



EXCEL ENGINEERING COLLEGE
(Autonomous)

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai
Accredited by NBA(AERO,CSE,ECE&MECH), NAAC with "A+" and Recognised by UGC (2f &12B)
KOMARAPALAYAM - 637303

DEPARTMENT OF AGRICULTURAL ENGINEERING
COURSE OUTCOMES
BATCH 2019-23 & 2018-22 (R2017)

Course Name: C101 HS8151 Communicative English	
C101.1	Read and understand articles of a general kind in magazines and newspapers.
C101.2	Participate effectively in Formal and informal conversations; introduce themselves and their friends and express opinions in English
C101.3	Comprehend conversations and short talks delivered in English
C101.4	Write short essays of a general kind and personal letters and emails in English.
C101.5	Speak in informal group activities
Course Name: C102 MA8151 Engineering Mathematics-I	
C102.1	Use both the limit definition and rules of differentiation to differentiate functions.
C102.2	Apply the functions of several variables in engineering field.
C102.3	Evaluate integrals using techniques of integration, such as substitution, partial fractions and integration by parts.
C102.4	Apply integration to compute multiple integrals, area, volume, integrals in polar coordinates, in addition to change of order and change of variables.
C102.5	Apply various techniques in solving differential equations
Course Name: C103 PH8151 Engineering Physics– I	
C103.1	Gain knowledge on the basics of properties of matter and its applications,
C103.2	Acquire knowledge on the concepts of waves and optical devices and their applications in fibre optics
C103.3	Adequate knowledge on the concepts of thermal properties of materials and their applications in expansion joints and heat exchangers,.
C103.4	Get knowledge on advanced physics concepts of quantum theory and its applications in tunneling microscopes Acquaint with Ultrasonics and its application in NDT .
C103.5	Understand the basics of crystals, their structures and different crystal growth techniques.

Course Name: C104 CY8151 Engineering Chemistry– I	
C104.1	Understanding polymerisation and some important industrial polymers.
C104.2	Learn Thermodynamic properties and their inter relationship.
C104.3	Acquaint With UV and IR Spectral analysis.
C104.4	Know The Principle Of cooling curves and alloys.
C104.5	Acquire Knowledge of Nano and micro structure materials.
Course Name: C105 GE8151 Problem Solving and Python Programming	
C105.1	Apply algorithm, pseudocode and flow chart for problem solving.
C105.2	Write simple Python programs.
C105.3	Develop Python programs with various programming constructs and functions.
C105.4	Implement lists, tuples and dictionaries in various applications.
C105.5	Use of files and file operations efficiently
Course Name: C106 GE8152 Engineering Graphics	
C106.1	Familiarize with the fundamentals and standards of Engineering graphics
C106.2	Perform freehand sketching of basic geometrical constructions and multiple views of objects.
C106.3	Project orthographic projections of lines and plane surfaces
C106.4	Draw projections and solids and development of surfaces.
C106.5	Visualize and to project isometric and perspective sections of simple solids.
Course Name: C107 GE8161 Problem Solving and Python Programming Laboratory	
C107.1	Write, test, and debug simple Python programs.
C107.2	Implement Python programs with suitable language constructs.
C107.3	Use functions effectively for structuring Python programs.
C107.4	Apply suitable data structures in various applications
C107.5	Develop python applications using files

Course Name: C108 BS8161 Physics and Chemistry Laboratory	
C108.1	Analyze the mechanical properties and thermal properties of materials .
C108.2	Acquire the practical knowledge about band gap of a semiconductor and in optics such as Interference & Diffraction
C108.3	Gaining the knowledge of electrochemical redox reaction
C108.4	Apply knowledge of measurement of hardness producing ions, alkalinity, conductance, EMF
C108.5	Understand the impact of water quality and to solve engineering problems
Course Name: C109 HS8251 Technical English	
C109.1	Read technical texts and write area- specific texts effortlessly
C109.2	Listen and comprehend lectures and talks in their area of specialisation successfully
C109.3	Speak appropriately and effectively in varied formal and informal contexts
C109.4	Write reports and winning job applications
C109.5	Perform better in interview through various softskills
Course Name: C110 MA8251 Engineering Mathematics-II	
C110.1	Understand the use of matrix algebra techniques that is needed by engineers for practical applications.
C110.2	Apply the concept of vector calculus in Engineering disciplines
C110.3	Analysis the real integrals by applying concept of complex integration.
C110.4	Comprehend different spoken excerpts critically and infer unspoken and implied meanings.
C110.5	Understand the knowledge of Laplace Transforms in solving Ordinary Differential Equations.
Course Name: C111 BE8251 Basic Electrical and Electronics Engineering	
C111.1	Demonstrate the knowledge on basic Electric circuit laws
C111.2	Describe the single and three phase circuits and wiring
C111.3	Analyze the characteristics ,Working principles of Electrical Machines
C111.4	Demonstrate the knowledge and characteristics of semiconductor devices
C111.5	Explain the knowledge on various measuring instrument.

Course Name: C112 GE8292 Engineering Mechanics	
C112.1	Illustrate the vectorial and scalar representation of forces and moments
C112.2	Analyse the rigid body in equilibrium
C112.3	Evaluate the properties of surfaces and solids
C112.4	Calculate dynamic forces exerted in rigid body
C112.5	Determine the friction and the effects by the laws of friction
Course Name: C113 AI8201 Princpls and Practices of Crop Production	
C113.1	knowledge in the area of crop production and agricultural production sub sectors
C113.2	acquired knowledge on crop selection, crop production crop management
C113.3	knowledge in the areas of Crop protection and management
C113.4	knowledge in the area of production of agricultural crops
C113.5	knowledge in the area of production of horticultural crops
Course Name: C114 GE8261Engineering Practices Laboratory	
C114.1	Identify and solce the plant protection tools and weeding practices
C114.2	Gain Knowledge on soil management practices
C114.3	Fabricate carpentry components and pipe connections including plumbing works
C114.4	Use welding equipments to join the structures
C114.5	Carry out the basic machining operations
Course Name: C115 AI8211 Crop Husbandry Laboratory	
C115.1	Introduce the different crop production practices in different lands
C115.2	Applications of farm machineries for cultivation
C115.3	learn about the different agriculture practices for cultivation
C115.4	Knowledge on water, weed management for cultivation
C115.5	Develop the various unit operations of agricultural processing

Course Name: C201 MA8353 Transforms and Partial Differential Equations	
C201.1	Predict to formulate and some of the physical problems involving partial differential equations
C201.2	Understand the concept of the fourier series related problems and harmonic analysis
C201.3	Apply the application of PDEs in various engineering problems
C201.4	Analyse problems related to engineering applications by using Fourier Transforms Techniques.
C201.5	Understand the concept of difference equation using z-transform
Course Name: C202 AI8301 Soil Science and Engineering	
C202.1	Understand the fundamental knowledge of soil physical parameters.
C202.2	Perform soil survey and classify soil based on its characteristics.
C202.3	Explain the phase relationship and soil compaction.
C202.4	Analyze Engineering properties of soil.
C202.5	Understand Concepts of bearing capacity and slope stability.
Course Name: C203 AI8302 Fluid Mechanics and Hydraulics	
C203.1	Get a basic knowledge of fluids in static, kinematic and dynamic equilibrium.
C203.2	Abtain knowledge of the applicability of physical laws in addressing problems in hydraulics.
C203.3	Apply formulas to calculate flow measurement
C203.4	Studying the open channel flow and flow measurement
C203.5	Develop the dimensional analysis in fluid mechanics and pumps
Course Name: C204 AI8303 Theory of Machines	
C204.1	Conversant with commonly used mechanism for agriculture industrial application and analyze velocity and acceleration of mechanisms by vector and graphical methods.
C204.2	Identify the role of friction in belt, rope and chain drives.
C204.3	Learn the fundamentals related to motion of cam and follower
C204.4	Basic knowledge on the friction applications, gear and gear trains.
C204.5	Understand the functions of flywheel and its applications in industrial drives and summarize the balancing masses and their locations of rotating and reciprocating masses.

Course Name: C205 CE8304 Surveying and Levelling	
C205.1	Introduce the principle of surveying
C205.2	Applications of compass and plane table surveying in Agriculture
C205.3	learn about the uses of theodolite and modern surveying in irrigation projects
C205.4	Knowledge on levelling in agriculture
C205.5	Develop the levelling applications in agriculture and irrigation projects
Course Name: C206 MF8491 Thermodynamics	
C206.1	Determine the basic concepts of thermodynamics.
C206.2	Illustrate the first and second law of thermodynamics.
C206.3	Knowledge on the concepts of heat engines.
C206.4	Identify the properties of gases and vapour mixtures.
C206.5	Apply the heat transfer concepts in thermodynamics.
Course Name: C207 CE8312 Surveying and Levelling Laboratory	
C207.1	Introduce the principle of surveying
C207.2	Applications of compass and plane table surveying in Agriculture
C207.3	learn about the uses of theodolite and modern surveying in irrigation projects
C207.4	Knowledge on levelling in agriculture
C207.5	Develop the levelling applications in agriculture and irrigation projects
Course Name: C208 AI8311 Fluid Mechanics Laboratory	
C208.1	Able to measure flow in pipes
C208.2	Can calculate flow through different types of notches
C208.3	Able to determine frictional losses
C208.4	Able to calculate losses due to bends and fittings
C208.5	Can develop characteristics of pumps and turbines.

Course Name: C209 HS8381 Interpersonal Skills/Listening & Speaking	
C209.1	Determine the performance characteristics of 2-stroke and 4-stroke diesel/petrol engine.
C209.2	Interpret the effectiveness of heat exchanger with parallel and counter flow.
C209.3	Experiment and calculate the calorific value of the fuel and its properties.
C209.4	Reveal the thermal conductivity and resistance of solids and composites wall respectively.
C209.5	Predict the vapour compression of refrigeration and air conditioning test rig.
Course Name: C210 MA8391 Probability and Statistics	
C210.1	Identify the concepts of Probability and have knowledge of standard distributions.
C210.2	Examine the functions of single and multiples random variable.
C210.3	Interpret the testing of hypothesis for small and large samples.
C210.4	Apply the concepts of classifications of design of experiments in the field of engineering.
C210.5	Illustrate the sampling distribution and statistical techniques
Course Name: C211 AI8401 Unit operations in Agricultural Processing	
C211.1	Examine the evaporation process and types of evaporators for food industry
C211.2	Analyze the principles of filtration and mechanical separation equipment
C211.3	Identify size reduction and grinding equipment and understand the factors affecting the process
C211.4	Identify the gas-liquid and solid-liquid equilibrium, concepts and factors influencing equilibrium concepts and factors influencing equilibrium separation process
C211.5	Differentiate crystallization and distillation processes and identify processing equipment
Course Name: C212 AI8402 Farm Tractors	
C212.1	The students will be able to understand the various parts on tractor engine
C212.2	interpretation of cooling, lubrication, fuel and electrical systems in engines
C212.3	Apply the knowledge on transmission systems in engine
C212.4	illustrate the hydraulic system in agriculture machineris
C212.5	Testing of tractor, power tiller and bulldozer

Course Name: C213 CE8091 Hydrology and Water Resources Engineering	
C213.1	An understanding of the key drivers on water resources
C213.2	Hydrological processes and their integrated behaviour in catchments
C213.3	Study and estimation of Flood and Drought
C213.4	Ability to conduct Spatial analysis of rainfall data and design water storage reservoirs
C213.5	Ability to construct and apply a range of hydrological models to surface water and groundwater problems including Hydrograph, Flood/Drought management, artificial recharge
Course Name: C214 CE8393 Strength of Materials	
C214.1	Introduce the principle of surveying
C214.2	Applications of compass and plane table surveying in Agriculture
C214.3	learn about the uses of theodolite and modern surveying in irrigation projects
C214.4	Knowledge on levelling in agriculture
C214.5	Develop the levelling applications in agriculture and irrigation projects
Course Name: C215 GE8291 Environmental Science and Engineering	
C215.1	Implement the analytical techniques like filtration and evaporation
C215.2	Interpret the properties of proteins
C215.3	Summarize the chemistry of sugar
C215.4	Identify the nature and problems of the soil
C215.5	Decide fertilizer for a particular soil depending on its nature
Course Name: C216 AI8411 Soil Science Laboratory	
C216.1	Students know the techniques to determine various physical properties of soil.
C216.2	Students know the techniques to determine various chemical properties of soil.
C216.3	Gain knowledge on its applicability for agriculture by conducting appropriate tests.
C216.4	Gain knowledge on its applicability for irrigation by conducting appropriate tests.
C216.5	Gain knowledge on its rocks and minerals.

Course Name: C217 CE8481 Strength of Materials Laboratory

C217.1	Introduce the principle of surveying
C217.2	Applications of compass and plane table surveying in Agriculture
C217.3	learn about the uses of theodolite and modern surveying in irrigation projects
C217.4	Knowledge on levelling in agriculture
C217.5	Develop the levelling applications in agriculture and irrigation projects

Course Name: C218 HS8461 Advanced Reading and Writing

C218.1	Apply knowledge of English grammar for effective communication
C218.2	Make use of common English phrases and vocabulary strength.
C218.3	Build self-confidence and enhance professionalism
C218.4	Implement listening, reading and writing skills in real - life situations
C218.5	Speak fluently in English with proper pronunciation, intonation, tone and accent

Course Name: C301 Irrigation and Drainage Engineering

C301.1	Explaining the Irrigation Requirement
C301.2	Interpretation of method of irrigation system
C301.3	Applying the knowledge on diversion and impounding structures
C301.4	Illustration of the canal irrigation and command area development
C301.5	Know about the agricultural drainage and the system

Course Name: C302 AI8502 Farm Machinery and Equipment

C302.1	To expose the students to farm mechanization benefits and constraints.
C302.2	To introduce the students to the working principles of farm equipments, tillage implements.
C302.3	The students will be able to understand the working principle of fertilizing equipment
C302.4	To know the basic working principles of farm equipments
C302.5	Understand the used and working mechanism of sowing, weeding and harvesting implements

Course Name: C303 AI8503 Design of Basic Machine Elements

C303.1	Apply the concept of steady stresses in design of machine elements subjected to steady loads.
C303.2	Design power transmission system such as belts, ropes, chain drives and sprockets.
C303.3	Design various machine components under torsion such as shafts, shaft couplings and keys.
C303.4	Design energy storing springs under constant and varying loads.
C303.5	Select the gears and bearings for specific applications.

Course Name: C304 AI8504 Post Harvest technology

C304.1	Introduce the fundamentals of post harvesting
C304.2	learn about the material handling equipments
C304.3	Knowledge on different post harvest operations
C304.4	Applications of different processing methods of harvested crops
C304.5	Fundamentals of various unit operations of agricultural processing

Course Name: C305 AI8003 Climate Change and Adoption

C305.1	Explain about the characters and composition of atmosphere.
C305.2	Illustrate the ozone layer and its depletion.
C305.3	Summarize the global warming causes and its impact.
C305.4	Explain about the climate change and its impact on various sectors.
C305.5	Infer about the mitigation technologies and practices against the climate change

Course Name: C306 OBT553 Fundamentals of Nutrition

C306.1	Explain about the history and different types of aquaculture.
C306.2	Illustrate the fishery management principles and life cycle.
C306.3	Summarize the fish nutrients and methods of feed formulation.
C306.4	Explain about the fish genetics and Breeding.
C306.5	Infer about the fish processing methods and value addition methods.

Course Name: C307 AI8511 Operation and Maintenance of Farm Machinery Laboratory	
C307.1	Students can be equipped with sufficient practical skills on farm power sources
C307.2	Students can be equipped with sufficient practical skills on handling of tractors
C307.3	Students can be equipped with sufficient practical skills on power tillers
C307.4	Students can be equipped with sufficient practical skills on various implements used in land preparation, sowing, inter cultivation and plant protection
C307.5	Gain Knowledge on operation of Bulldozer and agricultural implements and trailers
Course Name: C308 AI8512 Post Harvest Engineering Laboratory	
C308.1	Introduce the principle of drying process
C308.2	Applications of paddy thresher and winnowers
C308.3	learn about the efficiency of bucket elevator and screw conveyor
C308.4	Knowledge on rice mill in agriculture process
C308.5	Develop the various unit operations of agricultural processing
Course Name: C309 AI8513 Irrigation Field Laboratory	
C309.1	To study the various meteorological instruments
C309.2	Measurement of flow properties
C309.3	Design of drip irrigation system
C309.4	Design of sprinkler irrigation system
C309.5	Determining uniformity coefficients of different irrigation systems.
Course Name: C310 HS8581 Professional Communication	
C310.1	Apply knowledge of English grammar for effective communication
C310.2	Make use of common English phrases and vocabulary strength.
C310.3	Build self-confidence and enhance professionalism
C310.4	Build self-confidence and enhance professionalism
C310.5	Speak fluently in English with proper pronunciation, intonation, tone and accent

Course Name: C311 AI8601 Groundwater and Well Engineering

C311.1	Understand the technical aspects of groundwater.
C311.2	Ability to identify the availability of groundwater.
C311.3	Knowledge on the concepts of assessment of groundwater.
C311.4	Gain knowledge on technical aspects of utilization of groundwater.
C311.5	Familiarized with the theory behind well design, construction and management of wells.

Course Name: C312 AI8602 Food and Dairy Engineering

C312.1	The students will gain knowledge about Dairy and Food process engineering
C312.2	Understand the process of manufacturing of dairy products
C312.3	Understand the process of thermal of food products
C312.4	Students will understand the processing and preservation of foods
C312.5	Students will understand the importance of quality control and packaging

Course Name: C313 AI8603 Protected Cultivation

C313.1	Identify the different types of farm buildings
C313.2	Apply the design of dairy and poultry housings
C313.3	Applications of farm feed storage structures
C313.4	Construct the rural roads, water supply and sewage disposal
C313.5	Develop the green houses and constructions

Course Name: C314 AI8604 Solar and Wind Energy Engineering

C314.1	Understand the physics of solar radiation and concept of different collectors.
C314.2	Ability to classify the solar energy collectors and methodologies of storing solar energy.
C314.3	Knowledge on the concepts of solar PV cells and system.
C314.4	Knowledge on wind energy potential and nature of wind.
C314.5	Illustrate the different wind mills and applications of wind energy.

Course Name: C315 AI8005 Agricultural Economics and Farm Management	
C315.1	Explain the basics of economics and Agricultural economics.
C315.2	Constructing the consumption theory- utility and demand.
C315.3	Illustrate about theory of production and supply.
C315.4	Infer about the theory of exchange and distribution.
C315.5	Summarize the basics of macroeconomics.
Course Name: C316 AI8007 Agricultural Waste Management	
C316.1	Explain the basic concepts of Agricultural waste management
C316.2	Illustrate the different types of agriculture wastes and its utilization
C316.3	knowledge on the Biomass briquetting techniques
C316.4	Explain the Biochar production methods
C316.5	Summarize the basic concept of biogas and bio ethanol production
Course Name: C317 AI8611 CAD for Agriculture Engineering	
C317.1	Utilize standard software tools to create part, assemblies and check for clearances.
C317.2	Understand the plan and layout of underground pipes and check dams.
C317.3	Understand the plan and layout of post harvest technology units like plough, threshers and winnowers.
C317.4	Understand the plan and layout of biogas plant.
C317.5	Modify 2D drafting to 3D using modeling software
Course Name: C318 AI8612 Drawing of Farm Structures	
C318.1	Gain knowledge on various farm structures related to agricultural engineering.
C318.2	Design and draw the animal housing structures.
C318.3	Design and draw the grain storage structures.
C318.4	Design and draw all farm structures connected to agricultural engineering including small civil structures
C318.5	Design of machinery and equipment shed and workshops.

Course Name: C319 AI8613 Study Tour	
C319.1	Apply engineering knowledge learned in classroom in real industrial/Laboratory situations.
C319.2	Knowledge on advanced tools, techniques and exposure to engineering practices in the industry.
C319.3	Understand the role and responsibilities as well as code of ethics that engineers should uphold.
C319.4	Illustrate about general workplace behaviour and build interpersonal and team skills.
C319.5	Knowledge on prepare the professional work, reports and presentations.
Course Name: C320 AI8614 Food Process Engineering Laboratory	
C320.1	Introduce the principle of dehydration process
C320.2	learn about the efficiency of butter churn and working process
C320.3	learn about the efficiency of microwave oven heating
C320.4	Knowledge on food adulteration detection
C320.5	Develop the various expansion and oil absorption of frying processing
Course Name: C401 AI8701 Soil and Water Conservation Engineering	
C401.1	Gain fundamental knowledge on the concepts of soil erosion.
C401.2	Gain knowledge about evolution of Universal Soil Loss Equation: and its applications.
C401.3	Design erosion control measures types and design specifications.
C401.4	Have sufficient knowledge on soil and water conservation measures.
C401.5	Familiar knowledge on reservoir sedimentation and sediment control methods.
Course Name: C402 AI8702 Remote Sensing and Geographical Information System	
C402.1	Introduce the principle of surveying
C402.2	Applications of compass and plane table surveying in Agriculture
C402.3	learn about the uses of theodolite and modern surveying in irrigation projects
C402.4	Knowledge on levelling in agriculture
C402.5	Develop the levelling applications in agriculture and irrigation projects

Course Name: C403 AI8703 Bio Energy resources Technology	
C403.1	Impart the fundamental knowledge on the importance of bio resources.
C403.2	Impart the fundamental knowledge on the importance of bio energy.
C403.3	Knowledge on the different bio reactors and fermentors.
C403.4	Illustrate about alcohol production, pyrolysis and gasification processes.
C403.5	Understand the briquetting process and different bio energy policies.
Course Name: C404 AI8011 Seed Processing Technology	
C404.1	Explain the Seed characters and importance of good quality seeds.
C404.2	Interpret the floral biology and different types of pollination.
C404.3	Summarize the scope and importance of seed certification.
C404.4	Infer about the seed processing techniques and equipments.
C404.5	Explain about seed programmes and seed marketing.
Course Name: C405 OCE751 Environmental and Social Impact Assessment	
C405.1	To carryout scoping and screening of developmental projects for environmental and social assessments
C405.2	Explain different methodologies for environmental impact prediction and assessment
C405.3	Plan environmental impact assessments and environmental management plans
C405.4	Evaluate environmental impact assessment reports
C405.5	Evaluate environmental impact project
Course Name: C406 AI8711 GIS Laboratory for Agricultural Engineers	
C406.1	Introduce the principle of surveying
C406.2	Applications of compass and plane table surveying in Agriculture
C406.3	Learn about the uses of theodolite and modern surveying in irrigation projects
C406.4	Knowledge on levelling in agriculture
C406.5	Develop the levelling applications in agriculture and irrigation projects

Course Name: C407 AI8712 Renewable Energy Laboratory

C407.1	Understand the need of energy conversion and the various methods of energy storage
C407.2	Explain the concept and field applications of solar energy
C407.3	Identify Winds energy as alternate form of energy and to know how it can be tapped
C407.4	Understand the Geothermal & Tidal energy, its mechanism of production and its applications
C407.5	Explain bio gas generation and its impact on environment

Course Name: C408 AI8713 ICT in Agricultural Engineering Lab Exercises

C408.1	To gain practical knowledge on various technologies in information and communication for agriculture.
C408.2	Know Configuring timers for automatic switching on and off of irrigation systems.
C408.3	Know using sensors for Agro meteorological measurements.
C408.4	Gain Experience with existing open source crop simulation models.
C408.5	Exposing cloud resources for agricultural applications.

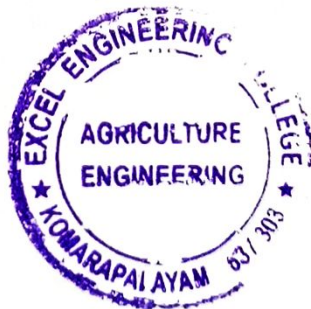
Course Name: C409 AI8714 Industrial Training

C409.1	Introduce the principle of surveying
C409.2	Applications of compass and plane table surveying in Agriculture
C409.3	learn about the uses of theodolite and modern surveying in irrigation projects
C409.4	Knowledge on levelling in agriculture
C409.5	Develop the levelling applications in agriculture and irrigation projects

Course Name: C410 AI8015 Micro irrigation

C410.1	Knowledge and working of pumps and pump selection.
C410.2	Applying knowledge on pump valves.
C410.3	Illustration of different micro irrigation systems.
C410.4	Design of drip irrigation system.
C410.5	Design of sprinkler irrigation system.

Course Name: C411 AI8020 Special Farm Equipment	
C411.1	Get a basic knowledge of mowers and weeders for different field intercultural operations.
C411.2	Gain knowledge about different types of sprayers and dusters.
C411.3	Acquired knowledge on types of threshers and harvesters required for various agricultural operations.
C411.4	Understand the working mechanism of threshers and other machineries for different field operations.
C411.5	Acquire knowledge on various special farm equipments required for agricultural operations.
Course Name: C411 AI8811 Project Work	
C412.1	Take up and Evaluate any challenging practical problem
C412.2	Find solution by formulating proper methodology
C412.3	Develop the ability to solve a specific problem right from its identification and literature review
C412.4	Analyze and carry out engineering task related to various fields of agriculture
C412.5	Analyze and evaluate to obtain solution for practical problems in agricultural engineering



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 HEAD OF THE DEPARTMENT
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