

**GOVERNMENT DEGREE COLLEGE, THORRUR**

**MAHABUBABAD DISTRICT, TELANGANA STATE – 506163**

**e-Mail: [jc.gdc.thorrur@gmail.com](mailto:jc.gdc.thorrur@gmail.com), Mobile: 8008307999**

**Website: <https://gdcts.cgg.gov.in/thorrur.edu>**



## **Criterion 2**

### **Metric No.2.6.1**

***PROGRAMME OUTCOMES***

***AND***

***COURSE OUTCOMES***

**GOVERNMENT DEGREE COLLEGE**

**Thorrur**

**MAHABUBABAD (Dist)-506163**



**DEPARTMENT OF  
ENGLISH**

**PROGRAMME AND  
COURSE OUTCOMES**



## DEPARTMENT OF ENGLISH - PROGRAM SPECIFIC OUTCOME (PSO)

Three text books – **English For Advancement** for the first and second semesters and **English For Excellence** for the third and fourth semesters and **English For Careers** – for fourth and sixth semesters have been prescribed. These text books aim at:

- Making the students realize the importance of the language – both written and spoken – in the present day scenario
- Provide thorough grounding in the basics of soft skills
- Equipping the students with communication skills and people skills

### ***COURSE OUTCOMES***

***The following are Course Outcomes of English Course for Under Graduation Students.***

#### **SEMESTER I**

- Infusing passion for reading and writing
- Filling up the gaps in language abilities left due to formal education
- Creating thorough grounding in all four language abilities - reading, writing, listening and speaking
- Improving their skills in the areas of grammar and vocabulary
- Developing reading and writing skills
- Familiarizing the students with the culture of the region
- Providing value orientation through passages and anecdotes
- Enhancing knowledge of various aspects of language such as pronunciation, grammar, vocabulary, spelling, punctuation, conversation and writing
- Emphasizing the importance of extensive practice

#### **SEMESTER II**

- Addressing the English language needs of students
- Enhancing the critical thinking capabilities
- Emphasizing on the use rather than usage of English; on how the language is used rather than how it should be used
- Exposing the students to a range of real-life contexts where the English language is used
- Enabling the students to communicate information, opinions, ideas and feelings
- Integration of knowledge and skills

- Equipping the students to engage with the practical, emotional, intellectual and creative aspects of language

### SEMESTER III

- Exposing the students to a range of real-life contexts where the English language is used
- Enabling the students to communicate information, opinions, ideas and feelings
- Integration of knowledge and skills
- Equipping the students to engage with the practical, emotional, intellectual and creative aspects of language

### SEMESTER IV

- Infusing passion for reading and writing
- Filling up the gaps in language abilities left due to formal education
- Creating thorough grounding in all four language abilities - reading, writing, listening and speaking
- Improving their skills in the areas of grammar and vocabulary

### SEMESTER V

- Developing reading and writing skills
- Familiarizing the students with the culture of the region
- Providing value orientation through passages and anecdotes
- Enhancing knowledge of various aspects of language such as pronunciation, grammar, vocabulary, spelling, punctuation, conversation and writing
- Emphasizing the importance of extensive practice

### SEMESTER VI

- Addressing the English language needs of students
- Enhancing the critical thinking capabilities
- Filling up the gaps in language abilities left due to formal education
- Creating thorough grounding in all four language abilities - reading, writing, listening and speaking



  
Principal  
Govt. Degree College  
THORRUR, Dt. Mahabubabad







## GOVERNMENT DEGREE COLLEGE, THORRUR

MAHABUBABAD DISTRICT, TELANGANA STATE – 506163

e-Mail: [jc.gdc.thorrur@gmail.com](mailto:jc.gdc.thorrur@gmail.com), Mobile: 8008307999

Website: <https://gdcts.cgg.gov.in/torrur.edu>



### DEPARTMENT OF ECONOMICS

### PROGRAMME AND COURSE OUTCOMES

Name of the Programme: **B.A. (CBCS) - Economics**

**Programme Outcomes:** The BA programme in Economics has been designed with the objective to develop thorough knowledge of students in areas of economics so that they are able to use the knowledge to apply in real world economic problems. The course is intended to strong focus on theoretical and quantitative skills of Economics. The BA programme in Economics seeks to develop the following outcomes.

1. **Critical Thinking:** It prepares students to develop own and critical thinking to understand various socio-economic issues objectively and bridge the gap between theory and practice.
2. **Effective Citizenship:** It develops among students the empathetic social concern and equity centered national development and enable them to act and participate in civic life through volunteering and become a rational and an enlightened citizen.
3. **Ethics:** It makes the students to recognize different value systems and understand the moral dimensions of their decisions and accept responsibility for them.
4. **Environment and Sustainability:** Make t students to understand the issues of environmental contexts and especially sustainable development and strive to protect environment bringing awareness by social interaction.
5. **Self-directed and Life-long Learning:** Prepare students to acquire the ability to engage an independent life through entrepreneurship and self employment. Inculcate the attitude of life-long learning in the context socio-technological changes.

**Programme Learning Outcomes:** At the end of the programme, the students will have adequate knowledge and competency in the frontier areas of economics. The students will acquire additional specialization through optional courses. Students will be able to apply their

knowledge in economic issues and solve them based on their understanding of economic theory. Keeping the programme outcomes in view, the specific learning outcomes of BA Economics are:

Number	Programme Learning Outcomes
PO 1	Students will be able to understand economics terminology, principles, methodologies, tools of analysis and procedures
PO 2	Students will be familiar with the knowledge and application of economics for the formulation of policies and planning
PO 3	Students will be able to understand the past, present economic conditions of the country
PO 4	Students will be able to understand the impact of government policies and programmes implemented and will be able to assess the consequences of the government policies/programmes on the stakeholders involved.
PO 5	Student develops an awareness of career choices and the option for higher studies in Economics.

**Courses Outcomes:** The BA programme in Economics consists of different courses and optionals throughout its duration of six semesters of the programme. The following are the course outcomes.

Sl. No.	Semester	Course	Title of Paper	Number	Course Outcome
1	I	Discipline Specific Course	Micro Economics	CO 1	To understand the consumer behavior and utility analysis
				CO 2	To make know the concept of production and production function
				CO 3	To make to understand the Revenue and Cost Concepts
				CO 4	To know the concepts and classification of market structure
				CO 5	To recognize the business firm and understand the profit
2	II	Discipline Specific Course	Macro Economics	CO 1	To be acquainted with the importance of Macro Economics and National Income
				CO 2	To know the theories of employment and income and the concepts of multiplier and accelerator
				CO 3	To understand the types of investment and determinants of investment pattern
				CO 4	To grasp the functions and classification of money and theories of money supply
				CO 5	To learn the concepts of inflation and trade cycles

3	III	Discipline Specific Course	Statistics for Economics	CO 1	To know meaning and basic concepts of Statistics and methods of data collection
				CO 2	To understand the measures of central tendency and dispersion
				CO 3	To learn the meaning and uses of Correlation and Regression
				CO 4	To have knowledge of meaning, uses and types of Index numbers
				CO 5	To be aware of meaning, uses and types of Time series
4	III	Skill Enhancement Course-I	Basics of Computer Applications in Economics	CO 1	To know the basics of computer applications, operating system and MS Office
				CO 2	To learn the data analysis using SPSS
5	III	Skill Enhancement Course-II	Economics of Rural Development	CO 1	To understand the various aspects of Rural Development
				CO 2	To know about the Rural Credit and Self Help Groups
6	IV	Discipline Specific Course	Indian Economy	CO 1	To have knowledge of the Structure of Indian Economy, Natural Resources and National Income
				CO 2	To understand the importance of Indian Agriculture sector
				CO 3	To know the importance of Indian Industry and Industrial Policy Resolutions
				CO 4	To understand the genesis, structure and composition of NITI Ayog
				CO 5	To be acquainted with trends and importance of service sector and New Economic Reforms
7	IV	Skill Enhancement Course-III	Data Analysis	CO 1	To know the methods of data collection and analysis
				CO 2	To understand the Indian Official Statistics
8	IV	Skill Enhancement Course-IV	Entrepreneurship and Development	CO 1	To know Basic Issues of Entrepreneurship and Economic Development
				CO 2	To make aware of Financial Resources for new ventures of an entrepreneur
9	V	Generic Elective	Telangana Economy	CO 1	To know the Economic Features of Telangana
				CO 2	To understand Gross State Domestic Product, Poverty and Unemployment in Telangana
				CO 3	To have the knowledge of Agricultural Sector in Telangana

				CO 4	To be acquainted with Industrial Sector and Service Sectors in Telangana
10	V	Discipline Specific Course – Optional (A)	Agricultural Economics	CO 1	To understand the Nature and scope of agricultural economics
				CO 2	To know the Production function analyses in agriculture
				CO 3	To notice Recent trends in agricultural growth in India
				CO 4	To have the knowledge of New agriculture strategy and Green revolution and its impact
				CO 5	To aware of Emerging trends in production - processing, marketing and exports
11	V	Discipline Specific Course – Optional (B)	Public Economics	CO 1	To know the Meaning and importance of Public finance
				CO 2	To learn the theories, Growth and pattern of public expenditure
				CO 3	To get the idea of various approaches to taxation and public debt
				CO 4	To understand the fiscal policy and its objectives and federal financial structure
				CO 5	To have the knowledge of State and Central budgets and Fiscal crisis and Fiscal sector reforms in India
12	V	Discipline Specific Course – Optional (C)	Economics of Environment	CO 1	To understand the Theory and Concept of Environmental Economics
				CO 2	To know the inter linkage of Environment and Economics
				CO 3	To be acquainted with Economic development and environmental problems
				CO 4	To aware of Methods of Prevention, control and abatement of pollution
				CO 5	To assess the Indian environment policies and performance
13	V	Discipline Specific Course – Optional (D)	Economics of Social Sector	CO 1	To know the Economic Dimensions of Healthcare
				CO 2	To understand the Institutional Issues in Healthcare Delivery
				CO 3	To establish the relation between Education and Economic Growth
				CO 4	To aware of Primacy of Energy in the Process of Economic Development
				CO 5	To get the idea of relation between Social Sector and Economic Development

14	VI	Discipline Specific Course – Optional (A)	International Economics	CO 1	To learn the Theories of International Trade
				CO 2	To recognize the Trade as an Engine of Economic Growth
				CO 3	To understand the Tariff and Non-Tariff Barriers to Trade
				CO 4	To know the Concepts and Components of Balance of Payments
				CO 5	To aware of Internal Factor movements
15	VI	Discipline Specific Course – Optional (B)	Development Economics	CO 1	To know the Concepts of Economic Growth and Development
				CO 2	To understand the Factors effecting Economic Development
				CO 3	To learn various Theories of Economic Development
				CO 4	To recognize Allocation of resources and Investment Criteria
				CO 5	To make out External resources for Financing Economic Development
16	VI	Discipline Specific Course – Optional (C)	Industrial Economics	CO 1	To know Meaning and classification of Industries
				CO 2	To aware Market Structure and Market Performance
				CO 3	To assess the Industrial Development Pattern under Five Year Plans
				CO 4	To recognize the sources of Industrial Finance
				CO 5	To be conscious of Indian Industries and Problems
17	VI	Discipline Specific Course – Optional (D)	Demography	CO 1	To know the Meaning and scope of demography
				CO 2	To recognize Population trends in the twentieth century and social economic implications
				CO 3	To notice the Trends in fertility rates in developed and less developed countries
				CO 4	To understand the Methods of population projection.
				CO 5	To Factors affecting migration
18	VI	Project Work	-	CO 1	To have the field work experience
				CO 2	To apply the theoretical knowledge of economics in the related field
				CO 3	To explore the problems in real society
				CO 4	To appreciate the research work done in the field of Economics



  
**Principal**  
**Govt. Degree College**  
**THORRUR, Dt. Mahabubabad**





**GOVERNMENT DEGREE COLLEGE, THORRUR**  
**MAHABUBABAD DISTRICT, TELANGANA STATE-506163**

**E-Mail: [jc.gdc.thorrur@gmail.com](mailto:jc.gdc.thorrur@gmail.com),**

**Mobile: 8008307999 Website: <https://gdcts.cgg.gov.in/torrur.edu>**



## **DEPARTMENT OF HISTORY**

### **PROGRAMME AND COURSE OUTCOMES**

**Name of the Programme: B.A.(CBCS)-History**

**Programme Outcomes:** The BA programme in History has been designed with the objective to develop thorough knowledge of students in areas of history so that they are able to use the knowledge to apply in World history, Indian History, and Telangana History. The course is intended to strong focus on theoretical and quantitative skills of History. The BA programme in History seeks to develop the following outcomes.

1. **Critical Thinking:** It prepares students to develop own and critical thinking to understand various socio-economic, Culture and Heritage of rulers in different Kingdoms from ancient to modern.
2. **Effective Citizenship:** It develops among students the empathetic social concern and equity centered national development and enable them to act and participate in civic life through volunteering and become a rational and an enlightened citizen.
3. **Ethics:** It makes the students to recognize different value systems and understand the moral dimensions of their decisions and accept responsibility for them.
4. **Environment and Sustainability:** Make the students to understand the issues of environmental contexts and especially sustainable development and strive to protect environment bringing awareness by social interaction.
5. **Self-directed and Life-long Learning:** Prepare students to acquire the ability to engage an independent life through the constant study of History and self employment. It inculcates the attitude of life-long learning in the context of socio-technological changes.

**Programme Learning Outcomes:** At the end of the programme, the students will have adequate knowledge and competency in the frontier areas of History. The students will acquire additional specialization through optional courses. Students will be able to apply their Knowledge in economic issues and solve them based on their understanding of historical theory. Keeping the programme outcomes in view, the specific learning outcomes of BA History are:

Number	Programme Learning Outcomes
PO1	Students will be able to understand historical terminology, principles, methodologies, tools of analysis and procedures
PO2	Students will be familiar with the knowledge and application of history in their life.
PO3	Students will be able to understand the past, present history conditions of the country
PO4	Students will be able to understand the impact of history on government policies
PO5	Student develops an awareness of career choices and the option for higher studies in History.

**Course out comes:** The B.A programme in History consists of different Courses and optional thought out its duration of VI semesters of the programme. The fallowing of the course out comes

HISTORY Course outcome					
S.No	SEMESTER	COURSE	TITLE OF PAPER	Number	Course outcome
1	I	Discipline Specific Course	History of India (From Earliest Times to c.700 CE) Paper-I	CO1	To know about the History and Its Relationship with other Social Sciences - Geographical Features of India Sources of Indian History.
				CO2	To know about the Indus Valley Civilization - Its Features & Decline.
				CO3	To gain knowledge on Rise of New Religious Movements, Jainism and Buddhism.
				CO4	To gain knowledge of Ashoka and His Dharma Polity Administration - Society Economy Religion Literature - Art and Architecture.
				CO5	To gain knowledge of Gupta Empire: A Brief Political Survey - Polity and Administration, Social and Economic Conditions, Agriculture and Land Grants – Feudalism.

2	II	Discipline Specific Course	History of India (c.700-1526 CE) Paper – II	CO1	To Know the Cholas; Local Self Government under Cholas; Society, Economy, Literature, Art and Architecture.
				CO2	To Know the Arab Conquest of Sind, Ghaznavids and Ghoris; Foundation of Delhi Sultanate: Slave, Khaljis, Tughlaqs, Sayyids and Lodis Polity, Administration.
				CO3	To know the : Bhakti and Sufi Movements and their Impact on Society and Culture – Emergence of Composite Culture.
				CO4	To know the importance Kakatiyas Polity Administration - Society and Economy - Literature and Religion Art and Architecture Yadavas Hoysalas and Pandyas Brief History.
				CO5	To gain knowledge of Vijayanagara Polity Administration - Society and Economy Religion Art and Architecture
3	III	Discipline Specific Course	History of India (1526-1857 CE) Paper – III	CO1	To acquire knowledge to Establishment of Mughal Dynasty - Sources Shershah Sur and His Reforms -Brief Survey of political History of Mughals Akbar, Shah Jahan and Aurangzeb
				CO2	To acquire the knowledge Rise of Regional Powers - Marathas Shivaji and His Administration Peshwas -Sikhs.
				CO3	To acquire the knowledge Advent of European Powers - Portuguese, Dutch, English and French, Anglo- French Rivalry - Expansion and Consolidation of British Power We Subsidiary Alliance
				CO4	To know the Three Stages of Colonialism Mercantilism - Free Trade Policies Finance Capital - Land Revenue Settlements Cornwallis and Permanent Revenue Settlement
				CO5	To know the- Anti-Colonial Upsurge - 1857 Revolt Nature, Causes and Results.

4	III	Discipline Specific Course	Skill Enhancement Course - Paper - III Telangana Heritage and Culture	CO1	To acquire knowledge regarding the Definition of Heritage and Culture: Tangible heritage
				CO2	To know the : Archaeological sites, Art and Architecture- Buddhist heritage, Jain Heritage
				CO3	To Acquire the knowledge about Hindu Temple architectural heritage- Role of Government Museums.
				CO4	To Know INTACH in preservation of Heritage Telangana- Kotilingala (Jagityal District), Peddabankur (Peddapalli District)
				CO5	To know theWarangal -Heritage related Government Departments-Museums.
5	IV	Discipline Specific Course	History of India (1858-1964 CE) Paper – IV	CO1	To Know the Queen’s Proclamation – Beginning of Colonial Rule – Introduction of Western Education
				CO2	To Know the Socio-Religions Reform Movements – Brahma Samaj - Arya Samaj – Theosophical Society - Ramakrishna Mission
				CO3	to know the importance Factors for the Rise of Nationalism – Formation of Indian National Congress –Three Phases of Freedom Struggle: Moderate Phase, Extremist Phase and Gandhian Era
				CO4	To know the Revolutionary Movement: Gadhar Party – Bhagath Singh – Chandra Sekhar Azad
				CO5	To know the Emergence of Communal Politics and Mohd. Ali Jinnah – Prelude to Partition of India - Sardar Vallabhai Patel

6	V	Discipline Specific Course	<b>World History (1453-1815 CE)</b> Paper-V	CO1	To gain knowledge Fall of Constantinople (1453 C.E.) – Beginning of Modern Age in Europe –Geographical Discoveries
				CO2	The know the Reformation Movement – Causes – Martin Luther, John Calvin and Zwingli; Counter Reformation Movement and Ignatius Loyola
				CO3	To have the knowledge Emergence of Nation States – Causes – Spain – Charles V; England – Henry VIII -Glorious Revolution (1688); France under Bourbons – Louis XIV; Era of Enlightened Despotism – Peter the Great and his Policies
				CO4	To understand the importance End of Feudalism – Industrial Revolution
				CO5	To know the American War of Independence (1776) – French Revolution (1789)
7	V	Discipline Specific Course	<b>Telangana History (Earliest times to 1724 CE)</b> Paper-V(A)	CO1	To Know the Sources – Archaeological and Literary Sources - Geographical Features of Telangana - Pre History – The Age of Satavahanas
				CO2	To know about Post-Satavahana Period - Ikshvakus – Vishnukundins – A Brief Political History –Society – Economy
				CO3	To know the importance Origin and Early History of Chalukyas of Badami and their Contribution to Culture- Chalukyas of Vemulavada & Mudigonda
				CO4	To know the Kakatiyas – Origin and Early History – Ganapatideva, Rudramadevi and Prataparudra
				CO5	To know the: Qutb Shahis of Golconda – Origin and Political History



8	VI	Discipline Specific Course	Paper – VI World History (1815-1950 CE)	CO1	To Know the : Congress of Vienna (1815) – Principles and Impact; Metternich and his System –1830 and 1848 French Revolutions
				CO2	To Know the First World War (1914-18) – Results –Treaty of Versailles
				CO3	To Know the Establishment of United Nations Organization (1945)
				CO4	To Know the knowledge Second World War – Causes and Results
				CO5	To know the Colonization of Asia - India and China under Colonial Rule
9	VI	Discipline Specific Course	History of Telangana (1724-2014 CE) Paper - II (A)	CO1	To know the Foundation of Asaf Jahi Dynasty – Nizam-ul-Mulk to Mir Mahaboob Ali Khan
				CO2	To know the Social, Cultural and Political Awakening in Telangana – Press, Journalism and Library Movements
				CO3	To Know the Anti-Nizam and Anti-Feudal Struggles – Telangana Peasants Armed Struggle 1946-51
				CO4	To know the Discrimination, Dissent and Protest – Violation of Gentlemen’s Agreement
				CO5	To know the Second Phase Movement for Separate Telangana – Formation of Various Associations –Telangana Aikhya Vedika – Telangana Jana Sabha - Telangana Rashtra Samithi 2001
10	VI	Project Work	Culture Tourism in India	CO1	To know the Concept of tourism meaning, Nature scope ,Industry relevance of tourism
				CO2	To know the Natural Resources ,Physical features of India
				CO3	To Know the Archaeological and Historical resources
				CO4	To know the Cultural resources, Important religions
				CO5	To know the Handicrafts and modern centers

  
**Principal**  
**Govt. Degree College**  
**THORRUR, Dt. Mahabubabad-**



**GOVERNMENT DEGREE COLLEGE, THORRUR**

**MAHABUBABAD DISTRICT, TELANGANA STATE – 506163**

**E-Mail: [jc.gdc.thorrur@gmail.com](mailto:jc.gdc.thorrur@gmail.com), Mobile: 8008307999**

**Website: <https://gdcts.cgg.gov.in/torrur.edu>**



## DEPARTMENT OF MATHEMATICS

### PROGRAMME AND COURSE OUTCOMES

**Name of the Programme: B.Sc (CBCS)-MATHEMATICS**

#### Programme Outcomes:

Number	Programme Learning Outcomes
PO 1	Think in a critical manner.
PO 2	Know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand.
PO 3	Formulate and develop mathematical arguments in a logical manner.
PO 4	Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.
PO 5	Understand, formulate, and use quantitative models arising in social science, business and other contexts.

**Course Outcomes:** The B.Sc. Physical Science programme in Mathematics consists of different courses and optional throughout its duration of six semesters of the programme. The following are the course outcomes.

S.NO	Semester	Course	Title of Paper	Number	Course Outcome
1	I	Discipline Specific Course	DIFFERENTIAL AND INTEGRAL CALCULUS	CO1	To enable the students to solve mathematical problems of daily life. We have to select the content and methods of teaching so that the students are able to make use of their learning of mathematics in daily life.
				CO2	To enable the students to understand the contribution of mathematics to the development of culture and civilization.
				CO3	To develop thinking and reasoning Power of the students.
				CO4	To prepare a sound foundation Needed for various vocations. Mathematics is needed in various professions such as those of engineers, bankers, scientists, Accountants, statisticians etc.
				CO5	To prepare the child for further learning in mathematics and the related fields. School mathematics should also aim at preparing him for higher learning in Mathematics.
				CO6	To give the child an insight into the relationship of different topics and branches of the subject.
				CO7	To enable the child to understand popular literature. He should be so prepared that he finds no handicap in understanding mathematical terms and concepts used in various journals, magazines, newspapers etc.
				CO8	To teach the child the art of economic and creative living.
				CO9	To develop in the child rational and scientific attitude towards life.
2	II	Discipline Specific Course	DIFFERENTIAL EQUATIONS	CO1	To analyze real world scenarios to recognize when ordinary differential equations (ODEs) or systems of ODEs are appropriate, formulate problems about the scenarios, creatively model these scenarios (using technology, if appropriate) in order to solve the problems using multiple approaches, judge if the results are reasonable, and then interpret and clearly communicate the results.

				<b>CO2</b>	To recognize ODEs and system of ODEs concepts that are encountered in the real world, understand and be able to communicate the underlying mathematics involved to help another person gain insight into the situation.
				<b>CO3</b>	To work with ODEs and systems of ODEs in various situations and use correct mathematical terminology, notation, and symbolic processes in order to engage in work, study, and conversation on topics involving ODEs and systems of ODEs with colleagues in the field of mathematics, science or engineering.
3	III	Discipline Specific Course	REAL ANALYSIS	<b>CO1</b>	Describe the real line as a complete, ordered field.
				<b>CO2</b>	Determine the basic topological properties of subsets of the real numbers.
				<b>CO3</b>	Use the definitions of convergence as they apply to sequences, series, and functions.
				<b>CO4</b>	Determine the continuity, differentiability, and integrability of functions defined on subsets of the real line.
				<b>CO5</b>	Apply the Mean Value Theorem and the Fundamental Theorem of Calculus to problems in the context of real analysis.
				<b>CO6</b>	Produce rigorous proofs of results that arise in the context of real analysis.
4	IV	Discipline Specific Course	ABSTRACT ALGEBRA	<b>CO1</b>	Assess properties implied by the definitions of groups and rings.
				<b>CO2</b>	Use various canonical types of groups (including cyclic groups and groups of permutations) and canonical types of rings including polynomial rings and modular rings
				<b>CO3</b>	Analyze and demonstrate examples of subgroups, normal subgroups and quotient groups.
				<b>CO4</b>	Analyze and demonstrate examples of ideals and quotient rings.
				<b>CO5</b>	Use the concepts of isomorphism and homomorphism for groups and rings.
5	V	Discipline Specific Course	LINEAR ALGEBRA	<b>CO1</b>	Solve systems of linear equations
				<b>CO2</b>	Analyze vectors in $\mathbb{R}^n$ geometrically and algebraically.

				<b>CO3</b>	Recognize the concepts of the terms span, linear independence, basis, and imension, and apply these concepts to various vector spaces and subspaces.
				<b>CO4</b>	Use matrix algebra and the related matrices to linear transformations, compute and use determinants.
				<b>CO5</b>	Compute and use eigenvectors and eigenvalues.
				<b>CO6</b>	Determine and use orthogonality.
6	VI	Discipline Specific Course	ANALYTICAL SOLID GEOMETRY	<b>CO1</b>	To understand Geometrical terminology triangles, for angles, quadrilaterals, and circles.
				<b>CO2</b>	To measure angles using a protractor.
				<b>CO3</b>	To use geometrical results to determine unknown angles.
				<b>CO4</b>	To recognise line and rotational symmetries.
				<b>CO5</b>	To find the areas of triangles, quadrilaterals and circles and shapes.
7	VI	Discipline Specific Course	NUMERICAL ANALYSIS	<b>CO1</b>	Derive numerical methods for approximating the solution of problems of continuous mathematics.
				<b>CO2</b>	Analyze the error incumbent in any such numerical approximation.
				<b>CO3</b>	Implement a variety of numerical algorithms using appropriate technology.
				<b>CO4</b>	Compare the viability of different approaches to the numerical solution of problems arising in roots of solution of non-linear equations, interpolation and approximation, numerical differentiation and integration, solution of linear systems.
8	VI	Discipline Specific Course	INTEGRAL TRANSFORMS	<b>CO1</b>	The vector-valued functions of a real variable and their curves and in turn the geometry of such curves including curvature, torsion and the Frenet-Serre frame and intrinsic geometry
				<b>CO2</b>	Scalar and vector valued functions of 2 and 3 variables and surfaces, and in turn the geometry of surfaces.
				<b>CO3</b>	Gradient vector fields and constructing potentials, Integral curves of vector fields and solving differential equations to find such curves.



				CO4	The differential ideas of divergence, curl, and the Laplacian along with their physical interpretations, using differential forms or tensors to represent derivative operations.
				CO5	The integral ideas of the functions defined including line, surface, and volume integrals - both derivation and calculation in rectangular, cylindrical, and spherical coordinate systems and understand the proofs of each instance of the fundamental theorem of calculus.
				CO6	Step input functions using the Laplace transform.



  
**Principal**  
**Govt. Degree College**  
**THORRUR, Dt. Mahabubabad**



**GOVERNMENT DEGREE COLLEGE, THORRUR**  
**MAHABUBABAD DISTRICT, TELANGANA STATE-506163**  
e-Mail: [jc.gdc.thorrur@gmail.com](mailto:jc.gdc.thorrur@gmail.com),

Mobile: 8008307999 Website: <https://gdcts.cgg.gov.in/torrur.edu>



## DEPARTMENT OF COMMERCE

### PROGRAMME AND COURSE OUTCOMES

#### Program objectives:

**The principal aims and objectives of learning Commerce as part of the courses are:**

The B.Com program aims at producing qualified, skilled and trained personnel for the fields such as insurance, accounting, banking, marketing, stock markets, e-commerce and computer based accounting besides teaching jobs at different areas of commerce education. Indeed this program gets overwhelming response from various corners of the region. B. Com is one of the most sought after career oriented program offered at the under graduation and post graduation level. This program opens up huge career options and opportunities at the aspiring people in the field of commerce and management. This program also prepares one to start his or her own business as an entrepreneur. Based on the core purpose of the program, following will be listed as program objectives:

- Skill enhancement, knowledge acquisition and preparing students with all other needy abilities for employment are the vital elements in its primary objectives of the program.
- Preparing students to deal with the latest issues of commerce and management in one hand and nurture the competencies among them,

so as to constantly challenge and push themselves towards continuous improvement.

- Developing accounting and managerial skills besides imparting knowledge in networking and system based recording of business transactions
- Another pivotal objective of the program is ensuring the development of core competencies, such as written and oral communication, quantitative reasoning, financial literacy and critical thinking and evaluation of business results.

### **Specific objectives of the Program:**

B. Com program is one of the highly opted UG program by the students across the nation. Our state i.e., Telangana and even our College is not exemption to it. Perhaps this program caters the needs of the industry in general and its students, who pursue it as their discipline in particular. Therefore following objectives may be mentioned as specific objectives of the commerce program.

- To develop economic understanding among the students.
- To develop students to understand economic problems and their effects on the society and its multi Variety of stakeholders.
- To promote sense of values that serve as the basis of economic planning and policy design of any institution.
- It also aims at people's appreciation, attitudes, interests, perceptions and levels of behaviour in different organisations they work for.

S.No	Semester	Course	Title of paper	Number	Course outcome
1	I	B.COM	Financial accounting	Co1	Understand the accounting principles, concepts and convention
				Co2	Analyze what bank reconciliation statement is and understand about rectification of errors and suspense account
				Co3	Analyze the essentials of bill of exchange and its accounting treatment.
				Co4	Understand the various methods of calculating depreciation.
				Co5	Understand the methods of calculating profits under single entry System.
2	I	B.COM	Business Organization and management	Co1	Provide understanding about business organization
				Co2	Create understanding about different business organization forms
				Co3	Familiarize with Partnership form of organization and its comparison with sole proprietorship
				Co4	Provide understanding about kinds of companies and create awareness about multinational companies
				Co5	Get an idea about cooperative societies and Cooperative society movement in India
3	II	B.COM	Financial Accounting II	CO1	Learn the accounting treatments, valuation of unsold stock and calculation of normal loss.
				CO2	Learn the accounting treatments in consignments, commission, Bad debts.
				CO3	Prepare joint venture accounts and methods of maintaining accounts.
				CO4	Prepare joint venture accounts and methods of maintaining accounts.

4	II	B.COM	Business Law	CO1	Understand the law and procedure of the contracts
				CO2	Analyse performance and the remedies
				CO3	Get clear idea about the guarantee of the parties under the contract
				CO4	Get an idea about various kinds of agencies and bailment and pledge
				CO5	Summarize sale of goods and rights and duties of buyer and seller
5	III	B.COM	Business statistics	CO1	Explain the primary concepts of statistics, data collection, sampling and tabulation
				CO2	Understand the concepts of measures of central tendency and solve problems
				CO3	Understand the various measures of dispersion and solve related problems
				CO4	Develop the ability to solve problems in correlation and regression analysis
				CO5	Calculate the index numbers and understand the concept of time series and their application
6	III	B.COM	Advanced accounting	CO1	Understand the procedure for preparing capital accounts
				CO2	Understand and analyse the preparation of accounts on admission of partners
				CO3	Prepare accounts on retirement, death of partners
				CO4	Clarify the procedure for Dissolution and Insolvency
				CO5	Analyse the amalgamation, sale to a company and piece meal distribution



7	III	B.COM	Principles Of Insurance	CO1	provide a basic understanding of the Insurance Mechanism
				CO2	identify the relationship between Insurers and their Customers
				CO3	give an overview of major Life Insurance and General Insurance Products
8	III	B.COM	Practice Of Life Insurance	CO1	Explain insurance operation, including functions of insurance and insurance markets in India
				CO2	Determine the loss exposures of properties, human lives, business operations.
				CO3	Apply the knowledge of current information, theories and models.
				CO4	Compare various kinds of insurance plans as well as the contract selection criteria from a cost-benefit point of view.
				CO5	Create valuable insights into the key principles and practices that regulate the insurance .
9	IV	B.COM	Practice Of General Insurance	CO1	Graduates will demonstrate knowledge of the legal and ethical environment impacting business organizations .
				CO2	Graduates will demonstrate knowledge of the legal and ethical environment .
				CO3	Graduates will demonstrate an ability to engage in critical thinking by analyzing situations .
				CO4	Graduates will demonstrate an ability to work effectively with others
				CO5	Graduates will demonstrate knowledge of current information.

10	IV	B.COM	Regulation of Insurance Business	CO1	Explain insurance operation, including functions of insurance.
				CO2	Apply the knowledge of current information, theories and models.
				CO3	Evaluate the Regulation of Indian Insurance Legislation and Insurance Act 1938.
				CO4	Examine insurance business conducting Legislation and its environment in India
				CO5	Develop valuable insights into the key principles .
11	IV	B.COM	Income Tax	CO1	Know about various basic concepts used in Income tax Act.
				CO2	Impart knowledge on the provisions of Income tax law and practice .
				CO3	Enable students to develop experience in identifying tax issues .
				CO4	Enable students to develop experience in identifying tax issues .
				CO5	Exemplify professional judgments and advice on issues relating to tax payable by Individuals, and companies .
12	V	B.COM	Business Economics	CO1	To understand the concepts of cost, nature of production .
				CO2	To understand the concepts of cost, nature of production.
				CO3	To analyse the causes and consequences of different Market conditions.
				CO4	To integrate the concept of price and output decisions of firms under various market structure.

13	V	B.COM	Computerised Accounting	CO1	The characteristics of Accounting; describing what useful information .
				CO2	Accounting principles and concepts used to guide recording.
				CO3	Functions of accounting in keeping a systematic record of financial transaction.
				CO4	Cash book used to record the day to day cash transactions .
				CO5	Bank Reconciliation Statement as a report which compares the bank balance as per company's accounting records with the balance stated in the bank statement
14	V	B.COM	Cost Accounting	CO1	Students would classify costs and would be able to prepare cost sheet for manufacturing and trading concerns
				CO2	Students would be able to reconcile cost and financial statements.
				CO3	Students would be able to prepare contract account and understand various aspects of contract costing including treatment of profit on incomplete contracts.
				CO4	Students would be able to prepare process accounts and statement of joint products and by-products.
15	VI	B.COM	Research Methodology And Project Report	CO1	know the basic of research and formation of problems
				CO2	Understand and apply the major types of research designs and errors
				CO3	Formulate clearly defined scaling techniques and report writing
				CO4	Analyze and summaries the basic terms such as mean, medium and mode.

16	VI	B.COM	Cost control And Management Accounting	CO1	Explains the relationship between cost accounting-financial accounting and managerial accounting .
				CO2	Explains the concept of management accounting
				CO3	Explains the importance of management accounting for businesses
				CO4	Explains fixed,variable,semi-fixed and semi-variable cost concepts
				CO5	Analyzes the relationship between the cost-volume and profit
17	VI	B.COM	Theory And Practical Of GST	CO1	CO1: Know about importance of Indirect taxes in India and the journey of GST in India since the year 2004.
				CO2	Know about the application of GST in Tally.
				CO3	List out the accounts to be maintained as per GST laws and various returns to be
				CO4	Know about the application of GST in case of businesses which are service-oriented
				CO5	Know about Application of GST in tally ERP 9, recording business transactions.



  
 Principal  
 Govt. Degree College  
 THORRUR, Dt. Mahabubnagar





**GOVERNMENT DEGREE COLLEGE, THORRUR**

**MAHABUBABAD DISTRICT, TELANGANA STATE-506163**

**E-Mail:**[jc.gdc.thorrur@gmail.com](mailto:jc.gdc.thorrur@gmail.com), **Mobile:** 8008307999

**Website:**<https://gdcts.cgg.gov.in/torrur.edu>



## DEPARTMENT OF PHYSICS

### PROGRAMME AND COURSE OUTCOMES

**Name of the Programme: B.Sc(CBCS)-PHYSICS**

**Programme Outcome:**

**Students of Physical Science are expected to**

Number	Programme Learning Outcomes
PO1	Inculcate scientific thinking and awareness
PO2	Understand the basic concepts, fundamental principles, and the scientific Theories related to various scientific phenomena of Physics.
PO3	Acquire the skills in handling scientific instruments in the laboratory ,and Planning and performing experiments in a proper manner.
PO4	Explain the basic scientific principles and methods.
PO5	Analyse the applications of mathematics to the problems in physics and Interpret the mathematical results.

**Course Outcomes:** The B.Sc. Physical Science programme in Physics consists of different courses and optional throughout its duration of six semesters of the programme. The following are the course outcomes.

S.NO	Semester	Course	Title of Paper	Number	Course Outcome
1	I	Discipline Specific Course	MECHANICS	CO1	To understand the uses of vector calculus in the field of physics by studying Gauss's divergence theorem, Stoke's theorem & Green's theorem.
				CO2	To know about concepts of mechanics of particles & Rigid bodies.
				CO3	To gain knowledge on concepts of central forces
				CO4	To gain knowledge of relativity, Galilean & Lorentz transformations, concept of four vector formalism.
2	I	Discipline Specific Course	WAVES AND OSCILLATIONS	CO1	To acquire the knowledge of fundamentals of vibrations, Simple Harmonic Oscillator-equation & its solution, Lissajous figures etc.
				CO2	To know the concept and applications of Damped Oscillator and coupled oscillator.
				CO3	To gain the knowledge of vibrations on strings, overtones, energy transport, transverse impedance.
				CO4	To understand the concepts of vibrations of bars.
3	II	Discipline Specific Course	THERMAL PHYSICS	CO1	To understand the concepts of Kinetic Theory Gases, Transport phenomena, basic laws of thermodynamics.
				CO2	To acquire the knowledge of thermodynamic potentials and Maxwell's equations, concepts of low temperature physics.
				CO3	To acquire the knowledge of the Quantum theory of radiation, pyroheliometers.
				CO4	To understand the concepts of Statistical Mechanics, Maxwell-Boltzmann, Bose-Einstein, Fermi-Dirac Statistics.
4	IV	Discipline Specific Course	OPTICS	CO1	To understand the concepts of Interference of Light by studying Interference phenomena.
				CO2	To acquire the knowledge of concepts of Diffraction phenomena.

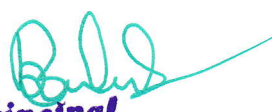
				<b>CO3</b>	To understand the concepts of Polarization of light.
				<b>CO4</b>	To gain the knowledge of the concepts of Aberrations.
5	III	Discipline Specific Course	ELECTROMAGNETISM	<b>CO1</b>	To have the knowledge of concepts of electric field, electric flux, Gauss's law and its applications, concept of electric potential etc.
				<b>CO2</b>	To know the concepts of magnetic field and magnetic flux, Biot-Savart's law and its applications, Ampere's law and applications etc.
				<b>CO3</b>	To have the knowledge of Faraday's laws of electromagnetic Induction, Lenz's law, concepts of self-induction and mutual induction.
				<b>CO4</b>	To understand the Maxwell's electromagnetic wave equations in free space & dielectric medium, Transverse nature of Electromagnetic waves. Polarization of Electromagnetic waves etc.
6	III	Discipline Specific Course	ELECTROMAGNETIC THEORY	<b>CO1</b>	To have the knowledge of concepts of electric field, electric flux, Gauss's law and its applications, concept of electric potential etc.
				<b>CO2</b>	To know the concepts of magnetic field and magnetic flux, Biot-Savart's law and its applications, Ampere's law and applications etc.
				<b>CO3</b>	To have the knowledge of Faraday's laws of electromagnetic Induction, Lenz's law, concepts of self-induction and mutual induction. To understand the Maxwell's electromagnetic wave equations in free space & dielectric medium, Transverse Nature of Electromagnetic waves. Polarization of Electromagnetic waves etc.
				<b>CO4</b>	To know about Growth and Decay of LR, CR and LCR circuits Growth and Decay, R, C and L- vector diagrams To gain the knowledge Network models, Network theorems.
7	V	Discipline Specific Course	SOLIDSTATE PHYSICS	<b>CO1</b>	To gain the knowledge on crystal structures and crystal systems, Lattice vibrations, theories of specific heat of solids.
				<b>CO2</b>	To know about concepts of magnetic properties of matter and dielectric properties of solids.



				<b>CO3</b>	To understand the concept of band theory of solids, classification of solids, Hall effect and its uses
				<b>CO4</b>	To gain the knowledge on Lasers, construction, working principle and uses, concepts of Superconductivity and uses of superconductors.
8	V	Discipline Specific Course	MODERN PHYSICS	<b>CO1</b>	To acquire knowledge regarding the concept of black body radiation, photoelectric effect, atomic spectra, Bohr's model and Sommerfeld's model.
				<b>CO2</b>	To know the concepts of dual nature of matter, matter waves, Heisenberg uncertainty principle and applications.
				<b>CO3</b>	To Acquire the knowledge about concept of nucleus, nature of nuclear forces and nuclear models.
				<b>CO4</b>	To Know the concept of radioactive materials, half-life, mean life, types of decay, nuclear reactions and elementary particles.
9	VI	Discipline Specific Course	BASIC ELECTRONICS	<b>CO1</b>	To understand the concepts of Network elements and network theorems.
				<b>CO2</b>	To acquire the knowledge on Band theory of P-N junction diodes and uses of junction diode
				<b>CO3</b>	To understand the concepts of bipolar junction transistor, uses of BJTs.
				<b>CO4</b>	To Understand the concept of Binary number system, Decimal, Hexadecimal Number system, Boolean algebra, Logic gates, De-Morgan's theorems.
10	IV	Discipline Specific Course	WAVES & OPTICS	<b>CO1</b>	To gain the knowledge of vibrations on strings, overtones, energy transport, transverse impedance. The concepts of vibrations of bars.
				<b>CO2</b>	To understand the concepts of Interference of Light by studying Interference phenomena.
				<b>CO3</b>	To acquire the knowledge of concepts of Diffraction phenomena.
				<b>CO4</b>	To understand the concepts of Polarization of light.
11	VI	Discipline Specific	ELECTRONICS	<b>CO1</b>	To acquire the knowledge on Band theory of P-N junction diodes and uses of junction diode.

		Course		
			CO2	To understand the concepts of bipolar junction transistor, uses of BJTs.
			CO3	To Understand the concept of construction and Characteristics of Photo Diode Solar cell FET,UJT,and Silicon controlled rectifiers
			CO4	To Understand the concept of Binary numbersystem, Decimal, Hexadecimal Numbersystem, Boolean algebra, Logic gates, De-Morgan's theorems.



  
**Principal**  
**Govt. Degree College**  
**THORRUR, Dt. Mahabubabad**

**GOVERNMENT DEGREE COLLEGE, THORRUR**  
**DIST: MAHABUBABAD, TELANGANA STATE- 506163**  
Email: jc.gdc.thorrur@gmail.com Mobile: 8008307999

**DEPARTMENT OF POLITICAL SCIENCE**

**Programme and Course Outcomes**

**Name of the Programme: B.A (POLITICAL SCIENCE)**

**Programme Outcomes:**

The B.A. Programme in POLITICAL SCIENCE has been designed with the objective to develop through knowledge of students in areas of political science so that they are able to use the knowledge to apply in Understanding political thought, Western political thought, Indian political thought, Constitution and international relation the course is intended to strong focus on theoretical and quantitative skills of Political science. The BA Programme in political science seeks to develop the following outcomes.

**Critical thinking:** The concepts in various areas of POLITICAL SCIENCE instigate critical thinking skills in the learner.

**Ethics:** It makes the students to recognize different values systems and understand the moral dimensions of their decisions and accepts responsibility for them.

**Research Aptitude:** The practical knowledge in various concepts drives the research aptitude among the learners.

**Environment Sustainability:** The concepts relating to Population increasing and literacy development

**Application:** The acquired theoretical and practical knowledge of various concepts help in the application of thoughts in different day to day life activities.

**Programme Specific Outcomes:**

The B.A. PROGRAMME IN POLITICAL SCIENCE at the end of the programme ,the students will have adequate knowledge and competency in the frontier areas of political science .The students will acquire additional specialization through optional coerce .students will be able to apply their Knowledge in economic issues and solve them based on their understanding of historical theory .keeping the programme outcomes in view ,the specific learning outcomes of BA POLITICAL SCIENCE ARE;



**Principal**  
**Govt. Degree College**  
THORRUR, Dt. Mahabubabad



Number	Programme Learning Outcomes
PO 1	Students gain knowledge and To understand about Indian Constitution
PO 2	Students gain knowledge and understand the About Central Government ,State Government ,Local Government
PO 3	Students will be able To understand about the Fundamental rights
PO 4	Students will be able to understand the voter policy system and voter behavior
PO 5	Students will be able to understand International relations foreign policy ,International organizations, and issues International
PO 6	Students will Be able to understand the political philosopher Ideology

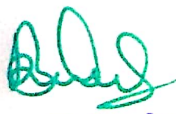
**Course Outcomes:** The B.A. Programme in **POLITICAL SCIENCE** consists of six papers one in each Semester.

S.No.	Semester	Course	Title of the Paper	Number	Course Outcome
1.	I	Discipline Specific Course	UNDERSTANDING POLITICAL THEORY	CO 1	To know debates on political theory
				CO 2	To know what is political
				CO 3	To know how to origin of political theories and its importance.
				CO 4	Students will gain knowledge and understand political values and theoretical perspective
				CO 5	Students will gain knowledge and understand political values and theoretical perspective Student will to know Ideology



2.	II	Discipline Specific Course	WESTERN POLITICAL THOUGHT	CO 1	To know Greek Political thought
				CO 2	Students will gain knowledge and understand the Medieval and early modern thought.
				CO 3	Students will gain knowledge and understand To know utilitarian political thought
				CO 4	Students will gain knowledge and understand the Philosophy of Dialectics
				Co 5	To know social contractualists
3.	III	Discipline Specific Course	INDIAN POLITICAL THOUGHT	CO 1	Students will gain knowledge and understand the State and society in ancient India
				CO 2	students will gain knowledge and understand Indian medieval political thought
				CO 3	Students will gain knowledge and understand Renaissance thought M.N.Roy ,Jyothirao Phule
				CO 4	Students gain knowledge and understand Reformists thought; M.K Gandhi, Dr.B.R.Ambedkar.
				CO 5	To know Socialist THOUGHT M.N.Roy ,Nehru, RM Lohia
4.	IV	Discipline Specific Course	CONSTITUTIO NAL AND POLITICS OF INDIAN	CO 1	Students will gain knowledge and understand About Indian national movement
				CO 2	Students will gain knowledge and understand fundamental rights

				CO 3	TO know Union, State Governments powers
				CO 4	Students will gain knowledge and understand Electoral politics in India
				CO5	To know Issues in India politics
5.	V	Discipline Specific Elective	INTERNATIONAL RELATIONS	CO 1	Students will gain knowledge and understand Regarding the world nations politics
				CO 2	Students will understand the 1 <sup>st</sup> & 2 <sup>nd</sup> world wars
				CO 3	Students will understand Cold war
				CO4	Students will understand the Indian foreign policy
				CO5	To know India relations USA,CHINA,PAKISTHAN,NEPAL,SRILANKA
6.	VI	Discipline Specific Elective	GLOBAL POLITICS	CO 1	TO Know elements of power Balance of power
				CO 2	Student will understand bipolarity, multipolarity, unipolarity
				CO 3	Students will gain the knowledge Human rights, Terrorism
				CO 4	Students will understand the World BANK,IMF,UNCTAD
				CO 5	To know Disarmament Armsrace Arms control NPT,CTBT

  
**Principal**  
**Govt. Degree College**  
 THORRUR, Dt. Mahabubabad

**GOVERNMENT DEGREE COLLEGE, THORRUR**  
**DIST: MAHABUBABAD, TELANGANA STATE- 506163**  
Email: jc.gdc.thorrur@gmail.com Mobile: 8008307999

---

## **DEPARTMENT OF SERICULTURE**

### **Programme and Course Outcomes**

#### **Name of the Programme: B.Sc CBCS) - SERICULTURE**

##### **Programme Outcomes:**

The B.Sc. Programme in SERICULTURE is one of the basic sciences studied at undergraduate level. This program aims to develop the scientific temper and attitude among the learners which would in turn prove to be beneficial for the society. The program equips the learner with deep insight into the various concepts from sericulture in mulberry cultivation and rearing. A lot of avenues are open for the students after completion of this program.

The B.Sc. Programme in Sericulture aims to inculcate the following outcomes in the learners.

**Critical thinking:** The concepts in various areas of Sericulture instigate critical thinking skills in the learner.

**Logical Reasoning:** The concepts studied learnt develop logical reasoning among the students.

**Research Aptitude:** The practical knowledge in various concepts drives the research aptitude among the learners.

**Environment Sustainability:** The concepts relating to Ecology and Biodiversity evokes the responsibility of the learner in the conservation of the environment.

**Application:** The acquired theoretical and practical knowledge of various concepts help in the application of thoughts in different day to day life activities.



### Programme Specific Outcomes:

The B.Sc. Programme in Sericulture is intended to provide the students with both theoretical and practical knowledge General sericulture and Moriculture, Silk worm Biology and Rearing Technology, Silk worm and Seed Technology, Post Cocoon Technology, Mulberry and Silk worm Crop Protection, Entrepreneurship and development in Sericulture.

Number	Programme Learning Outcomes
PO 1	Students gain knowledge and understand the Sericulture: Origin and history of sericulture silk route; Distribution of sericulture in world, components of sericulture end products of each components & their economic importance, Environmental impact on sericulture, eco friendly activity of sericulture .
PO 2	Students gain knowledge and understand the Acquire knowledge on various aspects of silkworm biology & development, To acquaint with ecology of silkworm rearing, To familiarise with improved rearin technologies, Develop confidence to se up farms on their own
PO 3	Students will be able To understand about the seed technology, Silkworm seed organisation and its importance, Gain knowledge about scientific procedure involved in egg production & hibernation, Schedules and importanc of mother moth examination and other related process in production of DFLs.
PO 4	Students will be able to understand the introduce the cocoon and its significance in reeling, To acquaint with silk reeling technologies and its importance, To understand the process from cocoon to yarn.
PO 5	Students will be able to understand To study the incidence symptoms and damage caused by pests and diseases of mulberry & silkworm to acquaint with management of pest and diseases through different methods to prevent crop loss
PO 6	Students will be able to Study the entrepreneurial opportunities in sericulture ,To gain knoledge to become an entreprneur in various aspects of sericulture

Course Outcomes: The B.Sc. Programme in Sericulture consists of six papers one in each Semester.

S.No.	Semester	Course	Title of the Paper	Number	Course Outcome
1.	I	Discipline Specific Course	General Sericulture and Moriculture	CO 1	Students will gain knowledge and understand the introduction to sericulture origin and history of sericulture (mulberry, rearing, seeling, grainage and weaving) & economic importance.
				CO 2	Students will gain knowledge and understand sericulture development & organization, economics on silk production, income generation through sericulture
				CO 3	Students will gain knowledge and understand the Moriculture and its botanical aspects History, history origin, distribution and economical importance Anatomy of mulberry root stem, leaf, flower and fruit.
				CO 4	Students will gain knowledge and understand soils for mulberry cultivation soil sampling, and testing Establishment and maintenance of mulberry garden pruning of mulberry, harvesting transportation and preservation of mulberry leaves

2.	II	Discipline Specific Course	Silkworm Biology and Reeling Technology	CO 1	Students will gain knowledge and understand the general salient features of class insects .Biology of silkworm bombyx mori - Life cycle of Bombyx mori.
				CO 2	Students will gain knowledge and understand the general Morphology of B.mori egg larva ,pupa and moth Anatomy digestive ,circulatory ,excretory ,nervous system and male and female reproductive system ,structure and function of silk glands .
				CO 3	Students will gain knowledge and understand the Different types of rearing houses,procurement of DHS incubation ,brushing
				CO 4	Students will gain knowledge and understand the chawki rearing ,late rearing,spining,harvesting,transportation and marketing of cocoons mounting
3.	III	Discipline Specific Course	Silk worm Seed Technology	CO 1	Students will gain knowledge and understand The introduction ,concept and general account of silkworm seed ,concept and significance ,maintanance of parent stock basic multiplication centres , planning for pure and hybrid



					silkworm ,egg production ,purchace of bivoltene and multivoltine seed cocoons from markets deflossing,sorting &preservation pupal axamination &its function.
				CO 2	students will gain knowledge and understand grainages location ,ground plan model, grainage disinfection and hygiene conditions in grainage
				CO 3	Students will gain knowledge and understand proccesing of eggs ;selecton of moh ,coupling ,decoupling,oviposition preservaton of moyh,preparation of starch coated paper
				CO 4	Students gain knowlede and understand handing and preservation of eggs,acid treatment,preservation and handling of hibemated eggs
4.	IV	Discipli ne Specific Course	Post Cocoon Technology	CO 1	Students will gain knowledge and understand textile fibre -breat introduction to natural &synthetic fibres and thair uses ,cocoon sorting -


					objectives & procedure
				CO 2	Students will gain knowledge and understand the cocoon handling ,cocoon stiffling cocoon cooking,
				CO 3	Students will gain knowledge and understand silk reeling ;evaluation of silk reeling units charaka ,cottage basins ,Re reeling and packing ;objectives grant reeling hank preparation lacing skeining booking baling and bunding
				CO 4	Students will gain knowledge and understand Raw silk tusting and grading ; objective of testing grading ,raw silk testing , -visual,winding evenness cleanes neatness tenacityand elongati
5.	V	Discipli ne Specific Elective	Mulberry and Silk worm crop protection	CO 1	Students will gain knoledge and understand the collection of diseases from mulberry ,identification ,isolation culturing and preservation

				CO 2	Students will understand pest predators and parasites definition, mulberry pests leaf eating caterpillars, mealy bugs, mulberry predators, integrator
				CO 3	Students will understand pest introduction mode of infection, classification of silkworm diseases, protozoan diseases, bacterial diseases of silkworm, viral diseases of mulberry & its management
				CO 4	Students will understand the dermestid beetles - life cycle, factors responsible, Indian fly nature, nature of damage and prevention, predators of silk worm
6.	VI	Discipline Specific Elective	Entrepreneurship Development in Sericulture	CO 1	Students will understand the entrepreneurship development; objectives, qualities of an entrepreneur and section



					of a potential entreaprenership
				CO 2	Student will understand the insectary facilities and eqyipment ; location environmental building specification ;mass production of insect pathogens
				CO 3	Students will gain knowledge EDP in raising mulbery saplingb EDP in orgaization of chwki rearing centre EDP in silkworm egg production & rearing EDP in reeling
				CO 4	Students will understand the mechanization in mulberry cultivation silk worm egg production and silkworm rearing activities and economics

  
 Dr. P. ROHINI  
 M.Sc., B.Ed., Ph.D.  
 Assistant Professor,  
 Department of Zoology  
 Govt. Degree College, Thorur,  
 Dist. Mahabubabad-506 163

  
**Principal**  
**Govt. Degree College**  
 THORUR, Dt. Mahabubabad



**GOVERNMENT DEGREE COLLEGE, THORRUR**  
**DIST: MAHABUBABAD, TELANGANA STATE- 506163**  
**Email: jc.gdc.thorrur@gmail.com Mobile: 8008307999**

## **DEPARTMENT OF ZOOLOGY**

### **Programme and Course Outcomes**

**Name of the Programme: B.Sc CBCS) - ZOOLOGY**

#### **Programme Outcomes:**

The B.Sc. Programme in Zoology is one of the basic sciences studied at undergraduate level. This program aims to develop the scientific temper and attitude among the learners which would in turn prove to be beneficial for the society. The program equips the learner with deep insight into the various concepts from classical zoology to applied zoology. A lot of avenues are open for the students after completion of this program.

The B.Sc. Programme in Zoology aims to inculcate the following outcomes in the learners.

**Critical thinking:** The concepts in various areas of zoology instigate critical thinking skills in the learner.

**Logical Reasoning:** The concepts studied learnt develop logical reasoning among the students.

**Research Aptitude:** The practical knowledge in various concepts drives the research aptitude among the learners.

**Environment Sustainability:** The concepts relating to Ecology and Biodiversity evokes the responsibility of the learner in the conservation of the environment.

**Application:** The acquired theoretical and practical knowledge of various concepts help in the application of thoughts in different day to day life activities.

### Programme Specific Outcomes:

The B.Sc. Programme in Zoology is intended to provide the students with both theoretical and practical knowledge in vast areas of Animal Science. This programme aims at comprehensive understanding of Animal Diversity and Classification, Animal Physiology, Animal Behavior, Cell Biology, Genetics, Molecular Biology, Developmental Biology, Immunology, Animal Biotechnology, Ecology, Evolution and Zoogeography.

Number	Programme Learning Outcomes
PO 1	Students gain knowledge and understand the animal diversity among Invertebrates, the characteristic features and classification of different phyla in Invertebrates.
PO 2	Students gain knowledge and understand the animal diversity among Vertebrates, the characteristic features and classification of different classes in Vertebrates.
PO 3	Students will be able to comprehend the various physiological processes that occur in animals and appreciate different types of behavior in animals.
PO 4	Students will be able to understand the structure and function of Cell and Cell organelles, principles of genetics, molecular biology and developmental biology.
PO 5	Students will be able to understand the fundamentals of Immunology and the concepts in Animal Biotechnology and appreciate the applications of different biotechnological principles.
PO 6	Students will be able to learn the concepts of ecology, zoogeography and understand theories of evolution.

Course Outcomes: The B.Sc. Programme in Zoology consists of six papers one in each Semester.

S.No.	Semester	Course	Title of the Paper	Number	Course Outcome
-------	----------	--------	--------------------	--------	----------------

1.	I	Discipline Specific Course	Animal Diversity - Invertebrates	CO 1	Students will gain knowledge and understand the general characters and classification of Protozoa up to orders, structure and life history of <i>Elphidium</i> , Locomotion and Reproduction in Protozoa, Epidemiology of Protozoan Diseases. Students gain knowledge and understand the general characters and classification of Porifera up to orders, structure and life history of <i>Sycon</i> , Canal System in Sponges, Types of cells and spicules in Porifera.
				CO 2	Students will gain knowledge and understand the general characters and classification of Cnidaria, Platyhelminthes, Nematelminthes up to classes, structure and life history of <i>Obelia</i> , <i>Schistosoma</i> , <i>Dracunculus</i> . Polymorphism in Cnidarians, Corals and Coral reef formation and Parasitic adaptations in Helminthes.
				CO 3	Students will gain knowledge and understand the general characters and classification of Annelida and Arthropoda up to classes, structure and life history of <i>Hirudinaria</i> and <i>Palaemon</i> . Evolutionary significance of Coelom and Coelomoducts, Metamerism and Economic importance of Annelida, Crustacean larvae, Insect Metamorphosis,

					Useful and Harmful Insects and Structure and affinities of <i>Peripatus</i> .
				<b>CO 4</b>	Students will gain knowledge and understand the general characters and classification of Mollusca and Echinodermata up to classes, structure and life history of <i>Pila</i> , <i>Asterias</i> . Students also know about Pearl formation, Torsion and Detorsion in Gastropods, Echinoderm larvae and their evolutionary significance, Autotomy, Regeneration and -Symmetry of Echinoderms.
2.	II	Discipline Specific Course	Animal Diversity - Vertebrates	<b>CO 1</b>	Students will gain knowledge and understand the general characters and classification of Hemichordates up to classes, structure and affinities of <i>Balanoglossus</i> and larval significance. Students also know and understand the general characters and classification of Chordates up to orders, Salient features of Urochordata, Retrogressive Metamorphosis in Urochordata, Salient features and affinities of Cephalochordata, Salient features of Cyclostomata, Comparison of <i>Petromyzon</i> and <i>Myxine</i> .
				<b>CO 2</b>	Students will gain knowledge and understand the general characters and classification of Pisces and Amphibians up to orders, Digestive,



					Respiratory, Circulatory, and Nervous system of <i>Scotodon</i> and Respiratory, Circulatory, and Nervous system of <i>Rana</i> . Students also know and understand different types of fins, types of scales and Migration in Fishes, Parental Care in Amphibians, Neoteny and Paedogenesis, Metamorphosis in Amphibians and its hormonal control.
				<b>CO 3</b>	Students will gain knowledge and understand the general characters and classification of Reptilia and Aves up to orders. Digestive, Circulatory, Respiratory and Nervous System of <i>Calotes</i> and <i>Columba</i> . Temporal fossa in Reptiles and its evolutionary importance, Distinguished characters of Poisonous and Non-poisonous Snakes. Migration in Birds and Flight adaptations in Birds and Dentition in Mammals.
				<b>CO 4</b>	Students will gain knowledge and understand the general characters and classification of Mammalia up to orders, Digestive, Circulatory, Respiratory and Nervous System of Rabbit, Dentition in Mammals and Aquatic adaptations in Mammals.
3.	III	Discipline Specific Course	Animal Physiology and Animal Behavior	<b>CO 1</b>	Students will gain knowledge and understand about Enzymes definition, classification, inhibition and regulation, Digestion of

					Carbohydrates, Proteins, Lipids and Cellulose, Absorption and Assimilation of digested food, role of gastrointestinal hormones in digestion, classification of animals on the basis of excretory products, structure and function of Nephron, Urine formation and Counter current mechanism, Concept and mechanism of Homeostasis, Hormone regulation of blood glucose levels in human being, water and ionic regulation by fresh water and marine animals, thermoregulation in human being, osmoregulation in marine, fresh and brackish water animals.
				<b>CO 2</b>	Students will gain knowledge and understand the definition of respiration, respiration mechanism, external, internal and cellular respiration. Students gain knowledge on different respiratory pigments, transport of respiratory gases, regulation of respiration - nervous and chemical mechanism, Types of Circulation, Open and Closed, Structure of Mammalian Heart, types of Hearts, Heart functions and Blood Clotting Mechanism.
				<b>CO 3</b>	Students will gain knowledge and understand different types of Muscles, Ultrastructure of skeletal muscle fiber, Mechanism and chemical changes during Muscle


					<p>Contraction, Twitch, Tetanus, Summation, and Treppe fatigue. Students gain knowledge and understand the structure of Neuron, transmission of Nerve Impulse, Synaptic transmission and Neurotransmitters. Students gain knowledge and understand the structure of endocrine glands, secretion and function of pituitary, thyroid, parathyroid, adrenal and pancreas. Hormone action and concept of secondary messengers, male and female hormones, hormonal control of menstrual cycle in human beings.</p>
				<b>CO 4</b>	<p>Students gain knowledge and understand the types of behavior, taxes, reflexes, tropisms, types of learning, conditioning, Social behavior, communication and biological rhythms.</p>
4.	IV	Discipline Specific Course	Cell Biology, Genetics and Developmental Biology	<b>CO 1</b>	<p>Students will gain knowledge and understand the ultra structure of Animal cell, Structure and function of Plasma membrane, cell organelles like endoplasmic reticulum, golgi complex, ribosomes, lysosomes, mitochondria and nucleus; structure and types of chromosomes, cell division, mitosis and meiosis, cell cycle and its regulation.</p>
				<b>CO 2</b>	<p>Students will gain knowledge</p>



					and understand the structure of DNA, RNA and types of RNA, DNA replication. Protein synthesis, Gene expression, Molecular biology techniques like Polymerase Chain reaction and Electrophoresis.
				<b>CO 3</b>	Students will gain knowledge and understand Mendel Law's of Inheritance and Non - Mendelian Inheritance, Linkage and Crossing over, Sex determination and Sex - linked Inheritance, Chromosomal Mutations, Deletion, Duplication, Inversion, Translocation, Aneuploidy, Polyploidy, Gene Mutations , Inborn Errors of Metabolism.
				<b>CO 4</b>	Students will gain knowledge and understand Gametogenesis, Fertilization, Types of eggs, Types of Cleavages, Development of frog up to the formation of primary germ layers, formation of fetal membrane in chick embryo and their functions, types and functions of placenta in mammals, Regeneration in Turbellarians and Lizards.
5.	V	Discipline Specific Elective	Immunology and Animal Biotechnology	<b>CO 1</b>	Students will gain knowledge and understand basics of Immune System like cells

					and organs of Immune system, Types of immunity and Major Histocompatibility.
				<b>CO 2</b>	Students will understand the structure and function of Antibody, Types of antibodies, Diversity, Monoclonal antibodies, Antigen, Antigen - antibody reactions, Hypersensitivity reactions and Autoimmunity and Immunodeficiency diseases
				<b>CO 3</b>	Students will understand the concept and scope of Animal Biotechnology, Recombinant DNA technology and its applications, Cloning Vectors, Cloning methods, Enzymes used in r DNA technology and Transgenesis.
				<b>CO 4</b>	Students will understand the concepts of <i>In vitro</i> fertilization, Embryo transfer, Stem cells, Hybridoma technology, Polymerase Chain Reaction, Animal Bioreactors and also the applications of all these techniques.
6.	VI	Discipline Specific Elective	Ecology, Zoogeography and Evolution	<b>CO 1</b>	Students will understand the structure and function of Ecosystem, types of ecosystems, Bio-geochemical nutrient cycles, Energy flow in the ecosystem, Food chain,

					Food web and Ecological pyramids and different kinds of Animal associations.
				CO 2	Student will understand the Concept of species, Population dynamics and Growth curves, Community Structure and Dynamics of Ecological Succession, Ecological adaptations, Environmental pollution, Wild Life Conservation,
				CO 3	Students will gain knowledge on climatic and faunal peculiarities of different zoogeographical regions, Wallace line, Discontinuous distribution and Continental drift.
				CO 4	Students will understand theories of evolution, forces of evolution, isolation, speciation, causes and role of extinction in Evolution.

  
**Dr. P. ROHINI**  
 M.Sc., B.Ed., Ph.D  
 Assistant Professor,  
 Department of Zoology  
 Govt. Degree College, Thorrur,  
 Dist. Mahabubabad-506 163

  
**Principal**  
**Govt. Degree College**  
**THORRUR, Dt. Mahabubabad**



GOVERNMENT DEGREE COLLEGE THORRUR  
MAHABUBABAD DISTRICT, TELANGANA STATE-506163  
E-Mail: [jc.gdc.thorrur@gmail.com](mailto:jc.gdc.thorrur@gmail.com), Mobile: 8008307999



Website: <https://gdcts.cgg.gov.in/torrur.edu>

DEPARTMENT OF TELUGU  
PROGRAMME AND COURSE OUTCOMES

Name of the Programme: B.A, B.Com & B.Sc (CBCS)-TELUGU

Programme Outcome:

SEMESTER I & II:

1. To inculcate respect to mother tongue in general and Telugu in specific among the students.
2. To educate the students about Telangana history, culture, language and literature
3. To inculcate human values, women empowerment and to improve imagination power among the students.
4. To give a perfect outlook about classical, neo classical, modern, post-modern trends in Telugu literature.
5. To motivate to write poetry, stories, literary essays etc.
6. To expose the students to the structural aspects, of the language through grammar

SEMESTER III AND IV:

1. To enlighten the students about the writers of the Telangana region who have been neglected in the past.
2. To inculcate moral values and spiritual outlook through literature.
3. To expose the students to literature created for the upheaval of the suppressed classes, especially Dalit's.
4. To explain the glory of the Telangana by texts related to the heroes of Telangana, History of the region and cultural uniqueness of Telangana
5. To educate the students about the ill effects of modern culture
6. To inculcate passion for reading
7. To introduce the beauty of prosody in the language in order to make them write poetry metrically.

SEMESTER V AND VI:

1. To introduce the kavitha prakriyas to among the students and make them to write poetry on their own choice.
2. To improve the skills on understanding and how to write the essay writing.
3. To introduce the vachana sahithyam to the students to improve skills to write vachana kavitha on their own.
4. To introduce the various types of sahithya prakriyas to the students made him to know the huge varieties of telugu sahithyas.
5. To introduce the skills on journalism.
6. To introduce the project and research work in telugu sahithyam





## Course Outcomes:

The B.A, B.Com & B.Sc. programme in Telugu consists of different courses and optional throughout its duration of six semesters of the programme. The following are the course outcomes.

S.N O	Semester	Course	Title of Paper	Number	Course Outcome
1	I	Discipline Specific Course	Shakunthalopakhyanam	CO1	Mahabharata visheshalu
				CO2	Aadikavi Nannaya, Akshara Ramyatha
				CO3	Parichina Telugu sookthulu
				CO4	Parichina kavithvam Adyanam
			Goda guchi katha	CO1	Palkurki somana kavitha vaibhavam
				CO2	Modati Telugu Puranam, Basava Puranam
				CO3	Dwipada Kavitha Parichayam
				CO4	Modati Sathaka kartha Palkurki somana
			Samvaruni Thapassu	CO1	Addanki Gangadharudu
				CO2	Ibrahim Kuthubsha (Malkibharamudu)
				CO3	Thapathi Samvaranopakhyanam Parichayam, 16 sathabdapu kavitha parichayam
			Kaasulu	CO1	Gurajada Apparao, Aadunika Telugu Kavitha Vaithalikudu
				CO2	Tholikathanika Diddubatu
				CO3	Kanyasulkam Natakam
			Raju & Kavi	CO1	Gurram Jashuva
				CO2	Aadunika Kavithva Parichayam
	CO3	Gabbilam Dalitha Kavitha Prathika			
	CO4	Navayuga Kavi Chakravarthy, Kavi Kokila			
	Gangireddu	CO1	Dr.Palla Durgaiiah		
		CO2	Telangana Culture & Tradition		
	Jayabheri	CO1	Srirangam Srinivasa Rao		
		CO2	Maha Prasthanam Abhyudaya Kavithva Parichayam		
		CO3	Siprali Kavithalu		
	Vyakaranam	CO1	Sandulu		
		CO2	Samasalau, Telugu Bashalo vati Pramukhyatha		
	Upavachakam	CO1	Rudramadevi Navala		
		CO2	Voddiraju Sodarulu, Telangana Charithra mariyu visheshalu		
	II	Discipline Specific Course	Gajendra Moksham	CO1	Bammera Pothana
				CO2	Andhra Maha Baghavatham Adhyanam
				CO3	Sahaja Pandithudu
			Hanumath Sandesham	CO1	Kavayithri Molla
				CO2	Kanda Ramayanam, Ramayanamulo Hanumanthuni Vaibhayam
CO3				Sundara Kanda	
Subhashithamulu			CO1	Yenugu Lakshamana Kavi	
			CO2	Subhashita Thrishathi, Neethi Sathaka Parichayam, Murtimathva nirmanam	
			CO3	Eelakuchi Balasaraswathi, Yenugu Lakshmana Kavi, Pushpagiri Thimmana	
Anthranadam			CO1	Dasharathi Krishnama Charya	
			CO2	Agni Dhara, Abhyudaya Kavitha Adhyanam	
			CO3	Thimiramutho Samaram	
Prapancha Padulu			CO1	Dr.C.Narayana Reddy	
			CO2	Adhunikandra Kavithvamu – Sampradayalu, Prayogalu	

			CO3	Vishwabhara ,Loka reethi thelpe sahithyam
		Alwida	CO1	Koumudi, Shamshuddin
			CO2	Makdum Mohiuddin
		Snehalatha Lekha	CO1	Rayaprolu Subbarao
			CO2	Bhava Kavitha Parichayam, Adhyanam
		Grammer	CO1	Alankaralu, Telugu bhashalo vati pramukhyatha
			CO2	Sabdhalankaralu, Ardalankaralu
III	Discipline Specific Course	DHARMJUNIVA KCHATURYAM.	CO1	Mahabharata visheshalu
			CO2	Tikkana natakeeyata,
			CO3	Parichina Telugu padabandalu
			CO4	Parichina kavivvam
		GUNANIDHIKATHA.	CO1	Sreenadhuni kavivvam
			CO2	Puruni prdhanyata
			CO3	VidyaPradhanyata
			CO4	Chatuvulu
		VIBHEESHANA SHARANAGATHI	CO1	Gona Buddha Reddy
			CO2	Ranganadha Ramayanam
			CO3	Telugu Sahithyamulo Dwipada and Tholi Ramayanam
		RAITHU PRASHASTHI	CO1	Vanamamalai Jagannadha Charyulu
			CO2	Raithu Ramayanam
		GURU DAKSHINA	CO1	Ambati Lakshmi Narasimha Raju
			CO2	Vijaya Vijayam
			CO3	Mahabharatha Parichayam
		GUDISELU KALIPOTHUNNAYI	CO1	Dr.Boyi Bheemanna
			CO2	Paleru nundi Padmasri varaku
			CO3	Vachana Kavitha Parichayam
		CHALI CHEEMALU	CO1	Natakavisheshalu
			CO2	Gramarajikeeyalu
			CO3	Devalayam aastulu
			CO4	Gramasarpnadhikaradurviniyogam.
		IV	Discipline Specific Course	NARADAGANA MATSARYAM
CO2	Kalapurnodayam			
CO3	Prabhanda Kavya Patanam			
VAGDANA BHANGAM	CO1			Asoori Maringanti Venkata Narasimha Charyulu
	CO2			Talanka Nandini Parinayam
	CO3			Mahabharatha Katha
NARASIMHA SATHAKAM	CO1			Satakam viseshaalu
	CO2			Dhariamsalu
	CO3			Neetivisheshalu
	CO4			Bhakthivisheshalu
NARUDANENU NARUDANENU	CO1			Kaloji Narayana Rao
	CO2			Nagodava Pusthaka Adhyanam
	CO3			Vachana Kavitha Adhyanam
AARTHA GEETHAM	CO1			Devarakonda Bala Gangdhar Thilak
	CO2			Amruthamkurisina Rathiri
	CO3			Vachana Kavitha
DEVARAKONDA DURGAM	CO1			Dr.Mukurala Rama Reddy
	CO2			Devarakonda Durga Charithra



			ARDHARATRI ARUNODAYA	CO3	Vachana Kavitha		
				CO1	Vachanakavitvam visheshalu		
				CO2	Telaganasamajikamshalu		
				CO3	Naijam palana		
			CP BROWN SAHITHYA SEVA	CO4	Rajakarladascharyalu		
				CO1	Janumaddi Hanumath Sasthri		
				CO2	CP Brown Charithra		
			MANAGRAMA NAMALU	CO2	Telugu Basha Seva		
				CO1	Dr.Kapilavayi Lingamurthi		
			NIVURUTOLAG INANIPPU	CO2	Grama Charithralu		
				CO1	Katha sahityam visheshalu		
				CO2	Patrowchityam		
				CO3	Atmavisvasam, pattudala		
			KONDA MALLELU	CO4	Jrutagyatabhavam		
				CO1	Illindala Saraswathi Devi		
				CO2	Girijana Hrudayala Avishkarana		
			V	Discipline Specific Course	KAVITHA PRAKRIYALU	CO3	Swarna Kamalalu
						CO1	Brief introduction on pandhyam
CO2	Brief introduction on Telugu Song						
CO3	Brief introduction on Telugu Vachana Kavitha						
CO4	Introduction of Lagu Kavithas						
TELUGU VYASAM	CO5	Introduction of Urdu Kavithas					
	CO1	Introduction of Vyasam					
	CO2	Vyasa Parinamam					
	CO3	Types of Vyasa Rachana					
	CO4	The Various Topics on Essay Writings					
VACHANA SAHITHAYM	CO5	Telugu Language usage in Essay writing.					
	CO1	Research on Culture					
	CO2	Usage on Literary Adhyana					
	CO3	Preface					
	CO4	Book Review					
VI	Discipline Specific Course	SAHITHYA PRAKRIYALA PARICHAYAM			CO5	Folk Literature	
					CO1	Natakam	
					CO2	Navala	
			CO3	Kathanika			
			CO4	Life History			
		JOURNALISM LO MOULIKA AMSHALU	CO5	Upanyasa Kala			
			CO1	Vaaritha			
			CO2	Vaaritha Nirmanam			
			CO3	Vaaritha Kathanalu			
			CO4	Interviews			
		PROJECT PARICHAYAM	CO5	Anuvadam			
			CO1	Projects			
			CO2	Adhyanam			
			CO3	Parikalpana			
					CO4	Nivedika	



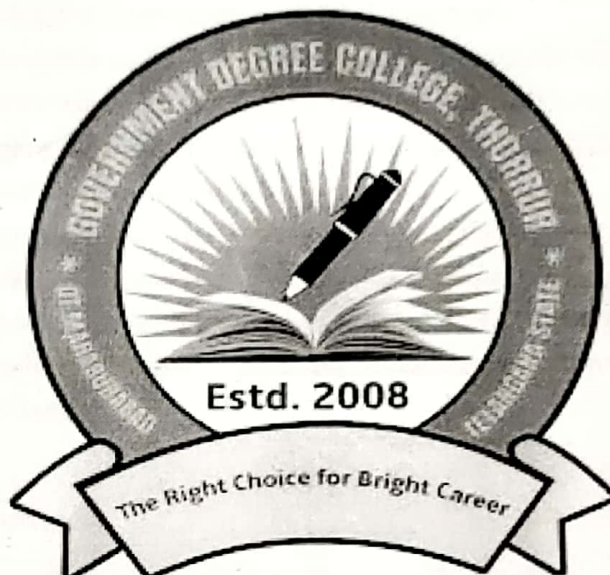
  
 Principal  
 Govt. Degree College  
 THORRUR, Dt. Mahabubabad



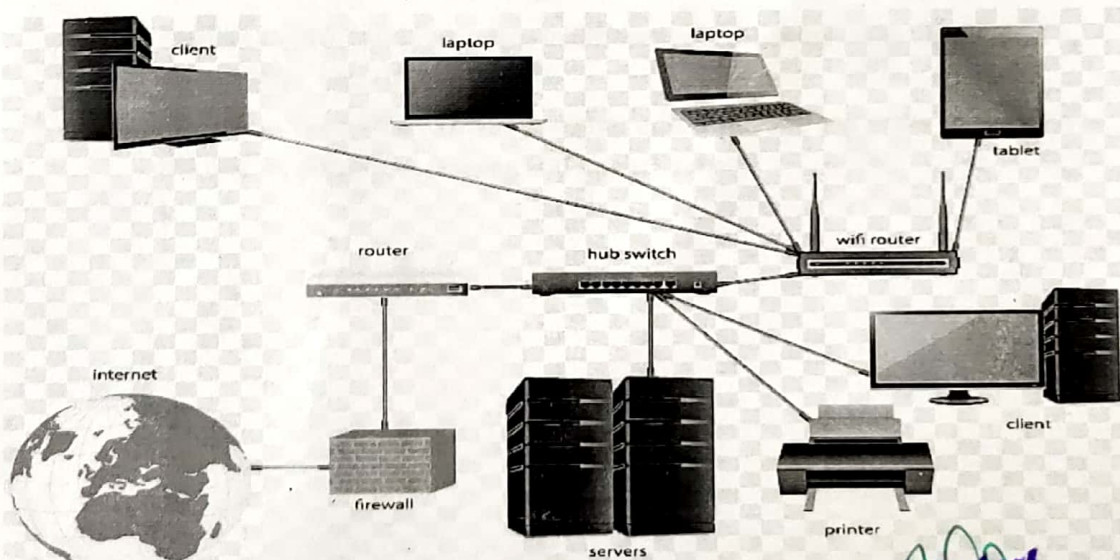


GOVERNMENT DEGREE COLLEGE THORRUR,  
MAHABUBABAD, (Dist)-506 163  
TELANGANA

([www.https//gdcts.cgg.gov.in/torrur.edu](https://gdcts.cgg.gov.in/torrur.edu), e-mail id: [jc.gdc.thorrur@gmail.com](mailto:jc.gdc.thorrur@gmail.com))



DEPARTMENT OF COMPUTER SCIENCE AND APPLICATIONS  
PROGRAMME AND COURSE OUTCOMES



*Principal*  
Govt. Degree College  
THORRUR, Dt. Mahabubabad

## Programme Outcomes

- Student should be able to understanding of the basic operations of a computer system, specifically in terms of the systems hardware and software components use computer applications software.
- Develop ability to analyze a problem, identify and define the computing requirements, which may be appropriate to its solution.
- To prepare students to undertake careers involving problem solving using computer science and technologies.
- Develop ability to pursue advanced studies and research in computer science.
- To produce entrepreneurs who can innovate and develop software product.
- They can able to solve problems and discuss, comment on the social impact of the widespread use of computer technology and automate simple tasks in specific applications.

## Programme specific outcome

The students can get the knowledge and skills during the end of the degree course.


- By goodness of the preparation they can turn into a Banking jobs, Data Entry Operator, Clerical Jobs, Government as well as Private employments and so on.
- Students will prove themselves in different professional exams like C.A., C S, CMA, TSPSC, and UPSC.
- Students will be able to do their higher education and can make research in the field of Computer Science and Applications.

S.No	Semester	Course	Credits	Course Outcome
1	BSC (MPCs) Semester-I	Programming In C	5	Explore algorithmic approaches to problem solving. 1) Ability to analyze a problem and devise an algorithm to solve it. 2) Able to formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems. 3).Ability to implement algorithms in the C language. 4). Develop modular programs using control structures and arrays in C.
2	B.Com.(CA) semester-I	Information Technology	5	Students will be able to acquire basic knowledge Technology and its applications in the areas of business.
3	B.A (HPCA) semester-I	Introduction to Computers Programming In C	5	Students will be able to acquire basic knowledge/skills in Computers and C-Language
4	BSC (MPCs) semester-II &B.A(HPCA) semester-II	Object Oriented Programming In C++	5	Able to understand the concept of object oriented programming . Use the benefits of object oriented design and understand when it an appropriate methodology use.Design object oriented solutions for small systems involving multiple objects.
5	B.Com.(CA) semester-II	Programming with C and C++	5	Explore algorithmic approaches to problem solving. a problem and devise an algorithm to solve it. Able to formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems. Ability to implement algorithms in the C language. Develop modular programs using control structures and arrays in C.
7	B.Com.(CA) semester-III	Relational Data Base Management System	5	Able to understand database concepts and database management system software Analyze and desing areal database application .

8	B.A (HPCA) semester-III	Relational Database Management System	5	<p>Able to understand database concepts and database management system software</p> <p>Analyze and desing areal database application .</p> <p>Develop and evaluate a real database application using a database management system.</p> <p>Able to develop application using PL/SQL &amp;front end tools.</p>
9	BSC (MPCs) semester-IV	Data Base Management System	5	<p>Understand fundamental concepts of database.</p> <p>Understand user requirements and frame it in data model.</p> <p>Ability in creations, manipulation and querying of data in database.</p> <p>Ability to solve real world problems using appropriate set, function, and relational models.</p> <p>Ability to design E-R Model for given requirements and convert the same into database tables.</p>
10	B.Com. (CA) semester-IV	Web Technology	5	<p>Able to understand Of Creation Web Page And Creating Style Sheets, Tables, Forms, Lists.</p> <p>And To Develop Mathematical Programs using Control Statements</p>
11	B.A (HPCA) semester-IV	Multimedia Applications	5	<p>The aim of this course is to provide the conceptual Knowledge of Multimedia design which enables the student to develop the skill of Multimedia Applications .</p>
12	BSC (MPCs) semester-V B.A(H.P.CA) Semester-V	Programing in Java	5	<p>Understand to implement object oriented programming concepts.</p> <p>Understand how to design graphical user interface in Java programs.</p> <p>Understand how to design and develop AWT ,Packages.</p> <p>And To Develop Mathematical Programs using Control Statements.</p>



13	B.Com (C.A) Semester-V	E-Commerce	5	Students will be able to acquire basic knowledge Learning E-Business And Electronic Transactions.
14	BSC (MPCs) semester-VI B.A(H.P,CA) Semester-VI	Web Technology	5	To Learn How to pay Digital Payments Able to understand Of Creation Web Page And Creating Style Sheets, Tables, Forms, Lists. And To Develop Mathematical Programs using Control Statements. Using Java Scripting And VB Scripting For Webpage Developing.
15	B.Com (C.A) Semester-VI	Multimedia Systems	5	The aim of this course is to provide the conceptual Knowledge of Multimedia design which enables the student to develop the skill of Multimedia Applications, Uses, Digital Audio, Digital Video, and Image Formats And Sound Editing.

V.C.P.   
Incharge

  
PRIN ~~Principal~~  
Govt. Degree College  
THORRUR, Dt. Mahabubabad



**GOVERNMENT DEGREE COLLEGE**  
**THORRUR MAHABUBABAD DISTRICT**  
**TELANGANA STATE**  
**DEPARTMENT OF BOTANY**

**PROGRAMME OUTCOMES**

1. Students will be able to understand the fundamental theories , concepts and applications in the areas of Botany , Zoology and Chemistry
2. Emphasizes the diversity in plants and animals , create an awareness on the environment and the society
3. Apprize the significance of Botany, Zoology and Chemistry in day to day life
4. Students get acquainted with the skills in the proper handling of instruments and chemicals and hence can function effectively as professionals in life science based industries
5. Through this program students will be able to pursue higher education and focus on scientific research and apply this knowledge in both real life and laboratory.

S.NO	PAPER	NUMBER	COURSE OUTCOME
01	SEMESTER-1  TITLE :  Microbial diversity of lower plants	CO1	To gain knowledge about microbial diversity and their economic importance
		CO2	To understand the phylogeny of plants
		Co3	To know about various plant diseases and their control measures
		Co4	To understand life cycles of different algal plants
		Co5	To understand organization of thallus in algae and fungi
		Co6	To know the evolution of sporophyte in bryophytes
		Co7	To understand the stellar evolution and seed formation habit in pteridophytes

02	SEMESTER-2  TITLE:  Gymnosperms, Taxonomy Of Angiosperms and Ecology	Co1	To gain knowledge about life cycles of gymnosperm plants
		Co2	To gain knowledge about fossils and fossilization
		Co3	To gain knowledge about geological time scale
		Co4	To recognize major groups of vascular plants and their phylogenetic relationships
		Co5	To gain knowledge about various plants family
		Co6	To understand ecological relationship between organisms and their environment
		Co7	To identify diversity of life forms in an ecosystem
		Co8	To understand adaptations of plant communities
		Co9	To understand plant succession
03	SEMESTER-3  TITLE: plant anatomy and embryology	Co1	To gain knowledge about plant cells, tissues and their functions
		Co2	To understand anomalous secondary growth patterns in various stems
		Co3	To know the structure and development of monocot and dicot embryos and endosperms
		Co4	To study the function and morphology of pollen grains and their classification

04	SEMESTER-4 TITLE: cell biology , plant physiology	Co1	To gain knowledge about the structure of cell and cell organelles and their functions
		Co2	To gain knowledge about cell divisions in plants
		Co3	To understand plant physiological processes and metabolism
		Co4	To explain the role of micro nutrients in plant growth and development
		Co5	To study about photosynthesis and respiration
05	SEMESTER-5 TITLE: Economic Botany	Co1	To gain knowledge about various crops and their nutritional and commercial value
		Co2	To understand various processes to extract oils , processing of rubber and sugar
		Co3	To understand various medicinal plants and their value
06	SEMESTER-6 TITLE :tissue culture and biotechnology	Co1	To understand the main techniques of invitro culture of plant cells and tissues
		Co2	To understand the culture of various organs
		Co3	To know the main technique of genetic manipulation in plants
		Co4	To understand the importance of transgenic plants
		Co5	To understand the importance of tissue culture and biotechnology

  
 Principal  
 Govt. Degree College  
 THORRUR, Dt. Mahabubabad



**GOVERNMENT DEGREE COLLEGE, THORRUR**

**MAHABUBABAD DISTRICT**

**DEPARTMENT OF CHEMISTRY**

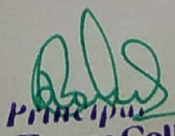
**PROGRAMME AND COURSE OUTCOMES**

**Programme outcomes:** The B.Sc Programme in Chemistry has been designed with the objective to develop through knowledge of students. So that they are able to use the knowledge in doing practical's. The course is intended to strong focus on practicals. The B.Sc Programme in Chemistry seeks to develop the following outcomes.

1. **Critical thinking:** It prepares students to develop own and critical thinking to understand objectives of various practical.
2. **Effective participants:** It develops among students to effectively participate in a laboratory by qualitatively and quantitatively.
3. **Ethics:** It makes students to recognize different experiments and understand the methods of procedure.
4. **Self directed and lifelong learning:** It will prepare students to acquire the ability to engage a self dependent and self employment.

**Programme learning outcomes:** At the end of the programme, the students will have adequate knowledge and acquire additional specialization through optional courses. Students will be able to apply their knowledge in Chemistry practicals solve them based on their understanding of Chemistry.

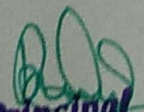
Keeping the programme outcomes in view, the specific learning outcomes of B.Sc Chemistry are

  
Principal  
Govt. Degree College  
THORRUR, Dt. Mahabubabad

Number	Programme learning outcomes
PO1	Students will be able to understand in Organic Chemistry, methodologies, principles of metallurgy procedures.
PO2	Students will be familiar with the knowledge and mechanism of Organic Chemistry for the strategies.
PO3	Students will be able to understand the impact of derivation in physical Chemistry.
PO4	Students develops the awareness of general Chemistry and the consequences of drugs, Polymers.

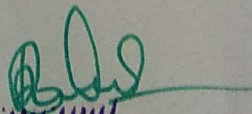
**Course outcomes:** The B.Sc. programme in chemistry consists of different courses and optional throughout its duration of Six semesters of the programme. The following are the course outcomes.

S.No	Semester	Course	Title of paper	Number	Course outcomes
1	I	Discipline specific course	Chemistry-I	CO1	To understand the Inorganic Chemistry and elements of s and p blocks.
				CO2	To know structural theory in Organic Chemistry.
				CO3	To make to understand the atomic structure and Elementary quantum mechanics.
				CO4	To recognize the general principles of Inorganic qualitative analysis.
				CO1	To be understand the chemistry Zero and d-block elements.
				CO2	To know the

  
**Principal**  
 Govt. Degree College  
 THORRUR, Dt. Mahabubabad

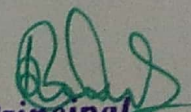


2	II	Discipline specific course	Chemistry-II		mechanism of Organic compounds.
				CO3	To be acquainted with the importance of Electro Chemistry.
				CO4	To learn the Theory of Quantitative analysis and understand dilute solution and Colligative property.
3	III	Discipline specific course	Chemistry-III	CO1	To understand the Co-ordination complexes and metal carbonyls and OMCs.
				CO2	To know carboxylic acids and its derivatives
				CO3	To understand the Thermodynamics statements and functions.
				CO4	To be aware of Evaluation of analytical data.
4	IV	Discipline specific course	Chemistry-IV	CO1	To understand the essential elements of Bio inorganic chemistry
				CO2	To know the classification of sugar and Hetero cyclic compounds.
				CO3	To understand the Chemical Kinetics.
				CO4	To know about Theories of bonding and colloids, surface Chemistry.

  
Principal

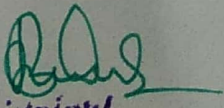
Govt. Degree College  
THORRUR, Dt. Mahabubabad

5	IV	Skill enhancement course-IV	Remedial method of pollution	CO1	To know the remedial method of pollution, causes and controlling measures.
				CO2	To understand the drinking water and soil fertility standards and analysis.
6	V	Discipline specific elective (A)	Spectroscopy and Chromatography	CO1	To have the knowledge of molecular spectroscopy.
				CO2	To understand types of spectroscopy and their application.
				CO3	To know the separation techniques of chromatography.
				CO4	To learn the principles, Development and Extraction of chromatography.
7	V	Discipline specific elective (B)	Metallurgy, Dyes and Catalysis	CO1	To know the general principles of metallurgy and production of Non ferrous metals.
				CO2	To understand the natural and synthetic Dyes.
				CO3	To learn Homogeneous and Heterogeneous catalysis.
				CO4	To have to understand the characteristics of enzymes catalysis

  
**Principal**  
**Govt. Degree College**  
**THORRUR, Dt. Mahabubabad**



8	V	Skill enhancement course-V	Water Resource management	CO1	To understand different types of Water Resource management
				CO2	To know the application of Water Resource management.
9	VI	Discipline specific elective (A)	Medicinal Chemistry	CO1	To understand terminology of drugs.
				CO2	To know about enzymes and receptors.
				CO3	To learn the synthesis and therapeutic activity of drugs.
				CO4	To have the knowledge of molecular messengers, vitamins and micronutrient.
10	VI	Discipline specific elective (B)	Agriculture and Fuel Chemistry	CO1	To know the classification of pesticides and formulation.
				CO2	To understand the classification of formulas and uses of fertilizers.
				CO3	To learn the classification of fuels and their calorific value
				CO4	To have to learn petroleum and its products, petrochemicals and non petroleum fuels.

  
 Principal  
 Govt. Degree College  
 THORRUR, Dt. Mahabubnagar

## DEPARTMENT OF DAIRY SCIENCE

### Programme and Course outcomes

Name of the programme: B.Sc 'Dairy Science'

#### Programme Outcomes:

The B.Sc programme in Dairy Science is one of the basic sciences studied at U.G level.

This program aims to develop the scientific temper and attitude among the learners which would in turn prove to be beneficial for the society.

The program equips the learner with deep insight into the various concepts from Dairy Science in Animal Husbandry and Dairying. A lot of avenues are open for the students after completion of this programme.

The B.Sc programme in DAIRY SCIENCE aims to inculcate the following outcomes in the learners.

- **Critical thinking**: - The concepts in various areas of Dairying instigate critical thinking skills in the learner.
- **Logical Reasoning**: - The concepts studied learnt develop logical reasoning among the students.
- **Research Aptitude**: - The practical knowledge in various concepts drives the research aptitude among the learners.
- **Environment Sustainability**: - The concepts relating to Ecology and Biodiversity evokes the responsibility of the learner in the conservation of the environment.



## Programme Specific Outcomes.

The B.Sc Programme in Dairy Science is intended to provide the students theoretical and practical knowledge. Animal Husbandry, Dairy cattle nutrition, Dairy Cooperative Societies, principles of Dairy chemistry and Dairy microbiology.

Number	Programme Learning outcomes
P01	Students gain knowledge and understand common terms and definitions in Animal Husbandry, Cattle and Buffalo population and its distribution. Breeds of Dairy cattle buffaloes and goats. Symptoms of sick Dairy animals, Maintenance of high level of fertility in the herd.
P02	Students gain Knowledge and understand Digestive System and role of Nutrients in Dairy Cattle. feeding standards, Balanced rations for Dairy cattle. Utilization of Agricultural and industrial by-products for livestock feeding
P03	Students will be able to understand about Advantages of Dairying, Methods of procurement of milk. Pricing of milk and marketing of milk. Dairy development programmes implemented in India.
P04	Students will be able to understand Reception of milk. Methods of Pasteurization, Sterilization of milk. packaging of milk, Market milk.
P05	Students will be able to study Composition of milk significance of colostrums. Factors affecting Composition and Yield of milk. Physico-chemical properties of milk. Chemistry of major constituents of milk.
P06	Students will be able to study classification and Composition of Butter, Cheese. Condensed and Evaporated milks and Indigenous milk products.



**COURSE OUTCOMES:** The B.Sc programme in Dairy Science consists of six papers one in each semester.

S.No	Semester	Course	Title of the Paper	Number	Course outcome
1	I		Dairy Husbandry - I	CO1	Students will gain Knowledge of Common terms and Definitions in Animal Husbandry. Breeds of Dairy Cattle, Buffaloes & Goats. Indigenous, Exotic and Cross bred cattle breeds.
				CO2	Students will gain Knowledge and understand Anatomy & Development of Udder. Letdown of milk. milking procedure and practices for clean milk production. proper cleaning of milking area.
				CO3	Students will gain Knowledge and understand the methods of milking. methods of Selection of Dairy animals. Unified Score Card system, Body Condition Score System.
				CO4	Students will gain Knowledge and understand Systems of Dairy cattle breeding. Multi ovulation and Embryo transfer technique. Cloning and Transgenic animals.
2	II		Dairy Husbandry - II	CO1	Students will gain Knowledge and understand Systems of Housing of Dairy cattle. Criteria for selecting site for establishing Dairy farm buildings. Water requirement of Dairy animals.
				CO2	Students will gain Knowledge and understand symptoms of Sick Dairy animals Bacterial, Viral, parasitic and Nutritional deficiency diseases and their Control.

	II	Dairy Husbandry - II	CO3	Management of different classes of Dairy animals Management practices for Dairy farm. Castration, Grooming, Deworming, Vaccination
			CO4	Maintenance of high level of fertility in the herd. Reasons for low fertility, Methods of maintaining high level of fertility in the herd. etc. Will gain knowledge.
3	III	Dairy cattle Nutrition	CO1	Students will gain knowledge and understand Digestive system and role of Nutrients in dairy cattle. Classification of feeds and fodder.
			CO2	Students will gain knowledge. Types of fodder varieties. cultivation practices of fodder crops.
			CO3	Students will gain knowledge & understand feeding standards. Balanced rations for Dairy Cattle. General feeding practices with regard to management.
			CO4	Students will gain knowledge and understand utilization of agricultural and Industrial by-products for livestock feeding. Urea treatment of Paddy straw.
4	IV	Dairy Development & Cooperative Societies.	CO1	Students will gain knowledge and understand Advantages of Dairying. principles involved in successful dairying. Systems of dairy farming.

IV

C02 Students will gain knowledge and understand methods of procurement of milk. Transportation of milk.

C03 Students will gain knowledge and understand cooperative dairying. Primary milk producers cooperative society. Objectives and functions.

C04 Students will gain knowledge for dairy development programs implemented in India. Operation flood program. Economics of maintaining dairy farm. Estimating the production cost of milk.

5

V

Dairy chemistry

C01 - Students will gain knowledge for composition of milk (cow, buffalo, sheep, goat). Differences between the composition of cow and buffalo milks. & colostrums.

C02 Students will gain knowledge & understand factors affecting composition and yield of milk. Age of the animal season. Interval between milking. Stage of milking, Estruses, milker and drugs.


C03 Students will gain knowledge & understand physico-chemical properties of milk. - colour, flavour, density, specific gravity, Boiling & freezing point. General property, pH and acidity.

C04 Students will gain knowledge & understand chemistry of major constituents of milk. FSSAI specifications for milk.



6	VI	Dairy Microbiology.	CO 1	Students will gain knowledge and understand Types of microorganisms present in milk. Types of microorganisms based on temperature requirement. Psychrophilic, mesophilic, thermophilic and thermotolerant microorganisms.
			CO 2	Students will gain knowledge of chemical changes observed during storage of milk and abnormal fermentations observed in milk.
			CO 3	Students will gain knowledge & understand microbiological examination of milk. Milk borne diseases: Bacterial, Viral and other diseases.
			CO 4	Students will gain knowledge & understand cleaning and sanitization of Dairy equipment. commonly used detergents and sanitizers. Methods of cleaning and sanitization.

Bonehala

  
Principal  
Govt. Degree College  
THORRUR, Dt. Mahabubabad