Course outcome of under graduate courses department of Ag. chemistry

Course Title : Fundamentals of Soil Science
Code : D-192
Class : B. Sc. Ag I Sem.
Course credit : 2-0-1
Course outcome:

1. Students develop a general understanding about different physico-chemical properties of soils and develop ability to manage them for higher fertility and productivity of soils.
2. Helps students in understanding of different traditional as well as moderns soil defect managing techniques and their scientific relevance.
3. Develops an understanding about essential plants nutrients their metabolic roles in plants their specific deficiency symptoms and strategies to maintain soil fertility for higher and sustained productivity.
4. Helps the students to develop a basic understanding about efficient utilization of naturally occurring inputs such as biofertilizers and organics for higher and sustained farm production and profitability.
5. Familiarise the students in understanding about different soils their origin, specific features, and also generates understanding about the range of crops which can be grown in these soils.
6. Creates practical ability among students for identification of different soil types, rocks and minerals, fertilizers and Agrichemicals.
7. Develops practical ability among students to determine the magnitude of different chemical disorders in the soil (soil pH, salinity etc.)

Course Title : Plant biochemistry and chemistry of plant products
Code : D-296
Class : B. Sc. Ag II Sem.
Course credit : 2-0-1
Course outcome:

1. To understand about synthesis of different biochemical compounds in plant and their significance in plant metabolism.
2. To understand the factors affecting functioning and survival of soil microbes and their specific natural role in governance of natural processes occurring in soils..
3. Helps in developing scientific understanding about commercial utilization of different soil flora and fauna strains to achieve reliance on natural ways of farming.
4. Familiarise about isolation, multiplication and commercial production of microbial strains for their economic use in agricultural production.
5. A practical understanding about physical processes involved and laboratory techniques adopted in study of nature, behaviour and relevance of different soil microbes..

Course Title : Elementary microbiology and soil microbiology
Code : D-397
Class : B. Sc. Ag III Sem.
Course credit : 2-0-1
Course outcome:

1. Would make the student familiar about nature and properties of different biochemical compounds present in plant.
2. Would develop ability among students to understand the factors affecting synthesis and metabolic functions of different biochemical compounds and their significance in plant and human nutrition.
3. Helps in developing scientific understanding about commercial extraction and utilization of different biochemical compounds.
4. Familiarise the students about isolation and determination of content of different biochemical compounds present in plant and plant products.
5. A practical understanding about physical processes involved and laboratory techniques adopted in study of nature, behaviour and relevance of different plant biochemical products.

Course Title : Soil Fertility, fertilizers and INM
Code : D-597
Class : B. Sc. Ag V Sem.
Course credit : 2-0-1
Course outcome:

1. Develops capacity to understand the forces responsible for weathering and soil formation and its significance for maintenance of life forms on the earth planet.
2. Helps the students to learn about basic physico-chemical phenomena/processes governing soil fertility and productivity
3. Familiarise the knowledge regarding soil flora and fauna and their role in maintaining hospitability of soil environment for crop plants.
4. Helpful in developing ability among students in understanding transformation of different nutrient elements and the factors affecting these transformations.
7. Familiarise comprehensive knowledge about essential plants nutrients their metabolic roles in plants, their specific deficiency symptoms and strategies to maintain soil fertility for higher and sustained productivity.
8. Provide insight knowledge about IPNM (Integrated Plant Nutrient Management) and its necessity for sustenance of life and agricultural production system.
9. Helpful in creating practical ability among students regarding diagnosis of soil problems and developing situation specific plan for their reclamation.
10. Provides opportunity to the students to learn different scientific approaches of soil quality enhancement through visit to different research stations of national repute.

11. Creates practical ability for determination of nutrient content in soils and plants and calculation regarding uptake of nutrients.

Course Title : Management of Problem Soils
Code : D-794
Class : B. Sc. Ag VII Sem.
Course credit : 2-0-1
Course outcome:

1. Familiarise knowledge regarding different forms of soil problems their causes of formation and their area and distribution in India and Indian states.
2. Helps the students to learn about basic physico-chemical phenomena/processes governing soil physico-chemical and biological health, fertility and productivity.
3. Familiarise the knowledge regarding soil flora and fauna and their role in maintaining hospitability of soil environment for crop plants.
4. Helpful in developing ability among students in understanding transformation of different nutrient elements and the factors affecting these transformations.
5. Provides opportunity to learn about management of saline, alkaline, acidic, water logged and ravines in reference to economic and sustained crop production.
6. Provides practical knowledge to run glass electrode. pH meter, electrical conductivity meter *etc*. for the diagnosis of soil chemical problems.
7. Helpful in acquiring understanding about use of soil survey equipments for efficient land use and planning.
8. Creates ability to decide the kind and quantity of soil reclamants for the given set of agroclimatic situations and crops.
9. Creates practical ability to judge the quality of irrigation water and the strategies for the use of poor quality irrigation water.
10. Provides on farm practical ability to diagnose the soil sickness and problems through visible field appearances.

Course Title : Rural Agricultural Works Experience in Soil Science and Ag. Chemistry
Code : D-891(d)
Class : B. Sc. Ag VIII Sem.
Course credit : 0-0-2
Course outcome

1. The course provides an opportunity to the students to understanding the rural society in perspective of agriculture and allied activities.
2. Makes the students familiar with socio economic condition and functioning of farmers and its community.
3. Helps the students to impart the practical knowledge of different soil reclamation operations performed by different farmers.

4. Provides opportunity for the field visit to understand the farmer problems related to declining and gradual loss in soil fertility in reference to crop production and develop strategies for their improvement.
5. Develops confidence and competence among the students in solving agricultural problems.
6. Helps the students for generating on site ability for INM feasibilities at farm under different situations.

Course Title : Geo informatics and Nano-technology
Class: B. Sc. Ag V Sem. Code : AG-511
Course credit: 1-0-1

Course outcome

1. Familiarise knowledge regarding different techniques, tools and practices used in precision agriculture.
2. Helps the students to learn about basic principles of spatial data management in GIS for its agricultural uses.
3. Familiarise the knowledge and techniques adopted in image processing and interpretation in Global Positioning Systems (GPS).
4. Provides opportunity to learn about nano-technology its concepts and techniques of nano-practices and nano scales in agricultural studies.
5. Creates ability to design the nano-particles, nano-pesticides nano-fertilizers, nano-sensors etc use full in commercialization of agriculture.