAL SEMINAR I	1+0
AGM 692	DOCTORAL SEMINAR II	1+0
AGM 699	DOCTORAL RESEARCH	45

*Compulsory for Master's programme

AGRONOMY
Course Structure – at a Glance

Sr. No.	Course No.	Title of course	Credit
1.	AGRON 501*	MODERN CONCEPTS IN CROP PRODUCTION	3+0
2.	AGRON 502*	PRINCIPLES AND PRACTICES OF SOIL FERTILITY AND NUTRIENT MANAGEMENT	2+1
3.	AGRON 503*	PRINCIPLES AND PRACTICES OF WEED MANAGEMENT	2+1
4.	AGRON 504*	PRINCIPLES AND PRACTICES OF WATER MANAGEMENT	2+1
5.	AGRON 505	AGROMETEOROLOGY AND CROP WEATHER FORECASTING	2+1
6.	AGRON 506	AGRONOMY OF MAJOR CEREALS AND PULSES	2+1
7.	AGRON 507	AGRONOMY OF OILSEED, FIBRE AND SUGAR CROPS	2+1
8.	AGRON 508	AGRONOMY OF MEDICINAL, AROMATIC AND UNDER UTILIZED CROPS	2+1
9.	AGRON 509	AGRONOMY OF FODDER AND FORAGE CROPS	2+1
10.	AGRON 510	AGROSTOLOGY AND AGROFORESTRY	2+1
11.	AGRON 511	CROPPING SYSTEMS	2+0
12.	AGRON 512	DRY LAND FARMING	2+1
13.	AGRON 513	PRINCIPLES AND PRACTICES OF ORGANIC FARMING	2+1
14.	AGRON 591	MASTER'S SEMINAR	1+0
15.	AGRON 599	MASTER'S RESEARCH	20
Sub total			28+11+20
16.	AGRON 601	CURRENT TRENDS IN AGRONOMY	3+0
17.	AGRON 602	CROP ECOLOGY	2+0
18.	AGRON 603	CROP PRODUCTION AND SYSTEM MODELING	2+1
19.	AGRON 604	ADVANCES IN CROP GROWTH AND PRODUCTIVITY	2+1
20.	AGRON 605	IRRIGATION MANAGEMENT	2+1
21.	AGRON 606	ADVANCES IN WEED MANAGEMENT	2+0
22.	AGRON 607	INTEGRATED FARMING SYSTEMS	2+0
23.	AGRON 608	SOIL CONSERVATION AND WATERSHED MANAGEMENT	2+1
24.	AGRON 609	STRESS CROP PRODUCTION	2+1
25.	AGRON 691	DOCTORAL SEMINAR I	1+0
26.	AGRON 692	DOCTORAL SEMINAR II	1+0
27.	AGRON 699	DOCTORAL RESEARCH	45
Sub total			21+5+45
Grand total			49+16

***Compulsory for Master's programme**

SOIL SCIENCE
Course Structure – at a Glance

CODE	COURSE TITLE	CREDIT
SOILS 501*	SOIL PHYSICS	2+1
SOILS 502*	SOIL FERTILITY AND FERTILIZER USE	3+1
SOILS 503*	SOIL CHEMISTRY	2+1
SOILS 504*	SOIL MINERALOGY, GENESIS, CLASSIFICATION AND SURVEY	2+1
SOILS 505	SOIL EROSION AND CONSERVATION	2+1
SOILS 506*	SOIL BIOLOGY AND BIOCHEMISTRY	2+1
SOILS 507	GEOMORPHOLOGY AND GEOCHEMISTRY	2+0
SOILS 508	RADIOISOTOPES IN SOIL AND PLANT STUDIES	1+1
SOILS 509	SOIL, WATER AND AIR POLLUTION	2+1
SOILS 510	REMOTE SENSING AND GIS TECHNIQUES FOR SOIL AND CROP STUDIES	2+1
SOILS 511	ANALYTICAL TECHNIQUES AND INSTRUMENTAL METHODS IN SOIL AND PLANT ANALYSIS	0+2
SOILS 512	SYSTEM APPROACHES IN SOIL AND CROP STUDIES	2+1
SOILS 513	MANAGEMENT OF PROBLEMATIC SOILS AND WATERS	2+1
SOILS 514	FERTILIZER TECHNOLOGY	1+0
SOILS 515	LAND DEGRADATION AND RESTORATION	1+0
SOILS 591	MASTER'S SEMINAR	1+0
SOILS 599	MASTER'S RESEARCH	20
SOILS 601	ADVANCES IN SOIL PHYSICS	2+0
SOILS 602	ADVANCES IN SOIL FERTILITY	2+0
SOILS 603	PHYSICAL CHEMISTRY OF SOILS	2+0
SOILS 604	SOIL GENESIS AND MICROPEDOLOGY	2+0
SOILS 605	BIOCHEMISTRY OF SOIL ORGANIC MATTER	2+0
SOILS 606	LAND USE PLANNING AND WATERSHED MANAGEMENT	2+0
SOILS 691	DOCTORAL SEMINAR I	1+0
SOILS 692	DOCTORAL SEMINAR II	1+0
SOILS 699	DOCTORAL RESEARCH	45

*Compulsory for Master's programme

PRE-REQUISITE COURSES FOR BASIC SCIENCE STUDENTS

1. Ag.chem.1.1: Introduction to Soil Science (2+1)
2. Ag.Chem.2.2: Soil Chemistry, Soil Fertility and Nutrient Management (2+1)

ENTOMOLOGY

Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
ENT 501*	INSECT MORPHOLOGY	(1+1)
ENT 502*	INSECT ANATOMY, PHYSIOLOGY AND NUTRITION	(2+1)
ENT 503 / NEMA 502s	PRINCIPLES OF TAXONOMY	(2+0)
ENT 504*	CLASSIFICATION OF INSECTS	(2+1)
ENT 505*	INSECT ECOLOGY	(1+1)
ENT 506	INSECT PATHOLOGY	(1+1)
ENT 507*	BIOLOGICAL CONTROL OF CROP PESTS AND WEEDS	(1+1)
ENT 508*	TOXICOLOGY OF INSECTICIDES	(2+1)
ENT 509	PLANT RESISTANCE TO INSECTS	(1+1)
ENT 510* / NEMA 512s	PRINCIPLES OF INTEGRATED PEST MANAGEMENT	(1+1)
ENT 511**	PESTS OF FIELD CROPS	(1+1)
ENT 512**	PESTS OF HORTICULTURAL AND PLANTATION CROPS	(1+1)
ENT 513	STORAGE ENTOMOLOGY	(1+1)
ENT 514 / PL.PATH 514s	INSECT VECTORS OF PLANT VIRUSES AND OTHER PATHOGENS	(1+1)
ENT 515	GENERAL ACAROLOGY	(1+1)
ENT 516	SOIL ARTHROPODS AND THEIR MANAGEMENT	(1+1)
ENT 517	TECHNIQUES IN PLANT PROTECTION	(0+1)
ENT 519	COMMERCIAL ENTOMOLOGY	(1+1)
ENT 520 / NEMA 514 / PL.PATH 520s	PLANT QUARANTINE	(2+0)
ENT 591	MASTER'S SEMINAR	(1+0)
ENT 599	MASTER'S RESEARCH	(20)
ENT 601	ADVANCED INSECT SYSTEMATICS	(1+2)
ENT 602	IMMATURE STAGES OF INSECTS	(1+1)
ENT 603	ADVANCED INSECT PHYSIOLOGY	(2+0)
ENT 604	ADVANCED INSECT ECOLOGY	(1+1)
ENT 605	INSECT BEHAVIOUR	(1+1)
ENT 606	RECENT TRENDS IN BIOLOGICAL CONTROL	(1+1)
ENT 607	ADVANCED INSECTICIDE TOXICOLOGY	(2+1)
ENT 608	ADVANCED HOST PLANT RESISTANCE	(1+1)
ENT 609	ADVANCED ACAROLOGY	(1+1)
ENT 610	AGRICULTURAL ORNITHOLOGY	(1+1)
ENT 611**	MOLECULAR APPROACHES IN ENTOMOLOGICAL RESEARCH	(1+1)
ENT 612**	ADVANCED INTEGRATED PEST MANAGEMENT	(2+0)
ENT 613 / PL PATH 606\$	PLANT BIOSECURITY AND BIOSAFETY	(2+0)
ENT 691	DOCTORAL SEMINAR -I	(1+0)
ENT 692	DOCTORAL SEMINAR- II	(1+0)
ENT 699	DOCTORAL RESEARCH	(45)

*Compulsory for Master's programme; ** Compulsory for Ph.D. programme
 #One out of 511 or 512 is compulsory; \$ Cross-listed with Plant Pathology

NEMATOLOGY
Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
NEMA 501*	PRINCIPLES OF NEMATOLOGY	2+1
NEMA 502 [§] ENT 503	PRINCIPLES OF TAXONOMY	2+0
NEMA 503*	STRUCTURAL ORGANIZATION OF NEMATODES	2+1
NEMA 504*	CLASSIFICATION OF NEMATODES	2+1
NEMA 505*	NEMATOLOGICAL TECHNIQUES	1+2
NEMA 506*	NEMATODE DISEASES OF CROPS	3+1
NEMA 507	NEMATODE BIOLOGY AND PHYSIOLOGY	2+1
NEMA 508	NEMATODE ECOLOGY	2+1
NEMA 509	NEMATODE INTERACTIONS WITH OTHER ORGANISMS	2+1
NEMA 510*	NEMATODE MANAGEMENT	2+1
NEMA 511	BENEFICIAL NEMATODES	1+1
NEMA 512/ ENT 510 [§]	PRINCIPLES OF INTEGRATED PEST MANAGEMENT	1+1
NEMA 513/ PL PATH 513 [@]	DISEASE RESISTANCE IN PLANTS	2+0
NEMA 514/ ENT 520 [§]	PLANT QUARANTINE	2+0
NEMA 591	MASTER'S SEMINAR	1+0
NEMA 599	MASTER'S RESEARCH	20
NEMA 601	ADVANCES IN STRUCTURE AND SYSTEMATICS OF NEMATODES	2+1
NEMA 602**	CURRENT TOPICS IN NEMATODE DISEASE DEVELOPMENT AND HOST RESISTANCE	2+1
NEMA 603**	ADVANCES IN NEMATODE MANAGEMENT	2+1
NEMA 604	PHYSIOLOGICAL AND MOLECULAR NEMATOLOGY	2+1
NEMA 605/ PL PATH 606 [@]	PLANT BIOSECURITY AND BIOSAFETY	2+0
NEMA 691	DOCTORAL SEMINAR I	1+0
NEMA 692	DOCTORAL SEMINAR II	1+0
NEMA 699	DOCTORAL RESEARCH	45

* Compulsory for Master's programme; ** Compulsory for Doctoral programme
[@] Cross-listed with Plant Pathology; [§] Cross-listed with Entomology

PLANT PATHOLOGY
Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
PL PATH 501*	MYCOLOGY	2+1
PL PATH 502*	PLANT VIROLOGY	2+1
PL PATH 503*	PLANT BACTERIOLOGY	2+1
PL PATH 504*	PRINCIPLES OF PLANT PATHOLOGY	3+0
PL PATH 505*	DETECTION AND DIAGNOSIS OF PLANT DISEASES	0+2
PL PATH 506	PRINCIPLES OF PLANT DISEASE MANAGEMENT	2+1
PL PATH 507	DISEASES OF FIELD AND MEDICINAL CROPS	2+1
PL PATH 508	DISEASES OF FRUITS, PLANTATION AND ORNAMENTAL CROPS	2+1
PL PATH 509	DISEASES OF VEGETABLE AND SPICES CROPS	2+1
PL PATH 510	SEED HEALTH TECHNOLOGY	2+1
PL PATH 511	CHEMICALS IN PLANT DISEASE MANAGEMENT	2+1
PL PATH 512	ECOLOGY OF SOIL-BORNE PLANT PATHOGENS	2+1
PL PATH 513	DISEASE RESISTANCE IN PLANTS	2+0
PL PATH 514/ ENT 514 ^s	INSECT VECTORS OF PLANT VIRUSES AND OTHER PATHOGENS	1+1
PL PATH 515	BIOLOGICAL CONTROL OF PLANT DISEASES	2+1
PL PATH 516	INTEGRATED DISEASE MANAGEMENT	2+1
PL PATH 517	MUSHROOM PRODUCTION TECHNOLOGY	2+1
PL PATH 518	EPIDEMIOLOGY AND FORECASTING OF PLANT DISEASES	2+1
PL PATH 519	POST HARVEST DISEASES	2+1
PL PATH 520/ ENT 520 ^s	PLANT QUARANTINE	2+0
PL PATH 591	MASTER'S SEMINAR	1+0
PL PATH 599	MASTER'S RESEARCH	20
PL PATH 601	ADVANCED MYCOLOGY	2+1
PL PATH 602	ADVANCED VIROLOGY	2+1
PL PATH 603	ADVANCED BACTERIOLOGY	2+1
PL PATH 604**	MOLECULAR BASIS OF HOST-PATHOGEN INTERACTION	2+1
PL PATH 605	PRINCIPLES AND PROCEDURES OF CERTIFICATION	1+0
PL PATH 606	PLANT BIOSECURITY AND BIOSAFETY	2+0
PL PATH 691	DOCTORAL SEMINAR I	1+0
PL PATH 692	DOCTORAL SEMINAR II	1+0
PL PATH 699	DOCTORAL RESEARCH	45

*Compulsory for Master's programme; ** Compulsory for Ph. D. programme;

^s Cross-listed with Entomology

AGRICULTURAL ECONOMICS

Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
AG ECON 501*	MICRO ECONOMIC THEORY AND APPLICATIONS	2+0
AG ECON 502*	MACRO ECONOMICS AND POLICY	2+0
AG ECON 503*	EVOLUTION OF ECONOMIC THOUGHT	1+0
AG ECON 504*	AGRICULTURAL PRODUCTION ECONOMICS	1+1
AG ECON 505*	AGRICULTURAL MARKETING & PRICE ANALYSIS	2+1
AG ECON 506*	RESEARCH METHODOLOGY FOR SOCIAL SCIENCES	1+1
AG ECON 507*	ECONOMETRICS	2+1
AG ECON 508*	LINEAR PROGRAMMING	1+1
AG ECON 509*	AGRICULTURAL FINANCE AND PROJECT MANAGEMENT	2+1
AG ECON 511	INTERNATIONAL ECONOMICS	1+1
AG ECON 512	INSTITUTIONAL ECONOMICS	1+0
AG ECON 513	AGRICULTURAL DEVELOPMENT POLICY ANALYSIS	2+0
AG ECON 514	NATURAL RESOURCE AND ENVIRONMENTAL ECONOMICS	1+1
AG ECON 515	INTELLECTUAL PROPERTY MANAGEMENT	1+0
AG ECON 516 #	COMPUTER APPLICATIONS FOR AGRICULTURAL ECONOMICS	2+1
AG ECON 517	RURAL MARKETING	2+0
AG ECON 518	COMMODITY FUTURES TRADING	2+0
AG ECON 591	MASTER'S SEMINAR	1+0
AG ECON 599	MASTER'S RESEARCH	20
AG ECON 601**	ADVANCED MICRO-ECONOMIC ANALYSIS	1+1
AG ECON 602**	ADVANCED MACRO-ECONOMIC ANALYSIS	2+0
AG ECON 603**	ADVANCED ECONOMETRICS	2+1
AG ECON 604**	ADVANCED PRODUCTION ECONOMICS	2+1
AG ECON 605**	QUANTITATIVE DEVELOPMENT POLICY ANALYSIS	1+1
AG ECON 606**	ADVANCED AGRICULTURAL MARKETING AND PRICE ANALYSIS	2+1
AG ECON 608	COMMODITY FUTURES TRADING	2+0
AG ECON 609	NATURAL RESOURCE MANAGEMENT	1+1
AG ECON 610	ENVIRONMENTAL ECONOMICS	2+0
AG ECON 691	DOCTORAL SEMINAR I	1+0
AG ECON 692	DOCTORAL SEMINAR II	1+0
AG ECON 699	DOCTORAL RESEARCH	45

* Compulsory for Master's programme; ** Compulsory for Doctoral programme

Cross-listed with Statistics

The following Basic Supporting courses (5 credits) are recommended for M. Sc. / Ph. D. programmes

M. Sc.		
STAT	MATHEMATICS FOR AGRICULTURAL ECONOMICS	3
STAT	STATISTICAL METHODS FOR SOCIAL SCIENCES	2
Ph. D.		
STAT	MULTIVARIATE ANALYSIS	2
STAT	OPERATIONS RESEARCH	3

**AGRICULTURAL
EXTENSION Course
Structure – at a Glance**

CODE	COURSE TITLE	CREDITS
EXT 501*	DEVELOPMENT PERSPECTIVES OF EXTENSION EDUCATION	1+1
EXT 502*	DEVELOPMENT COMMUNICATION AND INFORMATION MANAGEMENT	2+1
EXT 503*	DIFFUSION AND ADOPTION OF INNOVATIONS	2+1
EXT 504*	RESEARCH METHODS IN BEHAVIORAL SCIENCES	2+1
EXT 505*	E-EXTENSION	2+1
EXT 506*	ENTREPRENEURSHIP DEVELOPMENT AND MANAGEMENT IN EXTENSION	2+1
EXT 507*	HUMAN RESOURCE DEVELOPMENT	2+1
EXT 508	VISUAL COMMUNICATION	2+1
EXT 509	PARTICIPATORY METHODS FOR TECHNOLOGY DEVELOPMENT AND TRANSFER	1+1
EXT 510	GENDER SENSITIZATION FOR DEVELOPMENT	2+1
EXT 511	PERSPECTIVES OF DISTANCE EDUCATION	2+0
EXT 512	MARKET-LED EXTENSION	2+0
EXT 591	MASTER'S SEMINAR	1+0
EXT 599	MASTER'S RESEARCH	20
EXT 601**	ADVANCES IN AGRICULTURAL EXTENSION	2+1
EXT 602**	ADVANCED DESIGN AND TECHNIQUES IN SOCIAL SCIENCE RESEARCH	2+1
EXT 603**	ADVANCES IN TRAINING TECHNOLOGY	2+1
EXT 604**	ORGANIZATIONAL DEVELOPMENT	2+1
EXT 605**	ADVANCED INSTRUCTIONAL TECHNOLOGY	2+1
EXT 606	THEORY CONSTRUCTION IN SOCIAL SCIENCES	2+0
EXT 607	ADVANCED MANAGEMENT TECHNIQUES	2+1
EXT 608	MEDIA MANAGEMENT	2+1
EXT 609	TRANSFER OF TECHNOLOGY IN AGRICULTURE	2+1
EXT 691	DOCTORAL SEMINAR I	1+0
EXT 692	DOCTORAL SEMINAR II	1+0
EXT 699	DOCTORAL RESEARCH	45

* Compulsory for Master's programme; ** Compulsory for Doctoral programme

The following Basic Supporting courses (5 credits) are recommended for M. Sc. / Ph. D. programmes

M. Sc.		
STAT	STATISTICAL METHODS FOR SOCIAL SCIENCES	2+1
STAT	NON-PARAMETRICS	2+0
Ph. D.		
STAT	STATISTICS	2+1
STAT	COMPUTER APPLICATION	1+1

AGRICULTURAL STATISTICS/STATISTICS

Course Structure - at a Glance

1. Service Courses (For M. Sc. and Ph.D. programs of other disciplines)

AG. STAT. 501	MATHEMATICAL METHODS FOR APPLIED SCIENCES	3+0
AG. STAT. 511	STATISTICAL METHODS FOR APPLIED SCIENCES	2+0
AG. STAT. 512	EXPERIMENTAL DESIGNS	2+0
AG. STAT. 521	APPLIED REGRESSION ANALYSIS	2+1
AG. STAT. 531	DATA ANALYSIS USING STATISTICAL PACKAGES	2+1
AG. STAT. 533	STATISTICAL METHODS FOR CROP PROTECTION - I	2+1
AG. STAT. 534	STATISTICAL METHODS FOR CROP PROTECTION - II	2+1
AG. STAT. 535	STATISTICAL METHODS FOR CROP PRODUCTION - I	2+1
AG. STAT. 536	STATISTICAL METHODS FOR CROP PRODUCTION - II	2+1
AG. STAT. 537	STATISTICAL METHODS FOR SOCIAL SCIENCES - I	2+1
AG. STAT. 538	STATISTICAL METHODS FOR SOCIAL SCIENCES - II	2+1
AG. STAT. 539	STATISTICAL METHODS FOR CROP IMPROVEMENT	2+1
AG. STAT. 540	STATISTICAL GENETICS - II	2+1
AG. STAT. 541	STATISTICAL METHODS FOR ANIMAL SCIENCES	2+1
AG. STAT. 542	AGRICULTURAL STATISTICS	2+1

2. Major / Core Courses for M. Sc. (Statistics / Agricultural Statistics)

AG. STAT. 551	MATHEMATICAL METHODS – I	3+0
AG. STAT. 552	MATHEMATICAL METHODS – II	2+0
AG. STAT. 560	PROBABILITY THEORY	2+0
AG. STAT. 561	STATISTICAL METHODS	2+0
AG. STAT. 562	STATISTICAL INFERENCE	2+1
AG. STAT. 563	MULTIVARIATE ANALYSIS	2+1
AG. STAT. 564	DESIGN OF EXPERIMENTS	2+1
AG. STAT. 565	SAMPLING TECHNIQUES	2+1
AG. STAT. 566	STATISTICAL GENETICS – I	2+1
AG. STAT. 567	REGRESSION ANALYSIS	1+1
AG. STAT. 568	STATISTICAL COMPUTING	1+1
AG. STAT. 569	TIME SERIES ANALYSIS	1+1
AG. STAT. 570	ACTUARIAL STATISTICS	2+0
AG. STAT. 571	BIOINFORMATICS	2+0
AG. STAT. 572	ECONOMETRICS	2+1
AG. STAT. 573	STATISTICAL QUALITY CONTROL	2+0
AG. STAT. 574	OPTIMIZATION TECHNIQUES	1+1
AG. STAT. 575	DEMOGRAPHY	2+0
AG. STAT. 576	STATISTICAL METHODS FOR LIFE SCIENCES	2+0
AG. STAT. 577	STATISTICAL ECOLOGY	2+0
AG. STAT. 578	COMPUTER FUNDAMENTALS AND PROGRAMMING	2+1
AG. STAT. 579	INTRODUCTION TO NETWORKING AND INTERNET APPLICATIONS	2+1
AG. STAT. 591	MASTER'S SEMINAR	1+0
AG. STAT. 599	MASTER'S RESEARCH	10+0

NOTE:

1. AG. STAT. 551 and AG. STAT. 552 are supporting courses. These are compulsory for all the students of Statistics / Agricultural Statistics.
2. AG. STAT. 560 – AG. STAT. 569 are core courses to be taken by all the students of Statistics / Agricultural Statistics.
3. AG. STAT. 591 and AG. STAT. 599 are compulsory for all the students of Statistics / Agricultural Statistics.
4. A student has to take a minimum of 36 credits course work, excluding the supporting courses, seminar and research.

3. Ph. D. (Statistics / Agricultural Statistics)

AG.STAT. 601	ADVANCED STATISTICAL COMPUTING	2+1
AG.STAT. 602	SIMULATION TECHNIQUES	1+1
AG.STAT. 611	ADVANCED STATISTICAL METHODS	2+0
AG.STAT.612	ADVANCED STATISTICAL INFERENCE	3+0
AG.STAT. 613	ADVANCED DESIGN OF EXPERIMENTS	2+0
AG.STAT. 614	ADVANCED SAMPLING TECHNIQUES	2+0
AG.STAT. 615	ADVANCED STATISTICAL GENETICS	2+0
AG.STAT.616	STATISTICAL MODELING	1+1
AG.STAT.617	ADVANCED TIME SERIES ANALYSIS	2+0
AG.STAT.618	STOCHASTIC PROCESSES	2+0
AG.STAT.619	SURVIVAL ANALYSIS	2+0
AG.STAT. 620	ADVANCED BIOINFORMATICS	2+0
AG.STAT. 621	ADVANCED ECONOMETRICS	2+0
AG.STAT. 651	RECENT ADVANCES IN THE FIELD OF SPECIALIZATION	1+0
AG.STAT.691	DOCTORAL SEMINAR I	1+0
AG.STAT.692	DOCTORAL SEMINAR II	1+0
AG.STAT.699	DOCTORAL RESEARCH	45+0

NOTE:

1. AG. STAT. 601 and AG. STAT. 602 are supporting courses. These are compulsory for all the students of Statistics / Agricultural Statistics.
2. AG. STAT. 691, AG. STAT. 692, AG. STAT. 651 and AG. STAT. 699 are compulsory for all the students of Statistics / Agricultural Statistics.
3. A student has to take a minimum of 18 credits course work, excluding the supporting courses, seminar and research.
4. A student has to take two seminars.

FRUIT SCIENCE

Course Structure – at a Glance

CODE COURSE TITLE CREDITS

FSC 501*	TROPICAL AND DRY LAND FRUIT PRODUCTION	2+1
FSC 502*	SUBTROPICAL AND TEMPERATE FRUIT PRODUCTION	2+1
FSC 503*	BIODIVERSITY AND CONSERVATION OF FRUIT CROPS	2+1
FSC 504	CANOPY MANAGEMENT IN FRUIT CROPS	1+1
FSC 505	PROPAGATION AND NURSERY MANAGEMENT FOR FRUIT CROPS	2+1
FSC 506*	BREEDING OF FRUIT CROPS	2+1
FSC 507	POST HARVEST TECHNOLOGY FOR FRUIT CROPS	2+1
FSC 508	GROWTH AND DEVELOPMENT OF HORTICULTURAL CROPS	2+1
FSC 509	BIOTECHNOLOGY OF HORTICULTURAL CROPS	2+1
FSC 510	ORGANIC HORTICULTURE	1+1
FSC 511	PROTECTED FRUIT CULTURE	2+1
FSC 512	GAP FOR HORTICULTURAL CROPS	1+0
FSC 513	CLIMATE MANAGEMENT IN HORTICULTURAL PRODUCTION	1+0
FSC 591	MASTER'S SEMINAR	1+0
FSC 599	MASTER'S RESEARCH	20
FSC 601**	ADVANCES IN BREEDING OF FRUIT CROPS	2+1
FSC 602**	ADVANCES IN PRODUCTION OF FRUIT CROPS	2+1
FSC 603	ADVANCES IN GROWTH REGULATION OF FRUIT CROPS	2+1
FSC 604	GENOMICS AND BIOINFORMATICS IN HORTICULTURE	2+1
FSC 605	BIOTIC AND ABIOTIC STRESS MANAGEMENT IN HORTICULTURAL CROPS	2+1
FSC 606	SYSTEMATICS OF FRUIT CROPS	2+1
FSC 691	DOCTORAL SEMINAR I	1+0
FSC 692	DOCTORAL SEMINAR II	1+0
FSC 699	DOCTORAL RESEARCH	45

*Compulsory for Master's programme; ** Compulsory for Doctoral programme

VEGETABLE SCIENCE

Course Structure – at a Glance

CODE COURSE TITLE CREDITS

VSC 501*	PRODUCTION TECHNOLOGY OF COOL SEASON VEGETABLE CROPS	2+1
VSC 502*	PRODUCTION TECHNOLOGY OF WARM SEASON VEGETABLE CROPS	2+1
VSC 503*	BREEDING OF VEGETABLE CROPS	2+1
VSC 504*	GROWTH AND DEVELOPMENT OF VEGETABLE CROPS	2+1
VSC 505	SEED PRODUCTION TECHNOLOGY OF VEGETABLE CROPS	2+1
VSC 506	SYSTEMATICS OF VEGETABLE CROPS	1+1
VSC 507	PRODUCTION TECHNOLOGY OF UNDEREXPLOITED VEGETABLE CROPS	1+1
VSC 508	ORGANIC VEGETABLE PRODUCTION TECHNOLOGY	1+1
VSC 509	FUNDAMENTALS OF PROCESSING OF VEGETABLES	2+1
VSC 591	MASTER'S SEMINAR	1+0
VSC 599	MASTER'S RESEARCH	20
VSC 601**	ADVANCES IN VEGETABLE PRODUCTION	2+1
VSC 602**	ADVANCES IN BREEDING OF VEGETABLE CROPS	2+1
VSC 603**	PROTECTED CULTIVATION OF VEGETABLE CROPS	1+1
VSC 604**	BIOTECHNOLOGY IN VEGETABLE CROPS	2+1
VSC 605	SEED CERTIFICATION, PROCESSING AND STORAGE OF VEGETABLE CROPS	2+1
VSC 606	ABIOTIC STRESS MANAGEMENT IN VEGETABLE CROPS	2+1
VSC 691	DOCTORAL SEMINAR I	1+0
VSC 692	DOCTORAL SEMINAR II	1+0
VSC 699	DOCTORAL RESEARCH	45

* Compulsory for Master's programme; **Compulsory for Doctoral programme

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FLORICULTURE AND LANDSCAPE ARCHITECTURE

Course Structure – at a Glance

CODE COURSE TITLE CREDITS

FLA.501*	BREEDING OF FLOWER CROPS AND ORNAMENTAL PLANTS	2+1
FLA.502*	PRODUCTION TECHNOLOGY OF CUT FLOWERS	2+1
FLA.503*	PRODUCTION TECHNOLOGY OF LOOSE FLOWERS	2+1
FLA.504*	LANDSCAPING AND ORNAMENTAL GARDENING	2+1
FLA.505	PROTECTED FLORICULTURE	2+1
FLA.506	VALUE ADDITION IN FLOWERS	2+1
FLA.507*	TURFING AND TURF MANAGEMENT	2+1
FLA.508	CAD FOR OUTDOOR AND INDOORSCAPING	2+1
FLA 591	MASTER’S SEMINAR	1+0
FLA 599	MASTER’S RESEARCH	20
FLA 601**	ADVANCES IN BREEDING OF FLOWER CROPS	2+1
FLA 602**	ADVANCES IN FLOWER PRODUCTION TECHNOLOGY	2+1
FLA 603	ADVANCES IN PROTECTED AND PRECISION FLORICULTURE	1+1
FLA 604**	ADVANCES IN LANDSCAPE ARCHITECTURE	1+2
FLA 605	ADVANCES IN BIOCHEMISTRY AND BIOTECHNOLOGY OF FLOWERS	2+1
FLA 691	DOCTORAL SEMINAR I	1+0
FLA 692	DOCTORAL SEMINAR II	1+0
FLA 699	DOCTORAL RESEARCH	45

*Compulsory for Master’s programme; ** Compulsory for Doctoral programme

PLANTATION, SPICES, MEDICINAL & AROMATIC CROPS

Course Structure – at a Glance

COURSE TITLE CREDITS

PSMA 501* PRODUCTION OF PLANTATION CROPS	2+1
PSMA 502* PRODUCTION TECHNOLOGY OF SPICE CROPS	2+1
PSMA 503* PRODUCTION TECHNOLOGY OF MEDICINAL AND AROMATIC CROPS	2+1
PSMA 504* BREEDING OF PLANTATION CROPS AND SPICES	2+1
PSMA 505* BREEDING OF MEDICINAL AND AROMATIC CROPS	2+1
PSMA 506* PROCESSING OF PLANTATION CROPS, SPICES, MEDICINAL AND AROMATIC PLANTS	2+1
PSMA 507 ORGANIC SPICE AND PLANTATION CROP PRODUCTION TECHNOLOGY	2+1
PSMA 508 UNDEREXPLOITED MEDICINAL AND AROMATIC PLANTS	1+1
PSMA 591 MASTER'S SEMINAR	1+0
PSMA 599 MASTER'S RESEARCH	20
PSMA 601** ADVANCES IN PRODUCTION OF PLANTATIONCROPS	2+1
PSMA 602** ADVANCES IN SPICE PRODUCTION	2+1
PSMA 603** ADVANCES IN MEDICINAL AND AROMATIC CROP PRODUCTION TECHNOLOGY	2+1
PSMA 604** ADVANCES IN BREEDING OF PLANTATION CROPS AND SPICES	2+1
PSMA 605 ADVANCES IN BREEDING OF MEDICINAL AND AROMATIC CROPS	2+1
PSMA 606 BIOTECHNOLOGY IN PLANATION CROPS AND SPICES	1+1
PSMA 607 POST HARVEST PROCESSING AND EXTRACTION IN MEDICINAL AND AROMATIC PLANTS	2+1
PSMA 608 ENVIRONMENTAL HORTICULTURE	2+1
PSMA 691 DOCTORAL SEMINAR I	1+0
PSMA 692 DOCTORAL SEMIANR II	1+0
PSMA 699 DOCTORAL RESEARCH	45

* Compulsory for M. Sc. Programme; ** Compulsory for Doctoral programme

POST HARVEST TECHNOLOGY

Course Structure – at a Glance

CODE	COURSE TITLE	CREDITS
PHT:501*	PRINCIPLES OF POST HARVEST MANAGEMENT FOR PERISHABLE HORTICULTURAL PRODUCE	1+1
PHT:502*	FUNDAMENTALS OF PROCESSING OF FRUITS AND VEGETABLES.	1+1
PHT:503*	LABORATORY ANALYSIS AND QUALITY ASSURANCE TECHNIQUES OF FRESH AND PROCESSED HORTICULTURAL PRODUCE	1+1
PHT:504*	TECHNIQUES FOR SENSORY ANALYSIS FOR PROCESSED PRODUCE	1+1
PHT:505*	PRE-HARVEST PRACTICES AFFECTING POST HARVEST LIFE OF PERISHABLE HORTICULTURAL PRODUCE	2+0
PHT:506	PRINCIPLES OF POST HARVEST MANAGEMENT OF SPICES AND PLANTATION CROPS.	1+1
PHT:507	PRINCIPLES OF POST HARVEST MANAGEMENT OF ORNAMENTAL, MEDICINAL AND AROMATIC PLANTS	1+1
PHT:508	PROCESSING OF PLANTATION CROPS, SPICES, MEDICINAL AND AROMATIC PLANTS	1+1
PHT:509	PACKAGING OF PERISHABLE HORTICULTURAL PRODUCE	1+1
PHT:510	PACKAGING TECHNOLOGY OF PROCESSED HORTICULTURAL PRODUCE	2+1
PHT:511	PROCESS ENGINEERING OF HORTICULTURAL CROPS	2+1
PHT:512*	IN-PLANT TRAINING	-
PHT:591	MASTER'S SEMINAR	1+0
PHT:599	MASTER'S RESEARCH	20
PHT:601**	ADVANCES IN POST HARVEST MANAGEMENT OF FRESH HORTICULTURAL PRODUCE	2+0
PHT:602**	ADVANCES IN LABORATORY TECHNIQUES AND RESEARCH METHODOLOGY IN POST HARVEST TECHNOLOGY	1+2
PHT:603**	ADVANCES IN PROCESSING TECHNOLOGY OF HORTICULTURAL CROPS	3+0
PHT:604	PACKAGING HOUSE OPERATIONS AND TRANSPORTATION OF FRESH HORTICULTURAL PRODUCE	2+0
PHT:605	COMMERCIAL ASPECTS OF POST HARVEST TECHNOLOGY OF HORTICULTURAL PRODUCE	2+0
PHT:606	DEHYDRATION TECHNOLOGY OF HORTICULTURAL PRODUCE	2+1
PHT:607	FREEZING TECHNOLOGY OF HORTICULTURAL PRODUCE	2+1
PHT:608	FRUIT AND VEGETABLE FERMENTATION TECHNOLOGY	2+1
PHT:609	WASTE MANAGEMENT FROM HORTICULTURE PROCESSING INDUSTRIES	2+1
PHT-691	DOCTORAL SEMINAR I	1+0
PHT-692	DOCTORAL SEMINAR II	1+0
PHT-699	DOCTORAL RESEARCH	45

*COMPULSORY FOR M.Sc. Programme; ** Compulsory for Doctoral Programme.