

ANNEXURE 18D03

V.V. VANNIAPERUMAL COLLEGE FOR WOMEN



(Belonging to Virudhunagar Hindu Nadars)

An Autonomous Institution Affiliated to Madurai Kamaraj University, Madurai

Re-accredited with 'A' Grade (3rd Cycle) by NAAC

VIRUDHUNAGAR - 626 001

**CHOICE BASED CREDIT SYSTEM
REGULATIONS AND SYLLABUS
(with effect from Academic Year 2018 - 2019)**

V.V. Vanniaperumal College for Women, Virudhunagar, established in 1962, offers 19 UG Programmes, 14 PG Programmes, 6 M.Phil. Programmes and 3 Ph.D. Programmes. All these programmes, except Ph.D. Programmes, have been framed as per the guidelines given by UGC under Choice Based Credit System (CBCS).

The Departments of Commerce, English and History upgraded as Research Centres offer Ph.D. Programmes as per the norms and regulations of Madurai Kamaraj University, Madurai and do not come under the purview of CBCS.

CHOICE BASED CREDIT SYSTEM (CBCS)

Choice based credit system is followed as per the guidelines formulated by the UGC. The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising Core, Elective and Skill Enrichment Courses. The performance of students is evaluated based on the uniform grading system. The uniform grading system will also enable potential employers in assessing the performance of the candidates. Computation of the Cumulative Grade Point Average (CGPA) is made to ensure uniformity in evaluation system.

List of Programmes in which CBCS/Elective Course System is implemented

UG PROGRAMMES

- | | | |
|--------------------------|---|--|
| Arts & Humanities | : | History (E.M. & T.M.), English and Tamil |
| Physical & Life Sciences | : | Mathematics, Zoology, Chemistry, Physics, Biochemistry, Home Science - Nutrition and Dietetics, Costume Design and Fashion, Microbiology, Biotechnology, Computer Science, Information Technology and Computer Applications. |
| Commerce & Management | : | Commerce, Commerce with Computer Applications, Commerce with Professional Accounting, Business Administration. |

PG PROGRAMMES

Arts & Humanities	:	History, English, Tamil.
Physical & Life Sciences	:	Mathematics, Physics, Biochemistry, Food Processing & Quality Control, Chemistry, Zoology, Computer Science, Information Technology, Computer Applications (MCA*)
Commerce & Management	:	Commerce, Business Administration (MBA*)

* AICTE approved Programmes

PRE-DOCTORAL PROGRAMMES (M.Phil.)

Arts & Humanities	:	History, English, Tamil
Physical & Life Sciences	:	Mathematics, Biochemistry
Commerce & Management	:	Commerce

OUTLINE OF CHOICE BASED CREDIT SYSTEM (UG)

1. Core Courses
2. Elective Courses
 - 2.1. Discipline Specific Elective Courses (DSEC)
 - 2.2. Dissertation / Project
3. Non Major Elective Courses (NMEC)
4. Generic Elective Courses (GEC)
5. Ability Enhancement Courses (AEC)
 - 5.1 Ability Enhancement Compulsory Courses (AECC)
 - 5.2. Skill Enhancement Courses (SEC)

List of Non Major Elective Courses (NMEC) Offered

UG PROGRAMMES

Name of the Course	Semester	Department
History of India upto A.D.1858	III	History(EM)
இந்திய வரலாறு கி.பி. 1858 வரை	III	History (TM)
Indian National Movement (A.D 1885-1947)	IV	History(EM)
இந்திய தேசிய இயக்கம் (கி.பி. 1885 – 1947)	IV	History(TM)
English for Professions I	III	English
English for Professions II	IV	
இக்காலநீதி இலக்கியம்	III	Tamil
உரைநடை இலக்கியம்	IV	
Basic Hindi - I	III	Hindi
Basic Hindi - II	IV	
Practical Banking	III	Commerce
Basic Accounting Principles	IV	
Business Management	III	Business Administration
Entrepreneurship	IV	
Quantitative Aptitude – I	III	Mathematics
Statistics and Operation Research	IV	
Physics in Everyday life	III	Physics
Fundamentals of Electronics	IV	
Industrial Chemistry	III	Chemistry
Drugs and Natural Products	IV	
Applied Zoology	III	Zoology
Animal Science	IV	
Basic Food Science	III	Home Science – Nutrition and Dietetics
Basic Nutrition and Dietetics	IV	
Women and Health	III	Biochemistry
Life style associated disorders	IV	
Medical Lab Technology	III	Microbiology
Applied Microbiology	IV	
Infectious Diseases	III	Biotechnology
Organic Farming	IV	
Basics of Fashion	III	Costume Design And Fashion
Interior Designing	IV	
Introduction to Computers and Office Automation	III	Computer Science
Introduction to Internet and HTML 5	IV	
Computer Fundamentals and E-mail	III	Information Technology
Introduction to HTML	IV	
Fundamentals of Computers	III	Computer Applications
Web Design with HTML	IV	
Horticulture – I	III	Botany
Horticulture – II	IV	
மருத்துவ தாவரவியல் - I	III	
மருத்துவ தாவரவியல் - II	IV	
Library and Information Science – I	III	Library Science
Library and Information Science - II	IV	

List of Generic Elective Courses (GEC) Offered

GENERIC ELECTIVE COURSES – 1

1. Human Rights/
2. Women Studies

GENERIC ELECTIVE COURSES – 2

1. Constitution of India/
2. Modern Economics/
3. Adolescent Psychology/
4. Disaster Management

ABILITY ENHANCEMENT COMPULSORY COURSES (AECC)

1. Environmental Studies
2. Value Education

ELIGIBILITY FOR ADMISSION

Candidate should have passed the Higher Secondary Examination with 10+2 pattern conducted by the Board of Higher Secondary Education, Govt. of Tamil Nadu or any other examination accepted by the Syndicate as equivalent thereto and the candidate should have studied +2 level Mathematics in the 10+2 pattern.

DURATION OF THE PROGRAMME

The candidates shall undergo the prescribed course of study for a period of three academic years (six semesters)

MEDIUM OF INSTRUCTION

English

COURSES OFFERED

Part I : Tamil/Hindi

Part II : English

Part III : Core Courses

Elective Courses: Discipline Specific Electives Courses

Allied Courses: 1. Digital Electronics

2. Mathematics

Part IV: Non-Major Elective Courses (NMEC)

Generic Elective Courses (GEC)

Ability Enhancement Compulsory Courses (AECC)

Skill Enhancement Courses (SEC)

Part V: National Service Scheme, Physical Education, Youth Red Cross Society, Red Ribbon Club, Science Forum, Eco Club, Library and Information Science, Consumer Forum, Health and Fitness Club, National Cadet Corps

EVALUATION SCHEME

Components	Internal Assessment Marks	External Examination Marks	Total Marks
Theory	25	75	100
Practical	40	60	100

PART III - Core Courses, Discipline Specific Elective Courses & Allied Courses**INTERNAL ASSESSMENT****Distribution of Marks****Theory**

Mode of Evaluation		Marks
Periodic Test	:	15
Assignment	:	5
Quiz	:	5
Total	:	25

Three Periodic Tests - Average of the best two will be considered

Two Assignments - Better of the two will be considered

Three Quiz Tests - Best of the three will be considered

Practical

Mode of Evaluation		Marks
Three tests (Best two average)	:	30
Performance	:	5
Record	:	5
Total	:	40

Question Pattern for Periodic Tests**Duration: 2 Hours**

Section	Type of Question	No. of Questions	No. of Questions to be answered	Marks for each question	Total Marks
A Q. No.(1- 4)	Multiple choice	4	4	1	4
B Q. No.(5 - 7)	Either or type	3	3	7	21
C Q. No.(8-10)	Open Choice	3	2	10	20
Total					45

EXTERNAL EXAMINATION**For Core Courses, Discipline Specific Electives Courses and Allied Courses****Question Pattern for External Examination****Duration: 3 Hours**

Section	Type of Question	No. of Questions	No. of Questions to be answered	Marks for each question	Total Marks
A Q. No.(1- 10)	Multiple choice (At least Two question from each unit)	10	10	1	10
B Q. No.(11 -15)	Either or type (one set from each unit)	5	5	7	35
C Q. No.(16-20)	Open Choice (one from each unit)	5	3	10	30
Total					75

CORE COURSES ASSESSMENT

Online Test will be conducted for the Core Courses in V & VI Semester.

Multiple Choice questions Pattern will be followed.

PART IV - Skill Enhancement Courses and Non Major Elective Courses

INTERNAL ASSESSMENT**Distribution of Marks****Theory**

Mode of Evaluation		Marks
Periodic Test	:	25
Assignment	:	10
Quiz	:	5
Total	:	40

- Three Periodic tests - Average of the best two will be considered
 Two Assignments - Better of the two will be considered
 Three Quiz Tests - Best of the three will be considered

Question Pattern**Duration: 1 Hour**

Section	Type of Question	No. of Questions	No. of Questions to be answered	Marks for each Question	Total Marks
A Q. Nos.1- 4	Open Choice	4	3	5	15
B Q. Nos.5- 6	Open Choice	2	1	10	10
Total					25

EXTERNAL EXAMINATION**Question Pattern****Duration: 2 Hours**

Section	Type of Question	No. of Questions	No. of Questions to be answered	Marks for each Question	Total Marks
A Q. Nos.1- 8	Open Choice	8	6	5	30
B Q. Nos.9- 13	Open Choice	5	3	10	30
Total					60

PART IV - Generic Electives and Ability Enhancement Compulsory Courses

- Assessment by Internal Examiner only
- Model Examination is conducted after two periodic tests.
- Book and Study Material prepared by the Faculty Members of the respective departments will be prescribed.

ASSESSMENT PATTERN

Mode of Evaluation		Marks
Periodic Test	:	30
Assignment	:	10
Model Examination	:	60
Total	:	100

Two Periodic tests - Better of the two will be considered

Two Assignments - Better of the two will be considered

Question Pattern for Periodic Test**Duration: 1 Hour**

Section	Type of Question	No. of Questions	No. of Questions to be answered	Marks for each Question	Total Marks
A Q. Nos.1- 4	Open Choice	4	3	6	18
B Q. Nos.5- 6	Open Choice	2	1	12	12
Total					30

Question Pattern for Model Examination**Duration: 2 Hours**

Section	Type of Question	No. of Questions	No. of Questions to be answered	Marks for each Question	Total Marks
A Q. Nos.1- 8	Open Choice	8	5	6	30
B Q. Nos.9- 13	Open Choice	5	3	10	30
Total					60

ELIGIBILITY FOR THE DEGREE

1. The candidate will not be eligible for degree without completing the prescribed Courses of study and a minimum Pass marks in all the Courses.
2. Attendance, progress and conduct certification from the Head of the Institution will be required for the students to write the examination.
 - No Pass minimum for Internal Assessment.
 - Pass minimum for External Examination is 27 marks out of 75 marks for Core Courses, Allied Courses and Discipline Specific Elective Courses.
 - Pass minimum for External Examination is 21 marks out of 60 marks for Non Major Elective Courses and Skill Enhancement Courses.
 - The aggregate minimum pass percentage is 40.
 - Pass minimum for External Practical Examination is 21 marks out of 60 marks.
 - Pass minimum for Generic Elective Course and Ability Enchantment Compulsory Course is 40.

BACHELOR OF INFORMATION TECHNOLOGY
PROGRAM CODE - 2025

PROGRAMME OUTCOMES

- Encourage intellectually disciplined process of thinking in analyzing, synthesizing, evaluating and applying scientific concepts.
- Develop good rapport with fellow-beings through efficient oral, written and technical communication.
- Connect with the society to transform ideas into action.
- Volunteer support in spreading scientific temperament and stand for the national cause in all core issues.
- Uphold the values and beliefs inherent in the nation's tradition and culture.
- Strive to preserve nature in all forms for a sustainable future.
- Develop an independent and self-disciplined specialized learning in tune with the changing socio-technological scenario

PROGRAMME SPECIFIC OUTCOMES

- ✚ Prepare the students to manage the hardware and software components in a computer independently
- ✚ Professionalize the students in Programming skills.
- ✚ Prepare the students to be Professional Software Engineers.
- ✚ Impart knowledge of software managed in a computer.

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PART I-TAMIL

S.No.	Sem.	Code	Title of Paper	Credits	Marks
1.	I	18UTAG11	தாள்: 1 பொதுத்தமிழ்	3	100
2.	II	18UTAG21N	தாள்: 2 பொதுத்தமிழ்	3	100
3.	III	18UTAG31C	தாள்: 3 கணிணித் தமிழ் I	3	100
4.	IV	18UTAG41C	தாள்: 4 கணிணித் தமிழ் II	3	100
Total				12	400

PART I –HINDI

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	I	18UHGD11	Prose – I & II, Ancient Stories - I, General Essays, Functional Hindi – I & Grammar	3	100
2.	II	18UHGD21	Drama, Ancient Stories - II, Letter Correspondence, Functional Hindi-II & Grammar	3	100
3.	III	18UHGD31	Ancient Poetry, Drama, Indian History, Hindi Grammar & Functional Hindi III	3	100
4.	IV	18UHGD41	Modern Poetry, Hindi Literary Essays, Letter Correspondence, Conversation & Functional Hindi IV	3	100
TOTAL				12	400

PART II

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	I	18UENG11A	English for Advanced Learners I	3	100
		18UENG11B	English for Career Guidance - I		
		18UENG11C	English for Communicative Competence-I		
2.	II	18UENG21A	English for Advanced Learners II	3	100
		18UENG21B	English for Career Guidance - II		
		18UENG21C	English for Communicative Competence - II		
3.	III	18UENG31A	English for Advanced Learners III	3	100
		18UENG31B	English for Career Guidance – III		
		18UENG31C	English for Communicative Competence - III		
4.	IV	18UENG41A	English for Advanced Learners IV	3	100
		18UENG41B	English for Career Guidance – IV		
		18UENG41C	English for Communicative Competence - IV		
TOTAL				12	400

PART III – CORE COURSES, DISCIPLINE SPECIFIC ELECTIVE COURSES

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1	I	18UITC11	Introduction to IT and Programming in C	4	100
2	I	18UITC11P	Programming in C lab	3	100
3	II	18UITC21	Advanced Concepts in C and Data Structures	4	100
4	II	18UITC21P	Data structures lab using C	3	100
5	III	18UITC31	Data Base Management Systems	4	100
6	III	18UITC32	Operating Systems	3	100
7	III	18UITC31P	RDBMS Lab	2	100
8	IV	18UITC41	PHP and MYSQL	4	100
9	IV	18UITC41P	Web Design using PHP Lab	2	100
10	V	18UITC51	Java Programming	5	100
11	V	18UITC52	Computer Networks	5	100
12	V	18UITC53	Computer Algorithms	5	100
13	V	18UITC51P	Java Programming lab	2	100
14	V	18UITO51	Core Course Assessment-Online	1	50
15	V	18UITE51/ 18UITE52/ 18UITE53	Cloud Computing / Internet Security / Internet Retrieval	4	100
16	V	18UITE51P/ 18UITE52P	VB.NET Lab/ Visual Basic Lab	2	100
17	VI	18UITC61	Mobile Computing	5	100
18	VI	18UITC62	Cyber Security	5	100
19	VI	18UITC63	Software Engineering	5	100
20	VI	18UITC61P	Android Lab	2	100
21	VI	18UITO61	Core Course Assessment-Online	1	50
22	VI	18UITE61/ 18UITE62/ 18UITE63	Data Mining/ Embedded System/ Wireless Adhoc Networks	4	100
23	VI	18UITE61PR	Project	2	100
Total				77	2200

PART III – ALLIED COURSES

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	I	18UITA11	Digital Principles and Applications	4	100
2.	II	18UITA21	Discrete Mathematics	4	100
3.	III	18UITA31	Numerical Methods	4	100
4.	IV	18UITA41	Resource Management Techniques	4	100
Total				16	400

PART IV – SKILL ENHANCEMENT COURSES

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1.	I	18UITS11P	Hardware Simulator Lab	2	100
2.	II	18UITS21	Object Oriented Programming in C++	2	100
3.	II	18UITS21P	Object Oriented Programming using C++ Lab	2	100
4.	IV	18UITS41	Numerical Aptitude	2	100
5.	IV	18UITS41P	Multimedia Lab	2	100
6.	VI	18UITS61P	Python Programming Lab	2	100
Total				12	600

PART IV – NON MAJOR ELECTIVE COURSES

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1	III	18UITN31	Spreadsheet	2	100
2	IV	18UITN41	Introduction to HTML	2	100
Total				4	200

**PART IV–GENERIC ELECTIVE AND ABILITY ENHANCEMENT
COMPULSORY COURSES**

S.No.	Sem.	Code	Title of the Course	Credits	Marks
1	I	18UGVE11	Value Education	2	100
2	III	18UGEH31/ 18UGEW32	Human Rights/ Women studies	1	100
3		18UGEC41/ 18UGEM42/	Constitution of India/ Modern Economics/	1	100
4	IV	18UGEA43/ 18UGED44	Adolescent Psychology/ Disaster Management		
6		Part V	Extension Activities	1	-
7		18UGES51	Environmental Studies	2	100
8	V				
9					
Total				7	400

PART –V - EXTENSION ACTIVITIES

S.No.	Sem.	Code	Title of the Course	Credit
1	I, II, III & IV	18UVNS1 18UVNS2	National Service Scheme	1
2		18UVPE1 18UVPE2	Physical Education	
3		18UVYR1 18UVYR2	Youth Red Cross Society	
4		18UVRR1	Red Ribbon Club	
5		18UVSF1	Science Forum	
6		18UVEC1	Eco Club	
7		18UVLI1	Library and Information Science	
8		18UVCC1	Consumer Forum	
9		18UVHF1	Health and Fitness Club	
10		18UVNC1 18UVNC2	National Cadet Corps	



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INFORMATION TECHNOLOGY (UG)

Course Structure - Allotment of Hours and Credits

For those who join in the Academic Year 2018 - 2019 and after

Components	Semester						Total Number of Hours / Credits
	I	II	III	IV	V	VI	
Part I : Tamil /Hindi	6 (3)	6 (3)	5(3)	5 (3)	-	-	22(12)
Part II : English	6(3)	6(3)	6(3)	6 (3)	-	-	24(12)
Part III : Core, Allied and DSEC Courses:							
Core Course	5(4)	5(4)	4(4)	4(4)	5(5)	5 (5)	28(26)
Core Course	-	-	4(3)	-	5 (5)	5 (5)	14(13)
Core Course	-	-	-	-	5 (5)	5 (5)	10(10)
Core Practical	5 (3)	5 (3)	4 (2)	4 (2)	5 (2)	4 (2)	27(14)
Core Courses Assessment - Online	-	-	-	-	0 (1)	0 (1)	0 (2)
Allied Course	4 (4)	4 (4)	4 (4)	4 (4)	-	-	16(16)
DSEC	-	-	-	-	4 (4)	5 (4)	9 (8)
DSEC Practical	-	-	-	-	4 (2)	4 (2)	8 (4)
Part IV : Non Major Elective and Value Added Courses:							
Value Education	2 (2)	-	-	-	-	-	2 (2)
Environmental Studies	-	-	-	-	2 (2)	-	2 (2)
Non Major Elective	-	-	2 (2)	2 (2)	-	-	4 (4)
Generic Elective	-	-	1(1)	1(1)	-	-	2(2)
SEC	2 (2)	2 (2)	-	2 (2)	-	2 (2)	8 (8)
SEC	-	2 (2)	-	2 (2)	-	-	4 (4)
Part V – Extension Activities NSS/ Physical Education/YRC/ RRC/ Science Forum/ ECO Club/ Library and Information Science/ Consumer Club/ Fitness Club/ National Cadet Corps	-	-	-	0 (1)	-	-	0 (1)
Total	30 (21)	30(21)	30 (22)	30 (24)	30(26)	30 26)	180(140)

DSEC: Discipline Specific Elective Course

SEC: Skill Enhancement Course



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B.Sc. INFORMATION TECHNOLOGY

SEMESTER I

S.No.	Components	Title of the Course	Course Code	Hours per week	Credits	Exam. Hours	Marks			
							Int.	Ext.	Total	
1	Part I	Tamil / Hindi Course I	18UTAG11/ 18UHDG11	6	3	3	25	75	100	
2	Part II	English Course I	18UENG11	6	3	3	25	75	100	
3	Part III	Core Course 1	Introduction to IT and Programming in C	18UITC11	5	4	3	25	75	100
4		Core Practical 1	Programing in C Lab	18UITC11P	5	3	3	40	60	100
5		Allied Course 1	Digital Principles and Applications	18UITA11	4	4	3	25	75	100
6	Part IV	SEC Practical 1	Hardware Simulator Lab	18UITS11P	1 T*+1P'	2	2	40	60	100
7		AECC – 1	Value Education	18UGVE11	2	2	-	100	-	100
Total				30	21				700	

T* - Tutorial P' - Practical

B.Sc. INFORMATION TECHNOLOGY - SEMESTER II

S.No.	Components		Title of the Course	Course Code	Hours per week	Credits	Exam. Hours	Marks		
								Int.	Ext.	Total
1	Part I		Tamil / Hindi Course II	18UTAG21/ 18UHDG21	6	3	3	25	75	100
2	Part II		English Course II	18UENG21	6	3	3	25	75	100
3	Part III	Core Course 2	Advanced Concepts in C and Data Structures	18UITC21	5	4	3	25	75	100
4		Core Practical 2	Data Structures using C Lab	18UITC21P	5	3	3	40	60	100
5		Allied Course 2	Discrete Mathematics	18UITA21	4	4	3	25	75	100
6	Part IV	SEC 1	Object Oriented Programming in C++	18UITS21	2	2	2	40	60	100
7		SEC Practical 2	Object Oriented Programming using C++ Lab	18UITS21P	1 T*+1P'	2	2	40	60	100
Total					30	21				700

T* - Tutorial P' - Practical

B.Sc. INFORMATION TECHNOLOGY - SEMESTER III

S.No.	Components	Title of the Course	Course Code	Hours per week	Credits	Exam. Hours	Marks			
							Int.	Ext.	Total	
1	Part I	Tamil / Hindi Course III	18UTAG31C/ 18UHDG31	5	3	3	25	75	100	
2	Part II	English Course III	18UENG31	6	3	3	25	75	100	
3	Part III	Core Course 3	Data Base Management Systems	18UITC31	4	4	3	25	75	100
4		Core Course 4	Operating Systems	18UITC32	4	3	3	25	75	100
5		Core Practical 3	RDBMS Lab	18UITC31P	4	2	3	40	60	100
6		Allied Course 3	Numerical Methods	18UITA31	4	4	3	25	75	100
7	Part IV	NMEC 1	Spreadsheet	18UITN31	1 T*+1P'	2	2	40	60	100
8		GEC 1	1.Human Rights/ 2. Women Studies	18UGEH31/ 18UGEW32	0	1	2	100	-	100
		GEC 2	1. Constitution of India/ 2. Modern Economics/ 3. Adolescent Psychology/ 4. Disaster Management	18UGEC41/ 18UGEM42/ 18UGEA43/ 18UGED44	1	-	-	-	-	-
Total				30	22				800	

T* - Tutorial P' - Practical

B.Sc. INFORMATION TECHNOLOGY - SEMESTER IV

S.No.	Components	Title of the Course	Course Code	Hours per week	Credits	Exam. Hours	Marks			
							Int.	Ext.	Total	
1	Part I	Tamil / Hindi Course IV	18UTAG41C/ 18UHDG41	5	3	3	25	75	100	
2	Part II	English Course IV	18UENG41	6	3	3	25	75	100	
3	Part III	Core Course 5	PHP and MYSQL	18UITC41	4	4	3	25	75	100
4		Core Practical 4	Web Design using PHP Lab	18UITC41P	4	2	3	40	60	100
5		Allied Course 4	Resource Management Techniques	18UITA41	4	4	3	25	75	100
6	Part IV	SEC 3	Numerical Aptitude	18UITS41	2	2	2	40	60	100
7		SEC Practical 2	Multimedia Lab	18UITS41P	1T*+1P'	2	2	40	60	100
8		NMEC 2	Introduction to HTML	18UITN41	2	2	2	40	60	100
9		GEC 2	1. Constitution of India/ 2. Modern Economics/ 3. Adolescent Psychology/ 4. Disaster Management	18UGEC41/ 18UGEM42/ 18UGEA43/ 18UGED44	1	1	2	100	-	100
	Part V	Extension Activity		-	1		-			
Total				30	24		900			

T* - Tutorial P' - Practical

B.Sc. INFORMATION TECHNOLOGY - SEMESTER V

S.No.	Components	Title of the Course	Course Code	Hours per week	Credits	Exam. Hours	Marks			
							Int.	Ext.	Total	
1	Part III	Core Course 6	Java Programming	18UITC51	5	5	3	25	75	100
2		Core Course 7	Computer Networks	18UITC52	5	5	3	25	75	100
3		Core Course 8	Computer Algorithms	18UITC53	5	5	3	25	75	100
4		Core Practical 5	Java Programming Lab	18UITC51P	5	2	3	40	60	100
5		DSEC 1	Cloud Computing / Internet Security/ Internet Retrieval /	18UITE51/ 18UITE52/ 18UITE53	4	4	3	25	75	100
6		DSEC Practical 1	VB.Net Lab/ Visual Basic Lab	18UITE51P/ 18UITE52P	4	2	3	40	60	100
		Online Courses	Core Courses Assessment – Online	18UITO51	–	1	–	50	-	50
7	Part IV	AECC 2	Environmental Studies	18UENV51	2	2	2	100		100
				Total	30	26				750

SEMESTER VI

S.No.	Components	Title of the Course	Course Code	Hours per week	Credits	Exam. Hours	Marks			
							Int.	Ext.	Total	
1	Part III	Core Course 9	Mobile Computing	18UITC61	5	5	3	25	75	100
2		Core Course 10	Cyber Security	18UITC62	5	5	3	25	75	100
3		Core Course 11	Software Engineering	18UITC63	5	5	3	25	75	100
4		Core Practical 6	Android Lab	18UITC61P	4	2	3	40	60	100
5		DSEC 2	Data Mining/ Embedded System/ Wireless Adhoc Networks	18UITE61/ 18UITE62/ 18UITE63	5	4	3	25	75	100
6		DSEC Practical 2	Project	18UITE61PR	4	2	3	100	-	100
7	Part IV	SEC Practical 3	Python Programming Lab	18UITS61P	1 T*+1P'	2	2	40	60	100
		Core Course Assessment – Online	18UITO61	-	1	-	50	-	50	
Total					30	26				750

T* - Tutorial P' - Practical



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VIRUDHUNAGAR - 626 001

B.Sc. INFORMATION TECHNOLOGY (SEMESTER) (2018 -19 onwards)

Semester III	DATABASE MANAGEMENT SYSTEMS	Hours/Week: 4	
Core Course - 3		Credits: 4	
Course Code 18UITC31		Internal 25	External 75

COURSE OUTCOMES

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

- learn the fundamentals of data models.
- conceptualize and depict a database system using ER diagram.
- make a study of SQL and relational database design.
- understand the internal storage structures using different file.
- understand the indexing techniques that helps in physical DB design.
- know the fundamental concepts of transaction processing, concurrency control techniques and recovery procedure.

UNIT I

Introduction: Database System Applications -Purpose of Data base Systems-View of Data-Database Languages-Relational Databases-Database Design-Data storage and querying –Transaction Management-Database Architecture. **Database Design and the E-R Model:** Overview of the Design Process- The Entity-Relationship Model-Constraints – Removing Redundant Attributes in Entity Sets – EntityRelationship Diagrams – Reduction to Relational Schema -Entity-Relationship Design Issues.

(12 Hours)

UNIT II

Introduction to the Relational Model: Structure of Relational Databases–Database Schema – Keys – Schema Diagrams – Relational Query Languages –Relational Operations. **Relational Database Design:** Features of Good Relational Designs – Atomic Domains and First Normal Form – Decomposition using Functional Dependencies-Functional Dependency Theory.

(10 Hours)

UNIT III

Introduction to SQL:overview of the SQL Query Language – SQL Data Definition – Basic structure of SQL queries – Additional basic Operations – Set Operations - NULL values –Aggregate functions – Nested Subqueries– Modification of the database. (14 Hours)

UNIT IV

Transactions: Transaction Concept – A Simple Transaction Model-Storage structure-Transaction Atomicity and Durability – Transaction Isolation – Serializability.**Concurrency Control:** Lock based Protocols –Deadlock Handling – Multiple Granularity - Timestamp Based Protocols – Validation Based Protocol. (10 Hours)

UNIT V

Recovery System: Failure Classification- Storage -Recovery and Atomicity-Recovery Algorithm –Buffer Management. **Distributed Databases:**Homogeneous and Heterogeneous Databases – Distributed Data Storage – Distributed Transactions – Commit Protocols –Concurrency Control in Distributed Databases. (14 Hours)

TEXT BOOK

Abraham Silberschatz, Henry F. KorthS.Sudarshan (2013). *Database System Concepts*, Tata McGraw Hill International Edition. 6th Edition.

UNIT	CHAPTER	SECTIONS
I	1	1.1-1.9
	7	7.1-7.7
II	2	2.1-2.6
	8	8.1-8.4
III	3	3.1-3.9
IV	14	14.1-14.6
	15	15.1-15.5
V	16	16.1–16.5
	19	19.1 -19.5

REFERENCE BOOKS

1. Alexis Leon, Mathews Leon (2006). *Essentials of Database Management Systems*, Vijay Nicole Imprints Pvt. Ltd.
2. Date, C.J. (2002). *An Introduction to Database Systems*, Pearson Education Pvt. Ltd. 7th Edition.
3. Raghu Ramakrishnan and Johannes Gehrke, *Database Management Systems*, Tata McGraw- Hill, 2nd Edition.



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B.Sc. INFORMATION TECHNOLOGY (SEMESTER) (2018 -19 onwards)

Semester III	OPERATING SYSTEMS	Hours/Week: 4	
Core Course - 4		Credits: 3	
Course Code 18UITC32		Internal 25	External 75

COURSE OUTCOMES

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

- learn about different types of system and OS structure.
- know about the processes and their scheduling algorithms
- understand the concept of deadlock and process synchronization
- gain knowledge on memory management
- stress the importance of mass storage structure
- implementing the concept of file system

UNIT I

Introduction: Operating System – Mainframe Systems – Multiprocessor Systems – Distributed Systems – Clustered Systems – Real Time Systems. **Operating System Structures:** System components – Operating System Services–System calls – System programs. (10 Hours)

UNIT II

Processes: Process concepts - Process scheduling – Operations on process- Cooperating Process- Inter Process communication. **CPU scheduling:** Basic Concepts – Scheduling criteria – scheduling algorithms – First-Come First-Served Scheduling – Shortest Job First Scheduling – Priority Scheduling – Round-Robin Scheduling. (15 Hours)

UNIT III

Process Synchronization: The Critical-section problem – Semaphores – Classic problems of synchronization. **Deadlocks:** Deadlock characterization – Deadlock prevention – Deadlock Avoidance – Deadlock Detection. (15 Hours)

UNIT IV

Memory Management: Contiguous memory allocation – Paging: Basic Methods – segmentation. **Virtual Memory:** Demand paging: Basic concepts - Page replacement. (10 Hours)

UNIT V

File-System Implementation: Directory implementation – Allocation methods: Contiguous Allocation – Linked Allocation – Indexed Allocation. **Mass-Storage Structure:** Disk Structure – Disk Scheduling – Disk Management. (10 Hours)

TEXT BOOK

Silberschartz, A. Galvin, Gagne, John Wiley & Sons, (2007). *Operating System Concepts*, 6th Edition.

UNIT	CHAPTERS	SECTIONS
I	1, 3	1.1,1.2,1.4 – 1.7, 3.1 – 3.4
II	4, 6	4.1 – 4.5, 6.1 – 6.3.1, 6.3.2, 6.3.3, 6.3.4
III	7, 8	7.2, 7.4, 7.5, 8.2, 8.4 – 8.6
IV	9, 10	9.3, 9.4.1, 9.5, 10.2.1, 10.4
V	12, 14	12.3 - 12.4.1, 12.4.2, 12.4.3,14.1 -14.3

REFERENCE BOOKS

1. William Stallings, (2009). *Operating Systems: Internals and Design Principles*, Dorling Kindersley India Pvt. Ltd., 6th Edition.
2. Davis, *Operating Systems*, Pearson Education, 6th Edition.
3. Dhamdhare, D.M. *Operating Systems: A Concept-Based Approach*, The McGraw-Hill Companies, 2nd Edition.



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B.Sc. INFORMATION TECHNOLOGY (SEMESTER)

(2018 -19 onwards)

Semester III	RDBMS LAB	Hours/Week: 4	
Core Practical -3		Credits: 2	
Course Code 18UITC31P		Internal 40	External 60

Write simple Queries for the following:

1. Implement DML commands
2. To Implement DDL commands
3. To Implement DCL commands
4. To Implement Aggregate functions

Write PL/SQL for the following:

5. Programs using conditional control, iterative controls and sequential controls
6. Programs using exception handling.
7. Programs using explicit cursors and implicit cursors.
8. Programs using database triggers.
9. Programs to design procedures using in, out parameter.
10. Program to design procedures using functions.
11. Programs to design procedures using packages.

FORMS AND REPORT WRITER

12. Inventory Control
13. Banking
14. Student mark List
15. Library maintenance
16. Payroll
17. Invoice
18. Railway Reservation
19. College Admission



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B.Sc. INFORMATION TECHNOLOGY (SEMESTER)

(2018 -19 onwards)

Semester III	NUMERICAL METHODS	Hours/Week: 4	
Allied Course -3		Credits: 4	
Course Code 18UITA31		Internal 25	External 75

COURSE OUTCOMES

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

- provide the students an understanding the basic principles of numerical methods.
- introduce various difference operators to enable the students to apply them in interpolation, numerical differentiation and Integration.
- apply the various numerical methods in solving algebraic equations.
- introduce various difference operators to enable the students to apply them in interpolation, numerical differentiation and integration.

UNIT I

Algebraic and Transcendental Equations: Introduction – Errors in Numerical Computation – Iteration Method (Successive Approximation Method) – Bisection Method (Bolzano method) – RegulaFalsi Method (Method of False Position) – Newton-Raphson Method. (12 Hours)

UNIT II

Simultaneous Equations: Introduction– Simultaneous Equations – Back Substitution – Gauss Elimination Method – Gauss-Jordan Elimination Method – Gauss-Seidalliteration method. (12 Hours)

UNIT III

Interpolation: Introduction – Newton’s Interpolation Formulae – Central Difference Interpolation Formulae – Lagrange’s Interpolation formula – Inverse Interpolation. (12 Hours)

UNIT IV

Numerical Differentiation and Integration: Introduction – Derivatives using Newton’s Forward Difference Formula – Derivatives using Newton’s Backward Difference Formula – Numerical Integration–Newton’s Cote’s Quadrature Formula – Trapezoidal Rule – Simpson’s One Third Rule – Simpson’s Three Eight Rule. (12 Hours)

UNIT V

Numerical Solutions of Ordinary Differential Equations: Introduction – Taylor’s Series Method – Picard’s Method – Euler’s Method – Runge-Kutta Methods (2nd and 4thOrder Only) (12 Hours)

TEXT BOOK

Arumugam, S., Thangapandi, A., Isaac & Somasundaram, A. *Numerical Methods*, The Scitech Publications (India) pvt. Ltd., Chennai, 2nd Edition.

UNIT	CHAPTERS	SECTIONS	PAGE NO.
I	3	3.0 – 3.4	79 – 106
II	4	4.0 – 4.4, 4.8	112 – 123, 139 - 145
III	7	7.0 – 7.3, 7.6	202 –245, 255 - 259
IV	8	8.0 – 8.2, 8.5	260 , 261, 279 -285
V	10	10.0 – 10.4	325 – 352



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B.Sc. INFORMATION TECHNOLOGY (SEMESTER) (2018 -19 onwards)

Semester III	SPREADSHEET	Hours/Week: 2	
NMEC 1		Credits: 2	
Course Code		Internal	External
18UITN31		40	60

COURSE OUTCOMES

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

- use spreadsheet software to manage financial data
- work with formulas and functions
- develop professional-looking worksheets
- create charts and graphs
- preview and print worksheets
- format data and cells

UNIT I

Introduction to Spreadsheets : Use of Spreadsheets – Spreadsheet Basics – Formatting a Spreadsheet – Graphs. **Introduction to Excel :** Functions of Microsoft Excel – Starting Microsoft Excel – Excel Work Environment – Changing the size of a Workbook and Excel Window – Cell and Cell Address – Standard Toolbar – Formatting Toolbar – The Formula Bar – Status Bar – Components of an Excel Workbook – Closing Excel Workbook without Saving – Quitting Microsoft Excel. (5 Hours)

UNIT II

Working in Excel : Moving Inside a Workbook – Moving the Cell-pointer Quickly - Selecting a Command – Types of Data – Entering Data in a Cell Address – Making Changes to an Entry – Saving Your Workbook – Closing an Excel Workbook – Quitting Microsoft Excel. **Mathematical Calculations :** Formulas using Numbers –

Formulas using Cell Addresses – Opening Microsoft Excel and Entering Data – Defining Functions. (7 Hours)

UNIT III

Manipulating Data : Moving data – Copying Data – Relative Cell Addressing – Absolute cell Addressing – Copying values not Formula or Function – Deleting rows and Columns – Inserting Rows – Inserting Columns – Automatic Filling of Entries – Quitting Microsoft Excel. **Simple Graphs :** Opening Microsoft Excel and Entering Data – Drawing a Graph – Naming the Sheet – Saving the Workbook – Printing and Closing a Graphic Sheet – Opening the Saved Graphic sheet - Quitting Microsoft Excel.

(5 Hours)

UNIT IV

Changing the Layout : Aligning Data – Increasing or Decreasing the Column Width – Increasing the Height of Rows – Erasing the contents of a sheet – Deleting Data from Cell Address – Setting the Column Width to Zero – Formatting of Values.

(7 Hours)

UNIT V

Database Management : Entering Data into a Database – Modifying a Database – Sorting a Database – Closing the Workbook and Quitting Excel. **Manipulating Sheets:** Adding a Sheet to the Workbook – Adding Many Sheets to the Workbook – Renaming a Sheet and entering Data in it – Moving Sheet – Copying Data between Sheets – Protecting the workbook – Deleting a Sheet from Workbook – Closing the Workbook – Recovering a Deleted Workbook – Quitting Microsoft Excel. (6 Hours)

TEXT BOOK

Vikas Gupta, *Comdex Computer Course Kit XP Edition*, Dream Tech Publications Pvt. Ltd.,

UNIT	CHAPTER	PAGE NO.
I	1,2	297 - 318
II	3,4	319 - 336
III	5,7	343 – 355, 377 - 386
IV	6	357 - 376
V	8,9	387 - 406

REFERENCE BOOKS

1. William Fischer, *Excel: A Quick Start Guide from Beginner to Expert*, Cassell Publications.
2. Rapidex Editorial Team, (2016). *Rapidex Computer Course*, Rapidex Publications, Reprint and Updated Edition.
3. Kevin Wilson, *Essential Office 365 The Illustrated Guide to Using Microsoft office*, Elluminet Press.



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Semester: III	HUMAN RIGHTS (2018 -19 onwards)	Hours/Week: 0	
Generic Elective - 1		Credits : 1	
Course Code: 18UGEH31		<u>Internal</u> 100	<u>External</u> -

COURSE OUTCOMES

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

- understand the basic concepts on Human Rights and Human values.
- learn the definition and the development of Human Rights.
- understand the various theories on Human Rights.
- know the International instruments and conventions on human Rights.
- acquire idea of the evolution of Human Rights in India.
- imbibe the knowledge of Human Rights violation in India.

UNIT I

Human Rights - Definition – Development of Human Rights: The Magna Carta (1215) - The Declaration on Rights of Man and Citizen (1789) - The Bill of Rights (1791).

UNIT II

Universal Declaration of Human Rights (1948) - International Covenant on Civil and Political Rights– International Covenant on Economic, Social and Cultural Rights.

UNIT III

Human Rights in India - Constitutional Guarantees on Human Rights - The Protection of Human Rights Act (1993).

UNIT IV

National Human Rights Commission - State Human Rights Commission – Human Rights Court.

UNIT V

Human Rights Violations in India- Children – Women – Refugees – Minorities – SCs & ST – Trans-gender.

TEXT BOOK

Study Material prepared by the faculty in Department of History.

REFERENCE BOOKS

1. Basu,L.N. (2006). *Human Rights: Practice and Limitations*, Jaipur: Pointer Publishers.
2. Chauhan,S.R, & Chauhan, N.S (ed.), (2007). *International Dimension of the Human Rights*, Vol. I – III, New Delhi: Rajdhani Publishers.
3. Gupta,U.N. (2004). *Human Rights*, Vol.I – IV, New Delhi: Atlantic Publishers.
4. Natarajan,A. (2004). *Human Rights in International Perspectives*, Madurai: Munnetra Pathipagam.
5. Raja Muthirulandi, E. (2003). *Manidha Urimaigal (Tamil)*, Madurai: BPI Publishers.

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Semester: III	WOMEN STUDIES	Hours/Week: 0	
Generic Elective - 1		Credits : 1	
Course Code: 18UGEW32		(2018 -19 onwards)	<u>Internal</u> 100

COURSE OUTCOMES

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

- understand the concept of Feminism.
- acquire the knowledge on the atrocities committed against women.
- know more of women's organisations and political rights.
- know about the various Government welfare schemes for women.
- gain knowledge on the legal rights of women.
- analyse the real empowerment of women in all fields.

UNIT I

Women Studies - Definition - Feminism- Kinds of Feminism.

UNIT II

Violence Against Women – Female Foeticide–Domestic violence - Problems of working women -Eve-Teasing - Sexual Harassment- Portrayal of women in Mass Media.

UNIT III

Women Indian Association -National Council of Women in India - Self Help Groups – Panchayat Raj and role of women in politics -NGOs and women Development.

UNIT IV

Central Government's Social Welfare schemes- State Government's Social Welfare Programmes for Women – Women and Children.

UNIT V

Dowry Prohibition Act 1961 - Equal Remuneration Act 1976 – Hindu Women’s Right to Property Act 1989 – Prohibition of indecent Representation of Women Act 1987 – Domestic Violence (Prevention) Act 2005 – POCSO Act 2012.

TEXT BOOK

Study Material prepared by the faculty in Department of History.

REFERENCE BOOKS

1. Anwarul Yaquin, Badar Anwar, (1982). *Protection of Women Under the Law*, New Delhi.
2. Chatterjee, B.B, (1971). *Impact of Social Legislation on Social Change*, Calcutta.
3. Gandhi,M.K., (1962). *Women and Social Injustice*, Ahemadabad.
4. Gangrade,K.D, (1978). *Social Legislation in India, Vol.I and II*, Delhi.
5. Mandakini Das, Pritirekha, Das Pathnayak (ed)., (2010). *Empowering Women: Issues and Challenges and Strategies*, New Delhi.

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Semester: III & IV	CONSTITUTION OF INDIA	Hours/Week: 1 + 1	
Generic Elective - 2		Credits : 1	
Course Code: 18UGEC41		(2018 -19 onwards)	<u>Internal</u> 100

COURSE OUTCOMES

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

- understand the basic tenets of the Constitution.
- realize the duties and responsibilities as a citizen of India.
- shine in competitive examinations.
- understand that the constitution is a base for the functioning of the Government
- aware of the actual working of political institutions.
- know the powers of Judiciary in the protection of citizen.

UNIT I

Constituent Assembly - Sources – Salient Features of the Constitution – Fundamental Rights – Fundamental Duties – Directive Principles of State Policy.

UNIT II

President and Vice-President – Election, Position, Powers and Functions – Prime Minister and his cabinet.

UNIT III

Indian Parliament – Lok Sabha and Rajya Sabha – Composition – Powers and Functions.

UNIT IV

Process of Law making – Committee system – Mode of Amendments-
Constitutional Amendments.

UNIT V

Judiciary – Supreme Court – Composition - Powers and Functions – Judicial
Review - State Government – Governor - Chief Minister- High court.

TEXT BOOK

Study Material prepared by the faculty in Department of History.

REFERENCE BOOKS

1. Gomathinayagam,P& Anusuya,R. (1980). *Modern Governments*, Rajapalayam: Sri Vinayaga Pathipagam.
2. Kapur,A.C. (1975). *Select Constitutions*, New Delhi: S.Chand & Co.
3. Kasthuri,J. (1998). *Modern Governments*, Udumalpet: Ennes Publications.
4. Mahajan, V.D. (1969). *Select Modern Governments*, New Delhi: S.Chand & Co.
5. Ramalingam, T.S. (1971). *Modern Governments*, Madurai: T.S.R. Publications.

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Semester: III & IV	MODERN ECONOMICS (2018-2019 Onwards)	Hours/Week: 1 +1	
Generic Elective - 2		Credits: 1	
Course Code 18UGEM42		Internal 100	External -

COURSE OUTCOMES

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

- understand the economic development and the various sectors of Indian Economy.
- get clear knowledge about economic issues.
- get introduced to the framework of Budgets and Income and Expenditure of the Government.
- understand the role of banks in economic development.
- apply the E-payment methods in day to day life.

UNIT I: Economic Development: Economic Development – Meaning – Nature of Indian Economy – Features of Indian Economy - Agriculture and Economic Development – Industrial Sector and Economic Development – LPG – Advantages and Disadvantages – MNCs – Obstacles to Economic Development.

UNIT II: Economic Issues: Population growth in India –Causes – Measures –Poverty – Causes – Measures – Unemployment – Causes – Types – Measures.

UNIT III: Government Budget and the Economy: Meaning –Types –Principles of Budgeting –Budgetary Procedure –Direct and Indirect Taxes –Merits –Demerits –Causes for Growth of Public Expenditure.

UNIT IV: Role of Commercial Banks in Economic Development: Commercial Banks – Classifications – Public Sector Banks – Merits - Private Sector Banks – Merits –

Differences between Public Sector Banks and Private Sector Banks - Role of Commercial Banks in Economic Development —Innovative Schemes for developing Infrastructure – Demonetization – Reasons for Demonetisation – Merits and Demerits of Demonetisation.

UNIT V: E-Banking: E-Banking – Advantages – Disadvantages – Mobile Banking – Facilities – Advantages – Disadvantages - Internet Banking – Types – Features – Advantages – Disadvantages – Electronic Payment System (EPS) – Meaning – Benefits – Disadvantages – Methods of EPS– ATM – Debit Card – Credit Card – Smart Card– Electronic Clearing Service (ECS) – National Electronic Funds Transfer (NEFT) – Real Time Gross Settlement (RTGS) - Risks involved in E-Payments – Security tips to overcome Risks in E-Payments

TEXT BOOK

Study Material prepared by the faculty in Department of Commerce and Economics.

REFERENCE BOOKS

1. Sankaran .S, (2012). *Micro Economics*, Chennai: Margham Publications.
2. Sankaran. S, (2012). *Monetary Economics*, Chennai: Margham Publications.
3. Ruddar Dutt and Sundharam. K.P.M., (2017). *Indian Economy*, New Delhi: S. Chand & Company Ltd.
4. Mithani.D.M., (2010). *Money, Banking, Trade and Public Finance*, Mumbai: Himalaya Publishing House.
5. Rama. A and Aruna Devi. A. (2019). *Banking Technology*, Chennai: New Century Book House (P) Ltd.



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Semester: III & IV	ADOLESCENT PSYCHOLOGY (2018 -19 onwards)	Hours/Week: 1+ 1	
Generic Elective- 2		Credits: 1	
Course Code 18UGEA43		Internal 100	External -

COURSE OUTCOMES

On completion of the course, students will be able to

- gain knowledge regarding the changes in different domains of development during adolescence.
- develop and maintain good relationship with parents and peers.
- aware of the issues challenging adolescents and measures to be taken to prevent those issues.
- face the challenges they face across the life span
- adopt a few counseling techniques.

UNIT I

Adolescence- Age of adolescence, characteristics, problems of adolescence. Biological transitions, Emotional transitions, Social transitions, Cognitive transitions, Changes in moral behavior, Developmental tasks.

UNIT II

Challenges of Adolescents-Health issues, Sexually transmitted diseases, Mental health issues, Social issues- Sexual abuse, Substance abuse, Influence of electronic media.

UNIT III

Development of Self- Identity development and autonomy, self - esteem, Gender and self- regulation. Self-reliance and personal decision making process. Peer Pressure and Family conflicts.

UNIT IV

Counselling – Styles of Counselling – An effective Counseling relationship-
Managing crises – Effective Counselor - Maintain boundaries – Taking care of
ourselves.

UNIT V

Qualities of a good Counsellors

Empathy – open mindedness – Genuine and Trust Winning – Maintaining
confidentiality – certain Do's and Dont's.

Related Experience

Discussion about the problems confronting adolescents today.

Group discussion on the use and misuse of electronic media by adolescents.

Discussion on issues relating to parent, adolescents relationship.

To study about the health problems of adolescents.

To make a study on the stress experience by adolescents.

Critical Analyses issues and debates in Counseling psychology.

Reflect on the their role in different fields of Counseling.

TEXT BOOK

Study Material prepared by the faculty in Department of Home Science.

REFERENCE BOOKS

1. Chauhan S. (1983), *Psychology of Adolescence*, New Delhi: Allied Publishers Private Limited.
2. Elizabeth B Hurlock (1985). *Developmental Psychology A Life - Span Approach*, New York: TMH Edition.
3. Aron, A., & Aron, E.N. (1994). *Statistics for Psychology*. New Jersey: Prentice Hall.
4. Miles, J. (2001). *Research Methods and Statics*, Exeter: Crucial.



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Semester: III & IV	DISASTER MANAGEMENT (2018 -19 onwards)	Hours/Week: 1+ 1	
Generic Elective- 2		Credits: 1	
Course Code 18UGED44		Internal 100	External -

COURSE OUTCOMES

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

- get a general insight in the dimensions of disasters caused by nature as well as the disasters and environmental hazards induced by human developmental activities
- become aware of the fundamentals of disaster assessment and environmental impact assessment
- become sensitized to the various institutional agencies for disaster management
- be aware of disaster recovery plan
- understand the association at National, State and District level of cope up with disaster

UNIT I

Disaster – Features and Effects of Disaster – Process of Disaster – Hazards and its Classification – Vulnerability and its Categories - Stages in Disaster – Disaster Management and its Activities – Disaster Management Cycle.

UNIT II

Earthquake - Factors Determining Earthquakes –Seismic Waves in Earthquake Processes - Magnitude and Intensity - Earthquake Damages - Disaster Management and Earthquake.

Volcanoes - Active and Non-Active Volcanoes - Types of Volcanoes – Landslides - Basic Causes of Landslides – Tsunami - Causes of Tsunami - Tsunami Warning System -

Disaster Management Team and Tsunami – Flood - Types of Flood - Damages due to Floods.

UNIT III

Damage Assessments for Different Disaster – Objectives, Features, Levels, Types: Damage to Buildings, House Property, Land, Crops and Live Stock – Impact of Human Lives – Assessment Damages - Damage Reports: Flash Report, Initial Report, Interim Report, Specialist Report and Final Report – Points to be Considered while Preparing Reports - Reporting Format and Quantification of Needs– Disaster Assistance: Individual Assistance and Public Assistance.

UNIT IV

National Crisis Management Committee (NCCM), State Crisis Management Group (SCMG): Task, District Disaster Management Committee, Disaster-Related Roles and Resources, Disaster Agencies, Site Operations Centre and Rescue Camps.

UNIT V

Disaster Mitigation Strategies in Floods and Water Hazards, Earthquakes, Volcanic Eruptions, Landslides, Drought and Desertification – Main Mitigation Strategies - - The Disaster Recovery Planning: Objectives and Phases - Reconstruction and Rehabilitation: Physical, Social, Psychological and Economic rehabilitation.

TEXT BOOK

Study material prepared by the faculty in Department of Commerce.

REFERENCE BOOKS

1. Rajdeep Dasgupta. (2011). *Disaster Management and Rehabilitation*, New Delhi: Mittal Publications.
2. Sunder.I. & Sezhiyan.T. (2012). *Disaster Management*, New Delhi : Sarup and Sons.
3. Ramana Murthy.K. (2004). *Disaster Management*, New Delhi: Dominant.



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VIRUDHUNAGAR - 626 001

B.Sc. INFORMATION TECHNOLOGY (SEMESTER) (2018 -19 onwards)

Semester IV	PHP and MYSQL	Hours/Week: 4	
Core Course - 5		Credits: 4	
Course Code 18UITC41		Internal 25	External 75

COURSE OUTCOMES

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

- know about the need of PHP and MySQL
- be confident in Server Side scripting.
- become familiar with PHP syntax and variables, Types in PHP, Control Structure and Functions in PHP.
- know about PHP String handling, Arrays and Number handling.
- learn about Databases and Structured Query Language.
- learn to use both PHP and MySQL to Manage Databases.

UNIT I

PHP and MySQL: PHP –MySQL – Deciding on a Web Application Platform.

Server-Side Scripting Overview: Static HTML – Client-Side Technologies – Server-Side Scripting –Advantages of Server-Side Scripting. **Learning PHP Syntax and**

Variables: PHP is Forgiving – HTML is not PHP – PHP's Syntax is C – Like – Comments – Variables – Types in PHP – Type Summary – The Simple Types – Output.

(15 Hours)

UNIT II

Learning PHP Control Structures and Functions: Boolean Expressions– Branching– Looping – Alternate Control Syntaxes – TerminatingExecution – Using Functions – Function Documentation – Defining own Functions – Functions and Variable Scope – Function, Scope.

(10 Hours)

UNIT III

Passing Information with PHP: HTTP is Stateless – GET Arguments – A Better use for GET – Style URL's – POST Arguments – Formatting form Variables – PHP Superglobal Arrays. **Learning PHP String Handling:** Strings in PHP – String Functions. (12 Hours)

UNIT IV

Learning Arrays: The uses of Arrays – PHP Arrays – Creating Arrays – Retrieving Values – Multidimensional Arrays – Inspecting Arrays – Deleting from Arrays – Iteration. **Learning PHP Number Handling:** Numerical Types – Mathematical Operators – Simple Mathematical Functions – Randomness. (13 Hours)

UNIT V

Introducing Databases and MySQL: Database – Purpose of a Database – PHP Supported Databases – Focus: MySQL. **Learning Structured Query Language (SQL):** Relational Databases and SQL – SQL Standards – The Workhorses of SQL – Database Design – Privileges and Security (10 Hours)

TEXT BOOK

Steve Suehring, Tim Converse, and Joyce Park, *PHP6 and MySQL Bible*, Wiley, INDIA.

UNIT	CHAPTER
I	1, 2, 4
II	5
III	6, 7
IV	8, 9
V	11, 13

REFERENCE BOOKS

1. Luke Welling, Laura Thomson, *PHP MySQL Web Development*, Pearson, 5th Edition.
2. Vikram Vaswani, *How to Do everything with PHP and MySQL*, McGraw-Hill/Osborne.
3. Alan Forbes, (2015). *The Joy of PHP: A Beginner's Guide to programming Interactive Web Applications with PHP & MySQL*, Create Space Independent Publishing Platform.



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B.Sc. INFORMATION TECHNOLOGY (SEMESTER) (2018 -19 onwards)

Semester IV	WEB DESIGN USING PHP LAB	Hours/Week: 4	
Core Practical - 4		Credits: 2	
Course Code 18UITC41P		Internal 40	External 60

Write a PHP Programme to

1. Design a Resume using form
2. Design a Mark statement using table
3. Count the occurrence of a number with its position using while loop.
4. Perform number manipulation using switch-case.
5. Calculate simple interest using function.
6. Generate Fibonacci series using recursive function.
7. Calculate NCR, using include command to include the factorial function.
8. Perform string manipulations.
9. Demonstrate all array operations.
10. Perform various Mathematical operations
11. Create a database for bank transaction using MYSQL connectivity.
12. Perform student mark list processing using MYSQL connectivity.
13. Design Employee pay bill form in HTML & process using MYSQL connectivity.
14. Create library details using MYSQL connectivity
15. Create Inventory details using MYSQL connectivity



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Semester IV	RESOURCE MANAGEMENT TECHNIQUES	Hours/Week: 4	
Allied Course - 4		Credits: 4	
Course Code 18UITA41		Internal 25	External 75

COURSE OUTCOMES

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

- have the concepts of formulation of problem, feasible and optimal solutions for problems.
- give an overview of Assignment problems.
- give an idea of queueing theory and queueing models.
- make the students understand PERT / CPM techniques.

UNIT I

Linear Programming Problem: Mathematical Formulation – Graphical Solution –Simplex Method. (12 Hours)

UNIT II

Transportation Problem: Introduction – General Transportation Problem –The Transportation Table – Loops in Transportation Tables –LP formulation of the Transportation Problem – Triangular Basis in a TP – Solution of a Transportation Problem – Finding an Initial Basic Feasible Solution – Test for Optimality – Degeneracy in Transportation Problem – Transportation Algorithm (MODI Method) – Some Exceptional Cases. (12 Hours)

UNIT III

Assignment Problem: Introduction – Mathematical Formulation of the Problem – The Assignment Method – Special Cases in Assignment Problems.

(12 Hours)

UNIT IV

Queueing Theory: Introduction – Queueing System – Elements of a Queueing System – Operating Characteristics of Queueing System – Probability Distributions in Queueing Systems (Axioms only) – Classification of Queueing Models – Definition of Transient and Steady States - Poisson Queueing Systems (Model I and Model III) and Problems.

(12 Hours)

UNIT V

Network Scheduling by PERT / CPM: Introduction – Network and Basic Components – Logical Sequencing – Rules of Network Construction – Critical Path Analysis.

(12 Hours)

TEXT BOOK

KantiSwarup, Gupta, P.K. Man Mohan, *Operations Research*, New Delhi : Sultan Chand & Sons, Educational Publishers.

UNIT	CHAPTERS	SECTIONS	PAGE NO.
I	2	2.1, 2.2	29 – 31
	3	3.1, 3.2, 3.3	43 – 51
	4	4.1	57 – 59, 68 – 72
II	10	10.1 –10.3, 10.5 – 10.12, 10. 14	171 – 186, 193 – 198
III	11	11.1 – 11.4	209 – 220
IV	20	20.1 –20.8	415 – 417, 421 – 428 , 432 - 434
V	21	21.1 – 21.5	459 – 472



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B.Sc. INFORMATION TECHNOLOGY (SEMESTER) (2018 -19 onwards)

Semester IV	NUMERICAL APTITUDE	Hours/Week: 2	
SEC - 3		Credits: 2	
Course Code 18UITS41		Internal 40	External 60

COURSE OUTCOMES

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

- train the students for various competitive exams.
- provide idea to solve the complex problems
- be confident on proportions.
- gain knowledge on Time and Work

UNIT I

Problems on Numbers (8 Hours)

UNIT II

Problems on Ages (6 Hours)

UNIT III

Ratio and Proportions, Fourth, Third and Mean Proportional. (5 Hours)

UNIT IV

Comparison of Ratios, Compound Ratio, Variation. (5 Hours)

UNIT V

Time and Work. (6 Hours)

TEXT BOOK

R.S.Aggarwal, (Reprint 2008). *Quantitative Aptitude*, S.Chand Publishers.

UNIT	CHAPTER	SECTIONS
I	7, 7A	Full
II	8, 8A	Full
III	12	1 – 30 problems only
IV	12	30 – 60 Problems only
V	15	1 – 40 problems only

REFERENCE BOOKS

1. Gourav.K.Singh, *Quantitative Aptitude*, Delhi : Khurana Publishing House Pvt. Ltd.,.
2. Navratan Singh, Manpreet Cheema, *A New Approach to Numerical Ability for Competitive and Academic Examinations*, New Delhi : Dhillon Group of Publications.
3. Khurana, KJS. Rajeev Markanday, *Numerical Ability 18 Days Wonder*, S.Chand Publishers.



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B.Sc. INFORMATION TECHNOLOGY (SEMESTER)

(2018 -19 onwards)

Semester IV	MULTIMEDIA LAB	Hours/Week: 2	
SEC Practical - 2		Credits: 2	
Course Code 18UITS41P		Internal 40	External 60

Photoshop

1. Editing a Photo.
2. Selecting a person from a photo.
3. Illustrating usage of CMYK and RGB color models.
4. Picture within Text.
5. Creating Changing Seasons.
6. Candle flame Animation.
7. Creating 3D Photo Cube.
8. Dripping Blood Animation.
9. Lens Flare Effect.
10. Zoo Creation.
11. Creating Scenery.
12. Creating Snap Shot.
13. Giving Shadow Effect for the Boy.
14. Creating Pin on Button.
15. Giving Shadow Effect for the Text.
16. Creating Glassy Characters.
17. Enhancing an Old Image to a Color Image. (Healing Brush Tool)
18. Creating Film Strip.
19. Jewel Coloring (History Brush Tool).
20. Making Silhouette.

Flash

21. Study about Timeline concepts, insert text, image. Use Scaling, rotation alignment.
22. Export movie using multiple scenes.
23. Study masking concepts.
24. Add effects to the text (Predefined and user defined)
25. Add buttons, menus, and actions to the movie.
26. Implement the animations using action script



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B.Sc. INFORMATION TECHNOLOGY (SEMESTER) (2018 -19 onwards)

Semester IV	INTRODUCTION TO HTML	Hours/Week: 2	
NMEC - 2		Credits: 2	
Course Code		Internal	External
18UITN41		40	60

COURSE OUTCOMES

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

- understand how to create table using table tags
- understand how to design web pages using formatting, list, link and forms tags
- insert a graphic within the web page.
- create a link within the web page.

UNIT I

Introduction to Html: Hyper Text Markup Language(HTML) – Commonly Used HTML Commands – Titles and Footers – Text Formatting – Emphasizing Material in a Web Page – Text Styles – Other Text Effects. (7 Hours)

UNIT II

Lists: Types of Lists: Ordered List and Unordered List – Definition List.

(5 Hours)

UNIT III

Tables: Using the Width and Border Attribute – Using the Cell Padding Attribute -Using the Cell Spacing Attribute - Using the Bgcolor Attribute - Using the Colspan and Row span attributes. (6 Hours)

UNIT IV

Linking Documents: Links: External & Internal Reference – Hyper Linking to a HTML File – Linking to a Particular Location in a Separate Document -Image as Hyper Links – Image Maps. (6 Hours)

UNIT V

Frames: Introduction to Frames: Frame Tag – Targeting Named Frames . (6 Hours)

TEXT BOOK

Ivan Bayross, (2007). *Web Enabled Commercial Application Development Using HTML, DHTML, JavaScript, Perl CGI*, BPB Publication, 3rd Revised Edition.

UNIT	CHAPTER	PAGE NO.
I	2	15 – 27
II	3	32 – 25
III	5	44 – 51
IV	6	53 – 66
V	7	68 – 77

REFERENCE BOOKS

1. Gopalan, N.P. & Akilandeswari, J. (2007). *Web Technology*, Prentice Hall of India.
2. Deital & Deital (2004). *Internet and World Wide Web - How to Program*, Pearson Education, 3rd Edition.