

**GOVERNMENT DEGREE COLLEGE, KORATLA – 505 326,  
DIST. JAGTIAL**



- PROGRAMME OUTCOMES
- PROGRAMME SPECIFIC OUTCOMES

&

**COURSE OUTCOMES**

# Bachelor of Science (B.Sc.)

## Programme Outcomes (PO)

PO-1 Understand scientific phenomena and their relevance in everyday life

PO-2 Develop skills to identify, analyse and solve problems of their core areas using modern tools and techniques

PO-3 Developed scientific outlook not only with respect to science subjects but also in all aspects related to life.

PO-4 Realized how developments in any science subject helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments

## Programme Specific Outcomes (PSO)

### Bachelor of Science (B.Sc.) Life Sciences -Botany/Zoology/Chemistry /Dairy Science

PSO 1: Understands life process and influence of the environment on life.

PSO 2: Appreciates the evolutionary mechanism which led to the formation of present-day plants and animals

PSO 3: Understands the role of chemistry in life processes and appraise role of green chemistry in environment sustainability

PSO4: Students master fundamental skills to function effectively as professionals and continue learning in the field of Biology

PSO5: To educate students on dairy production and milk processing

### Bachelor of Science ( B.Sc.) Physical Sciences– Maths/Physics/Chemistry/ Computer Science

PSO 1: Enhances arithmetical skills and logical reasoning in students

PSO 2: Understand the physical and chemical properties of materials

PSO 3: Develops ability to interlink the information in physical science, material science and chemical science and build up an inclination to address the issues in biophysics.

PSO 4: The combination integrates all Basic Science courses and lays a strong foundation and prepares the learner for Post-Graduation in respective disciplines

PSO 5 : Develop proficiency in computing

PSO 6: Hands-on experience in various practical aspects of problem solving, programming and experimentation.

# Bachelor of Commerce

## Programme Outcomes (PO)

PO-1 Students develop business acumen and financial literacy. .

PO-2 Analytical skills, entrepreneurial and managerial skills learnt through the course renders students employable.

PO-3 Knowledge about principles in accounting, economic policies, export and import laws and other aspects which tends to impact business and trade will help in building competence in choosing business as a career

PO-4 Computer programming skills help in conducting business with ease and make them employable

## Programme Specific Outcomes (PSO)

### Bachelor of Commerce (B.Com.)-General

PSO 1: Enables the students to develop business acumen and financial literacy

PSO 2: Enables students to examine the connection between Accounting, Auditing and Taxation.

PSO 3: Analytical skills, entrepreneurial and managerial skills learnt through the course renders students employable.

PSO 4: Knowledge of principles in accounting, economic policies, export and import laws and other aspects which tends to impact business and trade will help in building competence in choosing business as a career

### Bachelor of Commerce (B.Com)-Computer Applications

PSO 1: Enables the students to develop business acumen and financial literacy. To examine the connection between Accounting, Auditing and Taxation.

PSO 2: Analytical skills, entrepreneurial and managerial skills learnt through the course renders students employable. Knowledge of principles in accounting, economic policies, export and import laws and other aspects which tends to impact business and trade will help in building competence in choosing business as a career

PSO 3: Knowledge of computer programming enable the students to meet the requirements of technical competencies for placements

PSO 4: To empower the student to comprehend the ideas of computer programming and its applications in web based business tasks.

# Bachelors of Arts (B.A)

## Programme Outcomes (PO)

PO-1 Students develop a broader outlook towards the society

PO-2 Inculcates critical thinking, administrative acumen and effective leadership qualities

PO-3 Understand history to create a better future

PO-4 Knowledge about socio-economic problems help students to explore ways to overcome them

PO-5 On the whole it moulds a student into a citizen. With societal responsibility

## Programme Specific Outcomes (PSO)

### Bachelors of Arts (B.A.)- History, Economics, Political Science (H.E.P)

PSO 1: Provides critical thinking, administrative acumen and moulds the student into an ideal citizen.

PSO 2: Understands the impact of economic/warfare/literary policies of various rulers on the society

PSO 3: Analyse economic theories and concepts to tackle problems like poverty unemployment and to understand market trends.

PSO 4: The combination lays a strong foundation and prepares the learner for Post-Graduation in respective disciplines

\*\*\*\*\*



# GOVERNMENT DEGREE COLLEGE ,KORATLA

## DEPARTMENT WISE COURSES AND THEIR OUTCOMES

### DEPARTMENT OF ENGLISH

#### COURSES & THEIR OUTCOMES (COS)

Sl.No	SEM	COURSE CODE	NAME OF THE COURSE/BOOK	COURSE OUTCOME
1	I & II	UG/101	<b>ENGLISH FOR COMMUNICATION</b>	<ul style="list-style-type: none"><li>➤ Develop employability skills in English at career-entry level.</li><li>➤ Offers comprehensive, language skills, Grammar, Vocabulary and Conversation</li><li>➤ Authentic material with real life situations have been used to develop student's insights into forms and functions of the English Language.</li><li>➤ Exercise enables students to work on their own and improve their communication skills</li><li>➤ Provides a new approach to learning English through a wide range of authentic and meaningful activities useful in everyday life.</li><li>➤ Incorporate students Speaking and Reading skills</li><li>➤ If students carry out the tasks given, they will improve their life skills along with their linguistic skills</li><li>➤ Communication Skills and mastering life skills</li></ul>

Sl. No.	SEM	COURSE CODE	NAME OF THE COURSE /BOOK	COURSE OUTCOME
2	III & IV	UG/301	ENGLISH FOR COMMUNICATION	<ul style="list-style-type: none"> <li>➤ The book contains selected literary pieces, offering glimpses of life and world from different prospective</li> <li>➤ Reading Comprehension in the book are related to the local culture to get awareness</li> <li>➤ Students can build upon the employability skills and improve their communicative skills</li> <li>➤ Enable students to improve their word power, LSRW Skills besides Soft Skills</li> <li>➤ All the units work as springboards for effective communication</li> <li>➤ Soft Skills equip students by explaining some basic behavioral aspects that will help them perform better as both students and young professionals</li> <li>➤ Focuses on aspects and nuances of English grammar which help students the usage of words and sentences structures.</li> <li>➤ The vocabulary and writing skills focus on enabling students to use language in ways that help students save time and increase efficiency</li> </ul>

# DEPARTMENT OF TELUGU

## COURSES AND THEIR OUTCOMES

### SEMESTER-1: PAPER 1 ( Sahiti Manjeera)

CO1	Students can enjoy all the essays and improves literary skills
CO2	Students can learn all the grammar skills
CO3	Differentiate the methods of old and modern poetry thoughts.
CO4	Understand the culture of old society and comparison with modern trends.
CO5	Students can learn the changes of our society

### SEMESTER-2: PAPER 2 ( Sahiti Manjeera )

CO1	Students will be able to improve comprehensive skills as well as advanced grammar skills
CO2	Students can understand the values of literature
CO3	Differentiate the methods of old and modern poetry thoughts.
CO4	Understand the culture of old society and comparison with modern trends
CO5	students can be motivated towards moral values, obedience, right way of living.

### SEMESTER-3: PAPER 3 ( Sahiti Kinnera)

CO1	The anthology contains selected literary pieces offering glimpses of life and world from different
CO2	Students will be able to make use of grammar skills when they face competitive exams
CO3	Differentiate the methods of old and modern poetry thoughts.
CO4	Understand the culture of old society and comparison with modern trends
CO5	Students will understand the value of education & teacher.

### SEMESTER-4: PAPER 4( Sahiti Kinnera )

CO1	Students will be able to improve human values by following the given anthology.
CO2	Students can improve prosody and grammar skills
CO3	Differentiate the methods of old and modern poetry thoughts.
CO4	Understand the culture of old society and comparison with modern trends.
CO5	Students can understand the situations of that particular period.

<b>DEPARTMENT OF HINDI</b>	
<b>COURSES AND THEIR OUTCOMES</b>	
<b>SEMESTER-1: PAPER 1 ( Gadya DarpanKatha sindhu)</b>	
CO1	To make students understand the value of literature.
CO2	Help students develop good reading writing comprehending skills
CO3	To make them learn life skills and human values and ethics through good essays and prose lessons.
<b>SEMESTER-2: PAPER 2 ( Gadya Darpan K atha sindhu )</b>	
CO1	Enabling the students to develop grammar skills
CO2	total positive and humanistic approach.
<b>SEMESTER-3: PAPER 3 ( Kavya nidhi H indi sahitya ka itihaas)</b>	
CO1	Enabling the students to enjoy good poetry and understand the rich heritage of Hindi literature.
CO2	Developing creative literary skills in students
<b>SEMESTER-4: PAPER 4( Kavya nidhi H indi sahitya ka itihaas )</b>	
CO1	Literature in moulding one's personality.
CO2	To make students develop good translation and communication skills to face challenges of today's competitive world

---

<b>DEPARTMENT OF HISTORY</b>	
<b>COURSES AND THEIR OUTCOMES</b>	
<b>SEMESTER-I, PAPER 1(From Earliest Times to c.700 CE )</b>	
CO 1	After the completion of this unit, student must be able to understand Archaeological, literary and Foreign Travellers sources.
CO 2	After the completion of this unit, student must be able to understand socio-eco religious life Students must be able to understand town planning and decline of the civilization
CO 3	After the completion of this unit, student must be able to understand the administrative structure of Mahajanapadas Students must be able to understand Rise and decline of Jainism and Buddhism Students must be able to understand foreign invasions
CO 4	After the completion of this unit, student must be able to understand the expansion and policies under the Mauryan kings. Student must be able to understand the administration under the Maurya's. Student must be able to understand the role of post Mauryan dynasties
CO5	After the completion of this unit, student must be able to understand the expansion under the Gupta kings, administrative structure of Gupta period. Student must be able to understand the concept of classical age under the Guptas. The campaigns of Harsha and its administration
<b>SEMESTER-II, PAPER 2, History of India(700-1526 CE)</b>	
CO 1	After the completion of this unit, student must be able to understand the powers of Chalukyas , Rashtrakutas, Pallavas, Cholas Student must be able to understand the culture spread in South India.
CO 2	After the completion of this unit, student must be able to understand the socio- eco and political conditions before Turkish invasion Student must be able to understand the rise and fall of various dynasties in Delhi Sultanate and Delhi Sultanates administrative system and socio, economic and cultural conditions.
CO3	Analyses factors which led to the emergence of new religious ideas and movements (Bhakti and Sufi)
CO4	After the completion of this unit, student must be able to understand the rise, growth and decline of Kakatiya dynasty. Student must be able to understand the administration, socio- eco and cultural conditions in the Deccan states



CO5	After the completion of this unit, student must be able to understand the rise, growth and decline of Vijayanagar kingdom. Student must be able to understand the administration, socio-eco and cultural conditions in the Deccan state.
<b>SEMESTER-III, PAPER 3, History of India (1526-1857 CE)</b>	
CO 1	After the completion of this unit, student must be able to understand beginning, expansion and decline of the Mughal rule, socio- economic, Cultural, religious and Educational life during the Mughal period.
CO 2	After the completion of this unit, student must be able to understand the role of Shivaji in the foundation of Swaraj. Students must be able to understand the role of Sambhaji, Rajaram and Tarabai.
CO 3	After the completion of this unit, student must be able to understand Karnataka's wars, subsidiary alliance and doctrine of laps.
CO 4	After the completion of this unit, student must be able to understand the revenue settlements, famine and agrarian policies.
CO 5	After the completion of this unit, the student must be able to know what were the causes and consequences of the revolt of 1857.
<b>SEMESTER-IV, PAPER 4, History of India (1858-1964 CE)</b>	

CO 1	After the completion of this unit, the student must be able to understand the education system and its importance to understand the development of Press, Means of Transport and Communication.
CO 2	After the completion of this unit, the student must be able to understand various reforms and movements of the Indian society and also its impact.
CO 3	After the completion of this unit, the student must be able to know the leaders of the moderate politics, its role, objectives and work in the growth of Indian National Movement. Student must be able to know the leaders of the Extremist politics, its role, objectives and work in the growth of Indian National Movement. Student must be able to understand.
CO 4	After the completion of this unit, the student must be able to understand revolutionary movements in different parts of India and their significance.
CO 5	After the completion of this unit, the student must be able to understand the act of 1935, Cripps mission, cabinet mission and Mountbatten plan. Student must be able to understand independence and partition of India. And the process of making the constitution and the integration of states and policies of Nehru.

**SEMESTER-V, PAPER 5, History of the Modern World (From 1453 CE to 1815 CE)**

CO 1	After the completion of this unit, student must be able to understand the contribution and spread of the renaissance movement to different parts of Europe. Students must be able to understand geographical discoveries by eminent voyagers.
CO 2	After the completion of this unit, Students must be able to understand the reformation process, role of Martin Luther and protestants vs Catholicism.
CO 3	After the completion of this unit, student must be able to understand the causes, course and consequences of the Glorious revolution.
CO 4	After the completion of this unit, student must be able to understand the causes and results of the American revolution, French revolution and Industrial revolution in Europe.

**SEMESTER-V, PAPER 6, History and Culture of Telangana (From earliest times to 1724 CE)**

CO 1	After the completion of this unit, student must be able to understand the geographical features of Telangana & its sources Satavahana and social economic and cultural conditions.
CO 2	After the completion of this unit, student must be able to understand the Post Satavahana social economic and cultural conditions.
CO 3	After the completion of this unit, student must be able to understand the Kakatiya and Post Kakatiya social economic, administration and cultural conditions.

CO4	After the completion of this unit, student must be able to understand total awareness of Qutub Shahi's social, economic and cultural conditions
<b>SEMESTER-VI, PAPER 7, History of the Modern World (From 1815 to 1950 CE)</b>	
CO 1	After the completion of this unit, student must be able to understand the causes, course and consequences of French revolution, Unification of Germany & Italy.
CO 2	After the completion of this unit, student must be able to understand the causes, course and consequences of world war I Students must be able to understand the Russian revolution and the role of Lenin. Students must be able to understand the formation, organization and works done by League of Nations
CO 3	Student must be able to understand the role of Mussolini in creating a fascist state in Italy Students must be able to understand the rise of Nazism in Germany under the dictatorship of Hitler Students must be able to understand the Militarism in Japan.
CO 4	After the completion of this unit, student must be able to understand the causes, spread and the consequences of the World War II. Student must be able to understand the Atlantic charter and formation of U.N.O. for world peace.
<b>SEMESTER-VI, PAPER 8, History and Culture of Telangana (1724- 2014 CE)</b>	
CO 1	After the completion of this unit, student must be able to understand Hyderabad nizams roles and they policies for modernisation of Hyderabad state' complete knowledge of political awaking in Telangana.
CO 2	After the completion of this unit, student must be able to understand Andhra maha sabha, Hyderabad state congress, vande mataram movement, Mulki movement. And role of women in Hyderabad freedom movement.
CO 3	After the completion of this unit, student must be able to understand Telangana Peasants Armed Struggle - Adivasis Revolt - Kumaram Bheem - Razakars and their Activities - Police Action - Formation of Popular Ministry under Burgula Rama Krishna Rao - Assertion of Mulki Identity and the City College Incident (1952) - Merger of Telangana and the Formation of Andhra Pradesh, (1956).
CO 4	After the completion of this unit, student must be able to understand about Telangana - Formation of Various Associations - Telangana Aikya Vedika – Telangana Jana Sabha - Telangana Rashtra Samiti (2001) - Mass Mobilization - Sakala Janula Samme - Millennium March - Sagara Haram, Chalo Assembly - December 2009 Declaration and the Formation of Telangana State, June 2014.



**DEPARTMENT OF ECONOMICS**

**COURSES & THEIR OUTCOMES**

<b>S. No</b>	<b>Semester</b>	<b>Course</b>	<b>Course Out Come</b>
1	Sem. I	Micro Economics	1. Understand the price demand
			2. Understand the consumer's behaviour.
			3. Understand the production function and its factor.
			4. Understand the concept of cost and revenue
			5. Understand the classification of market.
2.	Sem. II	Micro Economics	1. Understand the National Income
			2. Classical and Keynesian theories of output and employment
			3. Understand the consumption and investment function
			4. Understand quantity theory of money
			5. Understand inflation causes and measures.
3.	Sem. III	Micro Economics	1. Understand the comparison between perfect competition and monopoly
			2. Understand the kinky demand curve
			3. Understand pricing strategies
			4. Understand the rent theory and profit theories.
			5. Understand the classical and modern theories of International trade
4.	Sem. IV	Public Economics	1. Private and Public goods
			2. Understand the principle of maximum social advantage
			3. Type of Taxes (VAT)
			4. Fiscal policies and its objectives
			5. Classification of budget
5.	Sem. V	Indian Economy	1. Basic features of Indian Economy

			2. Poverty and Unemployment causes
			3. New Economic Reforms, NITI Aayog
			4. Green Revolution, Food Security in India
			5. Small scale industries
6.	Sem. V VI(b)	Economics of Development and Infrastructure.	1. Indicators of Economic Development
			2. Human Resources Development
			3. Choice of techniques
			4. Social Infrastructure
7.	Sem. VI VII	Telangana Economy	1. Demographic features of Telangana
			2. Welfare Programme in Telangana
			3. Cropping pattern, Mission Kakatiya
			4. Special Economic zone in Telangana
			5. Infrastructural Development in Telangana
8.	Sem. VI VIII (a)	Industrial Economics	1. Industrial location theories
			2. Concepts and Organisation of a firm
			3. New Industrial Policy 1991
			4. Commercial Banks.

---

**DEPARTMENT OF POLITICAL SCIENCE**

**COURSES AND THEIR OUTCOMES**

**SEMESTER-1: PAPER 1 (Under Standing Political theory )**

CO1	Understanding What is Political Theory, Evolution, Nature , Significance .Debates on Political Theory, a) Normative b)Empirical
CO2	Raising questions, what is Political? 1. Analyzing the State: Theories of origin of the state- Divine, Social Contract, Evolutionary theories 2. Understanding the Power, Authority, and Authoritative allocation o Values. 3. Understanding the Power, Authority, and Authoritative allocation of Values. 4. Understanding the Sovereign state and Challenges.
CO3	The student understand the Political Values and Theoretical Perspective; Liberty :- A) Liberal B) Marxist C) Feminist Equality :- A) Liberal B) Marxist C) Feminist Justice :- A) Liberal B) Marxist C) Feminist
CO4	The student receives the different Political Ideologies; just like, Liberalism, Nationalism, and Multiculturalism.
CO5	Understanding the Political Institutions and Functions; Legislature, Executive and Judiciary Analyzing the Political Parties, Pressure Groups, Media

**SEMESTER-2: PAPER 2 (Western Political Thought )**

CO1	Understanding Constitutional Development in India, brief overview of Nationalist Movement Evolution of Indian Constitution -1909 Act, 1919 Act, 1935Act. Philosophical Foundations of the Indian Constitution – Liberal, Gandhian, Socialist
CO2	Examining Union Government – Executive; Legislature; Judiciary Evaluating State Government - Executive; Legislature; Judiciary
CO3	Evaluating the Union- State Relations: Legislative, Administrative, Financial. Recent trends in Union - State Relations
CO4	. Understanding the Electoral Politics in India
CO5	Analyzing issues in Indian politics

**SEMESTER-3: PAPER-4(Indian Political Thought )**

CO1	Analyzing state and society in India' Analyzing MANU'S Features of manuscript, Origin of Varna and Varna dharma. Analyzing Gautama Buddha's Dharma, Sanga and Eightfold path. Analyzing Kautilya's theory of Dandaneeti, Saptanga and theory of Diplomacy.
CO2	Understanding Medieval Political Thought. ➤ Analyzing Basava's Anubhava Mantapa and Gender Equality. ➤ Analyzing Zeauddin Barany's Theory of kingship and Ideal polity. ➤
CO3	Understanding Renaissance Thought; ➤ Raja Rammohan Roy to Indian liberalism. ➤ Jyothi Rao Phule -Gulam giri ,Satya Sodhak Samaj and Education
CO4	➤ Analyzing M.K.Gandhi's concepts and problem of political obligation ➤ Analyzing B. R.Ambedkar's views on Democratic Government and Constitutionalism and annihilation of caste ➤
CO5	Understanding Socialist Thinkers concepts M.N.Roy's Radical Humanism, Jawaharlal Nehru's Democrotic Socialism and R.M.Lohiya's Concepts of Four pillars of caste.

<b>SEMESTER-4: PAPER 4 (Constitution and Politics in of India )</b>	
CO1	Understanding Constitutional Development in India, brief overview of Nationalist Movement Evolution of Indian Constitution -1909 Act, 1919 Act, 1935Act. Philosophical Foundations of the Indian Constitution – Liberal, Gandhian, Socialist
CO2	Examining Union Government – Executive; Legislature; Judiciary Evaluating State Government - Executive; Legislature; Judiciary
CO3	Evaluating the Union- State Relations: Legislative, Administrative, Financial. Recent trends in Union - State Relations
CO4	. Understanding the Electoral Politics in India
CO5	Analyzing issues in Indian politics
<b>SEMESTER-5: PAPER- 5(Western Political Thought )</b>	
CO1	Understanding main features of Greek Political thought and Plato’s concepts of Justice and Communism and Aristotle’s theory of state and Classification of constitutions Aquinas’s Church-state controversy
CO2	Understanding the Machiavelli Ideology and state craft Hobbes’s individualism, absolute state Locks’ Natural Rights And limited Government.
CO3	Describing Bentham’s Utilitarianism and Revisiting Utilitarianism by J. S. Mill.
CO4	Assessing Hegel’s theory of Dialectics and state And Greeks Theory of Rights and political obligation.
CO5	Describing Marxist philosophy of dialectical and historical Materialism and Mao Ze Dong ;s philosophy of contradiction , new Democratic revolution. And Antonio’s Hegemony and civil society
<b>SEMESTER-5: PAPER -6 (International Relations-I )</b>	
CO1	Define the avenues of International Relations and rise of sovereign state system
CO2	Analyzing the history of International Relation through the causes and phases of Colonialism Knowing the impact of First World War and Second World War and its causes and consequent
CO3	Analyzing the history of Decolonialism its causes and phases and describing of emergence of third world its problems Describing the Cold War phases and understanding the post Cold War Describe the terms Human Rights, Terrorism and Environmentalism.
CO4	Define the kinds of powers national and super. Describing Bi Uni and Multipolarity and peace and security
CO5	Analyzing the regional organization UNO’s roles EU, ASEAN, SAARC,BRICS.
<b>SEMESTER-6: PAPER -7 (Indian Political Thought )</b>	
CO1	Analyzing Manu’s theory of Dharma and Varna and Koutilya’s theory of Saptanga and Buddha’s social and political ideas of Dharma and Sangha.
CO2	Understanding Indian political Sofi and Bhakti movements of medieval Movement,
CO3	Understanding the anti cast thoughts by social reformers as jyothirao phule’s critique of Brahmanism ,social revolution and Ambedkars Theory of cast ,Annihilation of cast and state .and Raja Ram Mohan Rao;s Brahmo, Ariya Samaj and Aligrah movement.
CO4	Discussing the concept of Ahinsa ,Satiyagraha and Understanding Socialist Ideas of Jawaharlal Nehru Democratic Socialism and Secularism.
CO5	Analyzing the M.N Roy;s and Rammanohar Lohiya’s socialist political thoughts and Jayaprakash Narayan’s party less democracy.
<b>SEMESTER-6: PAPER -7 (International Relations-II )</b>	
CO1	Understanding international political Economy in neo colonialism IBRD,IMF,WTO,MNCS and Globalization
CO2	Analyzing the Arms Race Arms control ,Disarmaments-issues in nuclear politics.
CO3	Understanding the foreign policy ; India’s foreign policy ,Determinants and Features ,issues and non Alignment-relevant.
CO4	Emerging Areas in International Relations. Environment ,Human Rights, Terrorism, Cyber Crimes
CO5	Understanding the India’s Bilateral Relations between India, USA, Russia and neighbor countries China and Pakistan.

**DEPARTMENT OF BOTANY****COURSES & THEIR OUTCOMES**

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

<b>S.NO</b>	<b>SEMESTER</b>	<b>COURSE</b>	<b>COURSE OUTCOMES</b>
1	SEMESTER -1	<b>PAPER-1 Microbial Diversity and Lower plants</b>	<b>CO-1.</b> Understand the fascinating diversity, evolution, and significance of microorganisms. <b>CO-2</b> Understand the diversity and affinities among Algae, Bryophytes, and Pteridophytes. <b>CO-3</b> Understand the morphology, anatomy, reproduction and life cycle across Algae, Bryophytes, Pteridophytes and their ecological and evolutionary significance. <b>CO-4</b> Obtain laboratory skills/explore non-flowering plants for their commercial applications.
2	SEMESTER-2	<b>PAPER-2 Gymnosperms / Taxonomy and Ecology</b>	<b>CO-1</b> Understand the morphology, anatomy, reproduction and life cycle across Gymnosperms and their ecological and evolutionary significance <b>CO-2</b> Ability to identify, classify and describe the plants in scientific terms. Identification of plants using dichotomous keys. <b>CO-3</b> Understanding the fundamental concepts in ecology, environmental science and phytogeography.
3	SEMESTER -3	<b>PAPER-3 Anatomy and Embryology</b>	<b>CO-1</b> Observation of variations that exist in internal structure of various parts of a plant and as well as among different plant groups in support for the evolutionary concept <b>CO-2</b> Skill development for the proper description of internal structure using botanical terms, their identification and further classification. <b>CO-3</b> Understanding the basic concepts in plant morphogenesis, embryology and organ development.
4	SEMESTER -4	<b>PAPER- 4 Cell Biology and Genetics</b>	<b>CO-1</b> Identify the basic principles and current trends in classical genetics and Cell biology.

			<p><b>CO-2</b> Recognize the historical process of the evolution of molecular genetics from classical genetics.</p> <p><b>CO-3</b> Develop theoretical background on molecular genetics to provide a strong support for the student for future research and employability.</p>
5	SEMESTER-5	<p><b>PAPER-5</b> <b>Biodiversity and Conservation</b></p>	<p><b>CO-1</b> Develop understanding of the importance of biodiversity</p> <p><b>CO-2</b> Identify the causes and implications of major threats of biodiversity</p> <p><b>CO-3</b> Estimate the biodiversity</p> <p><b>CO-4</b> Utilize various strategies for the conservation of biodiversity</p>
6	SEMESTER-5	<p><b>PAPER-6</b> <b>Water Resources Management ( Generic Elective)</b></p>	<p><b>CO-1</b> Understand the different types of water resources, and its importance global distribution of water, Hydrological cycles, conservation of water, recycling of water.</p> <p><b>CO-2</b> Know about water harvesting methods.</p> <p><b>CO-3</b> Know about Mission Bhagiratha and Mission kakatiya.</p>
7	SEMESTER-6	<p><b>PAPER-8</b> <b>Plant physiology</b></p>	<p><b>CO-1</b> Understand the relationship of plant with its habitat.</p> <p><b>CO-2</b> Differentiate mineral nutrition and mechanism of absorption</p> <p><b>CO-3</b> Understand the mechanism of photosynthesis.</p> <p><b>CO-4</b> Know the transport mechanism happening in plant system</p> <p><b>CO-5</b> Understand the respiration mechanism in plants.</p> <p><b>CO-6</b> Understand the physiology of growth and development in plants.</p>
8	SEMESTER-6	<p><b>PAPER-9</b> <b>( Elective III)</b> <b>Tissue Culture and Biotechnology</b></p>	<p><b>CO-1</b> Know about all the basic aspects of plant tissue culture</p> <p><b>CO-2</b> Understands the fundamentals of recombinant DNA technology, gene cloning strategies</p> <p><b>CO-3</b> Know the social and ethical issues in the field of biotechnology</p> <p><b>CO-4</b> Examine gene cloning and evaluate different methods of gene transfer Critically analyze the major concerns and applications of transgenic technology</p>



# DEPARTMENT OF ZOOLOGY

## COURSES AND THEIR OUTCOMES

### SEM –I, PAPER -I- Animal diversity- Invertebrates

CO1) To learn the general characteristics and classification of Invertebrates

CO 2) To learn the diagnostic characters of different invertebrate phyla through type studies

CO 3) Learn about the harmful and useful invertebrates

CO 4) To investigate invertebrates in laboratory & classify them easily

### SEM – II, PAPER -II Animal Diversity– Vertebrates

CO 1) To learn the general characteristics and classification of Phylum Hemichordate and Chordata

CO 2) To learn the diagnostic characters of different vertebrate classes through type studies

CO 3) To learn about adaptations of vertebrates

CO 4) To investigate vertebrates in laboratory & classify them easily

### SEM – III, PAPER -III -Animal Physiology & Animal Behaviour

CO1) To develop understanding for the fundamental concepts of physiology of Digestion, Excretion & Osmoregulation

CO2) To develop the fundamental concepts of physiology of Homeostasis, Respiration & Circulation

CO3) To develop understanding of muscle, nervous and endocrine systems

CO 4) To understand Animal behavior, response of animals to different instincts, their learning, memory and synchronization with time & tide.

### SEM – IV, PAPER -IV- Cell and molecular Biology, Genetics and Evolution

CO1) To understand the Basic unit of life

CO 2) To understand the Structure and function of various cell organelles

CO 3) To understand the concept of heredity

CO 4) To appreciate the evolutionary concepts

### SEM – V, PAPER -V- Physiology and Biochemistry

CO1)) To have an enhanced knowledge and appreciation of functioning of various systems

CO 2) To understand the mutual cooperation between systems for optimum functioning

CO 3) To understand the classification, function and metabolism of carbohydrates, proteins, Lipids

CO 4) Should be able to perform, analyse and report on experiments and observations in physiology and biochemistry

### SEM – V, PAPER -VI- Applied Zoology

CO1)To Introduce the term Fisheries, Sericulture, Apiculture, Vermiculture and Poultry to the students.

CO 2)To bring awareness to the students on economic value of fisheries, and provides the economic importance of Fisheries, Sericulture, Apiculture, Vermiculture and Poultry

CO 3) To educate students about equipments used in Fisheries Sericulture, Apiculture, Vermiculture and Poultry

CO 4) To be able to identify fishes, prawns, silkworm stages

### SEM – VI, PAPER -VII- Immunology and Animal biotechnology

- CO1) Imparts in depth knowledge of tissues, cells and molecules involved in host defense mechanisms.
- CO 2) Understanding of immune mechanisms in disease control, vaccination, process of immune interactions.
- CO 3) Imparts the Knowledge to culture animal cells in artificial media.
- CO 4) Uses of recombinant DNA technology, genetic manipulations and in a variety of industrial processes

### SEM – VI, PAPER -VIII -Aquatic biology

- CO1) To Understand the Aquatic environment
- CO 2) To Understand the physical and chemical characteristics of water bodies
- CO 3) To Understand aquatic pollution
- CO 4) Knows about the legal provisions for protection of water bodies from pollution

## DEPARTMENT OF DAIRY SCIENCE

### COURSES AND THEIR OUTCOMES

SL. NO	SEMISTER	COURSE CODE	COURSE	COURSE OUT COMES	
1	I	DSCP1	DAIRY HUSBANDARY-1	CO1	LEARNING ABOUT DEFFERENT TYPES OF BREEDS OFDAIRY CATTLE BUFFALOES AND GOATS
				CO2	STUDENTS WILL LEARN ABOUT ANATOMY OF UDDERAND MILKING PROCEDURE
				CO3	LEARN BASICS OF METHODS OF MILKING,METHODS OF SELECTION OF DAIRY ANIMALS
				CO4	AWARENESS ABOUT BREEDING METHODS AND DAIRYCATTLE AND ADVANCESED TECHNIQUES
1	2	DSCP2	DAIRY HUSBANDARY-2	CO1	TO LEARN ABOUT HOUSING AND LAYOUTS FORDAIRYFARM BUILDINGS
				CO2	TO AWARE ABOUT DEFFERNET TYPES OF SYMPTOMS OFSICK DAIRY ANIMALS
				CO3	TO STUDEY MANAGEMENT OF DEFERENT CLASSES OFDAIRY ANIMALS AND DAIRY FARMS
				CO4	TO STUDY ABOUT MAINTENANCE OF FERTILITYMETHODS

# CHEMISTRY

## COURSES AND THEIR OUTCOMES

### SEMESTER-I, PAPER 1

The students will learn the following

CO 1	Detailed understanding of chemical bonding and concerned theories. Inculcate industrial applications of carbides, silicones, acidity and reactivity of boron compounds
CO 2	Overview of periodic table and P block elements
CO 3	Detail understanding of various compounds of elements of p-block and theoretical knowledge to perform semi micro analysis i.e Identification of inorganic salts
CO 4	Understand the concept of nature of chemical bond.
CO 5	Understand alkanes, alkenes, alkynes, Understand the aromaticity of organic compounds
CO 6	Understand the concept of stereochemistry. Understand different types of reaction mechanism.
CO 7	These topics provide excellent understanding of basic knowledge of organic chemistry in future of course.
CO 8	These topics give a foundation to cater the needs of quantum mechanics future of course and use full to learn behaviour of real gases, liquification phenomenon, viscosity of liquids etc.
CO 9	Understand the crystal structures of various solids . Understand the concepts of Real gases and solutions (miscible , immiscible & partially miscible liquids)
CO 10	Inculcates the practical knowledge of identification and confirm the given unknown salt mixture

### SEMESTER-II, PAPER 2

The students will learn the following

CO 1	Understand reactivity and structures of oxides, oxy acids, structures of inter halogen compound. zero group elements, d -block elements
CO 2	Understand the structure and chemical bonding and behaviour in aryl ,alkyl halides,alcohols, phenols and carbonyl compounds..
CO 3	Understand the theories and laws of electrochemistry, electrolytical cells, electrochemical cells applications batteries industry. Conductometric titrations, emf etc.
CO 4	Volumetric analysis, and gravimetric analysis. estimation of carbonate, bicarbonate, copper etc.

### SEMESTER-III, PAPER 3

The students will learn the following

CO 1	Understand the chemistry of f-block elements, complex compounds, metal carbonyls and organometallic compounds and their applications.
CO 2	Understand the chemistry of carboxylic acids and their derivatives , active methylene compounds and nitro compounds . industrial and research importance. Importance of carbanions -I
CO 3	Understand the thermodynamics of chemical reactions, phase rule.
CO 4	Laboratory synthesis of some organic compounds.

**SEMESTER-IV, PAPER 4**

The students will learn the following

<b>CO 1</b>	Student able to understand the reaction mechanism of inorganic complexes, inert and labile nature ,bio inorganic chemistry Student able to understand the reaction mechanism of inorganic complexes, inert and labile nature ,bio inorganic chemistry i.e importance of micro and macro nutrients in human. Theories of bonding in metals.
<b>CO 2</b>	Student able to understand the the chemistry and reactions of carbohydrates, amino acids and Hetero cyclic compounds. Their importance in medical and biological fields. Importance of carbanions -II
<b>CO 3</b>	Understand the concepts of kinetics and photochemistry (reaction dynamics), colloids and surface chemistry.
<b>CO 4</b>	Functional group analysis.

**SEMESTER-V, PAPER 5**

The students will learn the following

<b>CO 1</b>	Understand the CFT, magnetic properties, colour properties, applications of complex compounds
<b>CO 2</b>	Understand the chemistry amines and heterocyclic compounds and their importance medical fields.
<b>CO 3</b>	By the end of this course, Students will be able to: Understand the thermodynamics of chemical reactions.Understand the concept of chemical kinetics

**SEMESTER-V, PAPER 6**

The students will learn the following

<b>CO 1</b>	Understand the spectroscopic techniques to elucidation of the given compound. Gains the knowledge of I.R, U.V and ELECTRONIC SPECTRAL TECHNIQUES
<b>CO 2</b>	Students are able to Preparation of and checking purity through T.L.C ,of few organic compounds

**SEMESTER-VI, PAPER 7**

The students will learn the following

<b>CO 1</b>	Student able to understand the reaction mechanism of inorganic complexes, inert and labile nature ,bio inorganic chemistry i.e importance of micro and macro nutrients in human
<b>CO 2</b>	Student able to understand the the chemistry and reactions of carbohydrates and amino acids. Their importance in medical and biological fields
<b>CO 3</b>	Student able to understand the thermo chemical reactions and thermodynamic parameters, spontaneous and non spontaneous, equilibrium, Cp and Cv, thermodynamically carried processes such as entropy etc.,
<b>CO 4</b>	Students are able to identify and confirm the given organic compounds and able to test the purity samples.

**SEMESTER-VI, PAPER 8**

The students will learn the following

<b>CO 1</b>	Understand the various types of diseases and various terms involved in medicinal chemistry. nomenclature of drugs and therapeutic activity of drugs. absorption , distribution, metabolism and elimination of drugs
<b>CO 2</b>	Understand the chemistry of enzymes and their action, drug action –receptor theory , drug function with an example

CO 3	Understand the synthesis of drugs and about the drugs to treat metabolic disorders. And those drugs which acting on nervous system
CO 4	Understand about molecular messenger and health promoting drugs in detail.
CO 5	Students are able to perform practicals of various physical chemistry experiments and gain the sound knowledge of their significance.

## DEPARTMENT OF MATHEMATICS

### COURSES AND THEIR OUTCOMES

#### SEMESTER-1: COURSE(DIFFERENTIAL CALCULUS)

CO1	The course is aimed at exposing the students to some basic notions in differential calculus.
CO2	Students can visualise the two variable functions and able to find the partial derivatives of two variable functions
CO3	Students will learn how to apply concepts of maxima and minima of functions of two variables in real life
CO4	Students can understand the concepts of curvature, evolutes and involutes and able to find the same for various popular curves.
CO5	Students can find the lengths of various curves and Volumes and Surfaces of Revolution

#### SEMESTER-2: COURSE(DIFFERENTIAL EQUATIONS)

CO1	The main aim of this course is to introduce the students to the techniques of solving differential equations and to train to apply their skills in solving some of the problems of engineering and science.
CO2	After learning the course the students will be equipped with the various tools to solve few types of differential equations that arise in several branches of science.
CO3	Students will be able to solve Differential Equations of first order and first degree.
CO4	Students can find integrating factors to make certain kinds of Differential Equations exact and thereby solve the equations.
CO5	Students will be able to solve Differential Equations first order but not of first degree.
CO6	Students can formulate mathematical models in the form of ordinary differential equations to suggest possible solutions of the day to day problems like Growth and Decay, Dynamics of Tumour Growth, Radioactivity and Carbon Dating, Compound Interest and Orthogonal Trajectories arising in physical, chemical and biological disciplines.
CO7	Students will be able to solve Higher order Linear Differential Equations
CO8	Students can form and solve Partial Differential Equations

#### SEMESTER-3: COURSE(REAL ANALYSIS)

CO1	The course is aimed at exposing the students to the foundations of analysis which will be useful in understanding various physical phenomena
CO2	After the completion of the course students will be in a position to appreciate beauty and applicability of the course
CO3	Students can recognize bounded, convergent, divergent, Cauchy and monotonic sequences and can calculate their limit superior, limit inferior and the limits of convergent sequences.
CO4	Students can apply the ratio, root, alternating series and limit comparison tests for convergence and absolute convergence of an infinite series of real numbers and able to find the sum of infinite terms of some convergent series.
CO5	Students can identify Continuous and Uniformly Continuous Functions
CO6	Students can understand the properties of Continuous Functions
CO7	Students can find the limits of functions
CO8	Students can understand Basic Properties of the Derivatives
CO9	Students can understand the Mean Value Theorem, L'Hospital Rule and Taylor's Theorem and their applications.
CO10	Students can understand the concept of Riemann Integration.
CO11	Students can understand the Properties of Riemann Integral.
CO12	Students can understand the applications of the fundamental theorems of integration.

<b>SEMESTER-4: COURSE(ABSTRACT ALGEBRA)</b>	
CO1	The course is aimed at exposing the students to learn some basic algebraic structures like groups, rings etc.
CO2	On successful completion of the course students will be able to recognize algebraic structures that arise in matrix algebra, linear algebra and will be able to apply the skills learnt in understanding various such subjects.
CO3	Students can understand the concept of algebraic structures Groups, Subgroups and identify Groups, Subgroups.
CO4	Link the fundamental concepts of groups and symmetries of geometrical objects.
CO5	Students can Classify Subgroups and Cyclic Groups
CO6	Students can understand Permutation Groups and Properties of Permutations
CO7	Students can understand the notions of cosets, normal subgroups, and factor groups.
CO8	Students can analyze consequences of Lagrange's theorem.
CO9	Learn about structure preserving maps between groups and their consequences.
CO10	Students can understand the cocepts of Rings, Integral Domains, Ideals, Factor Rings, Prime Ideals, Maximal Ideals and Ring Homomorphisms
CO11	Students will learn important applications of groups like check digit systems which is applied in bank notes serial numbers.
CO12	Students can able to understand Modular arithmetic, which is vital in cryptography.
<b>SEMESTER-5: COURSE(LINEAR ALGEBRA)</b>	
CO1	Students can understand the concepts of vector spaces, subspaces, bases, dimension and their properties, Coordinate Systems which play key role in digitalisation.
CO2	Students can find the solution space of homogeneous equations using Null space
CO3	Students can map Vectort Spaces throug order preserving linear transformations.
CO4	Students can find the rank of matrices, which has many applications in solving system of equations
CO5	Students can understand the relation between Coordinates when basis are changed.
CO6	Students can find Eigenvalues and Eigenvectors of matrices, which has many applications
CO7	Students can understand the Diagonalization process, which reduces huge computing tasks and has applications in real time calculations.
CO8	Students can learn properties of inner product spaces and determine orthogonality in inner product spaces.
CO9	Students can realise the power of matrices and their role in digitalisation.
<b>SEMESTER-6: COURSE(INTEGRAL CALCULUS)</b>	
CO1	Students will be able to use various techniques of evaluating multiple integrals.
CO2	Students will be able to find the Double Integrals over a Rectangle
CO3	Students will be able to find the Double Integrals over over General Regions in the Plane
CO4	Students will be able to apply the concepts in finding areas and volumes of some solids.
CO5	Students will be able to find the Integrals over a Box
CO6	Students will be able to find the Integrals over Elementary Regions in Space
CO7	Students will learn evaluation of multiple integrals by changing variables
<b>SEMESTER-6: COURSE(NUMERICAL ANALYSIS)</b>	
CO1	Students will be able to find the solutions of all algebraic and transcendental equations in one variable with desired accuracy using variuos methods.
CO2	Students will be able to convert the data in to polynomials using various metods.
CO3	Students will be able to interpolate the data with in the given inervals.
CO4	Students will be able to understand various methods of Numerical Differentiation
CO5	Students will be able to understand various methods of Numerical Integration
CO6	Students can apply various numerical methods to get results in numerical form which are useful in real life problems.

<b>SEMESTER-6,COURSE(ANALYTICAL SOLID GEOMETRY)</b>	
CO1	Concept of spheres will be taught
CO1	Students can solve the way to find the equation of the sphere
CO2	Concept of cones will be taught
CO3	Students can solve the way to find the equation of the cones
CO4	Concept of right circular cone, cylinder and right circular cylinder will be taught
CO5	Students can solve the way to find the equation of the right circular cone, cylinder and right circular cylinder
CO6	Concept of intersection of line with conicoid, enveloping cone and cylinder will be taught
CO7	Students can solve the way to find the intersection of line with conicoid, enveloping cone and cylinder
<b>SEMESTER-6,COURSE(MATHEMETICAL MODELING)</b>	
CO1	Concept of compartmental models will be taught
CO1	Students can understand the case study of art forgeries, lake pollution models
CO2	Concept of single populations models will be taught
CO3	Students can understand the limited growth with harvesting, case study : cholera
CO4	Concept of heat & mass transport models will be taught
CO5	Students can understand model of hot water heater fourier's law
CO6	Concept of boundary value problems will be taught
CO7	Students can understand insulating water pipe, case study : detecting land mines
<b>SKILL ENHANCEMENT COURSE(THEORY OF EQUATIONS)</b>	
CO1	Students can use various tools to solve quadratic, cubic, biquadratic and quintic equations.
CO2	Students can able to identify the number of possible positive, negative roots of a polynomial equation using Descartes Rule of Signs.
CO3	Students can learn the relation between roots and coefficients of a polynomial equation
CO4	Students can understand the symmetric functions of roots
<b>SKILL ENHANCEMENT COURSE (INTEGRAL TRANSFORMS)</b>	
CO1	In this course, Students learn various methods to find the Laplace transform of a function.
CO2	Students will learn various methods to find inverse Laplace transforms.
CO3	Students will get to know the application of Laplace transform in solving ordinary and partial differential equations.

-----

# DEPARTMENT OF PHYSICS

## COURSES AND THEIR OUTCOMES

### SEMESTER-I,PAPER-I, MECHANICS & OSCILLATIONS

CO1	Study of Vectors & Scalars
CO2	Motion of particles & Rigid bodies
CO3	Planetary motion & relation between space and time for objects moving with constant velocity
CO4	Lissajous figures & study of damped and forced oscillations

### SEMESTER-II,PAPER- II, THERMAL PHYSICS

CO1	Relation between heat and other forms of energy
CO2	Production of low temperatures
CO3	Nature and behaviour of matter and energy on the atomic and sub atomic level
CO4	Statistical treatment of the behaviour of large no. of atoms or molecules especially as regards the distribution of energy among them

### SEMESTER-III,PAPER -III, ELECTROMAGNETIC THEORY

CO1	Study of electric fields in static equilibrium
CO2	Study of magnetic fields in systems where the currents are steady
CO3	Generation of alternating current & displacement current and its consequences
CO4	Quality factor & Bandwidth , to find a solution for a current & voltage using only one source at a time.

### SEMESTER-IV,PAPER-IV, WAVES & OPTICS

CO1	Modes of vibrations & testing of vibrations
CO2	Formation of interference pattern with different optical lenses and glass plates
CO3	Resolving power
CO4	Orientation of the vibrations of a light wave

### SEMESTER-V,PAPER-V, ELECTRO MAGNETISM

CO1	Study of electric fields in static equilibrium
CO2	Study of magnetic fields in systems where the currents are steady
CO3	Generation of alternating current
CO4	Displacement current and its consequences

### SEMESTER-V,PAPER-VI, SOLID STATE PHYSICS

CO1	Determining the band structure and electrical properties
CO2	Response of material to the external magnetic field
CO3	Theoretical understanding of elementary ideas of electronic energy bands
CO4	Production of lasers

### SEMESTER-VI,PAPER-VII, MODERN PHYSICS

CO1	Relationship between atomic spectra and the electronic structure of atoms
CO2	Explanation of behaviour of light and matter
CO3	Study of the nucleus of the atom
CO4	Capability of an atom at its nucleus to separate and generate

### SEMESTER-VI,PAPER-VIII, BASIC ELECTRONICS

CO1	Understand the use of circuit analysis theorems and methods
CO2	Diode formation and its applications
CO3	Study of amplification and conversion from DC to AC
CO4	To make conditional switches



**DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS**

**COURSES & THEIR OUTCOMES**

<i>S. No.</i>	<i>Semester</i>	<i>Course</i>	<i>Course Outcomes</i>
1	BSC (MPCs) Semester - I	Programming In C	<p>Explore algorithmic approaches to problem solving.</p> <p>Ability to analyze a problem and devise an algorithm to solve it.</p> <p>Able to formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems.</p> <p>Ability to implement algorithms in the 'C' language.</p> <p>Develop modular programs using control structures and arrays in 'C'.</p>
2	B.Com.(CA) Semester – I	Information Technology	Students will be able to acquire basic knowledge in Information Technology and its applications in the areas of business
3	BSC (MPCs) Semester - II	Object Oriented Programming In C++	<p>Able to understand the concept of object oriented programming.</p> <ul style="list-style-type: none"> <li>• Use the benefits of object oriented design and understand when it is an appropriate methodology to use.</li> <li>• Design object oriented solutions for small systems involving multiple objects.</li> </ul>
4	B.Com.(CA) Semester – II	Programming with C & C++	<p>Explore algorithmic approaches to problem solving.</p> <ul style="list-style-type: none"> <li>• Ability to analyze a problem and devise an algorithm to solve it.</li> <li>• Able to formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems.</li> <li>• Ability to implement algorithms in the 'C' language.</li> <li>• Develop modular programs using control structures and arrays in 'C'.</li> </ul>

			<ul style="list-style-type: none"> <li>• Able to understand the concept of object oriented programming.</li> </ul>
5	BSC (MPCs) Semester – III	Data Structures using C++	<ul style="list-style-type: none"> <li>• Understand to implement object oriented programming concepts.</li> <li>• Understand how to design graphical user interface in c++ programs.</li> <li>• Discuss the provisions in c++ to organize and manipulate data structures using arrays</li> <li>• Understand stack and queue execution in terms of c++ derived data type</li> <li>• Apply the Concept of dynamic memory allocation for the information of linked list and for garbage collection.</li> <li>• Apply tree terminology for data manipulations</li> <li>• Understand the concepts of Graphs, searching and Sorting techniques</li> </ul>
6	B.Com.(CA) Semester -III	Relational Database Management	<p>Able to understand database concepts and database management system software. • Analyze and design a real database application. • Develop and evaluate a real database application using a database management system.</p> <ul style="list-style-type: none"> <li>• Able to develop applications using PL/SQL &amp; front end tools.</li> </ul>

7	BSC (MPCs) Semester – IV	Data Base Management System	Understand fundamental concepts of database. • Understand user requirements and frame it in data model. • Ability in creations, manipulation and querying of data in databases. • Ability to solve real world problems using appropriate set,function, and relational models. • Ability to design E-R Model for given requirements and convert thesame into database tables.
8	BCOM (CA) Semester – IV	Web Technologies	The aim of this course is to provide the conceptual knowledge of web page design which enables the student to develop the skill of web page design.
9	BSC (MPCs) Semester – V Paper - V	Operating Systems	Understand the role of operating system as System software. • Able to compare the various algorithms and commentabout performance of various algorithms used for management of memory, CPU scheduling, File handling and I/O operations. • Understand various conceptrlated with Deadlock to solve problems related with Resources allocation, after checking system in Safe state or not. • To understand role of Process synchronization towards increasingthroughput of system.
10	BSC (MPCs) Semester – V Paper - VI	Programming With Python	To Learn Python scripting elementsto Discover how to work with lists and sequence data. Write Python functions to facilitatecode reuse. Use Python to read and write files.
11	B.Com.(CA) Semester – V	Object Oriented Programming In C++	Able to understand the concept of object oriented programming. • Use the benefits of object oriented design and understand when it is an appropriate methodology to use. • Design object oriented solutions for small systems involving multiple objects.

12	BSC (MPCs) Semester – VI Paper - VII	Software Engineering	Able to design and conduct experiments, as well as to analyze and interpret data. • Able to identify, formulate, and solve engineering problems. • Able to analyze, design, verify, validate, implement, apply, and maintain software systems. • Able to understand different phases of SDLC.
13	BSC (MPCs) Semester – VI Paper - VIII	Web Technologies	The aim of this course is to provide the conceptual knowledge of web page design which enables the student to develop the skill of web page design.
14	B.Com.(CA) Semester –VI	MIS	To equip the students with finer nuances of MIS
15	B.Com.(CA) Semester – VI	E-Commerce	To acquire conceptual and application knowledge of ecommerce.

## DEPARTMENT OF COMMERCE

### COURSES AND THEIR OUTCOMES

#### SEMESTER-I, Financial Accounting–I,

CO1	Understanding of Financial Accounting, its need, advantages and limitations
CO2	Knowledge of GAAP and accounting systems. Maintenance of subsidiary books, accounts and preparation of statements
CO3	Students will be able to acquire conceptual knowledge of basics of accounting and preparation of final accounts of sole trader

#### Business Organization and Management

CO1	To acquaint the students with the basics of commerce and business concepts and functions, form of business organization and functions of management
CO2	Understanding the nuances of management and planning for a profitable business.
CO3	Empathizing the tools that aid management in ensuring quality service for better contribution to the society.

#### SEMESTER-II, Financial Accounting-II

CO1	To acquire accounting knowledge of bills of exchange, Consignment, Joint Venture, Accounts from incomplete records and Non-Profit Organizations.
CO2	Get an understanding the concept of temporary partnership, maintaining the record Venture, Co-venturers.

CO3	Develop the ability to prepare accounts from incomplete information, comprehend the Differences between Single and double entry systems and preparing Statement of Affairs
<b>Business Laws</b>	
CO1	To understand basics of contract act. Sales of goods act. IPRs and legal provisions applicable for establishment, management and winding up of companies in India.
CO2	Instructing on the legal rights and obligations under the Sale of Goods Act, along with Consumer protection legislation and consumer redressal forums
CO3	Imparting importance of intellectual property rights including acquiring the rights.
<b>SEMESTER-III</b>	
<b>Advanced Accounting</b>	
CO1	Students acquire detailed knowledge about Partnership firms, its functioning, and preparation of accounts for admission, retirement, death and insolvency of partner.
CO2	They gain knowledge about issuing and allotment of shares, issue of debentures, Underwriting and Bonus shares
CO3	Practicing Joint Stock Companies maintenance of books of accounts, concept of Goodwill, preparation of final accounts.
CO4	Familiarizing with methods of valuation of goodwill and shares.
<b>Business Statistics -I</b>	
CO1	To impart students with the knowledge of fundamentals of Statistics
CO2	To give the knowledge about Diagrammatic and Graphic Presentation, construction of Graphs
CO3	Students can understand Measures of Central Tendency
CO4	To give the knowledge about Measures of dispersion, Skewness and kurtosis and Correlation.
<b>SEMESTER-IV</b>	
<b>Business Statistics -II</b>	
CO1	To make the students acquire the knowledge about regression and inculcate analytical ability
CO2	Students can understand the uses of Index numbers and methods of construction of Index numbers.
CO3	To make the students acquire the knowledge about uses and limitations of time series.
CO4	To give the knowledge about Probability and Theoretical Distribution
<b>Income Tax</b>	
CO1	To acquire the conceptual and legal knowledge about Income Tax provisions relating to computation of Income from different heads with reference to an Individual Assessee
CO2	Students can understand Income Tax system properly, and can get the knowledge of different tax provisions.
CO3	To give knowledge about preparation of Audit report, Submission of Income Tax Return, Advance Tax and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961.
<b>SEMESTER-V</b>	
<b>Cost Accounting, Business Laws, Banking Theory and Practice,</b>	

<b>Financial Institutions and Markets, Computerized Accounting.</b>	
CO1	To make the students acquire the knowledge of cost accounting methods.
CO2	To understand Basic Cost concepts, Elements of cost and cost sheet.
CO3	Providing knowledge about difference between financial accounting and cost accounting.
CO4	Ascertainment of Material and Labor Cost.
CO5	Students can understand Unit costing, Job costing, Contract costing and process costing
CO6	Student's Capability to apply theoretical knowledge in practical situation will be increased.
CO7	To make the students acquire the basic conceptual knowledge of different laws relating to Business.
CO8	To understand basics of contract act. Sales of goods act. IPRs and legal provisions applicable for establishment, management and winding up of companies in India.
CO9	Instructing on the legal rights and obligations under the Sale of Goods Act, along with Consumer protection legislation and consumer redressal forums
CO 10	Imparting importance of intellectual property rights including acquiring the rights.
CO 11	To acquire the knowledge of the working of the Indian Banking system.
CO 12	To familiar the students with the fundamentals of banking and thorough knowledge of banking operations.
CO 13	To build up the capability of students for knowing banking concepts and operations.
CO 14	To make the students aware of banking business and practices.
CO 15	To make understandable of the students regarding the new concepts introduced in the banking system.
CO 16	To familiarize with various Financial Institutions and Markets.
CO 17	Enable the students with Financial Markets and its various segments.
CO 18	To give the students and understanding of the operations and developments in financial markets in India.
<b>SEMESTER-VI,</b>	
<b>Managerial Accounting, Company Law, Auditing, Commerce Lab.</b>	
CO1	To acquire the knowledge of Managerial Accounting decisions.
CO2	To acquire the knowledge of Cost volume profit analysis.
CO3	To understand the meaning and elements of Marginal costing, Budgetary Control and working capital.
CO4	To understand the legal provisions applicable for establishment-management and winding up of Companies in India.
CO5	To understand the Company meetings and modes of winding up
CO6	To apprise the students of new concepts involving in company law regime.
CO7	To understand the meaning and elements of auditing and gain the knowledge of execution of audit.
CO8	Students will be versed in the fundamental concepts of Auditing.
CO9	To give knowledge about preparation of Audit report

<b>CO 10</b>	To understand about filling of Banking vouchers, insurance documents and registration of businesses.
<b>CO 11</b>	To acquire conceptual and application knowledge of commerce.
<b>CO 12</b>	The student will well verse in basic provisions regarding legal frame work governing the business world.
<b>CO 12</b>	To become familiar with various business documents and acquire practical knowledge, 0which Improve overall skill and talent
<b>CO 13</b>	To make the student acquire the knowledge of provisions and application of the subject

\*\*\*