CHATRAPATHI SIVAJI TRI SATA JAYANTHI GOVT. KALASALA

Enter to Learn - Leave to Serve

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COs & POs ATTAINMENT FOR PHYSICS

Academic Year: 2020-2024, Semester-1

Programme: B.Sc., M.P.C, Course: Mechanics, Waves & Oscillations

CO ATTAINMENT			
	DA	IA	CO
CO1	2.50	2.60	2.52
CO2	2.42	2.53	2.45
CO3	2.50	2.60	2.52
CO4	2.45	2.60	2.48
CO5	2.38	2.47	2.40

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.47	1.98	1.98	1.81	2.14	2.14	2.14	1.81	1.81	1.81
Program Exit Survey (B)	2.90	2.70	2.80	2.90	2.60	2.80	2.90	2.70	2.80	2.6
Employer Survey (C)	2.65	2.90	2.90	2.60	2.50	2.90	2.70	2.80	2.70	2.7
Alumni Survey (D)	2.87	2.80	2.70	2.80	2.90	3.00	2.90	2.70	2.50	2.4
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.842	0.84	0.84	0.83	0.8	0.87	0.85	0.82	0.8	0.77
PO Attainment (F = (0.7*A)+E)	2.467	2.097	1.982	1.728	1.661	1.748	1.735	1.733	2.016	1.994

Academic Year: 2020-2024, Semester-1

Programme: B.Sc., M.P.Cs, Course: Mechanics, Waves & Oscillations

CO ATTAINMENT			
	DA	IA	CO
CO1	2.48	2.60	2.50
CO2	2.40	2.53	2.43
CO3	2.50	2.60	2.52
CO4	2.44	2.60	2.47
CO5	2.36	2.47	2.38

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.47	1.98	1.98	1.81	2.14	2.14	2.14	1.81	1.81	1.81
Program Exit Survey (B)	2.90	2.70	2.80	2.90	2.60	2.80	2.90	2.70	2.80	2.6
Employer Survey (C)	2.65	2.90	2.90	2.60	2.50	2.90	2.70	2.80	2.70	2.7
Alumni Survey (D)	2.87	2.80	2.70	2.80	2.90	3.00	2.90	2.70	2.50	2.4
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.842	0.84	0.84	0.83	0.8	0.87	0.85	0.82	0.8	0.77
PO Attainment (F = (0.7*A)+E)	2.467	2.097	1.982	1.728	1.661	1.748	1.735	1.733	2.016	1.994

Academic Year: 2020-2024, Semester-2
Programme: B.Sc., M.P.Cs, Course: Wave Optics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.46	2.60	2.49
CO2	2.40	2.53	2.43
CO3	2.45	2.60	2.48
CO4	2.48	2.60	2.50
CO5	2.38	2.47	2.40

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.80	2.90	2.60	2.70	2.60	2.70	2.90	2.80	3.10	2.6
Employer Survey (C)	2.70	2.70	2.60	2.50	2.60	2.80	2.90	2.60	2.70	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.82	0.84	0.81	0.81	0.79	0.83	0.85	0.81	0.87	0.82
PO Attainment (F = (0.7*A)+E)	2.257	1.950	1.855	1.990	1.938	1.988	2.070	1.951	2.307	1.930

Academic Year: 2020-2024, Semester-2
Programme: B.Sc., M.P.C, Course: Wave Optics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.46	2.60	2.49
CO2	2.40	2.53	2.43
CO3	2.45	2.60	2.48
CO4	2.48	2.60	2.50
CO5	2.38	2.47	2.40

Attainment of POs/PSOs

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.60	2.80	2.60	2.90	2.60	2.70	2.60	2.80	2.80	2.9
Employer Survey (C)	2.60	2.70	2.80	2.50	2.70	2.70	3.20	2.80	2.90	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.50	2.4
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.79	0.83	0.83	0.83	0.80	0.82	0.85	0.83	0.82	0.80
PO Attainment (F = (0.7*A)+E)	2.227	1.940	1.875	2.010	1.948	1.9855	2.070	1.971	2.257	1.910

Academic Year: 2020-2024, Semester-3
Programme: B.Sc., M.P.Cs, Course: Heat & Thermodynamics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.49	2.60	2.51
CO2	2.43	2.53	2.45
CO3	2.46	2.60	2.49
CO4	2.47	2.60	2.50
CO5	2.39	2.47	2.40

Attainment of POs/PSOs

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.60	2.90	2.60	2.80	2.60	2.70	2.90	3.00	2.50	2.8
Employer Survey (C)	2.50	2.60	2.70	2.60	2.70	2.50	2.50	2.70	2.60	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.78	0.83	0.82	0.83	0.80	0.80	0.81	0.84	0.80	0.84
PO Attainment (F = (0.7*A)+E)	2.217`	1.940	1.865	2.010	1.948	1.965	2.030	1.951	2.237	1.950

Academic Year: 2020-2024, Semester-3
Programme: B.Sc., M.P.C, Course: Heat & Thermodynamics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.47	2.60	2.49
CO2	2.43	2.53	2.45
CO3	2.44	2.60	2.47
CO4	2.48	2.60	2.51
CO5	2.40	2.47	2.41

Attainment of POs/PSOs

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.70	2.90	2.70	2.80	2.70	2.80	2.60	2.50	2.70	2.9
Employer Survey (C)	2.50	2.60	2.70	2.80	2.70	2.50	2.70	2.60	2.50	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.50	2.4
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.79	0.83	0.83	0.85	0.74	0.81	0.80	0.78	0.77	0.78
PO Attainment (F = (0.7*A)+E)	2.227	1.940	1.875	2.030	1.888	1.975	2.020	1.921	2.205	1.890

Academic Year: 2020-2024, Semester-4

Programme: B.Sc., M.P.Cs, Course: Electricity, Magnetism & Electronics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.50	2.60	2.52
CO2	2.42	2.53	2.44
CO3	2.44	2.60	2.48
CO4	2.46	2.60	2.49
CO5	2.39	2.47	2.40

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.60	2.70	2.90	2.90	2.60	2.70	2.80	3.00	2.90	2.7
Employer Survey (C)	2.50	2.60	2.70	2.60	2.70	2.50	2.50	2.70	2.60	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.78	0.81	0.85	0.84	0.80	0.80	0.80	0.84	0.84	0.83
PO Attainment (F = (0.7*A)+E)	2.217`	1.960	1.895	2.020	1.948	1.965	2.020	1.75	2.277	1.940

Academic Year: 2020-2024, Semester-4

Programme: B.Sc., M.P.C, Course: Electricity, Magnetism & Electronics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.48	2.60	2.51
CO2	2.43	2.53	2.45
CO3	2.44	2.60	2.47
CO4	2.43	2.60	2.47
CO5	2.38	2.47	2.40

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.70	2.90	2.70	2.80	2.70	2.80	2.60	2.50	2.70	2.9
Employer Survey (C)	2.70	2.60	2.80	2.60	2.90	2.50	2.50	2.60	2.60	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.81	0.83	0.84	0.83	0.83	0.81	0.78	0.78	0.80	0.85
PO Attainment (F = (0.7*A)+E)	2.247	1.940	1.885	2.010	1.978	1.975	2.000	1.921	2.237	1.960

Academic Year: 2020-2024, Semester-4

Programme: B.Sc., M.P.Cs, Course: Modern Physics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.47	2.60	2.50
CO2	2.39	2.53	2.42
CO3	2.44	2.60	2.48
CO4	2.44	2.60	2.48
CO5	2.36	2.47	2.38

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.60	2.60	2.70	2.90	2.90	2.60	2.70	2.80	2.90	2.8
Employer Survey (C)	2.50	2.60	2.70	2.80	2.70	2.50	2.70	2.60	2.50	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.78	0.80	0.83	0.86	0.83	0.79	0.81	0.80	0.83	0.84
PO Attainment (F = (0.7*A)+E)	2.217`	1.910	1.345	1.875	1.978	1.955	2.030	1.941	2.267	1.950

Academic Year: 2020-2024, Semester-4

Programme: B.Sc., M.P.C, Course: Modern Physics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.47	2.60	2.49
CO2	2.41	2.53	2.44
CO3	2.44	2.60	2.47
CO4	2.45	2.60	2.48
CO5	2.38	2.47	2.40

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.70	2.90	2.50	2.70	2.80	2.90	2.90	2.50	2.70	2.6
Employer Survey (C)	2.50	2.60	2.70	2.60	2.70	2.50	2.50	2.70	2.60	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.79	0.83	0.81	0.82	0.82	0.82	0.81	0.79	0.82	0.82
PO Attainment (F = (0.7*A)+E)	2.227	1.940	1.885	2.000	1.968	1.985	2.041	1.931	2.257	1.930

Academic Year: 2020-2024, Semester-5

Programme: B.Sc., M.P.Cs, Course: Applications of Electricity & Electronics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.47	2.60	2.50
CO2	2.39	2.53	2.42
CO3	2.44	2.60	2.48
CO4	2.44	2.60	2.48
CO5	2.36	2.47	2.38

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.60	2.60	2.70	2.90	2.90	2.60	2.70	2.80	2.90	2.8
Employer Survey (C)	2.60	2.70	2.80	2.50	2.70	2.70	3.20	2.80	2.90	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.79	0.81	0.84	0.83	0.83	0.81	0.86	0.83	0.87	0.84
PO Attainment (F = (0.7*A)+E)	2.227	1.920	1.885	2.010	1.978	1.975	2.080	1.971	2.307	1.950

Academic Year: 2020-2024, Semester-5

Programme: B.Sc., M.P.C, Course: Applications of Electricity & Electronics

COs ATTAINMENT			
	DA	IA	CO
CO1	2.47	2.60	2.49
CO2	2.41	2.53	2.44
CO3	2.44	2.60	2.47
CO4	2.45	2.60	2.48
CO5	2.38	2.47	2.40

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.70	2.90	2.50	2.70	2.80	2.90	2.90	2.50	2.70	2.6
Employer Survey (C)	2.50	2.60	2.70	2.60	2.70	2.50	2.50	2.70	2.60	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.79	0.83	0.81	0.82	0.82	0.82	0.81	0.79	0.82	0.82
PO Attainment (F = (0.7*A)+E)	2.227	1.940	1.885	2.000	1.968	1.985	2.041	1.931	2.257	1.930

Academic Year: 2020-2024, Semester-5

Programme: B.Sc., M.P.Cs, Course: Electronic Instrumentation

COs ATTAINMENT			
	DA	IA	CO
CO1	2.47	2.60	2.49
CO2	2.41	2.53	2.44
CO3	2.44	2.60	2.47
CO4	2.45	2.60	2.48
CO5	2.38	2.47	2.40

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.587	1.494	1.687	1.641	1.665	1.743	1.630	2.053	1.587
Program Exit Survey (B)	2.80	2.90	2.60	2.70	2.60	2.70	2.90	2.80	3.10	2.6
Employer Survey (C)	2.70	2.70	2.60	2.50	2.60	2.80	2.90	2.60	2.70	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.82	0.84	0.81	0.81	0.79	0.83	0.85	0.81	0.87	0.82
PO Attainment (F = (0.7*A)+E)	2.257	1.950	1.855	1.990	1.938	1.995	2.070	1.951	2.307	1.930

Academic Year: 2020-2024, Semester-5

Programme: B.Sc., M.P.C, Course: Electronic Instrumentation

COs ATTAINMENT			
	DA	IA	CO
CO1	2.47	2.60	2.49
CO2	2.41	2.52	2.45
CO3	2.45	2.60	2.47
CO4	2.44	2.60	2.48
CO5	2.38	2.46	2.41

Attainment of POs/PSOs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
Direct Attainment (A)	2.053	1.586	1.494	1.687	1.641	1.665	1.742	1.630	2.053	1.587
Program Exit Survey (B)	2.80	2.90	2.60	2.70	2.60	2.70	2.90	2.80	3.10	2.6
Employer Survey (C)	2.70	2.70	2.60	2.50	2.60	2.80	2.90	2.60	2.70	2.7
Alumni Survey (D)	2.70	2.80	2.90	2.90	2.70	2.80	2.70	2.70	2.90	2.9
Indirect PO Attainment E = (0.1*B) +(0.1*C) + (0.1*D)	0.82	0.84	0.81	0.81	0.79	0.83	0.85	0.81	0.87	0.82
PO Attainment (F = (0.7*A)+E)	2.257	1.950	1.850	1.990	1.938	1.995	2.070	1.951	2.306	1.930

Chhatrapathi Sivaji Trl Satajayanthi Kalasala Jangareddigudem

Principal
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Jangareddigudem - 534447

CHATRAPATHI SIVAJI TRI SATA JAYANTHI (CSTS)
GOVT. KALASALA

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DEPARTMENT OF CHEMISTRY

PROGRAMME INFORMATION	
Programme Title	B.Sc
Awarding Institution	CSTS GOVERNMENT KALASALA JANGAREDDIGUDEM
Teaching Institution	CSTS GOVERNMENT KALASALA JANGAREDDIGUDEM
Faculty	Faculty of Chemistry
Department	Department of Chemistry
Mode and Period of study	Three academic Years Full Time

- These are our core Chemistry courses, which cover topics in General, Inorganic, Organic, Physical and Analytical Chemistry in all years of study.
- From 1st to 5th Semesters both programmes follow the same core course content in the 6th Semester Long term internship programme
- Practical experience in the lab is a major part of all Chemistry courses.

Programme outcomes with Practical's:

A. KNOWLEDGE AND UNDERSTANDING

PO 1. Have firm foundations in the fundamentals and application of current chemical and scientific theories in Inorganic, Organic, Physical and Analytical Chemistry.
PO 2. With guidance, be able to apply the methodologies in order to conduct chemical synthesis, analysis or other chemical investigations.

B. INTELLECTUAL SKILLS

PO 3. The ability to demonstrate knowledge and understanding of essential facts, concepts, principles and theories relating to the subject areas identified

PO 4. Skills in the evaluation, interpretation and synthesis of chemical information and data
.

C. PRACTICAL SKILLS

PO 5. Skills required for the conduct of documented laboratory procedures involved in synthetic and analytical work, in relation to both inorganic and organic systems

PO 6. Students will demonstrate proficiency in the use of appropriate instrumentation to collect and record data from chemical experiments.

D. GENERIC SKILLS(GENERAL SKILLS)

PO 7. Be able to prepare logical, organized and concise written reports, and oral and poster presentations that effectively communicate chemical content to others.

PO 8. Be able to work productively and collaboratively as a team member.

Course Outcomes:

Semester 1

Title of the Paper: Inorganic and Physical Chemistry

CO1	Understand the basic concepts of p-block elements
CO2	Explain the difference between solid, liquid and gases in terms of intermolecular interactions.
CO3	Apply the concepts of gas equations, pH and electrolytes while studying other chemistry courses.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	3	3	3	3	2		
CO2	3	2	-	2	2	3		
CO3	2	-	3	-	-	3		
AVERAGE	1.6	1.6	2	1.6	1.6	2.6		

Course Outcomes of Laboratory Course:

Semester - I

Title of the Paper: Qualitative inorganic analysis

CO1	Understand the basic concepts of qualitative analysis of inorganic mixture
CO2	Use glassware, equipment and chemicals and follow experimental procedures in the laboratory
CO3	Apply the concepts of common ion effect, solubility product and concepts related to qualitative analysis

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	-	3	3	2	2		
CO2	2	3	-	2	2	3		
CO3	-	2	3	-	3	3		
AVERAGE	1.3	1.6	2	1.6	2.3	2.6		

Semester - II

Title of the Paper: Organic & General Chemistry

CO1	Understand and explain the differential behavior of organic compounds based on fundamental concepts learnt.
CO2	Formulate the mechanism of organic reactions by recalling and correlating the fundamental properties of the reactants involved
CO3	Learn and identify many organic reaction mechanism including Free Radical Substitution, Electrophonic Addition and Electrophonic Aromatic Substitution.
CO4	Correlateanddescribethestereochemicalpropertiesoforganiccompoundsand reactions.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	2		
CO2	2	2	2	2	2	3		
CO3	-	3	-	-	3	3		
CO4	2	-	3	-	2	2		
AVERAGE	1.75	1.75	1.75	1.25	2.25	2.5		

Course Outcomes of Laboratory Course:

Semester - II

Title of the Paper: Volumetric Analysis Lab

CO1	Use glassware, equipment and chemicals and follow experimental procedures in the laboratory
CO2	Understand and explain the volumetric analysis based on fundamental concepts learnt in ionic equilibria
CO3	Learn and identify the concepts of a standard solutions, primary and secondary standards
CO4	Facilitate the learner to make solutions of various molar concentrations.
CO5	This may include: The concept of the mole; Converting moles to grams; Converting grams to moles; Defining concentration; Dilution of Solutions; Making different molar concentrations.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	2		
CO2	2	2	2	2	2	3		
CO3	-	3	-	-	3	3		
CO4	2	-	3	-	2	2		
CO5	-	2	3	2	-	-		
AVERAGE	1.4	1.8	2	1.4	1.8	2		

Semester - III

Title of the Paper: Organic chemistry & Spectroscopy

CO1	Understand preparation, properties and reactions of haloalkanes, haloarenes and oxygen containing functional groups.
CO2	Use the synthetic chemistry learnt in this course to do functional group transformations.
CO3	To propose plausible mechanisms for any relevant reaction

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	2		
CO2	2	2	2	2	2	3		
CO3	-	3	-	-	3	3		
AVERAGE	1.6	2.3	1.3	1.6	2.3	2.6		

Course Outcomes of Laboratory Course:

Semester - III

Title of the Paper: Organic preparations and IR Spectral Analysis Lab

CO1	How to use glassware, equipment and chemicals and follow experimental procedures in the laboratory
CO2	How to calculate limiting reagent, theoretical yield, and percent yield
CO3	How to engage in safe laboratory practices by handling laboratory glassware, equipment, and chemical reagents appropriately
CO4	How to dispose of chemicals in a safe and responsible manner
CO5	How to perform common laboratory techniques including reflux, distillation, recrystallization, vacuum filtration.
CO6	How to critically evaluate data collected to determine the identity, purity, and percent yield of products and to summarize findings in writing in a clear and concise manner
CO7	How to create and carry out work up and separation procedures

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	2		
CO2	2	2	2	2	2	3		
CO3	-	3	-	-	3	3		
CO4	3	2	3	3	3	2		
CO5	2	3	2	2	3	2		
CO6	-	2	-	3	3	-		
CO7	3	3	2	3	2	2		
AVERAGE	1.85	2.42	1.57	2.28	2.57	2		

Semester – IV A

Title of the Paper: Inorganic, Organic and Physical Chemistry

CO1	To learn about the laws of absorption of light energy by molecules and subsequent photochemical reactions.
CO2	To understand the concept of quantum efficiency and mechanisms of photochemical reactions.
CO3	To know the structures of Glucose and Fructose

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	-	3	3	2	2		
CO2	2	3	-	2	2	3		
CO3	-	2	3	-	3	3		
AVERAGE	1.3	1.6	2	1.6	2.3	2.6		

Course Outcomes of Laboratory Course – Semester – IV A

Title of the Paper: Organic Qualitative analysis Lab

CO1	Use glassware, equipment and chemicals and follow experimental procedures in the laboratory
CO2	Determine melting and boiling points of organic compounds
CO3	Understand Application of concepts of different organic reactions studied in theory part of organic chemistry

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	3	3	-	3		
CO2	3	3	-	2	2	3		
CO3	-	2	3	-	3	3		
AVERAGE	1.6	2.6	2	1.6	1.6	3		

Semester – IV B

Title of the Paper: Inorganic & Physical Chemistry

CO1	Understand concepts of boundary conditions and quantization, probability distribution, most probable values, uncertainty and expectation values
CO2	Application Of Quantization To Spectroscopy.
CO3	Various types of spectra and their use in structure determination.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	3	3	3	3	2		
CO2	3	2	-	2	2	3		
CO3	2	-	3	-	-	3		
AVERAGE	1.6	1.6	2	1.6	1.6	2.6		

Course Outcomes of Laboratory Course – Semester – IV B
Title of the Paper: Conductometric and Potentiometric Titrimetry Lab

CO1	Use glassware, equipment and chemicals and follow experimental procedures in the laboratory
CO2	Apply concepts of electrochemistry in experiments
CO3	Be familiar with electroanalytical methods and techniques in analytical chemistry which study an analyte by measuring the potential (volts) and/or current (amperes) in an electrochemical cell containing the analyte

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	3	3	-	3		
CO2	3	3	-	2	2	3		
CO3	-	2	3	-	3	3		
AVERAGE	1.6	2.6	2	1.6	1.6	3		

Semester – V

PAPER – VI B

Title of the Paper: Analytical Methods in Chemistry-1

CO1	Identify the importance of solvent extraction and ion exchange method.
CO2	Acquire knowledge on the basic principles of volumetric analysis and gravimetric analysis.
CO3	Demonstrate the usage of common laboratory apparatus used in quantitative analysis.
CO4	Understand the theories of different types of titrations.
CO5	Gain knowledge on different types of errors and their minimization methods.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	2		
CO2	2	2	2	2	2	3		
CO3	-	3	-	-	3	3		
CO4	2	3	2	3	2	3		
CO5	2	-	3	-	2	2		
AVERAGE	1.8	2	1.8	1.6	2.2	2.6		

Course Outcomes of Laboratory Course – Semester – V
PAPER – VI B

Title of the Paper: Analytical Methods in Chemistry-1

CO1	Estimate Iron(II) using standard Potassium dichromate solution
CO2	Learn the procedure for the estimation of total hardness of water
CO3	Demonstrate the determination of chloride using Mohr's method
CO4	Acquire skills in the operation and calibration of pH meter
CO5	Perform the strong acid vs strong base titration using pH meter

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	2	3	2	3		
CO2	2	2	2	2	2	2		
CO3	3	3	-	-	3	-		
CO4	3	2	2	3	2	3		
CO5	-	2	3	-	2	-		
AVERAGE	2	2.2	1.8	1.6	2.2	1.6		

Semester – V

PAPER – VII B

Title of the Paper: Analytical Methods in Chemistry-2

CO1	Identify the importance of chromatography in the separation and identification of compounds in a mixture
CO2	Acquire a critical knowledge on various chromatographic techniques.
CO3	Demonstrate skills related to analysis of water using different techniques.
CO4	Understand the principles of spectro chemistry in the determination of metal ions.
CO5	Comprehend the applications of atomic spectroscopy.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	2		
CO2	2	2	2	2	2	3		
CO3	-	3	-	-	3	3		
CO4	2	3	2	3	2	3		
CO5	2	-	3	-	2	2		
AVERAGE	1.8	2	1.8	1.6	2.2	2.6		

Semester – V

PAPER – VII B

Title of the Paper: Analytical Methods in Chemistry-2

CO1	Perform the separation of a given dye mixture using TLC
CO2	Learn the preparation of TLC plates
CO3	Demonstrate the separation of mixture of amino acids using paper chromatography
CO4	Acquire skills in using column chromatography for the separation of dye mixture

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	2		
CO2	2	2	2	2	2	3		
CO3	-	3	-	-	3	3		
CO4	2	-	3	-	2	2		
AVERAGE	1.75	1.75	1.75	1.25	2.25	2.5		

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DEPARTMENT OF MATHEMATICS

PROGRAMME INFORMATION	
Program Title	B.Sc. (Mathematics, Physics, Chemistry(MPC)/ Mathematics, Physics, Computer Science(MPCs)
Awarding Institution	CSTS GOVERNMENT KALASALA, JANGAREDDIGUDEM
Teaching Institution	CSTS GOVERNMENT KALASALA, JANGAREDDIGUDEM
Faculty	Faculty of Mathematics
Department	Department of Mathematics
Mode and Period of study	Five Years Full Time

- These are our core Chemistry courses, which cover topics in General, Inorganic, Organic, Physical and Analytical Chemistry in all years of study.
- From 1st to 5th Semesters both programs follow the same core course content in the 6th Semester one common elective course and 3 cluster courses form the subject of student interest with in the programs they opted
- Practical experience in the lab is a major part of all Chemistry courses.

Programs outcomes:

1. **PO1. Comprehensive Understanding:** Students will demonstrate a comprehensive understanding of the fundamental principles and concepts in Mathematics, Physics, and Chemistry (or Computer Science).
2. **PO2. Problem-Solving Skills:** Students will develop strong problem-solving skills and the ability to apply theoretical knowledge to real-world problems in their respective fields.
3. **PO3. Experimental and Analytical Skills:** Students will acquire experimental and analytical skills necessary for conducting experiments, analyzing data, and interpreting results accurately.
4. **PO4. Communication and Collaboration:** Students will demonstrate effective communication and collaboration skills, both orally and in writing, enabling them to work effectively in multidisciplinary teams.
5. **PO5. Ethical and Professional Responsibility:** Students will understand the ethical and professional responsibilities associated with their fields of study and conduct themselves accordingly in academic and professional settings.
6. **PO6. Lifelong Learning:** Students will recognize the importance of lifelong learning and continue to update their knowledge and skills to adapt to evolving trends and technologies in Mathematics, Physics, and Computer Science.

Course Outcomes:

SEMESTER 1: DIFFERENTIAL EQUATIONS

CO1: Solve linear differential equations.
CO2: Convert non exact homogeneous equations to exact differential equations by using integrating factors.
CO3: Know the methods of finding solutions of differential equations of the first order but not of the first degree.
CO4: Solve higher-order linear differential equations, both homogeneous and non-homogeneous, with constant coefficients.
CO5: Understand the concept and apply appropriate methods for solving differential equations.

5x6 mapping matrix of Cos –Pos is prepared in this regard for DIFFERENTIAL EQUATIONS course in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	3	2	3	2	-	2
CO4	2	1	2	1	-	1
CO5	1	-	2	2	1	2
AVERAGE	2.4	1.8	2.6	1.8	0.25	1.8

"1" – Slight (Low) Correlation,
"2" – Moderate (Medium) Correlation,
"3" – Substantial (High) Correlation,
"-" – Indicates there is no correlation

SEMESTER 2: THREE-DIMENSIONAL ANALYTICAL SOLID GEOMETRY

CO1: Get the knowledge of planes.
CO2: Basic idea of lines, sphere and cones.
CO3: Understand the properties of planes, lines, spheres and cones.
CO4: Express the problems geometrically and then to get the solution.

4x6 mapping matrix of Cos –Pos is prepared in this regard for THREE-DIMENSIONAL ANALYTICAL SOLID GEOMETRY course in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	3	2	3	2	-	2
CO4	2	1	2	1	-	1
AVERAGE	2.75	2.25	2.75	1.75	-	1.75

SEMESTER 3: ABSTRACT ALGEBRA

CO1: Acquire the basic knowledge and structure of groups, subgroups and cyclic groups.
CO2: Get the significance of the notation of a normal subgroup.
CO3: Get the behavior of permutations and operations on them.
CO4: Study the homomorphisms and isomorphisms with applications.
CO5: Understand the ring theory concepts with the help of knowledge in group theory and to prove the theorems.
CO6: Understand the applications of ring theory in various fields**.**

6x6 mapping matrix of Cos –Pos is prepared in this regard for ABSTRACT ALGEBRA course in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	3	2	3	2	-	2
CO4	2	2	2	1	-	1
CO5	2	2	2	1	2	1
CO6	2	2	2	1	2	1
AVERAGE	2.5	2.3	2.5	1.5	0.67	1.5

SEMESTER 4: REAL ANALYSIS

CO1: Get clear idea about the real numbers and real valued functions.
CO2: Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
CO3: Test the continuity and differentiability and Riemann integration of a function.
CO4: Know the geometrical interpretation of mean value theorems.

6x4 mapping matrix of Cos –Pos is prepared in this regard for REAL ANALYSIS course in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	3	2	3	2	-	2
CO4	2	2	2	1	1	1
AVERAGE	2.75	2.5	2.75	1.75	0.25	1.75

SEMESTER 4: LINEAR ALGEBRA

CO1: Understand the concepts of vector spaces, subspaces, bases, dimension and their properties.
CO2: Understand the concepts of linear transformations and their properties.
CO3: Apply Cayley- Hamilton theorem to problems for finding the inverse of a matrix and higher powers of matrices without using routine methods.
CO4: Learn the properties of inner product spaces and determine orthogonality in inner product spaces.

6x4 mapping matrix of Cos –Pos is prepared in this regard for LINEAR ALGEBRA course in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	2	2	3	2	-	2
CO4	2	1	1	1	1	1
AVERAGE	2.5	2.25	2.5	1.75	0.25	1.75

SEMESTER 5: NUMERICAL METHODS

CO1: Understand the subject of various numerical methods that are used to obtain approximate solutions.
CO2: Understand various finite difference concepts and interpolation methods.
CO3: Work out numerical differentiation and integration whenever and wherever routine methods are not applicable.
CO4: Find numerical solutions of ordinary differential equations by using various numerical methods.
CO5: Analyze and evaluate the accuracy of numerical methods.

6x5 mapping matrix of Cos –Pos is prepared in this regard for NUMERICAL METHODS course in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	3	2	3	2	-	2
CO4	2	2	2	1	1	1
CO5	2	2	2	2	1	1
AVERAGE	2.6	2.4	2.6	1.8	0.4	1.6

SEMESTER 5: NUMERICAL METHODS

CO1: Understand the Beta and Gamma functions, their properties and relation between these two functions, understand the orthogonal properties of Chebyshev polynomials and recurrence relations.
CO2: Find power series solutions of ordinary differential equations.
CO3: Solve Hermite equation and write the Hermite Polynomial of order (degree) n, also find the generating function for Hermite Polynomials, study the orthogonal properties of Hermite Polynomials and recurrence relations.
CO4: Solve Legendre equation and write the Legendre equation of first kind, also find the generating function for Legendre Polynomials, understand the orthogonal properties of Legendre Polynomials.
CO5: Solve Bessel equation and write the Bessel equation of first kind of order n, also find the generating function for Bessel function understand the orthogonal properties of Bessel function.

6x5 mapping matrix of Cos –Pos is prepared in this regard for NUMERICAL METHODS course in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	2	2	2	2	-	2
CO3	2	2	3	2	-	1
CO4	2	2	2	1	1	1
CO5	2	2	2	1	1	1
AVERAGE	2.2	2.2	2.4	1.6	0.4	1.4

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DEPARTMENT OF BOTANY

PROGRAMME INFORMATION	
Program Title	B.Sc. (Botany,Zoology,Chemistry(BZC)/ ,Botany, Horticulture,Chemistry(BCH)
Awarding Institution	CSTS GOVERNMENT KALASALA, JANGAREDDIGUDEM
Teaching Institution	CSTS GOVERNMENT KALASALA, JANGAREDDIGUDEM
Faculty	Faculty of Botany
Department	Department of Botany
Mode and Period of study	Three Years Full Time

- These are our core Botany courses, which cover topics in General, Vascular,Non-Vascular, microbiology,Anatomy,Embryology,physiology in all years of study.
- From 1st to 5th Semesters both programmes follow the same core course content in the 6th Semester Long term internship programme
- Practical experience in the lab is a major part of all Botany courses.

Programme Outcomes :

1. Understand the basic concepts of Botany in relation to its allied core courses.

2. Perceive the significance of microbes and plants for human welfare, and structural and functional aspects of plants.

3. Demonstrate simple experiments related to plant sciences, analyze data, and interpret them with the theoretical knowledge.

4. Work in teams with enhanced inter-personal skills.

5. Develop the critical thinking with scientific temper.

6. Effectively communicate scientific ideas both orally and in writing.

Botany Outcomes:

1. Students will be able to identify, compare and distinguish various groups of microbes and primitive plants based on their characteristics.
2. Students will be able to explain the evolution of trachaeophytes and also distribution of plants on globe.
3. Students will be able to discuss on internal structure, embryology and ecological adaptations of plants, and want of conserving Biodiversity.
4. Students will be able to interpret life processes in plants in relation to physiology and metabolism.
5. Students will be able to describe ultrastructure of plant cells, inheritance and crop improvement methods.
6. Students will independently design and conduct simple experiments based on the knowledge acquired in theory and practicals of the different sub-courses in Botany.

Semester - I

Course: 1 Fundamentals of Microbes and Non-vascular Plants

Course Outcomes:

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

CO-1: Explain origin of life on the earth.

CO-2:Illustrate diversity among the viruses and prokaryotic organisms and can categorize them.

CO -3: Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and life cycles.

CO-4: Analyze and ascertain the plant disease symptoms due to viruses, bacteria and fungi

CO-5:Recall and explain the evolutionary trends among amphibians of plant kingdom for their shift to land habitat. Evaluate the ecological and economic value of microbes, thallophytes and bryophytes.

5x6 mapping matrix of Cos –Pos is prepared in this regard for **Fundamentals of Microbes and Non-vascular Plants** course in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	2	3	-	-	-	-
CO2	2	3	2	2	1	2
CO3	1	3	2	-	-	2
CO4	1	3	2	1	-	1
CO5	2	2	-	2	1	2
AVERAGE	1.6	2.8	1.2	1	0.4	1.4

"1" – Slight (Low) Correlation,
"2" – Moderate (Medium) Correlation,
"3" – Substantial (High) Correlation,
"-" – Indicates there is no correlation

Semester - I

Practicals :Fundamentals of Microbes and Non-vascular Plants Lab

practical Outcomes: On successful completion of this practical course, student shall be able to;

Demonstrate the techniques of use of lab equipment, preparing slides and identify the material and draw diagrams exactly as it appears. 2. Observe and identify microbes and lower groups of plants on their own. 3. Demonstrate the techniques of inoculation, preparation of media etc. 4. Identify the material in the permanent slides etc.

Semester - II -Basics of Vascular plants and Phytogeography

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

CO-1; Classify and compare Pteridophytes and Gymnosperms based on their morphology, anatomy, reproduction and life cycles.

CO-2:Justify evolutionary trends in tracheophytes to adapt for land habitat.

CO-3: Explain the process of fossilization and compare the characteristics of extinct and extant plants.

CO-4 : Critically understand various taxonomical aids for identification of Angiosperms.

CO-5: Analyze the morphology of the most common Angiosperm plants of their localities and recognize their families.

CO-6 :Evaluate the ecological, ethnic and economic value of different tracheophytes and summarize their goods and services for human welfare.

CO-7 :Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.

7x6 mapping matrix of Cos –Pos is prepared in this regard for course **Basics of Vascular plants and Phytogeography** in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	-	1	1	-	1
CO2	1	-	-	-	-	-
CO3	2	-	-	1	-	1
CO4		-	2	-	3	-
CO5	-	-	3	-	2	1
CO6	1	3	2	1	-	-
CO7	-	2	-	-	2	1
AVERAGE	1	0.7	1.14	0.43	1	0.57

Semester - II

Practicals:(L) Basics of Vascular plants and Phytogeograph

Practical Outcomes: On successful completion of this course students shall be able to :

CO-1: Demonstrate the techniques of section cutting, preparing slides, identifying of the material and drawing exact figures.

CO-2: Compare and contrast the morphological, anatomical and reproductive features of vascular plants.

CO-3: Identify the local angiosperms of the families prescribed to their genus and species level and prepare herbarium.

CO-4: Exhibit skills of preparing slides, identifying the given twigs in the lab and drawing figures of plant twigs, flowers and floral diagrams as they are.

CO-5 Prepare and preserve specimens of local wild plants using herbarium techniques.

Semester - III - 3 Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity

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

CO-1:Understand on the organization of tissues and tissue systems in plants.

Illustrate and interpret various aspects of embryology.

CO-2:Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities.

CO-3 :Appraise various qualitative and quantitative parameters to study the population and community ecology.

CO-4 :Correlate the importance of biodiversity and consequences due to its loss.

CO-5: Enlist the endemic/endangered flora and fauna from two biodiversity hot spots in India and assess strategies for their conservation

CO-7 :Locate different phytogeographical regions of the world and India and can analyze their floristic wealth.

5x6 mapping matrix of Cos –Pos is prepared in this regard for course **Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity** in B.Sc program.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	2	-	-	-	1	1
CO2	2	1	3	-	2	-
CO3	1	-	3	1	2	1
CO4	1	-	-	-	2	2
CO5	1	2	1	-	2	3
AVERAGE	1.4	0.6	1	0.14	1.8	1

Semester - III

Practicals: Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity Lab

Practical Outcomes: On successful completion of this practical course students shall be able to :

CO-1: Get familiarized with techniques of section making, staining and microscopic study of vegetative, anatomical and reproductive structure of plants.

CO-2: Observe externally and under microscope, identify and draw exact diagrams of the material in the lab.

CO-3: Demonstrate application of methods in plant ecology and conservation of bio diversity and qualitative and quantitative aspects related to populations and communities of plants.

Semester - IV - 4 - Plant Physiology and Metabolism

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

CO-1: Comprehend the importance of water in plant life and mechanisms for transport of water and solutes in plants.

CO-2: Evaluate the role of minerals in plant nutrition and their deficiency symptoms.

CO-3: Interpret the role of enzymes in plant metabolism.

CO-4: Critically understand the light reactions and carbon assimilation processes responsible for synthesis of food in plants.

CO-5: Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms.

CO-6: Evaluate the physiological factors that regulate growth and development in plants.

CO-7**:**Examine the role of light on flowering and explain physiology of plants under stress conditions.

7x6 mapping matrix of Cos –Pos is prepared in this regard for course **Plant Physiology and Metabolism** in B.Sc program.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	1	-	3	-	-	1
CO2	1	3	2	-	-	1
CO3	1	3	2	-	1	-
CO4	1	1	3	-	1	-
CO5	-	-	3	-	-	1
CO6	-	-	2	-	1	-
CO7	-	--	2	1	-	1
AVERAGE	0.57	0.71	2.42	0.14	0.42	0.57

Semester – IV

Practicals (L) Plant Physiology and Metabolism

Practical outcomes:

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

CO-1: Conduct lab and field experiments pertaining to Plant Physiology, that is, biophysical and biochemical processes using related glassware, equipment, chemicals and plant material.

CO-2: Estimate the quantities and qualitative expressions using experimental results and calculations Demonstrate the factors responsible for growth and development in plants.

Semester - IV

Course: 5 :Cell Biology, Genetics and Plant Breeding Hrs/Wk: 4

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

CO-1:Distinguish prokaryotic and eukaryotic cells and design the model of a cell.

CO-2: Explain the organization of a eukaryotic chromosome and the structure of genetic material.

CO-3: Demonstrate techniques to observe the cell and its componentsunder a microscope.

CO-4 : Discuss the basics of Mendelian genetics, its variations and interpret inheritance of traits in living beings.

CO-5: Elucidate the role of extra-chromosomal genetic material for inheritance of characters.

CO-6: Evaluate the structure, function and regulation of genetic material.

CO-7: Understand the application of principles and modern techniques in plant breeding.

CO-8: Explain the procedures of selection and hybridization for improvement of crops.

8x6 mapping matrix of Cos –Pos is prepared in this regard for course **Cell Biology, Genetics and Plant Breeding** in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	-	-	1	1	2
CO2	2	-	-	-	1	-
CO3	1	-		3	-	-
CO4	2	-	3	-	-	1
CO5	-	-	2	-	2	1
CO6	-	-	3	-	1	-
CO7	1	3	2	-	-	1
CO8	2	3	-	-	-	2
AVERAGE	1.37	0.75	1.25	0.5	0.62	0.87

Semester – IV

Practicals:(L) Cell Biology, Genetics and Plant Breeding Lab Hrs/Wk: 2

Practical Outcomes: After successful completion of this practical course the student shall be able to:

CO-1: Show the understanding of techniques of demonstrating Mitosis and Meiosis in the laboratory and identify differentstages of cell division.

CO-2: Identify and explain with diagram the cellular parts of a cell from a model or picture and preparemodels Solve the problems related to crosses and gene interactions.

CO-3: Demonstrate plant breeding techniques such as emasculation and bagging.

Semester-V (Skill Enhancement Course - Elective)

Course: 6B Vegetable Crops – Cultivation Practices Hrs/Wk: 4

Learning Outcomes: Students at the successful completion of the course will be able to:

CO-1: Identify different vegetable plants and realize their value in human nutrition.

CO-2: Analyse the types of soils to cultivate vegetable crops.

CO-3: Demonstrate skills on agronomic practices for cultivation of vegetable crops.

CO-4: Acquire knowledge on water, weed and disease managements in vegetable farming.

CO-5: Comprehend aspects related to harvesting and storage of produce.

5x6 mapping matrix of Cos –Pos is prepared in this regard for course **Vegetable Crops – Cultivation Practices** in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	2	3	-	-	3	2
CO2	1	-	3	-	-	2
CO3	2	2	1	3	1	-
CO4	1	2	-	3	2	3
CO5	-	-	-	2	2	-
AVERAGE	1.2	1.4	0.8	1.6	1.6	1.4

Vegetable Crops – Cultivation Practices – Practical syllabus Learning Outcomes: On successful completion of this practical course, student will be able to:

CO-1: List out, identify and handle different garden implements.

CO-2: Identify the important vegetable crops grown in their locality.

CO-3: Demonstrate various skills in cultivation of vegetable crops.

CO-4: Identify pests, diseases and their remedies that are specific to a vegetable crop.

Semester-V (Skill Enhancement Course - Elective)

Course: 7B Vegetable Crops – Post Harvest Practices Hrs/Wk: 4

Learning Outcomes: Students at the successful completion of the course will be able to:

CO-1: Understand various practices for vegetable produce from harvesting to marketing.

CO-2: Demonstrate skills on storage, processing and preservation of vegetables.

CO-3: Summarize causes for spoilage of vegetables before and during storage and methods to prevent and control them.

CO-4: Make use of preservation methods to reduce the loss of vegetable produce.

CO-5: Explain about value added products, packaging and marketing of vegetables.

5x6 mapping matrix of Cos –Pos is prepared in this regard for course **Vegetable Crops – Post Harvest Practices** in B.Sc program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	1	-	3	3	2	-
CO2	-	-	2	3	1	2
CO3	-	-	3	2	2	-
CO4	-	1	-	3	1	2
CO5	1	-	-	2	3	3
AVERAGE	0.4	0.2	1.6	2.4	1.8	1.4

Vegetable Crops – Post Harvest Practices – Practical syllabus Learning Outcomes: On successful completion of this practical course, student willbe able to:

CO-1: Identify stages of maturity in vegetable crops.

CO-2 :Handle material for storage of vegetables.

CO-3: Identify physical and biological causes for spoilage of vegetables.

CO-4: Make some value-added products of vegetables.

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DEPARTMENT OF HORTICULTURE

PROGRAMME INFORMATION	
Program Title	B.Sc. B.C.H(Botany,Chemistry,Horticulture)
Awarding Institution	CSTS GOVERNMENT KALASALA, JANGAREDDIGUDEM
Teaching Institution	CSTS GOVERNMENT KALASALA, JANGAREDDIGUDEM
Faculty	Faculty of Horticulture
Department	Department of Horticulture
Mode and Period of study	Three Years Full Time

Programme Outcomes :

Horticulture Outcomes:

PSO :

A Bachelor's Degree in Horticulture typically aims to provide students with comprehensive knowledge and skills related to plant science, cultivation, and management .The program outcomes may include:

PO-1

Understanding of plant biology, anatomy, physiology, genetics, and pathology, providing a strong foundation in plant sciences.

PO-2

Proficiency in various horticultural techniques including propagation, cultivation, pest and disease management, irrigation, and soil management.

PO-3

Knowledge and skills in managing crop production systems for various purposes such as food, ornamental, medicinal, or landscape design.

PO-4

Understanding sustainable practices in horticulture, including environmentally friendly approaches to plant production, conservation, and resource management.

PO-5

Ability to conduct research, analyze data, and solve problems related to plant cultivation, production, and management.

PO-6

Understanding of business principles related to horticulture, including marketing, sales, and management of horticultural enterprises.

PO-7

Proficient communication skills to interact with diverse stakeholders, including clients, colleagues, and the public, as well as the ability to educate and advocate for horticultural practices.

PO-8

These outcomes prepare graduates for a wide range of careers in agriculture, landscaping, nursery management, research and development, extension services, botanical gardens, and various sectorsof the horticulture industry

Semester - I

Course: 1 Fundamentals Of Horticulture and Soil Science

Course Outcomes:

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

Explain origin of life on the earth.

CO-1 Study of features of orchard planning and layout orchard.
CO-2 Study of tools and implements in Horticulture.
CO-3 Identification of various Horticulture crops.
CO-4 Lay out of nutrition garden.
CO-5 Preparation of nursery beds to sow vegetable seeds.
CO-6 Digging of pits for fruit plants.
CO-7 Layout of different Planting systems.
CO-8 Study of different methods of training.
CO-9 Study of different methods of pruning.
CO-10 Preparation of fertilizer mixtures and field application.
CO-11 Preparation and application of growth regulators.
CO-12 Layout of different irrigation systems.
CO-13 Identification and management of nutritional disorders in important fruit, vegetable and flower crops.

Semester - I

Practicals : Fundamentals Of Horticulture and Soil Science Lab

practical Outcomes: On successful completion of this practical course, student shall be able to;

- Make a layout of an orchard in a given area.
- Use various tools and implements to raise nursery and cultivate a horticulture crop.
- Prepare fertilizer mixtures and PGRs for plants.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	1	1	2	1	1	-	-	1
CO2	-	2	1	-	1	1	1	3
CO3	1	3	2	1	1	1	-	1
CO4	1	1	3	2	1	1	-	2
CO5	-	1	2	1	1	3	1	-
CO6	1	2	3	1	1	2	-	1
CO7	-	2	3	1	1	-	1	2
CO8	-	1	3	-	-	1	2	1
CO9	-	3	2	1	1	-	1	-
CO10	1	-	-	1	3	1	-	-
CO11	1	3	2	2	2	3	1	1

CO12	-	3	2	-	-	1	-	-
CO13	-	1	2	-	-	-	-	-
AVERAGE	0.46	1.76	2.03	0.86	0.92	0.92	0.53	0.92

Semester - II –2 Plant Propagation and Nursery Management

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

CO-1 Observations on causes for dormancy in seeds and vegetative propagules.

CO-2 Methods of breaking dormancy in seeds, tubers, vegetative buds and other vegetative propagules.

CO-3 Media for propagation of plants in nursery beds, pots and Mist chamber.

CO-4 Preparation of nursery beds and sowing of seeds.

CO- 5 Raising of root stock.

CO-6. Preparation of plant material for potting.

CO-7 Hardening of plants in the nursery.

CO-8 Practicing different types of vegetative propagation techniques - cutting, layering grafting and budding.

CO-9 Preparation of plant growth regulators for seed germination and vegetative propagation.

Semester - II

Practicals:(L) Plant Propagation and Nursery Management

Practical Outcomes: On successful completion ofthiscourse students shall be able to :

- Practice a suitable propagation method for a given horticulture plant species.
- Perform skills to remove dormancy in seeds and other propagules of horticulture plants.
- Prepare media to raise nursery and to cultivate various horticulture plants.
- Demonstrate skill of various vegetative propagation technics used in Horticulture

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	1	1	-	1	-	-	-
CO2	2	-	1	-	1	-	-	1
CO3	3	1	-	1	1	1	-	-
CO4	-	2	-	2	-	1	1	1
CO5	1	-	3	-	1	2	1	1
CO6	2	1	2	1	1	-	2	1
CO7	1	-	1	-	1	2	3	2
CO8	-	2	1	2	1	1	1	1
CO9	1	1	2	2	3	1	1	2
AVERAGE	0.76	0.88	1.11	0.88	1.11	0.88	0.9	1

Semester - III – 3 Basics Of Vegetable Science

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

CO-1 Demonstration of seed germination test for a vegetable seed.

CO-2 Demonstration of seed viability test.

CO-3 Identification of vegetable seeds and vegetable crops at different growth stages.

CO-4 Preparing vegetable nursery beds.

C0-5 Raising vegetable seedlings in nursery bed and portrays.

CO-6 Identification of major diseases and insect pests of vegetables.

CO-7 Land preparation for sowing/ transplanting of vegetable crops.

CO-8 Sowing/ transplanting of vegetables in main field.

C0-9 Fertilizer application for vegetable growing.

CO-.10 Irrigation practices in a vegetable crop field

Semester - III

Practicals: Basics Of Vegetable Science Lab

Practical Outcomes: On successful completion of this practical course students shall be able to :

- Perform various tests for seed germination, viability and vigour.
- Make observations and record data on various growth stages of a given vegetable plant.
- Identify the pathogens and suggest control measures for diseases of vegetable crops.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	-	1	3	1	-	-	1
CO2	3	1	1	2	1	2	1	1
CO3	1	1	-	1	-	1	1	-
CO4	-	-	1	1	2	-	1	-
CO5	1	1	2	-	-	-	-	1
CO6	2	1	-	1	-	-	1	-
CO7	-	-	1	-	1	1	-	-
CO8	1	2	1	2	-	1	-	-
CO9	1	1	-	1	1	-	-	-
CO10	-	-	1	1	1	1	1	1
AVERAGE	1.1	0.7	0.8	1.2	0.7	0.6	0.5	0.4

Semester - IV - 4 Basics Of Fruit Science

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

CO-1 Study of varieties of Mango, Papaya and Guava.

CO-2 Study of varieties of Grape, Pomegranate, Citrus and Apple.

CO-3 Study of varieties of Amla, Dates and Wood apple.

CO-4 Manure and fertilizer application including biofertilizers in different fruit crops.

CO-5 Methods of application, calculation of the required quantity of manure and fertilizers based on the nutrient content.

CO-6 Use of growth regulators in fruit crops.

CO-7Identification and collection of important pests in fruit crops.

CO-8 Identification and collection of important diseases in fruit crops and herbarium preparation.

CO-9 Visit to a local fruit market/commercial orchard.

Semester – IV

Practicals (Lab) Basics Of Fruit Science

Practical outcomes:

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

- Identify different varieties of tropical, sub-tropical and temperate fruit crops.
- Estimate and apply required dosage of fertilizer/manure/biofertilizer for a fruit crop.
- Use required PGR to check the leaf fall, flower fall and fruit fall in a crop species.
- Identify pest and diseases of various fruit crops and suggest control measures.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	1	1	-	-	-	1	2	1
CO2	-	1	1	1	-	1	-	-
CO3	1	-	1	-	1	-	1	1
CO4	2	-	-	1	1	-	-	-
CO5	-	1	1	2	2	-	1	1

CO6	1	1	-	1	-	1	-	-
CO7	-	-	1	-	1	-	1	-
CO8	-	-	-	1	1	1	-	1
CO9	-	1	-	1	-	1	-	-
AVERAG	0.44	0.55	0.44	0.77	0.66	0.55	0.55	0.44

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Semester - IV

Course: 5 Pests and Diseases Of Horticulture Plant and Their Management

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

CO-1 Study of characteristics of insect pests, microbial pathogens, nematodes causing diseases on different plants given in the theory syllabus.

C0-2 Identification of disease symptoms on different plants given in the theory syllabus.

C0-3 Observing and acquiring knowledge on pesticides, fungicides etc.,

C0-4 Acquaintance with methods of application of common fungicides.

CO-5 Field visit and acquaintance with disease of crops

Semester – IV Practicals: Pests and Diseases Of Horticulture Plant and Their Management

Practical Outcomes: After successful completion of this practical course the student shall be able to:

- Identify the insect pests and microbial pathogens on various horticulture plants.
- Identify the disease symptoms and attribute them to a pest or a microbe.
- Suggest the dose and rate of application of a pesticide/fungicide to control the diseases in horticulture plants.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8

CO1	1	-	1	-	1	-	-	-
CO2	2	1	-	1	-	-	1	-
CO3	1	-	1	-	1	1	-	1
CO4	-	1	-	-	-	1	1	-
CO5	-	1	1	-	-	-	1	-
AVERAG	0.8	0.6	0.6	0.2	0.4	0.4	0.6	0.2

Semester-V (Ornamental Horticulture - Elective)

Course: 6A Vegetable Crops – Cultivation Practices

Cource Outcomes: Students at the successful completion of the course will be able to:

CO-1 Acquire a critical knowledge of ornamental gardening and its significance.

CO-2 Identify and explain living and non-living components in an ornamental garden.

C0-3 Acquire skills on propagation and planting of various ornamental plants.

C0-4 Perform managerial skills related to ornamental gardening.

C0-5 Demonstrate skills of designing and developing ornamental gardens in public places.

6A-Vegetable Crops – Ornamental Horticulture

Practical Outcomes: On successful completion of this practical course, student willbe able to:

- Identify various components required for ornamental garden development.
- Perform various skills related to establishment and maintenance of an ornamental garden.
- Demonstrate skills of making developing a lawn and bonsai.
- Make landscape design using CAD.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8

CO1	1	2	-	1	2	3	-	-
CO2	-	-	2	-	1	2	2	2
CO3	2	1	1	1	-	1	1	3
CO4	1	2	1	-	1	1	-	-
CO5	2	1	-	1	-	1	1	1
AVERAG	1.5	1.5	0.8	0.6	0.8	1.6	0.8	1.2

Semester-V (Commercial Floriculture)

Course: 7A Commercial Floriculture

course Outcomes: Students at the successful completion of the course will be able to:

C0-1 Identify different flowering plants of commercial value.

C0-2 Perform skills in propagation of flowering plants.

CO-3 Demonstrate skills of post-harvest handling of flowers.

C0-4 Perform skills of floral arrangements or making floral products.

Vegetable Crops- Commercial Floriculture

Practical Outcomes: On successful completion of this practical course, student willbe able to:

- Identify different flowering plants of commercial value.
- Perform skills in propagation of flowering plants.
- Demonstrate skills of post-harvest handling of flowers.

  Perform skills of floral arrangements or making floral products.

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	-	1	3	1	1	2	1	1
CO2	1	2	1	2	-	-	1	-
CO3	-	1	2	1	1	-	2	2
CO4	2	-	1	-	1	1	-	1
AVERAG	0.7	1	1.75	1	0.7	0.7	1	1

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NAAC : C (II Cycle)

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DEPARTMENT OF COMMERCE

PROGRAMME INFORMATION	
ProgrammeTitle	B.COM
AwardingInstitution	C.S.T.S.GOVERNMENTKALASALA
TeachingInstitution	C.S.T.S.GOVERNMENTKALASALA
Faculty	FacultyOFCommerce
Department	DepartmentofCommerce
ModeandPeriodofstudy	ThreeacademicYearsFullTime

- ThesareourCommececourses,whichcovertopicsinGeneral&computersinallyears of study.
- From3rdto5thSemestersbothprogrammes follow thesamecoursecontentinthe6th semestereverystudentgoingtopaidandnonpaidinternshipsinthe1stsemesterfrom 2023-24 Academic year introduced single major subject as a part of new education policy.

Programmeoutcomeswith Practical's:

1. KNOWLEDGEANDUNDERSTANDING

PO-1:AftercompletionofCommerceGraduation studentsareabletogaina thoroughknowledgeintheFundamentalsofCommerce,Banking,Accounting,Financeand Marketing.Taxation withthe practical exposure helps the studentsto standin organization

PO-2: Toanalyzedatabothquantitativelyandqualitativelyandtodrawcorrectinferences.

2. INTELLECTUALSKILLS

PO-3: Thestudentsareencouragedwithaddonvaluebasedandjoborindeedcourses which ensure them to the sustained in the organization level.

PO-4: EnterMasterProgrammerslikeM.Com,MBAandpursueProfessionalProgrammers like CA, etc.

3.ORGANIZATIONALSKILLS:

PO-5: Analyze organizational problems and generate realistic solutions based on current academic research in organizational behavior.

PO-6: Think critically on environment sustainability measures and propagate and follow environment friendly practices.

PO-7: Development entrepreneurial skills in students

5.GENERIC SKILLS(GENERAL SKILLS):

PO-8: Acquire comprehensive knowledge and skills make use of the knowledge in an innovative manner and are competent in identifying opportunities and develop strategies for contingencies.

Course Outcomes:

SEMESTER 1: Fundamentals of Accounting:

By the end of the course students are expected to be able to

CO1: Identify the consumer transactions and recording to know the maintenance of accounts books

CO2: To gain the knowledge of Accounting process and preparation final accounts

CO3: To develop skill of recording financial transactions and preparation of records

CO4: Analysis the difference between cashbook and passbook and in terms of balance make reconciliation

CO5: To know the final profits formulas and principal of business organization

5x8 mapping matrix of Cos –Pos is prepared in this regard for Fundamentals of Accounting programme

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	3	2	3	2	3	2
CO2	2	1	2	2	1	3	3	1
CO3	3	2	1	1	2	1	3	3
CO4	1	3	2	3	3	3	2	3
CO5	2	1	3	3	3	2	3	2
AVERAGE	2.2	1.8	2.2	2.2	2.4	2.2	2.8	2.2

SEMESTER 2: Business organization and management:

CO1: To understand the different forms of business organizations and its functions
CO2: To know the various sectors MNC companies features and it's progress
CO3: Importance of documents commencing of business content of prospectors
CO4: To know the Administration works material skills
CO5: To develop skill of planning and organizational structure

5x8 mapping matrix of Cos–Pos is prepared in this regard for Business organization and management program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	1	3	3	-	3	3	3	3
CO2	3	2	3	2	1	2	2	3
CO3	3	2	3	1	3	2	2	3
CO4	2	3	2	3	2	3	3	2
CO5	3	3	2	2	3	3	3	3
AVERAGE	2.4	2.6	2.6	1.8	2.4	2.6	2.6	2.8

SEMESTER 3: Business management and Environment

CO1: To understand concept and elements of affecting business of Environment
CO2: Economic trends and its impact and affect on government policies
CO3: To know the critical examination of at present government policies
CO4: To evaluate the best business policies and political stability, legal changes
CO5: To develop good business environment situations across the world

5x8 mapping matrix of Cos–Pos is prepared in this regard for Business management and Environment

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	3	2	2	3	3	2
CO2	2	2	3	2	3	3	1	3
CO3	3	3	2	-	3	3	3	3
CO4	2	2	3	3	1	2	3	2
CO5	3	2	3	2	3	3	3	2
AVERAGE	2.4	2.4	2.8	1.8	2.4	2.8	2.6	2.4

SEMESTER 4:Financial Accounting

CO1: Determine the useful life of asset and maintenance of asset and creations of deserve business entities
CO2: To understand provision resources how to create how to minimize bad and doubtful debts
CO3: To know the bill parties and renewal discounting bill without cash
CO4: To understand the concept of consignment and accounting treatment
CO5: To analysis accounting process

5x8 mapping matrix of Cos –Pos is prepared in this regard for Financial Accounting

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	3	3	2
CO2	3	2	1	2	3	2	2	3
CO3	3	3	3	3	2	3	3	3
CO4	2	1	2	1	3	1	3	2
CO5	1	3	3	3	2	3	3	3
AVERAGE	2.4	2.2	2.2	2.4	2.4	2.4	2.8	2.6

SEMESTER 5: Business Economics

CO1: To know nature of economics scarcity of resources
CO2: Analysis demand supply and it's on buying behavior
CO3: To evaluate the production and cost curves affecting forms behavior
CO4: Recognize the role of government in market failure structure
CO5: To know the economic models and measurement of national income

5x8 mapping matrix of Cos –Pos is prepared in this regard for Business Economics

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	2	3	3	3	3	2
CO2	2	2	3	2	2	2	3	3
CO3	1	3	1	1	3	3	2	2
CO4	3	2	3	-	2	1	2	2
CO5	3	3	3	3	2	3	3	2
AVERAGE	2.2	2.6	2.4	1.7	2.4	2.4	2.6	2.2

SEMESTER 6: Banking theory and practice

CO1: To understand the concept of banks and functions of commercial bank
CO2: To know the different types of bank system
CO3: Critically examine current scenario Indian banking system
CO4: To know how to develop banker customer relationship with KYC norms
CO5 : Formulate the procedure better service to the customer from various banking innovations

5x8 mapping matrix of Cos –Pos is prepared in this regard for Banking theory and practice

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	1	2	3	3	3	3	2	3
CO2	2	2	2	2	1	2	2	2
CO3	2	1	3	1	2	3	3	1
CO4	3	3	3	3	2	3	1	3
CO5	3	2	2	2	3	1	2	3
AVERAGE	2.2	2.0	2.6	2.2	2.2	2.4	2.0	2.4

SEMESTER 7: Advanced Accounting

CO1: Understand the concept of nonprofit organization
CO2 : To understand the scope of single entry system
CO3 :To introduce hire purchase system treatment of accounts
CO4 : To understand partnership accounts from admission and retirement of a partner
CO5 :understand the difference between the dissolution of the firm and dissolution of partnership

5x8 mapping matrix of Cos –Pos is prepared in this regard for Advanced Accounting

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	3	3	2	2	3	2
CO2	3	2	3	2	3	2	3	3
CO3	2	3	2	3	3	3	2	2
CO4	3	2	3	3	3	3	3	3
CO5	3	3	2	3	2	3	3	3
AVERAGE	2.8	2.4	2.6	2.8	2.6	2.6	2.8	2.6

SEMESTER 8: Business Statistics

CO1: To know the concept of statistics and it's important and real life
CO2: To provide the practical exposes and calculation of measure of central tendency
CO3 : To provide practical knowledge of dispersion coefficient variation
CO4 : To know the relative measure of curliest
CO5 : To understand correlation and concept probable error

5x8 mapping matrix of Cos –Pos is prepared in this regard for Business Statistics

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	2	3	2	2	3	2
CO2	2	3	3	3	2	2	2	3
CO3	3	2	2	2	3	3	2	3
CO4	3	3	3	-	3	2	2	2
CO5	2	3	3	3	3	3	3	3
AVERAGE	2.4	2.8	2.6	2.2	2.6	2.4	2.4	2.6

SEMESTER 9: Marketing

CO1: To develop an idea about marketing environment
CO2: To know the buying decisions and market segmentations
CO3: To learn product life cycle new products BPL
CO4: To know the priced e termination and impact on skimming and penetration
CO5: To understand advertising sales promotion public relations and always distribution channels

5x8 mapping matrix of Cos –Pos is prepared in this regard for Marketing

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	3	2	2	3	3	2
CO2	3	2	3	3	3	2	3	2
CO3	2	3	2	3	3	2	2	3
CO4	3	2	2	2	3	3	2	2
CO5	3	3	2	3	2	2	3	2
AVERAGE	2.6	2.6	2.4	2.6	2.6	2.4	2.6	2.2

SEMESTER 10: Corporate Accounting

CO1: To aware the process of book building treatment of share capital
CO2 : To know the adventures and by back of shares
CO3 : To analysis various of good will methods
CO4 : To evaluate valuation of shares
CO5 : To develop knowledge of final accounts as company act 2013

5x8 mapping matrix of Cos –Pos is prepared in this regard for Corporate Accounting

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	2	1	3	2	3	3
CO2	3	2	3	3	3	2	2	2
CO3	2	3	3	2	3	3	3	3
CO4	2	2	3	3	2	3	2	2
CO5	3	3	1	3	2	2	3	3
AVERAGE	2.6	2.6	2.4	2.4	2.6	2.4	2.6	2.6

SEMESTER 11: Cost and Management Accounting

CO1 : To know the various constant methods management techniques
CO2 :To understand the valuations of materials methods of payment and inset course
CO3 :To understand the job costing
CO4 : To know the preparation of financial statements and it's analysis
CO5 :To know the value adapted on each unit and estimation of profit

5x8 mapping matrix of Cos –Pos is prepared in this regard for Cost and Management Accounting

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	3	2	3	3	3	3
CO2	3	2	3	3	3	2	2	3
CO3	2	2	2	2	2	3	3	2
CO4	3	3	3	3	3	2	2	3
CO5	3	3	3	2	3	3	3	3
AVERAGE	2.6	2.6	2.8	2.4	2.8	2.6	2.6	2.8

SEMESTER 12: Income Tax

CO1 : To know the various constant methods management techniques
CO2 : To understand the valuations of materials methods of payment and inset course
CO3 :To understand the job costing
CO4 :To know the preparation of financial statements and it's analysis
CO5 :To know the value added on each unit and estimation of profit

5x8 mapping matrix of Cos –Pos is prepared in this regard for Income Tax

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	3	3	3	3	3	3
CO2	2	2	3	2	2	2	3	2
CO3	3	2	3	2	2	2	2	3
CO4	3	3	2	3	3	3	3	2
CO5	2	3	3	2	3	3	2	3
AVERAGE	2.6	2.6	2.8	2.4	2.6	2.6	2.6	2.6

SEMESTER 13: Business Law

CO1 :To understand the essential elements of Indian contract act 1872
CO2 :To develop valid offer, acceptance and consideration concepts
CO3 :To know the minors rules contract etc
CO4 :Sale of goods act consumer to detrude retries'
CO5 : To know the over view digital and enter cyber slaws

5x8 mapping matrix of Cos –Pos is prepared in this regard for Business Law

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	3	-	3	2	3	3
CO2	3	3	2	3	2	3	2	2
CO3	3	2	2	-	3	2	2	3
CO4	2	3	3	3	3	3	3	3
CO5	3	2	2	3	2	3	3	2
AVERAGE	2.8	2.6	2.4	1.8	2.6	2.6	2.6	2.6

SEMESTER 14:Auditing

CO1 : To know the importance of auditing role of auditor
CO2 :To know object of different types of audits
CO3 : To understand the audit notebook and planning of audit
CO4 : To enhance skills of beaching investigation
CO5 : To know the concept of audit report writing skills

5x8 mapping matrix of Cos –Pos is prepared in this regard for Auditing

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	3	3	3	3	3	3
CO2	3	2	3	2	3	2	2	2
CO3	2	3	2	3	3	3	3	3
CO4	2	3	3	2	2	2	2	3
CO5	3	3	3	3	2	3	2	2
AVERAGE	2.4	2.8	2.8	2.6	2.6	2.6	2.4	2.6

SEMESTER 15:Goods and Service Tax

CO1 : To know components of GST and basic principles
CO2 : To know the various GST models
CO3 : To understand the GST composition and supply
CO4 : To know the input tax credit utilization between CGST SGST
CO5 : To enhance skills of GST returns

5x8 mapping matrix of Cos –Pos is prepared in this regard for Goods and Service Tax

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	2	3	2	3	2	3
CO2	2	2	3	2	3	2	3	2
CO3	3	2	2	3	2	3	3	3
CO4	2	3	3	3	2	3	2	3
CO5	2	3	2	2	3	2	3	2
AVERAGE	2.4	2.6	2.4	2.6	2.4	2.6	2.6	2.6

SEMESTER 16:Cost Control Techniques

CO1: To know essential cost Control and reduction techniques
CO2 : To know the application of ABC analysis and over head costars
CO3 : To know the key factors of maker by destination
CO4 : To know components of standard various analysis
CO5 : To know the modern technologies applications

5x8 mapping matrix of Cos –Pos is prepared in this regard for Cost Control Techniques

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	2	2	3	3	3	3
CO2	3	3	3	3	3	2	3	3
CO3	3	2	2	3	2	2	3	2
CO4	2	3	2	3	3	3	2	3
CO5	3	3	3	2	2	2	3	2
AVERAGE	2.6	2.6	2.4	2.6	2.6	2.4	2.8	2.6

SEMESTER 17:Management Accounting and Practice

CO1: Understand the nature and scope of management accounting and differentiate management accounting, financial accounting and cost accounting.
CO2 : Compute ratios and draw in fervencies
CO3 : Analyze the performance of the organization by preparing funds flow statement and cash flow statements
CO4 : Prepare cash budget, fixed budget and flexible budget
CO5 : To know the various constant methods management techniques

5x8 mapping matrix of Cos –Pos is prepared in this regard for Management Accounting and Practice

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	3	3	3	3	3	3	3
CO2	2	3	2	2	2	3	2	2
CO3	3	2	3	3	3	3	3	2
CO4	2	3	2	3	2	2	3	3
CO5	3	3	3	2	3	2	3	3
AVERAGE	2.4	2.8	2.6	2.6	2.6	2.6	2.8	2.6

SEMESTER 18: Life Insurance with Practice

CO1: To understand the features of life insurance policy and schemes
CO2 : To understand the joint life policies and educational plants
CO3 : To know the principal of insurable interest
CO4 : To know the insurance claims and settlements consumer protection etc
CO5 : To know the role of IRDA

5x8 mapping matrix of Cos –Pos is prepared in this regard for Life Insurance with Practice

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	3	3	2	2	2	2
CO2	2	3	3	2	3	3	2	3
CO3	2	3	3	2	2	2	3	3
CO4	2	2	2	3	3	2	3	3
CO5	3	3	2	2	3	3	3	3
AVERAGE	2.4	2.6	2.6	2.4	2.6	2.4	2.6	2.8

SEMESTER 19: General Insurance with Practice

CO1 : To know frame walk of IRDA objective and powers
CO2 : To know motor vehicle act and compilation structure
CO3 : To know marine insurance calculation and payment of claims
CO4 :To understand the agricultural insurance and proper life stock
CO5 : Calculation of premium and claims

5x8 mapping matrix of Cos –Pos is prepared in this regard for General Insurance with Practice

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	2	3	3	3	3	3
CO2	2	3	3	-	2	2	2	3
CO3	2	3	2	3	3	3	2	2
CO4	3	2	3	3	2	1	2	2
CO5	3	1	2	2	2	2	3	3
AVERAGE	2.6	2.4	2.4	2.2	2.4	2.2	2.4	2.6

SEMESTER 20:Digital Marketing

CO1: To analysis online micro and macro business marketing techniques
CO2 : To know objective and website creation
CO3 : To enhance the rule such intention to optimization skills
CO4 : To develop skill of social networking and video creation
CO5 : To know the evaluation email marketing

5x8 mapping matrix of Cos –Pos is prepared in this regard for Digital Marketing

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	2	3	3	3	2	3	3
CO2	2	3	2	3	2	2	3	3
CO3	3	2	2	2	2	3	3	3
CO4	3	3	3	3	2	2	2	2
CO5	3	3	3	2	3	3	2	3
AVERAGE	2.6	2.6	2.6	2.6	2.4	2.4	2.6	2.8

SEMESTER 21:Service Marketing

CO1: To discuss the scope growth of service sector
CO2 : To know the stages of consumer behavior in service sector
CO3 : To know the relationship marketing and services marketing techniques
CO4 : To define the service standards
CO5 : To know the need of quality dimensions

5x8 mapping matrix of Cos –Pos is prepared in this regard for Service Marketing

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	2	3	2	2	3	3
CO2	2	3	2	3	3	3	3	3
CO3	3	3	1	2	3	2	2	2
CO4	2	2	3	3	2	3	3	2
CO5	2	1	3	1	1	3	2	2
AVERAGE	2.4	2.4	2.2	2.4	2.2	2.6	2.6	2.4

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DEPARTMENT OF HISTORY

PROGRAMME INFORMATION	
Program Title	B. A (HISTORY, ECONOMICS, POLITICAL SCIENCE)
Awarding Institution	CSTS GOVERNMENT KALASALA, JANGAREDDIGUDEM
Teaching Institution	CSTS GOVERNMENT KALASALA, JANGAREDDIGUDEM
Faculty	Faculty of History
Department	Department of History
Mode and Period of study	Three Years Full Time

- This Course studied with combination of Economics and Political Science.
- In Three Major Program 1st to 5th Semesters follow the same core course content in the 6th Semester one common elective course and 3 cluster courses form the subject of student interest with in the programs they opted.
- In Single Major Program History subject opted as Minor Program depends on the interest of the student.

PO1: LEARNING OUTCOMES:

- ✓ Knowledge: Students will be able to:
- ✓ Understand key historical events, figures, and concepts across different periods and regions.
- ✓ Analyze primary and secondary sources critically.
- ✓ Explain the causes and consequences of historical events.
- ✓ Identify different historical interpretations and perspectives.

PO2: SKILLS

- ✓ Research and gather information effectively.
- ✓ Analyze and interpret evidence.
- ✓ Develop strong critical thinking and writing skills.
- ✓ Communicate historical knowledge effectively through writing, speaking, and presentations.

PO3: VALUES

- An appreciation for the complexity and diversity of human history.
- An understanding of different cultures and perspectives.
- A critical awareness of the present through the lens of the past.
- A sense of empathy and responsibility as global citizens.

PO4: CAREER OUTCOMES:

- History graduates can pursue a variety of careers, including:
  - Teaching and research
  - Museum and archives work
  - Law and government
  - Journalism and media
  - Business and finance
  - Many other fields that require strong research, writing, and critical thinking skills.

Course Outcomes:

SEMESTER 1: SCIENCE AND HUMAN PAST

CO1: Students will understand the meaning of history and its relation to other social sciences and historical writing.

CO2: Learn about the origin and evolution of human culture.

CO3: Know how humans transformed from the Stone Age to the Iron Age.

CO4: Understand the greatness of the first Indian civilization in the Indus Valley.

CO5: Learn about the richness of Vedic culture.

5x6 mapping matrix of Cos –Pos is prepared in this regard for **SCIENCE AND HUMAN PAST** course in B.A program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	2	3	3	2	1	2
CO2	3	3	3	2	1	2
CO3	3	2	3	2	1	2
CO4	2	1	2	1	2	1
CO5	2	1	2	2	1	2
AVERAGE	2.4	2	2.6	1.8	1.2	1.8

"1" – Slight (Low) Correlation,
"2" – Moderate (Medium) Correlation,
"3" – Substantial (High) Correlation,
"-" – Indicates there is no correlation

SEMESTER 2: MEDIEVAL INDIAN SOCIETY: (POLITY, ECONOMY, AND CULTURE-1206 CE-1707 CE

CO1: Know the Delhi Sultanate Rule and its Conditions.

CO2: The Administrative Policies and Reforms of the Delhi Sultanate Kings

CO3: Understand the nature of mediaeval Indian states.

CO4: Get knowledge of the emergence of composite culture in India.

4x6 mapping matrix of Cos –Pos is prepared in this regard for THREE-DIMENSIONAL **MEDIEVAL INDIAN SOCIETY: (POLITY, ECONOMY, AND CULTURE-1206 CE-1707 CE** course in B.A program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	1	2
CO2	3	3	3	2	2	2
CO3	3	2	3	2	1	2
CO4	2	1	2	1	2	1
AVERAGE	2.75	2.25	2.75	1.75	1.5	1.75

SEMESTER 3: INDIAN NATIONAL MOVEMENT (1857-1947)

CO1: Learn the reforms of British viceroys, i.e., Lord Lytton, Rippon, and Curzon.

CO2: Study the important factors for the growth of Indian nationalism

CO3: Understand the young generation's enthusiasm to obtain independence at an early age.

CO4: Visualise the idealistic policies of Mahatma Ghandhi.

6x4 mapping matrix of Cos –Pos is prepared in this regard for **INDIAN NATIONAL MOVEMENT (1857-1947)** course in B.A program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	3	2	3	2	-	2
CO4	2	2	2	1	-	1
AVERAGE	2.5	2.3	2.5	1.5	0.67	1.5

SEMESTER 4: SOCIAL AND CULTURAL HISTORY OF ANDHRA PRADESH (UP TO 1956 CE)

CO1: Learning Outcomes: Students after successful completion of the Paper will be able to

CO2: Learn the broad social and cultural history of Andhra Pradesh, from pre-historic to the formation of Andhra Pradesh.

CO3: Visualise the various major and minor dynasties that ruled Andhradesa between the 11th and 16th centuries.

CO4: Know the advent of Europeans in Andhra and their trading settlement.

CO5: Learn about the socio-cultural awakening of Andhra during the 19th and early 20th centuries.

CO6: Examined the growth of the nationalist movement in Andhra Pradesh from 1885 to 1947.

6x6 mapping matrix of Cos –Pos is prepared in this regard for **SOCIAL AND CULTURAL HISTORY OF ANDHRA PRADESH (UP TO 1956 CE)** course in B.A program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	3	2	3	2	-	2
CO4	2	2	2	1	1	1
CO5						
CO6						
AVERAGE	2.75	2.5	2.75	1.75	0.25	1.75

SEMESTER 4: TOURISM AND HOSPITALITY SERVICES

CO1: Know the basics of tourism and hospitality services.

CO2: Inculcate interpersonal skills in the students.

CO3: Develop the ability to multitask and manage crises.

CO4: Understands the spirit of teamwork and different types of services

6x4 mapping matrix of Cos –Pos is prepared in this regard for **TOURISM AND HOSPITALITY SERVICES** course in B.A program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	2	2	3	2	-	2
CO4	2	1	1	1	1	1
AVERAGE	2.5	2.25	2.5	1.75	0.25	1.75

SEMESTER 5: 2020-21 A.Y HISTORY & CULTURE OF ANDHRA (FROM 1512 TO 1956 AD)

CO1: Interpret social and culture transformation from medieval to modern Andhra

CO2: Relate key historical development during medieval period occurring in costal Andhra and Telangana regions and analyze socio-political and economic changes under Qutbshahi rules

CO3: Understand gradual change, or change in certain aspects of society in Andhra, rather than rapid or fundamental changes.

CO4: Explain how the English East India company became the most dominant power and outline the impact of colonial on different aspects in Andhra.

6x4 mapping matrix of Cos –Pos is prepared in this regard for **2020-21 A.Y HISTORY & CULTURE OF ANDHRA (FROM 1512 TO 1956 AD)** course in B.A program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	3	3	3	2	-	2
CO3	3	2	3	2	-	2
CO4	2	2	2	1	1	1
AVERAGE	2.6	2.4	2.6	1.8	0.4	1.6

SEMESTER 5: 2020-21 A.Y HISTORY OF MODERN WORLD (FROM 15TH CENT. AD TO 1945 AD)

CO1: Demonstrate advanced factual knowledge of world histories, politics, and cultures

CO2: Assess and appraise the developments in art, literature, and society during the Renaissance and utilize content knowledge of the Reformation and Counter Reformation to make predictions about the evolution of Christianity in Europe and abroad.

CO3: Evaluate the causes for the Glorious Revolution and American Revolution and identify the background for the evolution of human rights movement.

CO4: Understand the main events of the French Revolution and its significance in the shift in European culture from Enlightenment to Romanticis.

CO5: Think how Russia's traditional monarchy was replaced with the world's first Communist state.

6x5 mapping matrix of Cos –Pos is prepared in this regard for **2020-21 A.Y HISTORY OF MODERN WORLD (FROM 15TH CENT. AD TO 1945 AD)** course in B.A program

COS/POS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	2	-	2
CO2	2	2	2	2	-	2
CO3	2	2	3	2	-	1
CO4	2	2	2	1	1	1
CO5	2	2	2	1	1	1
AVERAGE	2.2	2.2	2.4	1.6	0.4	1.4

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Chhatrapati Shivaji Tri Satajayanthi Utsavalu Govt. Kalasala Jangareddigudem