S.K.P. GOVERNMENT DEGREE COLLEGE

GUNTAKAL

COURSE OUTCOMES

DEPARTMENT OF BOTANY

Course Outcomes:
On successful completion of this course, the students will be able to:
Explain origin of life on the earth.

- Illustrate diversity among the viruses and prokaryotic organisms and can categorize them.
- Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and life cycles.
- Analyze and ascertain the plant disease symptoms due to viruses, bacteria and fungi.
- Recall and explain the evolutionary trends among amphibians of plant kingdom for their shift to land habitat.
- Evaluate the ecological and economic value of microbes, thallophytes and bryophytes.

DEPARTMENT OF CHEMISTRY

Course outcomes:
At the end of the course, the student will be able to:

1. Understand the basic concepts of p-block elements

2. Explain the difference between solid, liquid and gases in terms of in termolecular interactions.

3. Apply the concept so fgas equations, pHand electrolytes while studying other chemistry courses.

DEPARTMENT OF COMMERCE

Course Outcomes:
At the end of the course, the student will able to

- Identify transactions and events that need to be recorded in the books of accounts.
- Equip with the knowledge of accounting process and preparation of final accounts of sole trader.
- Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP.
- Analyze the difference between cash book and pass book in terms of balance and make reconciliation.
- Critically examine the balance sheets of a sole trader for different accounting periods.
- Design new accounting formulas & principles for business organisations.

DEPARTMENT OF COMPUTER SCIENCE

Course Outcomes:
Upon successful completion of the course, a student will be able to:
1. Understand the evolution and functionality of a Digital Computer.

2. Apply logical skills to analyze a given problem

3. Develop an algorithm for solving a given problem.

4. Understand „C" language constructs like Iterative statements, Array processing, Pointers, etc.

5. Apply „C" language constructs to the algorithms to write a „C" language program.

DEPARTMENT OF COMPUTER APPLICATIONS

Course Outcomes:
Upon successful completion of the course, a student will be able to:
1. Understand basic concepts of data science
2. Understand why python is a useful scripting language for developers.
3. Use standard programming constructs like selection and repetition.
4. Use aggregated data (list, tuple, and dictionary).
5. Implement functions and modules.

DEPARTMENT OF ECONOMICS

COURSE OUTCOMES
At the end of the course, the student is expected to demonstrate the following cognitive abilities and psychomotor skills.
1. Remembers and states in a systematic way (Knowledge)
   a. the differences between microeconomic analysis and macroeconomic analysis
   b. various laws and principles of microeconomic theory under consumption,

2. Explains (understanding)
   a. various terms and concepts relating to microeconomic analysis with the help of examples of real life
   b. consumer's equilibrium and consumer's surplus using indifference curve analysis.
   c. various laws and principles of consumption, production, and income distribution
   d. determination of price and output discriminating different market conditions in short term and long term

3. Critically examines using data and figures (analysis and evaluation)
   a. various laws and principles of microeconomic analysis and market conditions
   b. application of the concept of demand elasticity and its relation with Average and Marginal Revenue
   c. the relationship between average and marginal cost/revenue both in long term and

4. Draws critical diagrams and graphs to explain and examine the application of various laws and principles of microeconomic analysis

DEPARTMENT OF ENGLISH

Course Outcomes
By the end of the course the learner will be able to :

- Use reading skills effectively
- Comprehend different texts
- Interpret different types of texts
- Analyse what is being read
- Build up a repository of active vocabulary
- Use good writing strategies
- Write well for any purpose
- Improve writing skills independently for future needs

DEPARTMENT OF HISTORY

Course Outcomes:

- After successful completion of this course, the student will be able to:
- Identify and define various kinds of sources and understand how history books are shaped
- Compare and contrast various stages of progress from IVC to Vedic age and analyze the Jain, Buddhist and Vedic faiths
- Increase the awareness and appreciation of Transition from Territorial States to Emergence of Empires
- Analyze the emergence of the Mauryan and Gupta empires during the ―classical age‖ in India
- Evaluate the key facets of ancient society, polity and culture in South India—the feudalism, and the rise of technology and commerce.
- Critically examine the nature of monarchic rule and develop an comprehensive understanding of cultural evolution during ancient period
- Visualize where places are in relation to one another through map pointing

DEPARTMENT OF MATHEMATICS

Course Outcomes:

I. After successful completion of this course, the student will be able to; Solve linear differential equations
II. Convert nonexact homogeneous equations to exact differential equations by using integrating factors.
III. Know the methods of finding solutions of differential equations of the first order but not of the first degree.
IV. Solve higher-order linear differential equations, both homogeneous and non homogeneous, with constant coefficients.
V. Understand the concept and apply appropriate methods for solving differential equations

DEPARTMENT OF PHYSICS

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

1. Understand Newton's laws of motion and motion of variable mass system and its application to rocket motion and the concepts of impact parameter, scattering cross section.
2. Apply the rotational kinematic relations, the principle and working of gyroscope and it applications and the processional motion of a freely rotating symmetric top.
3. Comprehend the general characteristics of central forces and the application of Kepler's laws to describe the motion of planets and satellite in circular orbit through the study of law of Gravitation.
4. Understand postulates of Special theory of relativity and its consequences such as length contraction, time dilation, relativistic mass and mass-energy equivalence.
5. Examine phenomena of simple harmonic motion and the distinction between undammed, damped and forced oscillations and the concepts of resonance and quality factor with reference to damped harmonic oscillator.
6. Appreciate the formulation of the problem of coupled oscillations and solve them to obtain normal modes of oscillation and their frequencies in simple mechanical systems.
7. Figure out the formation of harmonics and overtones in a stretched string and acquire the knowledge on Ultrasonic waves, their production and detection and their applications in different fields.

DEPARTMENT OF POLITICAL SCIENCE

Course Outcomes:
On successful completion of the course the students will be able to;

- Recall the previous knowledge about Political Science and understand the nature and scope, traditional and modern approaches of Political Science.
- Understand concepts intrinsic to the study of Political Science.
- Have solid theoretical understanding of Rights and its theories along with the basic aspects of certain political ideologies.
- Apply the knowledge to observe the field level phenomena

DEPARTMENT OF ZOOLOGY

Course Outcomes: By the completion of the course the graduate should able to –

- **CO1** Describe general taxonomic rules on animal classification
- **CO2** Classify Protozoa to Coelenterate with taxonomic keys
- **CO3** Classify Phylum Platy helminthes to Annelid phylum using examples from parasitic adaptation and vermin composting
- **CO4** Describe Phylum Arthropoda to Mollusca using examples and importance of insects and Molluscans
- **CO5** Describe Echinodermata to Hemi chordata with suitable examples and larval stages in relation to the phylogeny

DEPARTMENT OF MICROBIOLOGY

Course Outcomes:-

- The development of this branch is understood. Students are able to identify various groups of microorganisms. Cultivation and control of bacteria and fungi is known by students.
- Students are able to understand the internal organization of bacteria. They are able to separate and study various biomolecules. Basic functions of a bacterial cell and diversity in bacterial nutrition is understood.
- Basic to advanced knowledge about genes and genetic material is gained. Synthesis of cell material and regulation of the mentioned process is understood. The application of knowledge regarding genes is understood.
- Deep knowledge about immune system in human body is gained and the application of that knowledge in diagnosis and treatment of diseases is understood. Information regarding diagnostic techniques and antimicrobial substances is useful to secure jobs in medical labs.
- Students will gain knowledge regarding the application of microorganisms in the fields of medicine, industry, food and agriculture. They can have higher prospects to secure jobs in respective fields.

DEPARTMENT OF ECONOMICS

Course Outcomes:-

- Apply concepts of electric network topology, nodes, branches, loops to sc circuit problems including the use of computer simulation.
- Apply time and frequency concepts of analysis.
- Develop a digital logic and apply it to solve real life problems.
- Analyze, design and implement combinational logic circuits.
- Understand the fundamentals and areas o f applications for the integrated circuits.
- Analyze important types of linear integrated circuits like Op-Amps.
- The student can gain good knowledge on microprocessor and implement in practical applications
- Design system using memory chips and peripheral chips for 16 bit 8086 microprocessor.
- Basic MOS transistor action is briefly reviewed and overview of fabrication process is given to help appreciate the nature of the technologies.

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PROGRAMME OUTCOMES

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On successful completion of Graduate & Post Graduate programme, graduating students/graduates will be able to:

PO 1 Domain Expertise:

- Acquire comprehensive knowledge and skills.
- Make use of the knowledge in an innovative manner.
- Effectively apply the knowledge and skills to address various issues.

PO 2 Life-long Learning and Research:

- Learn "how to learn"- Self motivated and self directed learning.
- Adapt to the ever emerging demands of work place and life.
- Be inquisitive and establish cause and effect relationship.
- Investigate and report.

PO 3 Modern equipment Usage

- Use ICT effectively.
- Access, retrieve and use authenticated information.
- Access, retrieve and use authenticated information.Have knowledge of software applications to analyze data.

PO 4 Computing Skills and Ethics

- Develop rationale and scientific thinking process.
- Use technology intelligently for communication, entertainment and for the benefit of mankind.
- Ensure ethical practices throughout ones endeavors for the well being of human race.

PO 5 Complex problem Investigation & Solving

- Predict and analyze problems.
- Frame hypotheses.
- Investigate and interpret empirical data.
- Plan and execute action.

PO 6 Perform effectively as Individuals and in Teams

- Work efficiently as an individual
- Cooperate, coordinate and perform effectively in diverse teams/groups.
- Prioritize common interest to individual interest.

PO 7 Efficient Communication & Life Skills

- Express thoughts in an effective manner
- Listen, understand and project views in a convincing manner.
- Decide appropriate media to share information
- Develop skills to present significant information clearly and concisely to interested groups.

PO 8 Environmental Sustainability

- Understand sensibly the Environmental challenges.
- Think critically on environment sustainability measures.
- Propagate and follow environment friendly practices.

PO 9 Societal contribution

- Render service for the general good of the society.
- Involve voluntarily in social development activities at Regional, National, global levels.
- Have own pride in volunteering to address societal issues viz: calamities, disasters, poverty, epidemics.
- Be a patriotic citizen to uphold the values of the nation

PO 10 Effective Project Management

- Identify the goals, objectives and components of a project and decide the appropriate time of completion.
- Plan, organize and direct the endeavors of teams to achieve the set targets in time.
- Be competent in identifying opportunities and develop strategies for contingencies.