



FACULTY OF SOCIAL SCIENCES & HUMANITIES



FACULTY OF SOCIAL SCIENCE & HUMANITIES



Prof. Dr. Irfan Ahmad Baig
Dean

Message from Dean

The Global economy is becoming increasingly competitive and assurance of raw material provision now demands high level of productivity and cost effectiveness. Economics is a social science that uses sound data analysis and logical thinking to address the microeconomic consequences of human motives, incentives, regulatory and policy structures to serve as building blocks for institutions and macro economy. Economics in general can help with better decision-making, social welfare, planning and issue handling. Those who have work associated to economics can tell you what a fascinating area this is to work on. Our curriculum is continually informed by research and industry insights to be bold, rigorous and global in outlook.

As Dean, I am much privileged to introduce the Faculty of Social Sciences & Humanities. We have a team of young enthusiastic faculty members who are ready to accept challenges in the societal dimension of agriculture business and its related subjects. Agriculture based business and economics education must be responsive to this dynamic environment. We are committed to enhancing our applied research outcomes, expanding our curriculum and strengthening our connections with industry to help shape the world of agribusiness and economics in Pakistan and internationally. My team is well equipped and holds international exposure to compare and design the modern day solutions for a traditional agricultural business sector.

Producing industry-ready graduates and through impactful research, our faculty informs and advances the policy and practice that underpins the ever evolving agribusiness, agricultural and resource economics and social environment in which we live. I encourage you to join us today to lead the world of business tomorrow.

FACULTY OF SOCIAL SCIENCE & HUMANITIES

Faculty of Social Sciences and Humanities consists of four departments:

1. Department of Agribusiness and Applied Economics
2. Department of Computer Science
3. Department of Islamic Studies
4. Department of English
5. Department of Statistics
6. Department of Agricultural Extension

The faculty with its constituent organs has been exploring socio-economic issues of national/international importance to assist policy makers and development practitioners in formulation of pro-poor policies for sustainable development. Faculty of Social Sciences and Humanities is currently offering degree programs at undergraduate level in the disciplines of Agricultural and Resource Economics, Agribusiness, Computer Sciences and Information Technology. The Faculty also offers postgraduate degree programs in Agricultural Economics, and Computer Sciences. Keeping in view, the future requirements and challenges of 21st century, the Faculty has upgraded and revised its institutional programs both at undergraduate and postgraduate levels. The Faculty looks forward to initiate postgraduate degree programs in Agribusiness to cater market needs and public demand.



DEPARTMENT OF AGRIBUSINESS & APPLIED ECONOMICS

Population of Pakistan is increasing at an alarming rate and its majority depends directly or indirectly on agriculture sector for their livelihood. Therefore, agriculture development is inevitable for ensuring food security, improving quality of life, alleviation of poverty and overall development in the rural areas. The Department of Agribusiness and Applied Economics is well aware of changing scenarios of the sector and emerging challenges of rural economy of Pakistan and is committed to equip the young social and agricultural scientists with updated knowledge and sophisticated research skills enabling them to handle day to day economics, social and environmental challenges in the achieving the goal of sustainable rural development. To cater the needs, the department offers following undergraduate programmes.

B.Sc. (Hons.) Agriculture with major Agricultural and Resource Economics

B.Sc. (Hons.) Agriculture in Agricultural and Resource Economics degree seeks to promote tertiary education and human capacity building in agricultural and resource economics. Programme mission includes achieving food security and sustainable agricultural development by providing qualified professionals of agricultural economics to contribute in various national as well as international organizations for the purpose.



DEPARTMENT OF AGRIBUSINESS & APPLIED ECONOMICS

BBA Agribusiness

BBA Agribusiness primarily focuses on polishing and intellectual capability of our students through personal meeting, guidance in combination with presentations and extensive discussion in the classrooms. Above all, the achievement of this degree is to provide an excellent blend of faculty from academia as well as executives from industry (businesses, banks and other financial and marketing fields) because we believe in excellence in agricultural business education.

B.Sc. (Hons.) Agriculture major in Farm Management

B.Sc. (Hons.) Agriculture major in Farm Management is aimed at improving the skills of future farm managers to prepare them for the challenges and opportunities of a dynamic and complex agri-system.



Department of AGRIBUSINESS & APPLIED ECONOMICS



DR. IRFAN AHMAD BAIG

Position: Professor & Dean
Qualification: Ph.D
Expertise: Climate change, Resource use efficiency, Water resource management
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DR. NASIR NADEEM

Position: Associate Professor
Qualification: Ph.D
Expertise: Agricultural Productivity, Impact analysis, Agriculture policy analysis
Email: nasir.nadeem@mnsuam.edu.pk



DR. UMAR IJAZ AHMED

Position: Assistant Professor
Qualification: Ph.D
Expertise: Food Security, Agricultural Policy Analysis, Market Integration
Email: umar.ijaz@mnsuam.edu.pk



MR. MUHAMMAD ARQAM IQBAL

Position: Lecturer (Agricultural Economics)
Qualification: M.Sc. (Hons.) Agricultural Economics
Expertise: Resource use efficiency and productivity, Agricultural policy and economic analysis of major crops
Email: arqam.iqbal@mnsuam.edu.pk



MR. MUHAMMAD ALI IMRAN

Position: Lecturer (Agricultural Economics)
Qualification: M.Sc. (Hons.) Agricultural Economics
Expertise: Economics of Climate-smart agriculture (CSA), Resource management and sustainable agriculture Analysis, Market Integration
Email: ali.imran@mnsuam.edu.pk



DR. SAMI ULLAH

Position: Assistant Professor
Qualification: Ph.D
Expertise: Productivity and efficiency analysis, Dairy markets, Agricultural policy, Market integration
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MR. MANAN ASLAM

Position: Lecturer
Qualification: MS Agribusiness and Marketing
Expertise: Agribusiness, Agricultural Marketing, Consumer Behavior, Business Ethics and Entrepreneurship
Email: manan.aslam@mnsuam.edu.pk



MS. BEENISH SARFRAZ

Position: Lecturer
Qualification: MSBA Marketing
Expertise: Consumer behavior, Marketing and Management, Business ethic
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MR. SHOAIB NASIR

Position: Lecturer (Agricultural Economics)
Qualification: Masters of Science (ENVIROFOOD), Germany
M.Sc. (Hons.) Environmental and Resource Economics, UAF
Expertise: Natural Resource Economics, Global GAP and International Standards Compliance
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Department of **COMPUTER SCIENCE**

Computer Science is the subject of experimentation and engineering that form the foundation for the design and function of information processing systems. It is the scientific approach of computation and a systematic study of feasibility, structure, expression and mechanization that enables the efficient and effective access to information systems. To follow this vision, the undergraduate programs in Computer Science and Information Technology are being offered.

The Bachelor of Science in Computer Science (BSCS) and the Bachelor of Science in Information Technology (BSIT) programs are being offered at MNS-University of Agriculture, Multan since 2014. The Department of Computer Science is dedicated to train and produce quality graduates who can utilize the comprehensive knowledge in various fields of Computer Science and Technology. These programs provide an in-depth theoretical as well as practical knowledge that will enable the students to apply their skills in the emerging areas of computer sciences.

The curriculum of BS(CS) and BS(IT) programs is designed to train the students with advanced knowledge, research and development skills in Software Engineering, Computer Programming, Computer Networks, Information and Network Security, Artificial Intelligence, DBMS and Operating System.



Department of COMPUTER SCIENCE



DR. AYESHA HAKIM

Position: Assistant Professor & Head of Department
Qualification: Ph.D
Expertise: Shape and Audio Analysis, Affective Computing,
Computer Vision & Machine Learning
Email: ayasha.hakim@mnsuam.edu.pk



DR. ABDUL RAZZAQ

Position: Assistant Professor
Qualification: Ph. D
Expertise: Skeleton Extraction and Animation, Digital
Image Processing & Machine Learning
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DR. AAMIR HUSSAIN

Position: Assistant Professor
Qualification: Ph.D
Expertise: Smart System, Cyber Security, Wireless
Sensor Networks
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MR. ADNAN ALTAF

Mr. Adnan Altaf
Position: Lecturer
Qualification: MS Computer Engineering
Expertise: Digital Image Processing
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MS. JAVERIA JABEEN

Position: Research Officer
Qualification: MS Computer Science
Expertise: Software Engineering
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MR. ISRAR HUSSAIN

Position: Lecturer
Qualification: MS Information Technology
Expertise: Semantic Web and Database
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شعبہ علوم اسلامیہ

یونیورسٹی آف ایگریکلچر ملتان زرعی و نباتاتی علوم کی تعلیم و تحقیق کا ادارہ و تربیت گاہ ہے۔ یونیورسٹی انتظامیہ نے اس بات کا ادراک کیا کہ طلباء و طالبات کے لیے جس قدر زرعی علوم کا جاننا اہم ہے اتنا ہی دینی و سماجی علوم سے واقفیت حاصل کرنا بھی ضروری ہے۔ زراعت، تجارت، صنعت، ٹیکنالوجی کے علوم کا ارتقاء ایک سماج ہی میں ہوتا ہے۔ سماج میں موجود افراد کا ایک دوسرے سے گہرا ربط و تعلق ہوتا ہے۔ تمام لوگ ایک دوسرے سے کسی نہ کسی (معاشرتی و کسبی، نسبی و فکری) رشتے میں جڑے ہوتے ہیں۔ کسی بھی انسان کے مثبت یا منفی رویے اور بلند و پست اخلاق اس کے سماجی کردار سے نمایاں ہوتے ہیں۔ اعلیٰ کردار کی تعمیر کے لیے کسی اعلیٰ فکر کا ہونا ضروری ہے۔ تاکہ یہ جانا جائے کہ سماجی تقاضے کیا ہیں؟ سماج میں موجود افراد کے باہمی تعلقات کی اساس کیا ہے؟ انسانوں کے مسلمہ اخلاق کون سے ہیں؟ طلباء و طالبات میں دین اسلام کی اعلیٰ فکر پر معاشرتی تشکیل کا شعور بیدار کیا جائے۔ تاکہ وہ انسانی اجتماع کو ترقی دینے والے اعلیٰ اخلاق کو پروان چڑھائیں اور اجتماع کو نقصان دینے والے برے اخلاق سے محفوظ رہیں۔ ان اہم معاشرتی امور کو عمل میں لانے کے لیے یونیورسٹی میں شعبہ علوم اسلامیہ کا قیام عمل میں لایا گیا۔ جس کا مقصد یونیورسٹی کے طلباء و طالبات میں دینی علوم کے اساسی ماخذ قرآن حکیم کے افکار عالیہ، خاتم النبیین حضرت محمد ﷺ کے اسوہ حسنہ، احادیث مبارکہ کے مقدس علوم اور تاریخ اسلام کے ساتھ ساتھ دینی افکار کی اساس پر قانون، سماج، سیاست، معیشت کا تعارف پیدا کرنا ہے۔ طلباء و طالبات میں مثبت سماجی رویوں کی تشکیل، اعلیٰ اخلاق کی تعمیر، اوصاف حمیدہ کی افزائش کرنا ہے۔

مقاصد:

طلباء و طالبات میں اللہ سے تعلق، انسان دوستی اور سماجی خدمت جیسے اعلیٰ تصورات کو پروان چڑھانا۔ تاکہ وہ خلوص نیت، بلند اخلاق اور شعوری کردار کے حامل ہوں۔ وہ انسان دوست جذبہ کے ساتھ زرعی علوم کو ترقی دیں اور قومی و بین الاقوامی سطح پر ملک و ملت کا نام روشن کریں۔



شعبہ علوم اسلامیہ

غرض و غایت:

طلبا و طالبات کو دینی تعلیمات سے روشناس کروانے کے ساتھ ساتھ

- ۱۔ عصر حاضر کے نظریاتی، اخلاقی، سماجی، سیاسی اور معاشی رجحانات سے آگاہ کرنا۔
- ۲۔ جذباتیت سے بلند ہو کر عصر حاضر کے چیلنجز کو شعوری بنیادوں پر سمجھنے کا اہل بنانا۔
- ۳۔ دین اسلام کی آفاقی تعلیمات کو سائنٹفک اور موثر انداز سے پیش کرنے کی صلاحیت پیدا کرنا۔
- ۴۔ جدید ٹیکنالوجی کے استعمال کے ساتھ ساتھ اس کے مثبت سماجی کردار و اثرات سے آگاہ کرنا۔

اہداف:

طلبا و طالبات کے صحت مند رویوں کی تعمیر کرنا اور تربیت دینا تاکہ وہ

- ۱۔ دینی شعائر کا احترام کریں اور دینی احکامات کو عمل میں لائیں۔
- ۲۔ معاشرہ میں رواداری، بھائی چارہ، ذہنی وسعت اور اعتدال جیسی صحت بخش اقدار کا مظاہرہ کریں اور ان کا پرچار کریں۔
- ۳۔ فرقہ واریت، گروہیت، عصبیت اور طبقاتیت کے مقابلہ پر وحدت انسانیت، بھائی چارہ، امن پسندی اور مساوات کا عملی نمونہ بنیں۔
- ۴۔ شعبہ زراعت میں ایجادات کے ذریعہ انسانوں کو سہولیات بہم پہنچانے میں کردار ادا کریں۔



MR. RASHEED AHMAD

Position: Lecturer

Qualification: M. Phil Islamic Studies

Expertise: Islamic Social Thoughts & Tafseeri

Literature in colonial era of subcontinent

Email: rasheed.ahmad@mnsuam.edu.pk

Department of **ENGLISH**

English is an integral part of the curriculum in all scientific disciplines including Agriculture Sciences, Agribusiness, Agriculture Engineering, Computer Science and Information Technology etc. It serves as a bridge between the students' years of study at university and the professional life, which require them to use English on a daily basis. At present, the University is offering various courses at undergraduate and postgraduate levels with 2-4 compulsory courses of English, such as English Composition and Comprehension, Technical and Business English writing, Functional English and Communication & Presentation Skills. The Department of English at MNSUAM caters for the need of students' English language skills with emphasis on enhancing their language comprehension, technical / scientific writing, communication and presentation skills. Besides teaching, the department is actively engaged in providing support to the students for co-curricular activities like essay writing, debate competitions etc. The department has skillful and experienced teaching faculty to meet the requirement of the courses by using syllabi that help students to achieve their English language learning objectives during the course.

Department of ENGLISH



MR. AZHER KHAN

Position: Lecturer
Qualification: MS-English (Linguistics & Literature)
Expertise: Language Development, Creative & Academic Writing, English Literature, Communication Skills
Email: azher.khan@mnsuam.edu.pk



MS. BUKHTAWAR RANA

Position: Research Officer (English)
Qualification: M.Phil (English)
Expertise: Vocabulary Building, Pedagogical Techniques, Teaching Language through Literature, Poetry
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Department of STATISTICS

The agricultural investigations are based on the application of statistical methods and procedures which are helpful in testing hypotheses using observed data, in making estimations of parameters and in predictions. The application of statistical principles and methods is necessary for effective practice in resolving the different problems that arise in the many branches of agricultural activity. Department of Statistics at MNS University of Agriculture Multan puts all efforts to equip the students with effective training in the field of statistics by teaching them basic and modern knowledge of the subject. The ambition is to produce graduates with skills to predict, forecast and estimate the real time data from agricultural trials and fields.



MS. SAMRA NASEEM

Position: Lecturer

Qualification: M.Phil Statistics

Expertise: Applied statistics, Data analyses

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Department of AGRICULTURAL EXTENSION

Agricultural Extension education plays multipurpose role in the provision of need-based and demand-based knowledge by serving as a bridge between research and farming community. The program of Agricultural Extension Education at MNS-UAM is designed to provide necessary skills in understanding extension oriented activities in agriculture related disciplines. The curriculum highlights the emerging issues of new and economically important agriculture and livestock in Pakistan. Moreover, the Department is committed to quality teaching and research with improved sustainable development.



DR. MUDSSAR YASIN

Position: Assistant Professor

Qualification: PhD Agri. Extension

Expertise: Agro-technology transfer, Communication process,
Rural development

Email: mudssar.yasin@mnsuam.edu.pk



Scheme of Studies

B.Sc. (Hons.) Agriculture MAJOR AGRICULTURAL & RESOURCE ECONOMICS

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SEMESTER-V

Course No.	Course Title	Credit Hours	Course Type
AE-501	Microeconomics – I	3(3-0)	Major
AE-503	Macroeconomics – I	3(3-0)	Major
AE-505	Mathematics for Economists	3(3-0)	Major
AE-507	Agricultural Finance	3(3-0)	Major
AE-509	Food and Agricultural Marketing	3(3-0)	Major
STAT-501	Statistical Methods for Economist	3(3-0)	Supporting Course (SC)
	Elective from Group 1	2(2-0)	
AE-511	Agriculture and Rural Development	2(2-0)	Elective
AE-513	Introduction to Rural Sociology	2(2-0)	Elective
AE-515	Economics of Livestock Production	2(2-0)	Elective
Total Credit Hours		20(20-0)	

SEMESTER-VI

Course No.	Course Title	Credit Hours	Course Type
AE-502	Microeconomics –II	3(3-0)	Major
AE-504	Macroeconomics – II	3(3-0)	Major
AE-506	Econometrics – I	3 (2-1)	Major
AE-508	Agricultural issues and Policies of Pakistan	3(3-0)	Major
AE-510	Agribusiness Supply Chain Management	3(3-0)	Major
AE-512	Development Economics	3(3-0)	Major
	Elective from Group 2	2(2-0)	
AE-514	Project Management and Evaluation	2(2-0)	Elective
AE-516	Introduction to Labor Economics	2(2-0)	Elective
AE-518	Pricing of Agricultural Products	2(2-0)	Elective
Total Credit Hours		20(19-1)	

SEMESTER-VII

Course No.	Course Title	Credit Hours	Course Type
AE-601	Econometrics – II	3(2-1)	Major
AE-603	Natural Resource Economics	3(3-0)	Major
AE-605	International Economics	3(3-0)	Major
AE-607	Agricultural Production Economics	3(3-0)	Major
AE-609	Research Methods in Agricultural Economics	3(3-0)	Major
AE-611	Islamic Economics	3(3-0)	Major
	Elective from Group 3	2(2-0)	
AE-613	Economics of Climate Change	2(2-0)	Elective
AE-615	Introduction to Environmental Economics	2(2-0)	Elective
AE-617	Ecological Economics	2(2-0)	Elective
Total Credit Hours		20(19-1)	

SEMESTER-VIII

Course No.	Course Title	Credit Hours	Course Type
AE-612	Internship and External Evaluation	6(0-6)	Major
Total Credit Hours		6(0-6)	



Scheme of Studies

B.Sc. (Hons.) Agriculture

Major Farm Management (Semester V-VIII)

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Semester V

Course No.	Course Title	Credit Hours
FM-501	Entrepreneurship	3(2-1)
FM-503	Introduction and Role of ICT in Agriculture	3(2-1)
FM-505	Agribusiness Marketing Strategies	3(3-0)
FM-507	Agricultural Laws	3(3-0)
FM-509	Agricultural Production Economics	3(3-0)
FM-511	Farm Planning and Budgeting using ICT	3(2-1)
FM-513	Horticulture	3(1-2)
TOTAL		21(16-5)

Semester VI

Course Code	Course Title	Credit Hours
FM-502	Risks Assessment and Mitigation	3(2-1)
FM-504	Human Resource Management and Business Ethics	3(3-0)
FM-506	Sustainable Agriculture and Organic Farming	3(2-1)
FM-508	Good Agricultural Practices (GAP) and other International Standards	3(3-0)
FM-510	Precision Agriculture	3(2-1)
FM-512	Integrated Pest Management	3(2-1)
FM-514	Post-Harvest Management and Value Addition	3(2-1)
TOTAL		21(16-5)

Semester VII

Course Code	Course Title	Credit Hours
FM-601	Internship	10(0-10)

Semester VIII

Course Code	Course Title	Credit Hours
FM-602	Internship	10(0-10)



Scheme of Studies

BBA-AGRIBUSINESS

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Semester - I

Course No.	Course Title	Credit Hours
BBAA-301	Functional English-I	3(3-0)
BBAA-303	Basics of Agriculture	3(2-1)
BBAA-305	Soil Science and Crop Production	3(2-1)
BBAA-307	Orchard Planning and Management	3(2-1)
BBAA-309	Introduction to Agribusiness	3(3-0)
BBAA-311	Agricultural Knowledge and Information System	3(2-1)
Total Credit Hours		18 (14-4)

Semester - II

Course No.	Course Title	Credit Hours
BBAA-302	General Plant Protection	3(2-1)
BBAA-304	Natural Resource Management	3(3-0)
BBAA-306	Principles of Management	3(3-0)
BBAA-308	Functional English-II	3(3-0)
BBAA-310	Food Service Industry	3(2-1)
BBAA-312	Principles of Marketing	3(3-0)
Total Credit Hours		18 (16-2)

Semester - III

Course No.	Course Title	Credit Hours
BBAA-401	Agricultural Marketing	3(3-0)
BBAA-403	Livestock Business Management	3(2-1)
BBAA-405	Farm Mechanization	3(2-1)
BBAA-407	Communication and Presentation Skills	3(3-0)
BBAA-409	Introduction to Rural Sociology	3(3-0)
BBAA-411	Pakistan Studies	3(3-0)
Total Credit Hours		18 (16-2)

Semester - IV

Course No.	Course Title	Credit Hours
BBAA-402	Energy Resources and Utilization	3(2-1)
BBAA-406	Agribusiness Supply Chain Management	3(3-0)
BBAA-408	Islamic studies	3(3-0)
BBAA-410	Consumer Behavior	3(3-0)
BBAA-412	Social Psychology and Self-Development	3(3-0)
BBAA-414	Agribusiness Strategic Management	3(3-0)
Total Credit Hours		18 (17-1)



Scheme of Studies

BBA-AGRIBUSINESS

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Semester - V

Course No.	Course Title	Credit Hours
BBAA-501	Principles of Microeconomics	3(3-0)
BBAA-503	Agribusiness Entrepreneurship	3(3-0)
BBAA-505	Financial Accounting	3(3-0)
BBAA-507	Business Mathematics & Statistics	3(3-0)
BBAA-509	E-Commerce in Agribusiness	3(3-0)
BBAA-511	Business Research Methods	3(3-0)
Total Credit Hours		18(18-0)

Semester - VI

Course No.	Course Title	Credit Hours
BBAA-502	Principles of Macroeconomics	3(3-0)
BBAA-504	Financial Management	3(3-0)
BBAA-506	Poultry Business Management	3(3-0)
BBAA-508	Retail Management	3(3-0)
BBAA-510	Business Ethics	3(3-0)
BBAA-512	Water Management	3(3-0)
Total Credit Hours		18(18-0)

Semester - VII

Course No.	Course Title	Credit Hours
BBAA-601	Advertisement & Sales Management	3(3-0)
BBAA-603	Introduction to International Trade	3(3-0)
BBAA-605	Human Resource Management in Agriculture	3(3-0)
BBAA-607	Harvest Technology	3(2-1)
BBAA-609	Organizational Behavior	3(3-0)
BBAA-611	Agricultural Price Analysis	3(3-0)
Total Credit Hours		18 (17-1)

Semester - VIII

Course No.	Course Title	Credit Hours
BBAA-602	Report Writing & Internship	6(0-6)
Total Credit Hours		6(0-6)



Scheme of Studies

BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)

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Semester-I

Course Code	Course Title	Credit Hours
CS-301	Introduction to Information & Communication Technologies	3(2-1)
CS-303	Programming Fundamentals	4(3-1)
PHY-305	Applied Physics	3(3-0)
MATH-307	Calculus & Analytical Geometry	3(3-0)
ENG-309	English Composition & Comprehension	3(3-0)
Total Credit Hours		16

Semester-II

Course Code	Course Title	Credit Hours
CS-302	Discrete Structures	3(3-0)
CS-304	Object Oriented Programming	4(3-1)
MATH-306	Linear Algebra	3(3-0)
ENG-308	Communication & Presentation Skills	3(3-0)
IS-310/ SSH-310	Islamic Studies Or Ethics (for foreigner / Non-Muslims)	2(2-0)
CS-312	Digital Logic Design	4(3-1)
Total Credit Hours		19

Semester-III

Course Code	Course Title	Credit Hours
CS-401	Data Structures & Algorithms	4(3-1)
CS-403	Comp. Organization & Assembly Language	4(3-1)
STAT-405	Probability & Statistics	3(3-0)
ENG-407	Technical & Business English Writing	3(3-0)
*409	Uni-Elective-I	3(3-0)
Total Credit Hours		17

Semester-IV

Course Code	Course Title	Credit Hours
CS-402	Software Engineering	3(3-0)
CS-404	Operating Systems	4(3-1)
CS-406	Database Systems	4(3-1)
CS-408	Design & Analysis of Algorithms	3(3-0)
*410	Uni. Elective-II	3(3-0)
SSH-412	Pakistan Studies	2(2-0)
Total Credit Hours		19



Scheme of Studies

BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BSCS)

www.mnsuam.edu.pk

Semester-V

Course Code	Course Title	Credit Hours
CS-501	Computer Networks	4(3-1)
CS-503	Theory of Automata	3(3-0)
CS-505	Web Engineering	3(2-1)
CS-507	Information Security	3(3-0)
CS-509	Computer Graphics	3(2-1)
MATH-511	Differential Equations	3(3-0)
Total Credit Hours		19

Semester-VI

Course Code	Course Title	Credit Hours
CS-502	Artificial Intelligence	4(3-1)
CS-504	Visual Programming	3(2-1)
CS-506	Graph Theory	3(3-0)
CS-508	Compiler Construction	3(2-1)
CS-510	Parallel & Distributed Computing	3(3-0)
*512	Uni-Elective-III	3(3-0)
Total Credit Hours		19

Summer Semester

Internship

Semester-VII

Course Code	Course Title	Credit Hours
CS-601	Digital Image Processing	3(2-1)
CS-603	Mobile Application & Development	3(2-1)
CS-605	Numerical Computing	3(2-1)
SSH-607	Professional Practices	3(3-0)
*609	Uni. Elective-IV	3(3-0)
Total Credit Hours		15

Semester-VIII

Course Code	Course Title	Credit Hours
CS-602	Data Mining & Warehousing	3(3-0)
CS-604	Final Year Project	6(0-6)
Total Credit Hours		09



Scheme of Studies

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (BSIT)

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Semester-I

Course Code	Course Title	Credit Hours
CS-301	Introduction to Information & Communication Technology (ICT)	3(2-1)
CS-303	Programming Fundamentals	4(3-1)
PHY-305	Applied Physic	3(3-0)
MATH -307	Calculus & Analytical Geometry	3(3-0)
ENG 309	English Composition & Comprehension	3(3-0)
*311	University Elective-1	3(3-0)
Total Credit Hours		19(17-2)

Semester-II

Course Code	Course Title	Credit Hours
CS-302	Discrete Structure	3(3-0)
CS-304	Object Oriented Programming	4(3-1)
MATH-306	Linear Algebra	3(3-0)
ENG-308	Communication & Presentation Skills	3(3-0)
IS 310 / SSH-310	Islamic Studies / Ethics (For foreigner / Non-Muslims)	2(2-0)
*312	University Elective-II	3(3-0)
Total Credit Hours		18(17-1)

Semester-III

Course Code	Course Title	Credit Hours
CS-401	Data Structure & Algorithms	4(3-1)
CS- 403	Computer Organization & Assembly Language	4(3-1)
STAT- 405	Probability & Statistics	3(3-0)
ENG 407	Technical & Business English Writing	3(3-0)
*409	University Elective-III	3(3-0)
IT- 411	Operation Research	3(3-0)
Total Credit Hours		20(18-2)

Semester-IV

Course Code	Course Title	Credit Hours
CS-402	Software Engineering	3(3-0)
CS 404	Operating Systems	4(3-1)
CS-406	Database Systems	4(3-1)
IT-408	Web Technologies	3(3-0)
IT-410	Information Technology Infrastructure	3(3-0)
SSH-412	Pakistan Studies	2(2-0)
Total Credit Hours		19(17-2)



Scheme of Studies

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (BSIT)

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Semester-V

Course Code	Course Title	Credit Hours
CS-501	Computer Networks	4(3-1)
CS-503	Theory of Automata	3(3-0)
IT-505	Database Administration & Management	4(3-1)
CS-507	Information Security	3(3-0)
IT-509	Software Requirements Engineering	3(3-0)
Total Credit Hours		17(15-2)

Semester-VI

Course Code	Course Title	Credit Hours
CS-502	Artificial Intelligence	4(3-1)
CS-504	Visual Programming	3(2-1)
IT-506	Virtual Systems & Services	4(3-1)
IT-508	Systems & Network Administration	4(3-1)
IT-510	IT Project Management	3(3-0)
Total Credit Hours		18(14-4)

Semester-VII

Course Code	Course Title	Credit Hours
IT-601	Cyber Security	3(3-0)
CS-603	Mobile Application Development	3(2-1)
IT-605	Modeling and Simulation	3(3-0)
SSH-607	Professional Practices	3(3-0)
* 609	University Elective-IV	3(3-0)
Total Credit Hours		15(14-1)

Semester-VIII

Course Code	Course Title	Credit Hours
CS-602	Data Mining & Warehousing	3(2-1)
CS-604	Final Year Project	6(0-6)
Total Credit Hours		9(2-7)

* Courses will be selected from the list of university electives at the time of enrollment.



FACULTY OF AGRICULTURAL, BIOSYSTEM ENGINEERING & TECHNOLOGY (FABSET)



Department of Agricultural Engineering

The Department of Agricultural Engineering at MNS-University of Agriculture, Multan integrates engineering principles with natural and artificial systems to provide support for agriculture, agro-industries and engineering business enterprises. Engineers/technologists would focus on solving complex, rapidly changing problems and develop technology related to agro-industrial machinery and processes, energy and water use efficiency, renewable energy development, and instrumentation and robotics.

Internship programs are distinction of this Department. These would emphasize on hands-on practice and therefore internship programs make these degree programs unique in the country. The department also focuses on developing leadership and entrepreneurial skill, provide opportunities for community service and professional and personal growth through partner specialized institutions and professional organizations.

B.Sc. Agro-Industrial Engineering Technology

Competitive agro-industries enhance the quality of agriculture produce, create employment and generate income for both farming and non-farming community. In developing countries, fast urbanization and change in consumer preferences are met by agro-industrial development. The full potential of agro-industries as an engine for economic development has not yet been realized in Pakistan. This is due to serious lack of technical expertise and understanding related to produce properties, value addition processes, and machinery used in agro-industries of the country.

Muhammad Nawaz Shareef University of Agriculture, Multan is the first University in Pakistan that has taken the initiative to start B.Sc. Agro-Industrial Engineering Technology program to strengthen technical workforce in agro-industries of the country, provide better quality grain and fibre, and help industries grow to contribute in country's economy. Degree programme offers a unique applied skills, and knowledge to begin career as agro-industrial technologist. This programme has been developed in consultation with industry and academics, to offer students a combined curriculum of formal education and practical experience to gain an edge through genuine industry knowledge.

The three major streams of B.Sc. Agro-Industrial Engineering Technology program are:

- **Feed Milling Technology**
- **Grain Milling Technology**
- **Sugarcane Processing Technology**

Department of Agricultural Engineering

Admission criteria for B.Sc. Agro-Industrial Engineering Technology:

Requisite Qualification:

Intermediate Science F.Sc. (Pre-Engineering / Pre-Agriculture / Three years Diploma of Associate Engineering (DAE), and A Level securing minimum 50% of total marks.

Seats Distribution:

Pre-Engineering students/A Level: 50% of total seats
Pre-Agriculture students: 10% of total seats
DAE students: 40% of total seats

Merit Criteria:

70% weightage of Intermediate/three years' diploma or A- level
30% weightage of entry test
MNSUAM will accept entry test taken by MNSUAM, UET, UAF or HEC.

Program Educational Objectives (PEOs)

PEO-1	To demonstrate knowledge of agro-based industries, appropriate for career pursuits, workplace needs, and entrepreneurship.
PEO-2	Ability to identify and address technical and societal problems.
PEO-3	Demonstrate the intellectual curiosity to actively pursue the acquisition of new knowledge and skills necessary to refine and improve abilities to contribute to the technology domain.
PEO-4	Work effectively as a team member or lead multidisciplinary teams while demonstrating the interpersonal, management skills, social and ethical responsibilities.



Department of Agricultural Engineering

Program Learning Outcomes (PLOs)

1. **Engineering Technology Knowledge:** An ability to apply knowledge of mathematics, natural science, Engineering Technology fundamentals and Engineering Technology specialization to defined and applied Engineering Technology procedures, processes, systems or methodologies.
2. **Problem Analysis:** An ability to Identify, formulate, research literature and analyze broadly-defined Engineering Technology problems reaching substantiated conclusions using analytical tools appropriate to the discipline or area of specialization.
3. **Design/Development of Solutions:** An ability to design solutions for broadly- defined Engineering Technology problems and contribute to the design of systems, components or processes to meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
4. **Investigation:** An ability to conduct investigations of broadly-defined problems; locate, search and select relevant data from codes, data bases and literature, design and conduct experiments to provide valid conclusions.
5. **Modern Tool Usage:** An ability to Select and apply appropriate techniques, resources, and modern technology and IT tools, including prediction and modelling, to broadly-defined Engineering Technology problems, with an understanding of the limitations.
6. **The Engineering Technologist and Society:** An ability to demonstrate understanding of the societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to Engineering Technology practice and solutions to broadly defined Engineering Technology problems.

Department of Agricultural Engineering

7. **Environment and Sustainability:** An ability to understand and evaluate the sustainability and impact of Engineering Technology work in the solution of broadly defined Engineering Technology problems in societal and environmental contexts.
8. **Ethics:** Understand and commit to professional ethics and responsibilities and norms of Engineering Technology practice
9. **Individual and Team Work:** An ability to Function effectively as an individual, and as a member or leader in diverse teams.
10. **Communication:** An ability to communicate effectively on broadly defined Engineering Technology activities with the Engineering Technologist community and with society at large, by being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project Management:** An ability to demonstrate knowledge and understanding of Engineering Technology management principles and apply these to one's own work, as a member or leader in a team and to manage projects in multidisciplinary environments.
12. **Lifelong Learning:** An ability to recognize the need for, and have the ability to engage in independent and life-long learning in specialist Engineering Technologies.

Department of Agricultural Engineering



ENGR. DR. SARFRAZ HASHIM

Position: Assistant Professor
Qualification: Ph.D and HOD
Expertise: Water Resource Engineering and
Waste water treatment
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ENGR. DR. ALAMGIR A. KHAN

Position: Subject Expert
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Expertise: Farm Mechanization, Agro-based
Industries and Bioventing
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DR. MUHAMMAD ABID

Position: Assistant Professor
Qualification: Ph.D
Expertise: Condensed Matter Physics
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DR. MUHAMMAD SAIFULLAH

Position: Assistant Professor
Qualification: Ph.D
Expertise: Groundwater, climate change, numerical modeling
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DR. MOHSIN NAWAZ

Position: Assistant Professor
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mechanical cotton picking
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DR. UMAIR SULTAN

Position: Assistant Professor
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ENGR. SHAHZAD AHMAD (Ex-Pakistan leave)

Position: Lecturer
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Expertise: Water Resource Engineering and RS & GIS
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ENGR. FARRUKH EHSAN

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Department of Agricultural Engineering



ENGR. MUHAMMAD MOHSIN KHAN

Position: Lecturer

Qualification: M.Sc. Engineering

Expertise: Water Resources and Remote Sensing

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ENGR. MUHAMMAD KASHIF

Position: Lecturer

Qualification: M.Sc. Engineering

Expertise: Energy and Environment

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ENGR. MUHAMMAD WAQAS

Position: Lab Engineer

Qualification: M.Sc. Engineering

Expertise: Farm Mechanization, Hydrology & Water Resources

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Scheme of Studies B.Sc. AGRO-INDUSTRIAL ENGINEERING TECHNOLOGY

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Semester - I

Course Code	Course Title	Category	Credit Hours	
			Theory	Practical
AIET-112	Engineering Drawing and Graphics	(Engineering Foundation)	1	1
AIET-123	Metallurgy and Workshop Practices	(Major based Depth)	2	1
AIET-134	Fluid Mechanics	(Engineering Foundation)	3	1
AIES-113	Applied Mathematics-I	(Natural Science)	3	0
AIET-143	Introduction to Agro-Based Industry	(Major based Depth)	2	1
AIEH-112	Islamic Studies	(Humanities)	2	0
Total			13	4
Grand Total			13+04 = 17	

Semester - II

Course Code	Course Title	Category	Credit Hours	
			Theory	Practical
AIET-152	Computer Aided Design	(Engineering Foundation)	1	1
AIET-163	Engineering Mechanics	(Engineering Foundation)	2	1
AIET-173	Farm and Industrial Structures	(Major based Depth)	2	1
AIES-123	Applied Physics	(Natural Science)	2	1
AIES-133	Applied Mathematics-II	(Natural Science)	3	0
AIEH-122	Pakistan Studies	(Humanities)	2	0
AIEH-133	Composition and Communication Skills	(Humanities)	3	0
Total			15	4
Grand Total			15 + 04 = 19	

Semester - III

Course Code	Course Title	Category	Credit Hours	
			Theory	Practical
AIET-213	Applied Thermodynamics	(Major based Depth)	2	1
AIET-223	Manufacturing Processes	(Major based Depth)	2	1
AIET-233	Human factor Engineering and Ergonomics	(Engineering Foundation)	2	1
AIET-243	Industrial Material Handling & Processes	(Major based Depth)	2	1
AIEH-212	Human Resource Management	(Humanities)	2	0
AIES-213	Industrial Chemistry	(Natural Science)	2	1
Total			12	5
Grand Total			12+ 5 = 17	



Scheme of Studies B.Sc. AGRO-INDUSTRIAL ENGINEERING TECHNOLOGY

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Semester - IV

Course Code	Course Title	Category	Credit Hours	
			Theory	Practical
AIET-253	IC Engine	(Major based Breadth)	2	1
AIET-263	Mechanics of Material	(Major based Depth)	2	1
AIET-273	Post-Harvest Processes	(Major based Depth)	2	1
AIES-222	Engineering Economics and Management	(Natural Science)	2	0
AIET-283	Grain Science for Industry	(Major based Breadth)	2	1
AIES-233	Statistics and Probability	(Natural Science)	3	0
AIEH-222	Professional Ethics	(Humanities)	2	0
Total			15	4
Grand Total			15 + 04 = 19	

Semester - V

Course Code	Course Title	Category	Credit Hours	
			Theory	Practical
AIET-313	Machine Design	(Major based Breadth)	2	1
AIET-323	Instrumentation and Control	(Major based Depth)	2	1
AIET-333	Total Quality Management	(Major based Depth)	2	1
AIET-343	Industrial Engineering and Management	(Major based Depth)	2	1
AIEH-312	Communication and Presentation Skills	(Humanities)	2	0
Electives				
AIET-353	Feed Milling Technology	(Major based Breadth)	2	1
AIET-363	Cotton Ginning and Fiber Technology	(Major based Breadth)	2	1
AIET-373	Sugar Technology	(Major based Breadth)	2	1
Total			12	5
Grand Total			12 + 05 = 17	

Semester - VI

Course Code	Course Title	Category	Credit Hours	
			Theory	Practical
AIET-383	Automation and Robotics	(Major based Depth)	2	1
AIET-393	Boiler Engineering and Plant system	(Major based Depth)	2	1
AIET-3103	Industrial Computer Programming	(Major based Breadth)	2	1
AIET-3113	Environmental Management System for Industry	(Major based Breadth)	2	1
AIEH-322	Entrepreneurship	(Humanities)	2	0
Electives				
AIET-3123	Grain Milling Technology	(Major based Breadth)	2	1
AIET-3133	Technology of Oils and Fats	(Major based Breadth)	2	1
AIET-3143	Seed Science and Seed Processing Technology	(Major based Breadth)	2	1
AIEH-330	Chinese Language	(Humanities)	0	0
Total			12	5
Grand Total			12 + 05 = 17	



Scheme of Studies B.Sc. AGRO-INDUSTRIAL ENGINEERING TECHNOLOGY

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Semester - VII

Course code	Course Title	Credit hours	
		Theory	Practical
AIET-4116	Supervised Industrial Training	0	16
Total		0	16
Grand total		00 + 16 = 16	

Semester - VIII

Course Code	Course Title	Credit Hours	
		Theory	Practical
AIET-4216	Supervised Industrial Training	0	16
Total		0	16
Grand Total		00 + 16 = 16	

Total credit Hours = 138





FACULTY OF VETERINARY AND ANIMAL SCIENCES



FACULTY OF VETERINARY AND ANIMAL SCIENCES

Faculty of Veterinary and Animal Sciences (FVAS), MNS University of Agriculture, Multan, is constituted recently and is striving hard to earn repute of excellence with intellect and future foresight. University Syndicate in its meeting held on May 3, 2019 has approved the establishment of following eight (08) departments in the Faculty.

1. Department of Anatomy
2. Department of Pharmacology and Physiology
3. Department of Biochemistry and Biotechnology
4. Department of Pathobiology
5. Department of Poultry Sciences
6. Department of Animal Feed and Production
7. Department of Clinical Sciences
8. Department of Fisheries and Aquaculture

Programs Offered

Following degree programs and diplomas are being offered in the Faculty of Veterinary and Animal Sciences in addition to introductory courses of B.Sc. (Hons.) Agriculture and BBA Agribusiness.

1. B.Sc. (Hons.) Poultry Sciences (4 years)

The B.Sc. (Hons.) Poultry Science 4-years (8 semesters) degree program aims equipping the students with knowledge and skills required to analyze and finding the solutions of challenges faced by poultry sector in present scenario, consistence with the interest of all stakeholders.

FACULTY OF VETERINARY AND ANIMAL SCIENCES

2. B.Sc. (Hons.) Fisheries and Aquaculture (4 years)

Fish farming is playing an important role in alleviation of poverty, human recourse development and sustainable developments of freshwaters in the country. The Fisheries and Aquaculture program offers students experience raising local fish and shrimp species and enriches them with diverse fisheries management field experiences. Students will also have opportunities to conduct independent research on addressing new available technologies in fisheries and aquaculture.

3. B.Sc. (Hons.) Animal Sciences (4 years)

Livestock is an important sector of Pakistan having share of 60.54 percent in agriculture and 11.22 percent in GDP. South Punjab is enriched with huge no of livestock population and majority of people is engaged in Livestock farming. The program will help in provision of skilled human resource in animal science to address and solve problems of livestock farmers of South Punjab.

The B.Sc. (Hons.) Animal Sciences 4 years (8 semesters) degree aims equipping the students with knowledge and skills required to analyze and finding the solutions of challenges faced by Livestock sector in present scenario, consistence with the interest of all stakeholders. Animal Science – the study of the biological function of domestic and captive animals and their utilization by people – focuses on modern, efficient and humane ways to care for and make the best use of the animals who share our lives. The degree provides a broad foundation in biological sciences and instruction in basic sciences, research skills and the health, welfare, behavior, nutrition, genetics and breeding of animals, including farm animals, pets and performance animals. The program also includes a component in practical skills such as animal handling and the development of lifelong learning skills, critical thinking and effective communication with scientists and lay people involved with animals.

4. BS Microbiology (4 years)

Microbiology is the basis of all sciences. It is one of the largest and most complex of the biological sciences as it deals with many diverse biological disciplines. It deals with every aspects of microbe-human as well as animals and environmental interaction. It deals with future challenges such as finding new ways to combat disease. It involves in the creation of new drugs, vaccines and high-quality food and reduction of pollution in the environment. It is also used as vectors to treat the diseases and enhance agricultural productivity. So, it's the need of the hour to start the BS Microbiology degree in southern Punjab area because of its high importance in human life. It will provide the knowledge and future employment for the people of southern Punjab in the sector Food, Cosmetics, Medical, Agriculture, Pharmaceuticals Diagnostics, Sanitation, Quality control and Biosafety and Biosecurity.

Department of VETERINARY & ANIMAL SCIENCES



DR. MUHAMMAD ASIF RAZA

Position: Associate Professor & Chairman
Qualification: Ph.D, Post-Doc
Expertise: Parasitology, Ethnobotany and phyto-medicine, Epidemiology
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DR. ASGHAR ABBAS

Position: Assistant Professor
Qualification: Ph.D
Expertise: Treatment of various parasitic diseases of domestic animals. Ethno-Veterinary medicinal practices and immunomodulation
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DR. HAFIZ MUHAMMAD ISHAQ

Position: Assistant Professor
Qualification: Ph.D
Expertise: Gut microbiota, Microbiology
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DR. NAHEED BANO

Position: Assistant Professor
Qualification: Ph.D
Expertise: Fresh water fisheries, Fish farm management, Limnology and aquaculture nutrition, Fish quality, Fish and Shrimp breeding and farming
Email: naheed.bano@mnsuam.edu.pk



DR. KASHIF HUSSAIN

Position: Assistant Professor
Qualification: Ph.D
Expertise: Control of poultry parasitic diseases, Immunology
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Dr. Rabnawaz Kausar

Position: Subject Specialist
Qualification: DVM
Expertise: Livestock Production, Extension work
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Scheme of Studies B.Sc. (Hons.) Poultry Science

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Semester - I

Course No.	Course Title	Credit Hours
PS-301	Introduction to Poultry Science	3(2-1)
PS-303	Poultry Physiology	3(2-1)
AN-301	Fundamentals of Animal Nutrition	3(2-1)
ABG-301	Principles of Heredity	3(2-1)
CS-301	Computer Science and Information Technology	2(0-2)
Biochem-301	Elementary Biochemistry	4(3-1)
Total		18

Semester - II

Course No.	Course Title	Credit Hours
PS-302	Poultry Breeding Practices	3(2-1)
PS-304	Rural Poultry Production	3(2-1)
AN-302	Metabolism of Primary Nutrients	3(2-1)
ABG-302	Introductory Molecular Genetics	3(2-1)
ENG-301	Composition and Communication Skills	3(3-0)
SSH-302	Pakistan Studies	2(2-0)
Zool-302	Biodiversity	2(1-1)
SRT-301	Social and Religious Tolerance	Audit
Total		19

Semester - III

Course No.	Course Title	Credit Hours
PS-401	Incubation Principles and Hatchery Management	3(2-1)
PS-403	Poultry Housing and Equipment	3(2-1)
ABG-401	Introductory Population Genetics	3(2-1)
AN-303	Mineral and Vitamin Metabolism	3(2-1)
Micro-301	General Microbiology and Immunology	4(3-1)
STAT-302	Introductory Statistics	2(2-0)
UAM-302	Citizenship Education and Community Engagement	Audit
Total		18



Scheme of Studies B.Sc. (Hons.) Poultry Science

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Semester - IV

Course No.	Course Title	Credit Hours
PS-402	Poultry Farm Management	3(2-1)
PS-404	Poultry Feeding Practices	3(2-1)
PS-406	Broiler Production and Management	3(2-1)
PS-408	Poultry Meat Inspection	2(1-1)
AN-404	Feed Evaluation, Formulation and Processing Technology	3(2-1)
AEE-402	Communication Skills and Leadership Development	2(1-1)
IS-401	Islamic Studies OR	3(3-0)
SSH-402	Ethics (for Foreign/Non-Muslim Students)	
Total		19

Semester - V

Course No.	Course Title	Credit Hours
PS-501	Poultry Farm Management & Biosecurity	3(2-1)
PS-503	Layer Production and Management	3(2-1)
PS-505	Poultry Farm Practices-I	2(0-2)
ABG-501	Applied Poultry Breeding	3(2-1)
FMP-507	Farm Equipment, Structure & Processing	4(3-1)
Path-505	Poultry Pathology	3(2-1)
Total		18

Semester - VI

Course No.	Course Title	Credit Hours
PS-502	Fancy Bird Production	3(2-1)
PS-504	Production and Management of Breeder Flock	2(1-1)
PS-506	Poultry Farm Practices-II	2(0-2)
AN-502	Principles of Poultry Nutrition	4(3-1)
MAB-601	Agri-Business Management, Marketing and WTO	4(4-0)
Micro-505	Veterinary Epidemiology and Public Health	4(2-2)
Total		19

Semester - VII

Course No.	Course Title	Credit Hours
PS-601	Poultry Products Technology	3(2-1)
PS-603	Poultry Marketing and Economics	3(2-1)
PS-605	Farm Records and Data Analysis	3(2-1)
AN-601	Poultry Feed Industry	4(3-1)
PS-609	Preparation of Research Project and Scientific Writing	2(1-1)
Med-501	Poultry Medicine	3(2-1)
Total		18

Semester - VIII

Course No.	Course Title	Credit Hours
PS-612	Internship and External Evaluation	6(0-6)
Total		06



Scheme of Studies B.Sc. (Hons.) FISHERIES & AQUACULTURE

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Semester - I

Course No.	Course Title	Credit Hours
FSAQ-301	Introductory Freshwater Biology	4(3-1)
FSAQ-303	Plant Diversity	3(2-1)
ENG-301	Composition and Communication Skills	3(3-0)
IS-401	Islamic Studies OR	3(3-0)
SSH-402	Ethics (for Foreign/Non-Muslim Students)	
STAT-302	Introductory Statistics	2(2-0)
ZOOL-101	Zoology-I	3(2-1)
Total		18

Semester - II

Course No.	Course Title	Credit Hours
FSAQ-302	Ichthyology	4(3-1)
FSAQ-304	Introductory Fish Culture	4(3-1)
FSAQ-406	Animal Physiology	3(2-1)
ENG-302	Functional English	3(3-0)
SSH-302	Pakistan Studies	2(2-0)
ZOOL-102	Zoology-II	3(2-1)
SRT-301	Social and Religious Tolerance	Audit
Total		19

Semester - III

Course No.	Course Title	Credit Hours
FSAQ-401	Aquatic Microbiology	3(2-1)
FSAQ-403	Plant Physiology	3(2-1)
FSAQ-404	Fish Behavior	4(2-2)
FSAQ-407	Fish and Fisheries Biology	4(3-1)
BIOCHEM-401	Biochemistry	3(3-0)
CS-301	Computer Science and Information Technology	2(0-2)
UAM-302	Citizenship Education and Community Engagement	Audit
Total		19

Semester - IV

Course No.	Course Title	Credit Hours
FSAQ-402	Developmental Biology	4(3-1)
FSAQ-405	Fish Nutrition	3(2-1)
FSAQ-408	Ecology	3(2-1)
FSAQ-410	Fresh Water Invertebrates	4(3-1)
FSAQ-412	Cell and Molecular Biology	4(3-1)
Total		18



Scheme of Studies B.Sc. (Hons.) FISHERIES & AQUACULTURE

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Semester - V

Course No.	Course Title	Credit Hours
FSAQ-501	Limnology	4(3-1)
FSAQ-503	Fish Parasitology	3(2-1)
FSAQ-505	Genetics	4(3-1)
FSAQ-507	Fishery Technology	4(3-1)
FSAQ-509	Phycology	4(3-1)
Total		19

Semester - VI

Course No.	Course Title	Credit Hours
FSAQ-502	Water Pollution	4(3-1)
FSAQ-504	Biotechnology in Aquaculture	4(2-2)
FSAQ-506	Fish breeding and Conservation	4(3-1)
FSAQ-508	Aquatic Macrophytes and Management	4(2-2)
FSAQ-510	Fish Immunology	3(2-1)
Total		19

Semester - VII

Course No.	Course Title	Credit Hours
FSAQ-601	Integrated Fish Farming	3(2-1)
FSAQ-603	Inland Fisheries Management	3(2-1)
FSAQ-605	Fish Post-harvest Technology	3(2-1)
FSAQ-609	Preparation of Research Project and Scientific Writing	2(1-1)
FSAQ-611	Fish Hygiene and Disease Management	4(2-2)
FSAQ-613	Aquatic Toxicology	3(2-1)
Total		18

Semester - VIII

Course No.	Course Title	Credit Hours
FSAQ-612	Internship and External Evaluation	6(0-6)
Total		06



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Semester I

Course No.	Course Title	Credit Hours	Course Type
LM-301	Introduction to Livestock Management	2(1-1)	Major
AN-301	Fundamentals of Animal Nutrition	2(1-1)	Major
BIOCHEM-301	Elementary Biochemistry	3(2-1)	Compulsory
CS-301	Computer Appreciation and Application	3(2-1)	Compulsory
ENG-301	English Composition and Comprehension	3(3-0)	Compulsory
MATH-301	Elementary Mathematics	3(2-1)	Compulsory
IS-301/SSH-301	Islamic Studies/Ethics (for Non-Muslims)	3(3-0)	Compulsory
	Total	19	

SEMESTER II

Course No.	Course Title	Credit Hours	Course Type
ABG-302	Introductory Molecular Genetics	2(1-1)	Major
LM-302	Management of Dairy Animals	3(2-1)	Major
AN-302	Metabolism of Primary Nutrients	3(3-0)	Major
STAT-302	Introductory Statistics	2(2-0)	Compulsory
SSH-302	Pakistan Studies	2(2-0)	Compulsory
ENG-302	Communication and Presentation Skills	3(3-0)	Supporting
PHYSIO-302	Introduction to Animal Physiology	3(2-1)	Minor
UAM-301	Social and Religious Tolerance	Audit	Audit
	Total	18	

SEMESTER III

Course No.	Course Title	Credit Hours	Course Type
ABG-401	Introductory Population Genetics	3(2-1)	Major
LM-403	Principles of Small Ruminant Production	3(2-1)	Major
AN-403	Minerals and Vitamins in Nutrition	2(2-0)	Major
PS-401	Introduction to Poultry Science	2(1-1)	Major
AGRON-401	Fodders and Forages	2(1-1)	Minor
ZOOL-401	Fish and Fisheries of Pakistan	3(2-1)	Minor
ENT-401	Insect Pests of Household, Human and Animals	2(1-1)	Minor
ENG-401	Technical and business English Writing	3(3-0)	Compulsory
UAM-302	Citizenship Education and Community Engagement	Audit	Audit
	Total	20	



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SEMESTER IV

Course No.	Course Title	Credit Hours	Course Type
ABG-402	Principles of Animal Breeding	3(2-1)	Major
LM-402	Principles of Milk Production	2(1-1)	Major
AN-402	Nutrient Requirements of Farm Animals	3(2-1)	Major
PS-402	Incubation Principles and Hatchery Management	2(1-1)	Major
PS-404	Poultry Housing and Equipments	2(1-1)	Major
ANAT-402	Introduction to Veterinary Anatomy	3(1-2)	Minor
FRW-402	Agro-Forestry, Range and Wildlife Management	3(2-1)	Minor
	Total	18	

SEMESTER V

Course No.	Course Title	Credit Hours	Course Type
ABG-501	Utilization and Conservation of Animal Genetic Resources	3(2-1)	Major
LM-501	Range Livestock Production	3(2-1)	Major
AN-501	Feeding of Farm Animals	3(2-1)	Major
PS-501	Poultry Farm Management	3(2-1)	Major
AR-501	Introduction to Animal Reproduction	3(2-1)	Minor
AE-501	Human Resource Management	3(3-0)	Minor
	Total	18	

SEMESTER VI

Course No.	Course Title	Credit Hours	Course Type
ABG-502	Selection for Economic Traits in Farm Animals	3(2-1)	Major
LM-502	Equine and Camel Production	3(2-1)	Major
AN-502	Principles of Poultry Nutrition	2(1-1)	Major
PS-502	Poultry Feeding Practices	3(2-1)	Major
MED-502	Introduction to Farm Animal Health	3(2-1)	Minor
AS-502	Livestock and Poultry Marketing Management	2(2-0)	Minor
PATH-502	Pathobiology	3(2-1)	Minor
	Total	19	

SEMESTER VII

Course No.	Course Title	Credit Hours	Course Type
ABG-601	Introduction to Animal Genomics	3(2-1)	Major
LM-601	Principles of Meat Production	2(1-1)	Major
LM-603	Behavior and Welfare of Farm Animals	2(1-1)	Major
AN-601	Feed Evaluation, Formulation and Processing Technology	3(2-1)	Major
PS-601	Poultry Hygiene and Disease Prevention	3(2-1)	Major
FMP-601	Fundamentals of Mechanized Farming	2(1-1)	Minor
AS-601	Remote Sensing and GIS Applications	3(2-1)	Major
UAM-611	Preparation of Research Project and Scientific Writing	2(1-1)	Major
	Total	20	

SEMESTER VIII

Course No.	Course Title	Credit Hours	Course Type
AS-612	Internship and Research Project	6(0-6)	Major



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Semester I

Course No.	Course Title	Credit Hours
MICRO-301	Fundamentals of Microbiology	3(2-1)
MICRO-303	Molecular Cell Biology	3(2-1)
CS-301	Computer Appreciation and Application	3(2-1)
Biochem-301	Elementary Biochemistry	3(2-1)
ENG-301	English Composition and Comprehension	3(3-0)
Math-301	Elementary Mathematics	3(2-1)
Total		18

Semester II

Course No.	Title of Course	Credit Hours
MICRO-302	Introduction to Mycology	2(1-1)
MICRO-304	Basic Immunology	3(2-1)
MICRO-306	General Virology	3(2-1)
SSH-302	Pakistan Studies	2(2-0)
UAM-301	Social and Religious Tolerance	Audit
ENG-302	Communication and Presentation Skills	3(3-0)
MICRO-308	Basic Biotechnology	3(2-1)
IS-302/ SSH-301	Islamic Studies OR Ethics (for Foreign/Non-Muslim Students)	3(3-0)
Total		19

Semester III

Course No.	Title of Course	Credit Hours
MICRO-401	Introduction to Cell Culture	3(2-1)
MICRO-403	Bacterial Cell Physiology	4(3-1)
STAT-302	Introductory Statistics	2(2-0)
PATH-401	General Pathology	3(2-1)
BOT-401	Plant Diversity	3(2-1)
UAM-302	Citizenship Education and Community Engagement	Audit
ENG-401	Technical and Business English Writing	3(3-0)
Total		18

Semester IV

Course No.	Title of Course	Credit Hours
MICRO-402	Fundamentals of Microbial Genetics	3(2-1)
MICRO-404	Antimicrobial Resistance & Probiotics	2(1-1)
MICRO-406	Proteomics	2(1-1)
MICRO-408	General Bacteriology	3(2-1)
EPH-402	Epidemiology and Public Health	3(2-1)
PATH-402	Clinical Pathology	3(1-2)
PARA-402	Diagnostic Parasitology	3(2-1)
Total		19



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Semester V

Course No.	Title of Course	Credit Hours
MICRO-501	Genetic Engineering	3(2-1)
MICRO-503	Applied Immunology	3(2-1)
MICRO-505	Marine and Fresh Water Microbiology	3(2-1)
MICRO-507	Soil Microbiology	3(2-1)
MICRO-509	Food and Dairy Microbiology	3(2-1)
MICRO-511	Bioinformatics and Protein Structure/ Function	3(2-1)
Total		18

Semester VI

Course No.	Title of Course	Credit Hours
MICRO-502	Medical Microbiology	3(2-1)
MICRO-504	Systemic and Diagnostic Virology	3(2-1)
MICRO-506	Environmental Microbiology	3(2-1)
MICRO-508	Industrial Microbiology	3(2-1)
ZOOL-302	Animal Biodiversity	2(1-1)
MICRO-510	One Health	3(2-1)
MICRO-512	Quality Control in Biologics	2(1-1)
Total		19

Semester VII

Course No.	Title of Course	Credit Hours
MICRO-601	Pharmaceutical Microbiology	3(2-1)
MICRO-603	Introduction to Vaccinology	3(2-1)
MICRO-605	Diagnostic Microbiology	3(0-3)
MICRO-607	Biorisk Management (Biosafety and Biosecurity)	3(2-1)
MICRO-609	Bio-entrepreneurship	2(2-0)
UAM-611	Preparation of Research Project and Scientific Writing	2(1-1)
MICRO-611	Emerging Issues in Microbiology	2(2-0)
Total		18

Semester VIII

Course No.	Title of Course	Credit Hours
MICRO-612	Internship and Research Project	6(0-6)
Total		6