Academic Program Description Form

University Name: Mosul

Faculty/Institute: College of Agriculture and Forestry

Scientific Department: Department of Agricultural Machines and Equipment

Academic or Professional Program Name: Bachelor of Science in Agricultural Machines and Equipment.

Final Certificate Name: Bachelor of Science in Agricultural Machines and Equipment.

Academic System: Semester

Description Preparation Date: 21/5/2025

File Completion Date: 21/5/2025

Signature:

Head of Department Name:

Asst. Prof. Nofal Issa Mahmeed

Date: 27/5/2025

Signature:

Scientific Associate Name:

Prof.

Date: 27/5/2025

The file is checked by:

Department of Quality Assurance and Performance Evaluation Division

Assistant Lecturer: Oday Abdulhadi Adday

Director of the Quality Assurance Unit Officer: Ramya Amer Khalil

Date: 27/5/2025

Signature:

Approval of the Dean: Dr. Ali Farouk Al-Maadedi

1. Program Vision

Developing agricultural education aligned with global standards, cultivating professionals who lead technological transformation and sustainability in the field of agricultural machinery and equipment.

2. Program Mission

Providing comprehensive academic programs that integrate theoretical knowledge with practical skills in agricultural machinery and equipment, while promoting scientific research and industrial partnerships. The department is committed to graduating technically and managerially competent professionals capable of meeting the challenges of modern agriculture, contributing to sustainable development, and serving society with integrity, humanistic values, and professional ethics.

3. Program Objectives

- **Technical Development:**

Provide the students with skills in designing, operating, and maintaining agricultural machinery using state-of-the-art smart agricultural technologies.

- **Sustainability Enhancement:**

Integrate concepts of sustainable agriculture and energy efficiency into the academic curriculum.

- **Labor Market Adaptability:**

Prepare graduates to effectively function in interdisciplinary environments that encompass agricultural engineering and technology.

- **Innovation and Research:**

Promote applied research in areas such as agricultural process automation and renewable energy.

- **International Collaboration:**

Support student and academic exchange programs with European and global universities through joint agreements aimed at enhancing academic and cognitive skills.

4. Program Accreditation

Does the program have program accreditation? And from which agency?

The application for program accreditation has been submitted.

5. Other external influences

- ✓ The family problems facing students negatively affect the students' performance in the academic program
- ✓ Extracurricular activities help students achieve greater achievements in implementing the academic program
- ✓ The economic situation of students and their involvement in work to save money negatively affects their academic performance.
- ✓ The student's learning competence from his preparatory studies is one of the most important indicators of excellence in the performance of the academic program.

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	7	12	%79.25	basic
College Requirements	5	16	%11.85	basic
Department Requirements	32	107	%8.9	basic
Summer Training	Satisfactor	Satisfactor	Satisfactor	basic
Other	–	–	–	–

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours		Units
			theoretical	practical	
Second Year/First Semester 2024-2025	STME241	Static Mechanics	2	3	3.5
Second Year/First Semester 2024-2025	META242	Metallurgy	2	3	3.5
Second Year/First Semester 2024-2025	PRPP117	Principles of Plant Protection	2	3	3.5
Second Year/First Semester 2024-2025	AGMA243	Agricultural Machinery	2	3	3.5
Second Year/First Semester 2024-2025	PAEC115	Principles of Agricultural Economy	2	3	3
Second Year/First Semester 2024-2025	ALLA236	Alteration and leveling of land	2	3	3.5
Second Year/First Semester 2024-2025	INDR245	Industrial Drawing	-	3	1.5
Second Year/First Semester 2024-2025	WORS246	Workshop 2	-	3	1.5
Second Year/First Semester 2024-2025	ENGL201	English Language 2	2	-	2
Second Year/ Second Semester 2024-2025	ARAL102	Arabic Language 1	2	-	2
Second Year/ Second Semester	DYME247	Dynamic Mechanics	2	3	3.5

2024-2025					
Second Year/ Second Semester 2024-2025	SOPH346	Soil Physics	2	3	3.5
Second Year/ Second Semester 2024-2025	PEST417	Pesticide	2	3	3.5
Second Year/ Second Semester 2024-2025	PRFI111	Principles of Food Industry	2	3	3.5
Second Year/ Second Semester 2024-2025	PRAP114	Principles of Animal Production	2	3	3.5
Second Year/ Second Semester 2024-2025	STAT109	Statistical	2	3	3.5
Second Year/ Second Semester 2024-2025	COMA203	Computer Application 2	-	3	1.5
Second Year/ Second Semester 2024-2025	CBAP200	Crimes of the defunct Baath Party	-	1	2
Third Year/ First Semester 2024-2025	THER375	Thermodynamics	2	3	3.5
Third Year/ First Semester 2024-2025	SOPE376	Soil Preparation Equipment	2	3	3.5
Third Year/ First Semester 2024-2025	ANPM224	Animal Production Mechanization	2	3	3.5
Third Year/ First Semester 2024-2025	SOFE377	sowing and fertilizing equipment	2	3	3.5
Third Year/ First Semester	FLME78	Fluid Mechanics	2	3	3.5

2024-2025					
Third Year/ First Semester 2024-2025	IRDR308	Irrigation and Drainage	2	3	3.5
Third Year/ First Semester 2024-2025	COMA301	Computer Application 3	-	3	1.5
Third Year/ Second Semester 2024-2025	METP379	Mechanics Of Tractor Performance	2	3	3.5
Third Year/ Second Semester 2024-2025	OMCS380	Orchard machinery and crop servicing	2	3	3.5
Third Year/ Second Semester	IRDE381	Irrigation and Drainage Equipment	2	3	3.5
Third Year/ Second Semester 2024-2025	DAMA382	Design Of Agricultural Machinery	2	3	3.5
Third Year/ Second Semester 2024-2025	INCE383	Internal Combustion Engine	2	3	3.5
Third Year/ Second Semester 2024-2025	DAAE302	Design and analysis of agricultural experiments	2	3	3.5
Third Year/ Second Semester 2024-2025	ENGL300	English Language 3	2	-	2
Fourth Year/ First Semester 2024-2025	MART475	Maintenance and Repair of Tractors	2	3	3.5
Fourth Year/ First Semester 2024-2025	HEME476	Heavy machines and equipment	2	3	3.5
Fourth Year/ First Semester 2024-2025	HYSE477	Hydraulic system and Equipment	2	3	3.5

Fourth Year/ First Semester 2024-2025	FPEM478	Food processing Equipment manufactures	2	3	3.5
Fourth Year/ First Semester 2024-2025	ELST479	Electrical systems of Tractor	2	3	3.5
Fourth Year/ First Semester 2024-2025	AGBU480	Agricultural Buildings	2	3	3.5
Fourth Year/ First Semester 2024-2025	REPR402	Research Project 1	-	3	1.5
Fourth Year/ First Semester 2024-2025	COMA401	Computer Application 4	-	3	1.5
Fourth Year/ Second Semester 2024-2025	HAEQ481	Harvesting Equipment	2	3	3.5
Fourth Year/ Second Semester 2024-2025	POHE482	Post Harvest Equipment	2	3	3.5
Fourth Year/ Second Semester 2024-2025	MAAM483	Management of Agricultural Machineries	2	3	3.5
Fourth Year/ Second Semester 2024-2025	PLPE484	Plant Protection Equipment	2	3	3.5
Fourth Year/ Second Semester 2024-2025	FOEQ485	Forage Equipment	1	3	2.5
Fourth Year/ Second Semester 2024-2025	SEMN404	Seminar	1	-	1
Fourth Year/ Second Semester 2024-2025	REPR403	Research Project 2	-	3	1.5

Fourth Year/ Second Semester 2024-2025	ENGL400	English Language 4	2	-	2

8. Expected learning outcomes of the program	
Knowledge	
The code	knowledge and understanding
A1	The student should be able to demonstrate sound knowledge and understanding of the Arabic language, its teaching, development, and dissemination as a scientific and educational language in various scientific and cognitive fields.
A2	The student should be able to explain the foundations of university culture and its core values, including accountability, transparency, justice, equality, cooperation, belonging, and citizenship.
A3	The student should be able to explain the principles of human rights and democracy and their role in achieving effective partnership with all segments of society.
A4	The student should be able to demonstrate sound knowledge and understanding of the English language, its teaching, dissemination, development, and use for scientific and educational purposes in various scientific and cognitive fields.
A5	The student should be able to interpret biodiversity, its importance, and how to preserve natural resources in the environment.
A6	The student should be able to grasp the basics of basic and applied sciences and modern technologies related to agriculture, food, and the principles of planning and implementing agricultural operations.
A8	The student should be able to explain the foundations and principles of basic sciences and their applications in agriculture sciences and food technology, illustrating the chemical composition of food contents, their reactions, food spoilage factors, and appropriate preservation and manufacturing methods.
A9	The student should be able to explain the basics of agricultural engineering and the principles of planning and implementing agricultural operations.
A11	The student should be able to explain the fundamentals of integrated management of various pests and disease agents, and the most important modern methods used for control.
A13	The student should be able to familiarize themselves with various scientific methods for the development and improvement of agricultural resources, facilities, and sectors.

A15	The student should be able to explain the principles of planning and implementing agricultural operations and understand market needs through analysis of supply and demand prices.
A16	The student should be able to explain the stages and essential elements of planning and implementing agricultural and cultural operations and activities in agricultural communities.
A17	The student should be able to explain the principles and theories of basic sciences related to agriculture and rural development.
A18	The student should be able to compare market needs through analysis of supply and demand prices.
A20	The student should be able to explain the principles of basic and applied sciences and modern technologies related to agricultural sciences, land, water, and the environment
A21	The student should be able to describe practical developments in the field of land sciences and related sciences.
A22	The student should be able to explain environmental issues and problems related to the land, water, and environmental sectors.
A23	The student should be able to classify types of agricultural equipment and devices, their uses, mechanical systems, and water pumps used in agricultural production.
A24	The student should be able to explain the principles of planning and implementing agricultural operations and appropriate scientific methods for soil and water treatment according to quality standards and food safety.
A35	The student should be able to explain the basics of designing irrigation systems and post-harvest processes according to concepts and elements of quality management and safety in agriculture and food, such as drying, pasteurization, storage, and processing.
A37	The student should be able to understand food processing methods, food preservation, and the basics of food transportation and trading.
A43	The student should be able to explain soil and water management methods and appropriate agricultural practices for field crops and pastures to maintain and prevent deterioration.
A46	The student should be able to explain the structure of living organisms in terms of plant cells, tissues, organs, and their functions, and explain the divisional and structural characteristics of field crops.
A49	The student should be able to explain the principles of planning and implementing agricultural operations to serve animal wealth in productive and economic aspects in various agricultural communities and its relationship with sustainable development.

A52	The student should be able to explain the basic concepts, knowledge, and modern techniques related to agriculture, food, and their relationship with animal, poultry, and fish nutrition.
A55	The student should be able to classify horticultural crops according to their plant and horticultural characteristics and uses.
A57	The student should be able to identify the fundamentals of renewable energy and utilize them in agricultural production operations.
A67	A67: The student should be able to understand social and economic structures, processes, and institutions across a wide range of human experiences and cultures.
Skills	
The code	The mental (intellectual) skills:
B1	The student should be able to systematically and positively exercise various thinking skills in diagnosing problems and issues encountered during work, and propose appropriate solutions.
B2	The student should be able to express their ideas clearly and objectively, and engage in positive dialogue with colleagues, superiors, and subordinates at work.
B3	The student should be able to systematically and objectively discuss and evaluate studies and research related to societal issues.
B4	The student should be able to propose commercial production plans for plant, animal, and food crops according to market systems by assessing the economic situation of the market and understanding its needs.
B5	The student should be able to propose solutions to problems related to systems, processes, machines that interact with humans, plants, animals, microorganisms, and biological materials.
B8	The student should be able to evaluate the economic situation of the market by solving agricultural problems and understanding its needs.
B9	The student should be able to propose methods for analyzing data and information and interpreting agricultural phenomena using applied software to solve agricultural problems.
B13	The student should be able to systematically analyze scientific data and information related to agricultural problems to find the most suitable solutions.
B14	The student should be able to plan for the management of agricultural projects free from diseases and pests according to quality and safety standards.
B15	The student should be able to evaluate the management of agricultural projects according to quality and safety standards, free from diseases and pests.

B16	The student should be able to choose logical solutions to problems in engineering systems, set concise and clear objectives, propose practical and reasonable solutions, analyze alternative solutions.
B18	The student should be able to analyze data and information related to agricultural problems in the land, water, and environmental sectors to find the most suitable solutions.
B19	The student should be able to design production plans and irrigation projects that achieve food and water security and serve the goals of sustainable development.
B22	The student should be able to propose appropriate solutions to specialized problems in the fields of soil, water, and environmental sciences.
B24	The student should be able to analyze assessment data and information for decision-making to maintain quality improvement and appropriate intervention.
B30	The student should be able to classify the social and economic factors that achieve technical and economic efficiency for the agricultural establishment.
B31	The student should be able to propose plans for planting field crops and developing pastures according to environmental conditions, soil quality, and water.
B32	The student should be able to innovate experimental designs and collect and analyze data under field, field, and laboratory conditions.
B39	The student should be able to choose the best proposed alternatives to solve a agricultural problem to achieve maximum efficiency for the agricultural establishment and utilize available natural resources to achieve sustainable agricultural development.
B41	The student should be able to develop production technologies for horticultural crops and methods for their trading and marketing.
B46	The student should be able to diagnose agricultural production problems and mechanize small holdings and propose appropriate solutions.
B47	The student should be able to solve problems using arithmetic, algebraic, geometric, statistical, or computational methods.
B48	The student should be able to identify and measure land areas and conduct spatial analysis.
B49	The student should be able to develop and evaluate management plans with multiple objectives and constraints.
Professional (practical) skills:	
The code	Professional (practical) skills:
C1	The student should be able to design scientific experiments to solve agricultural problems by applying modern techniques related to agricultural operations and food production.
C2	The student should be able to produce safe food for humans and animals while preserving the environment.

C3	The student should be able to prepare scientific research and studies in their field of specialization in both Arabic and English.
C4	The student should be able to conduct feasibility studies for agricultural projects using various programs.
C5	The student should be able to fulfill their national and societal role through a culture of peaceful coexistence.
C6	The student should be able to use laboratory equipment and computers to predict the spread of plant pests and diseases, operate agricultural machinery used in pest and disease control, and maintain them.
C7	The student should be able to efficiently employ modern techniques related to agricultural operations and food production to develop and improve food products, apply correct specifications and standards in the field of food science and nutrition, and analyze food composition and changes that occur in it.
C9	The student should be able to conduct applied research and use statistical programs in experimental design and data analysis in the field of food and nutrition research.
C10	The student should be able to design advisory programs to address agricultural phenomena and problems.
C13	The student should be able to plan economically viable production activities to increase agricultural productivity.
C15	The student should be able to apply standard economic principles in agricultural projects within the framework of international trade.
C16	The student should be able to collect relevant data on agricultural phenomena and problems.
C18	The student should be able to practice good agricultural practices that ensure environmental safety, maximize agricultural productivity, produce safe food, and preserve the environment.
C19	The student should be able to use agricultural resources optimally by implementing economically viable production activities to increase productivity and achieve sustainable agricultural development.
C21	The student should be able to apply modern techniques related to the management and implementation of agricultural land, water, environmental, and food production projects, adhering to professional and ethical standards.
C22	The student should be able to employ practical methods to address issues and problems in the fields of soil, water, and environmental sciences.
C23	The student should be able to apply theories of engine and tractor operation and usage

C24	The student should be proficient in using modern techniques, managing agricultural machinery and equipment, irrigation and drainage systems, agricultural structures, greenhouses, automated service strategies, and agricultural mechanization.
C25	The student should be able to implement agricultural facility projects, land surveying and reclamation, irrigation systems, water harvesting, and good agricultural practices to maximize productivity for food security.
C26	The student should be able to select appropriate devices and equipment used in food and dairy manufacturing and analysis.
C29	The student should be able to use agricultural resources optimally to achieve sustainable agricultural development.
C34	The student should be able to monitor changes in natural phenomena such as soil deterioration, desertification, and water pollution leading to the death of beneficial organisms.
C36	The student should be able to use fertilizers and pesticides in appropriate quantities and high quality, applying suitable usage systems.
C37	The student should be able to prepare initial budgets for agricultural projects and activities.
C38	The student should be able to conduct statistical and economic analysis of the local market for planning and developing the agricultural sector.
C41	The student should be able to diagnose diseases and pests of field crops and apply an integrated management system to control them.
C45	The student should be able to manage field crop production operations under conditions of drought, rain-fed agriculture, and irrigation systems using modern techniques
Communication and Information Technology Skills:	
The code	Communication and Information Technology Skills:
D1	The student should be able to use computer software for analyzing and presenting data and information in the agricultural field.
D2	The student should be able to effectively engage in reinforcing concepts of coexistence, tolerance, and diversity, both in practice and application.
D3	The student should be able to communicate fluently and effectively in both Arabic and English within their field of specialization.
D4	The student should be able to develop their cognitive, professional, and research capabilities in their field of specialization independently.
D6	The student should be able to manage human resources and create a collaborative work environment.

D10	The student should be able to demonstrate self-directed and continuous learning abilities to develop their professional knowledge and skills.
D11	The student should be able to master problem-solving methods and time management in the agricultural mechanization field.
D12	The student should be able to use information technology to easily access and present data and information, serving their professional practice and enabling them to present information scientifically and accurately.
D14	The student should be able to keep up with the requirements of the job market by familiarizing themselves with modern developments in the field of agricultural machinery and equipment.
D16	The student should be able to efficiently handle appropriate audiovisual means for presenting specialized environmental data and information.
D17	The student should possess effective communication skills and the ability to work within specialized teams with relevant stakeholders.
D21	The student should be able to raise awareness in the community about the importance of increasing green cover as a contribution to reducing environmental pollution and improving its impact on the health, psychological, and social aspects of society.
D22	The student should possess the ability to manage human resources and create a collaborative work environment.
D23	The student should have knowledge of general agricultural issues at both the national and global levels.
D24	The student should be able to interpret quantitative information from formulas, graphs, tables, plans, simulations, and visualizations, draw conclusions from that information, and represent it symbolically, visually, and numerically.
Ethics	
The code	Positions/Beliefs (Values, Independence, Responsibility):
E1	The student should be able to propose methods for preserving the environment and natural resources within the local community.
E2	The student should be able to contribute to enhancing understanding and awareness of professionalism in work and to assume legal, ethical, and social responsibilities.
E3	The student should be able to efficiently and effectively engage in the workplace to transfer knowledge and skills to farmers and the general public.
E4	The student should be able to contribute to raising awareness among farmers and community members to reduce the use of agricultural pollutants.
E5	The student should be able to take responsibility for completing work efficiently and ensure professional ethics.

E6	The student should be able to prioritize critical analysis and critical thinking within Eastern and Arab cultural traditions.
E7	The student should be able to evaluate ethical issues using critical thinking skills.

9. Teaching and Learning Strategies

- ✓ Theoretical lectures
- ✓ Watching scientific films online (Data Show)
- ✓ Field applications
- ✓ Assigning students homework assignments.
- ✓ Implementing some lessons in laboratories that contain miniature models of agricultural machinery parts.
- ✓ Conducting summer training by sending students to relevant departments and directorates.
- ✓ Assigning students to conduct experiments and turn them into mini-research and reports.
- ✓ E-learning by assigning students to search the web engines to find solutions to field and technical problems directed to them.
- ✓ Departmental seminars held for discussion

10. Evaluation methods

- ✓ Homework assignments and solving mathematical problems.
- ✓ Giving grades based on the level of participation and interaction within the lecture.
- ✓ Writing reports after completing the application period to assess students' ability to diagnose problems and find solutions.
- ✓ Classroom seminars and reports presented and discussed by students.
- ✓ Adhering to specified deadlines for submitting assignments and required research by students.
- ✓ Daily, periodic, and final exams reflecting the student's level of interest in cognitive and skill acquisition.
- ✓ Extracurricular activities (creativity, specialization skills).

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
professor	–	Agricultural machines and machinery	–	–	3	–
Assistant Professor	–	Agricultural machines and machinery	–	–	4	–
Lecturer	–	Agricultural machines and machinery	–	–	14	–
Assistant Lecturer	–	Agricultural machines and machinery	–	–	3	–

Professional Development

Mentoring new faculty members

- ✓ Developing skills to enhance self-confidence, a positive orientation towards a culture of quality, the requirements of enhancing a sense of responsibility, belief in the spirit of teamwork and its role in achievement, and developing a sense of function and ethical conscience.
- ✓ Evaluating academic courses and plans in coordination with academic departments to ensure that they meet labor market requirements.
- ✓ Possessing the skills of guiding and guiding students.

- ✓ The ability to produce educational materials according to quality specifications, including academic curricula, media, lectures and educational supplies.

Professional development of faculty members

- ✓ Developing educational skills through diversifying teaching methods, dealing positively with and practicing feedback, using educational techniques, and focusing on developing intellectual and competitive skills among students.
- ✓ Developing skills to address problems and phenomena affecting the course of the educational process in the college
- ✓ Developing the ability to evaluate academic courses and plans in coordination with academic departments to ensure that they meet labor market requirements.
- ✓ Developing the ability to measure the satisfaction of beneficiaries (faculty members, students, the community) with the educational and research process at the college.
- ✓ Evaluating tests and means of evaluating students, and preparing reports to follow up on their results.

12. Acceptance Criterion

- ✓ Students are accepted into college programs centrally through the Central Admissions Department at the Ministry of Higher Education and Scientific Research and according to the application channels approved by the Ministry.
- ✓ Students are distributed among the department's program according to the grade point average and the students' desire.
- ✓ To be physically fit and healthy based on the medical examination report
- ✓ The average of the advanced student, according to the minimum averages approved by the Ministry.

13. The most important sources of information about the program

- ✓ The main source of program information is the minutes of the Ministerial Committee of Experts for the departments corresponding to the Department of Agricultural Machinery and Machinery, which are accredited as a scientific body by the Committee of Deans of Colleges of Agriculture.

- ✓ The study prepared by the Scientific Committee and the Department Council and approved by the College Council, which includes proposals for modernizing agricultural specializations and simulating the three most important corresponding scientific departments accredited internationally.
- ✓ Local and regional market needs.

14. Program Development Plan

A plan was developed to develop the program after studying the internal review notes by the faculty members, the quality assurance committees, the department's scientific committee, the department council, the external review of the program, and the students' notes through analyzing the results of student questionnaires for the courses. Notes from the academic advisors and analysis of data from the college's questionnaire committee questionnaires and examination question evaluation reports for all courses. The program is as follows:

- ✓ Inadequate practical training
- ✓ The lack of a clear mechanism to help struggling students and motivate outstanding students
- ✓ Students' lack of familiarity with university regulations governing the educational process.

Program Skills Outline

Required program Learning outcomes — Knowledge

Year/Level	Course Code	Course Name	Basic or optional	A1	A2	A3	A4	A5	A6	A8	A9	A11	A13	A15	A16	A17	A18	A20	A21	A22	A23	A24	A35	A37	A43	A46	A49	A52	A57	A67
2024-2025 second Year/ First Semester	STME241	Static Mechanics	Basic							•		•		•																							
	META242	Metallurgy	Basic						|•|																										
	PRPP117	Principles of Plant	Basic								|•|•|																							
	AGMA243	Agricultural	Basic							•		•								•				•													
	PAEC115	Principles of	Basic										•		•			•																	•		
	ALLA236	Alteration and	Basic																		•	•	•	•			•	•				
	INDR245	Industrial Drawing	Basic								|•|																							
	CBAP200	Crimes of the	Basic		•	•																													
	WORS246	Workshop 2	Basic																												
	ENGL201	English Language 2	Basic			|•|																								
2024 – 2025 second Year/ Second Semester	ARAL102	Arabic Language 2	Basic |•|																											
	DYME247	Dynamic Mechanics	Basic							•		•		•																							
	SOPH346	Soil Physics	Basic					|•|•|										|•|	|•|	|•|					|•|					
	PEST417	Pesticide	Basic					|•|•|	|•|																					
	PRFI111	Principles of Food	Basic						•		•																•					•	•		
	PRAP114	Principles of Animal	Basic							•		•																		•	•			
	STAT109	Statistical	Basic										•		•																					
	COMA203	Computer	Basic																												
2024-2025 third Year/ First Semester	THER375	Thermodynamics	Basic							•		•		•																							
	SOPE376	Soil Preparation	Basic						•	•	•	•						•		•																
	ANPM224	Animal Production	Basic	•	•	•	•					•		•										•												
	SOFE377	sowing and	Basic									•		•										•										•		
	FLME78	Fluid Mechanics	Basic						•	•	•	•						•		•				•												
	IRDR308	Irrigation and	Basic																•	•	•		•	•		•						
	COMA301	Computer	Basic																												
2024 – 2025 third Year/ Second Semester	METP379	Mechanics Of	Basic									•		•										•										•		
	OMCS380	Orchard machinery	Basic									•												•											
	IRDE381	Irrigation and	Basic						•	•	•	•						•		•	•	•	•				•						
	DAMA382	Design Of	Basic			•						•		•																					
	INCE383	Internal Combustion	Basic							•		•		•																							
	DAAE302	Design and analysis	Basic											|•|																
	ENGL300	English Language 3	Basic			|•|																								
2024-2025 fourth Year/ First Semester	MART475	Maintenance and	Basic									•												•											
	HEME476	Heavy machines and	Basic																•				•										
	HYSE477	Hydraulic system	Basic						•	•		•						•		•				•												
	FPEM478	Food processing	Basic							•	•	•												•		•				•				
	ELST479	Electrical systems	Basic									•		•										•										•		
	AGBU480	Agricultural Buildings	Basic							•				•										•	•								
	REPR402	Research Project 1	Basic									•												•											
	COMA401	Computer	Basic																												
2024 – 2025 fourth Year/ Second Semester	HAEQ481	Harvesting Equipment	Basic							•		•								•				•													
	POHE482	Post Harvest	Basic						•	•	•	•						•		•				•		•							
	MAAM483	Management of	Basic										•		•			•					•											
	PLPE484	Plant Protection	Basic									|•|								|•|										
	FOEQ485	Forage Equipment	Basic							•			•	•										•	•								
	SEMN404	Seminar	Basic																			•											
	REPR403	Research Project 2	Basic									•	•										•											
	ENGL400	English Language 4	Basic			|•|																								

Required program Learning outcomes — Skills (B)

Course Code	B1	B2	B3	B4	B5	B8	B9	B13	B14	B15	B16	B18	B19	B22	B24	B30	B31	B32	B39	B41	B46	B47	B48	B49
STME241											|•|												|•|		
META242																									
PRPP117	•	•			•					•	•															
AGMA243	•	•			•																				
PAEC115	•	•		•	•	•											•								•
ALLA236	•	•			•									•	•										•	
INDR245								•				•	•									•			
CBAP200	•	•			•																				
WORS246																									
ENGL201																									
ARAL102																									
DYME247											|•|												|•|		
SOPH346	•	•			•																				
PEST417	•	•			•					•	•															
PRFI111	•	•	•	•	•																				
PRAP114	•	•			•																				
STAT109	•	•			•		•	•					•			•			•								
COMA203							•																		
THER375	•	•			•							•											•			
SOPE376	•	•			•										•											
ANPM224	•	•			•																		•			
SOFE377	•	•			•			•			•	•										•				
FLME78												•													
IRDR308	•	•			•									•	•											
COMA301							•																		
METP379	•	•			•			•			•	•										•				
OMCS380	•	•			•					•	•															
IRDE381	•	•			•							•														
DAMA382	•	•			•																				
INCE383											|•|												|•|		
DAAE302	•	•			•		•	•					•			•				•						
ENGL300																									
MART475	•	•			•																				
HEME476	•	•			•							•												•			
HYSE477	•	•			•										•											
FPEM478	•	•			•																				
ELST479	•	•			•			•			•	•										•				
AGBU480	•	•			•											•								•			
REPR402	•	•	•		•																				
COMA401							•																		
HAEQ481	•	•			•																				
POHE482	•	•			•							•									•					
MAAM483	•	•			•	•								•			•			•					•
PLPE484	•	•			•					•	•													•			
FOEQ485	•	•			•											•								•			
SEMN404	•	•	•		•																				
REPR403			•																						
ENGL400																									

Required program Learning outcomes — Skills (C)

Course Code	C1	C2	C3	C4	C5	C6	C7	C9	C10	C13	C15	C18	C19	C21	C22	C23	C24	C25	C26	C29	C34	C36	C37	C38	C41	C45
STME241																	•										
META242																											
PRPP117							•									•							•		•			•		
AGMA243													•		•							•							
PAEC115											•	•		•	•							•				•	•		
ALLA236															•					•		•							
INDR245	•																•										
CBAP200						•																					
WORS246																											
ENGL201			•																								
ARAL102			•																								
DYME247															•		•				•							
SOPH346															•			•			•	•						
PEST417							•									•							•		•			•		
PRFI111	•	•						•					•		•					•	•							
PRAP114														|•|					|•|						
STAT109	•								•			•															
COMA203				•																							
THER375																	•										
SOPE376														|•|					|•|						
ANPM224	•			•											•							•							
SOFE377	•														•		•				•							
FLME78																											
IRDR308															•			•	•		•	•						
COMA301				•					•																		
METP379	•														•		•				•							
OMCS380															•			•			•							
IRDE381														|•|					|•|						
DAMA382	•														•		•				•							
INCE383															•		•				•							
DAAE302	•								•																		
ENGL300			•																								
MART475														|•|					|•|						
HEME476														|•|					|•|						
HYSE477														|•|					|•|						
FPEM478								•					•		•					•	•							
ELST479	•														•		•				•							
AGBU480														|•|					|•|						
REPR402														|•|					|•|						
COMA401				•					•																		
HAEQ481							•						•		•							•							
POHE482														|•|					|•|						
MAAM483														•	•							•			•				
PLPE484							•								•				•			•		•			•		
FOEQ485														|•|					|•|						
SEMN404																											
REPR403																											
ENGL400			•																								

Required program Learning outcomes — Skills (D) and Ethics (E)

Course Code	D1	D2	D3	D4	D6	D10	D11	D12	D14	D16	D17	D21	D22	D23	D24	E1	E2	E3	E4	E5	E6	E7
STME241															|•|				|•|		
META242																				|•|		
PRPP117				•	•		•		•				•								•		•			•	
AGMA243				•	•		•		•				•				•					•		•			•	
PAEC115				•	•		•		•				•								•		•			•	
ALLA236				•	•		•		•				•								•		•			•	
INDR245							•		•							•		•	•			•			
CBAP200		•																•			•		•	
WORS246																				|•|		
ENGL201		|•|																|•|		
ARAL102		|•|																|•|		
DYME247				•	•		•		•				•					•			•		•			•	
SOPH346				•	•		•		•				•								•		•			•	
PEST417				•	•		•		•				•								•		•			•	
PRFI111				•	•		•		•				•								•		•			•	
PRAP114				•	•		•		•				•								•		•			•	
STAT109																				|•|		
COMA203 |•|																		|•|		
THER375															|•|				|•|		
SOPE376				•	•		•		•	•			•								•		•			•	
ANPM224				•	•		•		•				•				•			•	•		•			•	
SOFE377				•	•		•	•	•	•			•						•	•	•		•			•	
FLME78								|•|										|•|		
IRDR308				•	•		•		•				•								•		•			•	
COMA301 |•|																		|•|		
METP379				•	•		•	•	•	•			•						•	•	•		•			•	
OMCS380				•	•		•	•	•				•							•	•		•			•	
IRDE381				•	•		•		•	•			•								•		•			•	
DAMA382				•	•		•		•				•								•		•			•	
INCE383				•	•		•		•				•				•					•		•			•	
DAAE302																				|•|		
ENGL300		|•|																|•|		
MART475				•	•		•		•				•								•		•			•	
HEME476				•	•		•		•	•			•								•		•			•	
HYSE477				•	•		•		•	•			•						•	•	•		•			•	
FPEM478				•	•		•		•				•								•		•			•	
ELST479				•	•		•	•	•	•			•						•	•	•		•			•	
AGBU480				•	•		•		•	•			•						•	•	•		•			•	
REPR402				•	•		•		•				•								•		•			•	
COMA401 |•|																		|•|		
HAEQ481				•	•		•		•				•				•					•		•			•	
POHE482				•	•		•		•	•			•						•	•	•		•			•	
MAAM483				•	•		•		•	•			•								•		•			•	
PLPE484				•	•		•		•				•								•		•			•	
FOEQ485				•	•		•		•	•			•						•	•	•		•			•	
SEMN404																				|•|		
REPR403																				|•|		
ENGL400		|•|																|•|		

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluatio**