

SATVAHANA UNIVERSITY



Scheme of Instruction and Syllabus

B.Sc Physics (I – VI Semesters)
Under CBCS scheme
(from the academic year 2016-2017)

Approved Syllabus
for
B.Sc. Computer Science



**Satavahana University,
Karimnagar**

Under Choice Based Credit System
2016

Approved Syllabus
for
**B.A. (Computer Applications) &
B.Sc. (B.Z. Computer Applications)**



**Satavahana University,
Karimnagar**

Under Choice Based Credit System

2016

DEPARTMENT OF ENGLISH
SATAVAHANA UNIVERSITY
UG GENERAL ENGLISH (CBCS) 2017-18



LESSON ONE (SHORT FICTION)	TEXT	THE TOUCH BY ABBURI CHAYADEVI
	GRAMMAR	CONCORD
	ETYMOLOGY	WORD ORIGIN
	READING COMPREHENSION	P V NARASIMHA RAO
	WRITING	LETTER WRITING
	LANGUAGE SKILLS	LISTENING SKILLS: TIPS TO IMPROVE LISTENING SKILLS, BARRIES TO LISTENING
	SOFT & COMMUNICATION SKILLS	BRAIN STORMING
LESSON TWO (PROSE)	TEXT	TO STUDENTS BY M K GANDHI
	GRAMMAR	WORDS AND THEIR FORMS
	VOCABULARY	STORY ABOUT THE ORIGIN OF WORDS
	READING COMPREHENSION	TEMPLE STORY
	WRITING	NOTE MAKING / NOTE TAKING
	LANGUAGE SKILLS	EFFECTIVE LISTENING: CONVERSATION SKILLS
	SOFT & COMMUNICATION SKILLS	JAM
LESSON THREE (POETRY)	TEXT	THE BAT MESSANGER BY JASHUVA
	GRAMMAR	SPOTTING THE ERRORS
	VOCABULARY	WORDS IN ENGLISH FROM OTHER LANGUAGES
	READING COMPREHENSION	PERINI, THE PROUD HERITAGE OF TELANGANA
	WRITING	PROVERB EXPANSION

Syllabus for Computer Science

Proposed scheme for B.Sc. Programme under Choice Based Credit System

SYLLABUS for B.Sc Computer Science 2016-17

Programming in C (SEMETER - I)

4 Hrs /week

Total Classes: 60

Unit-1:

Fundamentals of Computers: Computer Definition, Types of Computers, Block diagram of Computer (Memory, Input & Output Devices). Operating System: Definition, Types and Functions of Operating System. Introduction to DOS: Dos Internal and External Commands. Introduction to Windows: Desktop, File, Folder, My Computer, My Documents, Recycle bin, Internet Explorer and Windows Explorer. Programming Concepts: Algorithm and its characteristics, pseudo code / flow charts, program, compilers and interpreters.

Unit-2:

Introduction to C: Concept of Structured Programming, Implementation of Structured Programming, Introduction to the C Language – Background, C Programs, Identifiers, Types, Variables, Constants, Input / Output statements, Operators(Arithmetic, relational, logical, bitwise etc.), Expressions, Precedence and Associativity, Expression Evaluation, Type conversions, Statements - Selection Statements(making decisions) – if and switch statements, Repetition statements (loops)-while, for, do-while statements, Loop examples, other statements related to looping – break, continue, goto, Simple C Program examples. One-dimensional Arrays, Character arrays, Functions from ctype.h, string.h, Multidimensional Arrays.

Unit-3:

Functions-Designing Functions, user defined functions, inter function communication, Standard functions, Scope, Storage classes-auto, register, static, extern, scope rules, type qualifiers, recursion-recursive functions, Limitations of recursion, example C programs, Call-by-Value Vs Call-by-reference, Passing Arrays to Functions. Pointers in C: Introduction, Address of Operator (&), Arrays and Pointers, Pointers and Strings, Pointer to Pointers, Array of Pointers, Pointer to Array, Dynamic Memory Allocation.

Unit-4:

User-defined Data Types(Structures & Union): Declaration, Initialization, Accessing members, Array of Structures, Structures Vs Unions, Enumeration Types. Files in C: Introduction, Using Files in C, Working with Text Files, Working with Binary Files, Random Access Files, Other File Management Functions. Command line arguments, Preprocessor commands.

Books Recommended

1. Computer Science: A Structured Programming Approach Using C, B.A.Forouzan and R.F. Gilberg, Third Edition, Cengage Learning.
2. Programming in C. P. Dey and M Ghosh , Oxford University Press.
3. Fundamentals of Computers - Reema Thareja , Oxford University Press.(UNIT-1)
4. Introduction to Computers - Peter Norton , Tata Mcgraw hill.(UNIT-1)

References

1. Programming in Ansi C by Bala guruswamy 7th edition Tata Mcgraw hill

**Syllabus for Computer Science
For B.Sc Programme under Choice Based Credit System
B.Sc (Computer Science) – III Year (VI SEMESTER)**

SOFTWARE ENGINEERING (Core Subject)

Theory: 4 credits (4 Hours/Week)

Practical: 1 Credit (2 Hours/week)

UNIT-I

SOFTWARE ENGINEERING: The Nature of Software, Changing Nature of Software, Defining the Discipline, Software Process, Software Engineering Practice.

THE SOFTWARE PROCESS: A Generic Process Model, Defining a Framework Activity, Process Assessment and Improvement, Prescriptive Process Models, Specialized Process Models, Unified Process, Defining Agility, Agile Process, Extreme Programming,

UNIT – II

MODELLING: Principles that guide Practice - Core Principles - Principles that guide each framework activity.-Communication principles, Planning principles, Modelling principles, Construction principles, Deployment principles.

REQUIREMENTS: Requirements Engineering, Establishing the Groundwork, Eliciting Requirements, Building the Requirements model, Negotiating requirements, validating requirements.

UNIT-III:

DESIGN CONCEPTS: Design within the Context of SE, Design Process, Design Concepts. **ARCHITECTURAL DESIGN:** Software Architecture, Architectural Styles, Architectural Design. **COMPONENT DESIGN:** Designing Class-Based Components, Conducting Component-Level Design.

UNIT-IV

UNIFIED MODELLING LANGUAGE: UML introduction, Use case diagrams, Activity diagrams, class diagrams, sequence diagrams, component diagrams, interaction diagrams, composite structure diagrams, state machine diagrams, timing diagrams, object diagrams, package diagrams, deployment diagrams.

TEXT BOOK

1. ROGER S PRESSMAN, B R MAXIM, SOFTWARE ENGINEERING--A PRACTITIONER'S APPROACH (8E)
2. GRADY BOOCH, JAMES RUMBAUGH, IVAR JACOBSON : THE UNIFIED MODELING LANGUAGE USER GUIDE, PEARSON EDUCATION

REFERENCE BOOKS

1. SOFTWARE ENGINEERING BY GHEZZI (PHI)
2. SOFTWARE ENGINEERING FUNDAMENTALS BY BEHFOROZ AND HUDSON OXFORD UNIVERSITY PRESS
3. GRADY BOOCH, OBJECT-ORIENTED ANALYSIS AND DESIGN WITH APPLICATIONS

**GENERIC ELECTIVE II
(FOR ALL FACULTTIES)**

BCO602: WATER RESOURCES MANAGEMENT

Paper: BCO602

Max. Marks: 40+10

PPW: 2 Hrs

Exam Duration: 1½ hrs

UNIT-I

1. Importance of Natural Resources – Different Types and Resources
2. Significance of Water Resources and their uses
3. Conservation of water and recycling of the water – Global distribution of water
4. Water shed programmes and their management
5. Storing the rain water in tanks and recharging ground water

Unit-II

6. Rain water harvesting in rural areas (*cheddam, trenches* etc..)
7. Overuse of surface and ground water and control measures.
8. Aims, objectives and implementation of *Mission Bhagiratha* (Telangana Government Drinking water programme)
9. Aims, objectives and implementation of *Mission Kakatiya* (Telangana Government minor irrigation programme)
10. Issues and challenges in Water Resources Management

SYLLABUS
B.A. (ECONOMICS) –III year
SEMESTER-V,VI
CHOICE BASED CREDIT SYSTEM (CBCS)
2018-19



Department of Economics
Satavahana University
Karimnagar
Telangana State-India

SATAVAHANA UNIVERSITY, KARIMNAGAR

U.G. ECONOMICS SYLLABUS (Under CBCS)

B.A. III YEAR

SEMESTER – V : CORE COURSE (Credits - 5)

COURSE – V: INDIAN ECONOMY

Unit – I: Basic Structure of the Indian Economy

Concepts of Development, Underdevelopment, Deprivation & Growth with reference to India (in brief) – Basic Features of Indian Economy: Growth and Structural Changes in Indian Economy – Demographic Features – Population: Size, Growth, Composition and their Implications on Indian Economy – Concept of Demographic Dividend – Occupational Distribution of Population in India – Population Policy of India – Development of Socio-Economic Infrastructure: Education and Health

Unit – II: National Income, Poverty and Unemployment

Estimation of National Income – Trends and Composition of National Income in India – Income Inequalities in India: Magnitude, Causes, Consequences and Remedial Measures – Poverty in India: Concept, Types, Trends, Causes and Consequences – Unemployment in India: Concept, Types, Trends, Causes and Consequences – Poverty Alleviation and Employment Generation Programmes in India

Unit – III: Planning and Public Policy

Five Year Plans: Concept and Objectives – Review of Five Year Plans – 12th Five Year Plan – NITI Aayog – Economic Reforms: Liberalisation, Privatisation and Globalisation – A Critical Evaluation – Impact of GATT and WTO on Indian Economy

Unit – IV: Agricultural Sector

Importance and Role of Agriculture in Indian Economy – Trends in Agricultural Production and Productivity – Land Reforms – Green Revolution – Agricultural Finance – Agricultural Marketing – Agricultural Pricing – Food Security in India

Unit – V: Industrial and Service Sector

Structure, Growth, Importance and Problems of Indian Industry – Large, Medium and Small Scale Industries: Role and Problems – Industrial Policies of 1948, 1956 and 1991 – FEMA and Competition Commission of India – Disinvestment Policy – Concept and Components of Service Sector – Infrastructural Development: Transport, Banking, Insurance, Information Technology, Communication and Tourism – Foreign Direct Investment

NUMERICAL ANALYSIS

BS: 603

DSC-1F

Theory: 3 credits and Practicals: 1 credit
Theory: 3 hours /week and Practicals: 2 hours /week

Objective: Students will be made to understand some methods of numerical analysis.

Outcome: Students realize the importance of the subject in solving some problems of algebra and calculus.

Unit - I

Solutions of Equations in One Variable : The Bisection Method - Fixed-Point Iteration - Newton's Method and Its Extensions - Error Analysis for Iterative Methods - Accelerating Convergence - Zeros of Polynomials and Müller's Method - Survey of Methods and Software

Unit - II

Interpolation and Polynomial Approximation: Interpolation and the Lagrange Polynomial - Data Approximation and Neville's Method - Divided Differences - Hermite Interpolation - Cubic Spline Interpolation

Unit - III

Numerical Differentiation and Integration: Numerical Differentiation - Richardson's Extrapolation - Elements of Numerical Integration- Composite Numerical Integration - Romberg Integration - Adaptive Quadrature Methods - Gaussian Quadrature

Text : Richard L. Burden and J. Douglas Faires, *Numerical Analysis (9e)*

References: M K Jain, S R K Iyengar and R k Jain, *Numerical Methods for Scientific and Engineering computation*

B. Bradie, *A Friendly introduction to Numerical Analysis*

**B.Sc. PHYSICS SYLLABUS UNDER CBCS SCHEME
SCHEME OF INSTRUCTION**

Semester	Paper [Theory and Practical]	Instructions Hrs/week	Marks	Credits
I sem	Paper – I : Mechanics	4	100	4
	Practicals – I : Mechanics	3	50	1
II sem	Paper – II: Waves and Oscillations	4	100	4
	Practicals – II : Waves and Oscillations	3	50	1
III sem	Paper – III : Thermodynamics	4	100	4
	Practicals – III : Thermodynamics	3	50	1
IV sem	Paper – IV : Optics	4	100	4
	Practicals – IV :Optics	3	50	1
V sem	Paper –V : Electromagnetism	3	100	3
	Practicals – V: Electromagnetism	3	50	1
	Paper – VI : Elective – I Solid state physics/ Quantum Mechanics and Applications	3	100	3
	Practicals – VI : Elective – I Practical Solid state physics/ Quantum Mechanics and Applications	3	50	1
VI sem	Paper – VII : Modern Physics	3	100	3
	Practical – VII : Modern Physics Lab	3	50	1
	Paper – VIII : Elective – II Basic Electronics/ Physics of Semiconductor Devices	3	100	3
	Practicals – VIII : Elective – II Practical Basic Electronics/ Physics of Semiconductor Devices	3	50	1
Total Credits		36		

OFFICE OF THE DIRECTOR, ACADEMIC AUDIT CELL
SATAVAHANA UNIVERSITY
KARIMNAGAR - 505 001 (T.S.), INDIA

Dr. V. Ramesh

Director

Lr.No. SU/KNR/2019-20/979

Date: 17.10.2019.

CIRCULAR

Sub: Satavahana University, Karimnagar – Environmental studies” paper as common in 1st semester for all UG Courses - Circular – Issued.

All the Principals of UG colleges are instructed to follow the “Environmental studies” paper as common in 1st semester for all UG Courses for 2 credits.

The syllabus is available in university website www.satavahana.ac.in.


DIRECTOR

Encl: syllabus of Environmental studies

To
All the Principals of UG (Govt. & Private) Colleges
Satavahana University
Karimnagar.

ENVIRONMENTAL STUDIES

UNIT - I : ECOSYSTEM, BIODIVERSITY & NATURAL RESOURCES : (15 hrs.)

1. Definition, Scope & Importance of Environmental Studies.
2. Structure of Ecosystem – Abiotic & Biotic components Producers, Consumers, Decomposers, Food chains, Food webs, Ecological pyramids)
3. Function of an Ecosystem :Energy flow in the Ecosystem (Single channel energy flow model)
4. Definition of Biodiversity , Genetic, Species & Ecosystem diversity , Hot-spots of Biodiversity, Threats to Biodiversity , Conservation of Biodiversity (Insitu & Exsitu)
5. Renewable & Non – renewable resources, Brief account of Forest , Mineral & Energy (Solar Energy & Geothermal Energy) resources
6. Water Conservation, Rain water harvesting & Watershed management.

UNIT – II : ENVIRONMENTAL POLLUTION , GLOBAL ISSUES & LEGISLATION : (15 hrs.)

1. Causes, Effects & Control measures of Air Pollution, Water Pollution
2. Solid Waste Management
3. Global Warming & Ozone layer depletion.
4. Ill – effects of Fire- works
5. Disaster management – floods, earthquakes & cyclones
6. Environmental legislation :-
(a) Wild life Protection Act (b) Forest Act (c) Water Act (d) Air Act
7. Human Rights
8. Women and Child welfare
9. Role of Information technology in environment and human health

FIELD STUDY:

(5 hrs.)

- Pond Ecosystem
- Forest Ecosystem

SUGGESTED BOOKS :

1. Environmental Studies - from crisis to cure – by R. Rajagopalan (Third edition) Oxford University Press.
2. Text book of Environmental Studies for undergraduate courses (second edition) by Erach Bharucha
3. A text book of Environmental Studies by Dr.D.K.Asthana and Dr. Meera Asthana
4. Environmental Studies (2019), R Venkateswara Rao, HPH



B.COM (Computer Applications)

CBCS COURSE STRUCTURE

w.e.f. 2019-20

<i>Sl.No.</i>	<i>Code</i>	<i>Course Title</i>	<i>HPW</i>	<i>Credits</i>	<i>Exam Hrs</i>	<i>Marks</i>
(1)	(2)	(3)	(5)	(6)	(7)	(8)
SEMESTER - I						
1.	ELS1	English (First Language)	4	4		
2.	SLS1	Second Language	4	4		
3.	AEC1	Environmental Science/ Basic Computer Skills	2	2		
4.	DSC101	Financial Accounting-I	5	5	3 hrs	80U+20I
5.	DSC102	Business Organization and Management	5	5	3 hrs	80U+20I
6.	DSC103	Fundamentals of Information Technology	3T+4P	5	1 ½ hrs	60T+20 P+ 20I
		Total	27	25		
SEMESTER - II						
7.	ELS2	English (First Language)	4	4		
8.	SLS2	Second Language	4	4		
9.	AEC2	Basic Computer Skills/ Environmental Science	2	2		
10.	DSC201	Financial Accounting-II	5	5	3 hrs	80U+20I
11.	DSC202	Business Laws	5	5	3 hrs	80U+20I
12.	DSC203	Programming with C & C++	3T+4P	5	1 ½ hrs	60T+20 P+ 20I
		Total	27	25		

M.A. ECONOMICS
(FOUR SEMESTERS SYLLABUS UNDER CBCS FROM THE ACADEMIC
YEAR 2016-17)



Department of Economics
Satavahana University
Karimnagar – 505 001

DEPARTMENT OF ECONOMICS
PROPOSED ECONOMICS SYLLABUS FOR M.A.
W.E.F 2016-2017 ACADEMIC YEAR

M.A. PREVIOUS

SEMESTER-I

ECO – 101
ECO – 102
ECO – 103

CORE PAPERS

Micro Economics – I
Macro Economic Analysis – I
Quantitative Methods – I

ELECTIVE PAPERS

ECO –104(a)
ECO –104(b)

Agricultural Economics – I
OR
Computer Applications -I

ECO –105(a)
ECO –105(b)

Social Sector – I
OR
financial economics-I

ECO –106

Seminars

SEMESTER-II

ECO – 201
ECO – 202
ECO – 203

CORE PAPERS

Micro Economics – II
Macro Economics Analysis – II
Quantitative Methods – II

ELECTIVE PAPERS

ECO –204(a)
ECO –204(b)

Agricultural Economics – II(ASSESSMENT)
OR
Computer Applications-II(CAELAB)

ECO –205(a)
ECO –205(b)

Social Sector – II
OR
Financial Economics – II

ECO –206

Seminars

(Dr A K Vasudeva Chary)
Chairman, BOS in Economics, SU

DEPARTMENT OF ECONOMICS
PROPOSED ECONOMICS SYLLABUS FOR M.A.
W.E.F 2016-2017 ACADEMIC YEAR

M.A. FINAL

SEMESTER-III

ECO - 301
ECO - 302
ECO - 303

CORE PAPERS

Development economics-I
International Economics
Public Economics

ELECTIVE PAPERS

ECO – 304(a)
ECO – 304(b)
ECO – 305(a)
Eco - 305 (b)
ECO – 306

Econometrics – I
OR
Agri-Business– I

Demography
(OR)
Industrial Economics

Seminars

SEMESTER-IV

ECO - 401
ECO - 402
ECO - 403

CORE PAPERS

Development economics-II
Indian economy
Environment Economics

ELECTIVE PAPERS

ECO – 404(a)
OR
ECO – 404(b)

ECO – 405(a)

ECO – 405(b)

ECO – 406

Econometrics – II

Labour economics

Economics of Insurance
OR
Telangana Economy/Project work

Seminars

Note: A Centre has to choose either option Telangana or Project mentioned under Paper Eco-405 in the IV Semester. If some students are willing to take up project work, they can be allowed by giving undertaking to University that they will not claim any financial assistance for carrying out project work.

(Dr A K Vasudeva Chary)

Chairman, BOS in Economics, SU



DEPARTMENT OF COMMERCE
Course Structure for P.G. Programme in Commerce
SATAVAHANA UNIVERSITY – KARIMNAGAR
Under Choice Based Credit System
M.COM I & II SEMESTER

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
	CPT -I	5	-	20	80	100	5	3 Hrs
	CPT -II	5	-	20	80	100	5	3 Hrs
	CPT -III	5	-	20	80	100	5	3 Hrs
	CPT -IV	5	-	20	80	100	5	3 Hrs
	CPT -V	3	2*	20	60	100	5	3 Hrs
					20			
	FC*	2	-	10	40	50	2	2 Hrs
	Total		27	110	440	550	27	

* Every Student must pass this paper since it is mandatory. However the credits will not be included in the calculation of SGPA and CGPA.

* Computer Lab PPW 1 = 2Lab hours

CPT – Core Paper Theory

CPP – Core Paper Practical

FC-Foundation Course*



DEPARTMENT OF COMMERCE
Course Structure for P.G. Programme in Commerce
SATAVAHANA UNIVERSITY – KARIMNAGAR
Under Choice Based Credit System
M.COM III & IV SEMESTER

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
	CPT -I	5	-	20	80	100	5	3 Hrs
	CPT -II	5	-	20	80	100	5	3 Hrs
	CPT -III	5	-	20	80	100	5	3 Hrs
	CPT -IV	5	-	20	80	100	5	3 Hrs
	CPT -V	5	-	20	80	100	5	3 Hrs
	Project Work	5						
	Total	30	-	100	400	500	25	

Paper Code	Title of the Paper	Workload per Week		Marks			Credits	Duration of Exam.
		Theory	Practical	Internal	University	Total		
	CPT -I	5	-	20	80	100	5	3 Hrs
	CPT -II	5	-	20	80	100	5	3 Hrs
	CPT -III	5	-	20	80	100	5	3 Hrs
	CPT -IV	5	-	20	80	100	5	3 Hrs
	CPT -V	5	-	20	80	100	5	3 Hrs
	Project Work	5	-	--	50VV+ 50D	100	5	
	Total	30	-	100	500	600	30	

CPT – Core Paper Theory

CPP – Core Paper Practical

VV=Viva-Voce

D=Dissertation

**SYLLABUS FOR
M.Sc. ZOOLOGY**

(With effect from the academic year 2016-17 Under CBCS system)

**DEPARTMENT OF ZOOLOGY
SATAVAHANA UNIVERSITY
TELANGANA STATE**

SATAVAHANA UNIVERSITY, DEPARTMENT OF ZOOLOGY
(With effect from the academic year 2016-17 Under CBCS system)

S.No	Paper Code	Title of the Paper	Instruction Hrs/Week	No. of Credits	Marks		Total Marks
					External	Internal	
SEMESTER-I							
1	101	Biosystematics, Structure & Function Of Invertebrates	4	4	80	20	100
2	102	Tools and Techniques in Biology	4	4	80	20	100
3	103	Animal Physiology and Ethology	4	4	80	20	100
4	104	Genetics and Evolution	4	4	80	20	100
5	105	Practical-I	4	4	100	--	100
6	106	Practical-II	4	4	100	--	100
7	107	Seminar	--	1	--	25	25
		Total		25	520	105	625
SEMESTER-II							
1	201	Structure and Function of Vertebrates	4	4	80	20	100
2	202	Environmental Biology	4	4	80	20	100
3	203	Biochemistry	4	4	80	20	100
4	204	Biostatistics and Computer Applications	4	4	80	20	100
5	205	Practical-I	4	4	100	--	100
6	206	Practical-II	4	4	100	--	100
7	207	Seminar	--	1	--	25	25
		Total		25	520	105	625

S.No	Paper Code	Title of the Paper	Instruction Hrs/Week	No. of Credits	Marks		Total Marks
					External	Internal	
SEMESTER-III							
1	301	Molecular Biology	4	4	80	20	100
2	302	Immunology	4	4	80	20	100
3	303	Subject Elective – I Parasitology (OR) Subject Elective – II Clinical Science	4	4	80	20	100
4	304	Subject Elective – III Endocrinology & Reproductive Biology (OR) Subject Elective – IV Bioinformatics	4	4	80	20	100
5	305	Practical – I	4	4	100	--	100
6	306	Practical – II	4	4	100	--	100
7	307	Seminar	--	1	--	25	25
		Total		25	520	105	625
SEMESTER-IV							
1	401	Cell Biology	4	4	80	20	100
2	402	Developmental Biology	4	4	80	20	100
3	403	Subject Elective – I Fisheries And Aquaculture (OR) Subject Elective – II Neurophysiology	4	4	80	20	100
4	404	Subject Elective – III Animal Biotechnology (OR) Subject Elective – IV Entomology	4	4	80	20	100
5	305	Practical – I	4	4	100	--	100
6	406	Practical – II	4	4	100	--	100
7	407	Seminar	--	1	--	25	25
		Total		25	520	105	625
GRAND TOTAL (Sem I+II+III+IV)				100	2080	420	2500