

S.K.R Government Degree College, Gudur, Tirupati Dist

Course Outcomes

S.K.R Government Degree college is established 58 years back in a coastal town gudur in Andhra Pradesh, India with a prime objective of imparting quality education to students of poor socio economic back ground students, especially those of weaker sections, which in turn enables them to gain employment or equip them to become entrepreneurs and thus empower them in all its dimensions through economic independence.

Following are the Course Outcomes:

Course. : B.Sc (Microbiology Zoology Chemistry)

Department: Microbiology

Course title: Introduction to microbiology and microbial diversity

On successful completion of this course, the students will be able to.:

- Explain origin of microbes on Earth
- Analyze the differences between prokaryotes and eukaryotes of nature.
- Acquire awareness about importance and applications of Microbiology
- Illustrate diversity among the viruses and prokaryotic organisms and can categorise them.
- Classify fungi, Actinomycetes, Algae and Mycoplasma based on their structure, reproduction and life cycles.
- Evaluate the microbial cultures.

On successful completion of this practical course, students shall able to:

- - Demonstrate the techniques of use of lab experiment, preparing slides and identify the material and draw diagrams exactly as it appears.
 - Observe and identify the types of bacteria
 - Demonstrate the techniques of inoculation, preparation of media etc.
 - To learn handling of microscopes.

Course title: Microbial physiology and Biochemistry

On successful completion of this course, the students will be able to:

- Explain classification of carbohydrates, Lipids and Amino acids
- Analyse protein sequencing.
- Acquire awareness about properties and Enzymes.
- Illustrate diversity in structure, function and their properties of DNA, RNA.
- Evaluate the oxidative and substrate level phosphorylation

On successful completion of this practical course, students shall able to:

- Demonstrate the techniques of use of lab experiment, preparing slides and identify the material and draw diagrams exactly as it appears.
- Qualitative analysis of Carbohydrates
- To learn Estimation of Biochemical reactions.
- To learn demonstration of immobilization of enzyme activity.

Course title: Immunology and medical microbiology

On successful completion of this course, the sh1dents will be able to:

- Acquire and know about the immunity.
- Acquire knowledge about antigen antibody reactions
- Understand about the clinical pathogens
- Acquire knowledge about chemotherapy

On successful completion of this practical course, students able to:

- Identification Of blood groups
- Estimation of hemoglobin
- To learn differential leukocyte count
- To learn antibacterial sensitivity test
- To learn symptoms of diseases

Course title: Industrial microbiology

On successful completion of this course, the students will be able to:

- Acquire and know about the bioreactors and fermentation methods
- Acquire the importance of microbial production of industrial products
- Learn about the bioleaching
- Understand the industrially important microorganisms

On successful completion of this practical course, students able to:

- Acquire and know about the amylase producing microbes
- Acquire the importance of microbial growth curve in production of industrial products
- Learn about the fermentor design and importance
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Course title: Molecular and microbial genetics

On successful completion of this course, the students will be able to:

- Acquire and know about the DNA, RNA
- Acquire knowledge on mutations and mutagens
- Acquire and the importance of gene regulation of gene expression in bacteria
- Understand the genetic code

On successful completion of this practical course, students able to:

- Demonstrate the techniques of use of lab equipment, draw diagrams exactly as it appears
- To learn demonstration of PCR
- learn about the isolation of DNA

Course title: Environmental and agricultural microbiology

On successful completion of this course, the students will be able to:

- Acquire and know about the micro flora
- Understand the microbial interaction
- Acquire and the importance of liquid waste management
- Understand the plant disease control

On successful completion of this practical course, students able to:

- Acquire and know about the analysis of soil
- Know about the isolation techniques
- Acquire and know about the vesicular and mycorrhizal fungi
- To learn observation of plant diseases

Course title: Food and industrial microbiology

On successful completion of this course, the students will be able to:

- Acquire knowledge about the food infection
- Understand the microbes as food

On successful completion of this practical course, students able to:

- To learn methylene blue reduction test
- Learn about the qualitative analysis of water
- To learn demonstration of mycotoxins.
- To learn estimation of citric acid

Course title: Instrumentation and biotechniques

On successful completion of this course, the students will be able to:

- Acquire and know about the different types of microscopes
- Understand the HPLC mechanisms
- Understand the principle of centrifugation

On successful completion of this practical course, students able to:

- To learn demonstration of chromatography and electrophoresis techniques
- To learn estimation of DNA
- To learn study of fluorescent micrographs to visualize bacterial cells
- To learn estimation of protein