DON BOSCO ARTS & SCIENCE COLLEGE

ANGADIKADAVU

(Affiliated to Kannur University Approved by Government of Kerala)

ANGADIKADAVU P.O., IRITTY, KANNUR – 670706

COURSE PLAN

BCA

(2019 – 22)

SEMESTER - I

ACADEMIC YEAR - (2019-20)

I Semester BCA (2019 - 22)			
SL. No.	**Name of Subjects with Code**	**Name of the Teacher**	**Duty Hours per week**
1.	**1A 01 ENG Communicative English**	Amrutha Lakshmanan N.V.	**5**
2.	**1A 02 ENG Readings on Kerala**	Alisha Vasu	**4**
3.	**1A 07 2MAL Sahithya Ganangal**	Rajisha C K	**5**
4.	**1A 07 HIN Kavitha Aur Kahani**	Jainy N George	**5**
5.	**1A 11 BCA Informatics for Computer Applications**	Sruthi N	**3**
6.	**1B 01 BCA Programming in C**	Sindhu P M	**2**
7.	**2B 04 BCA Lab I Programming in C**	Sindhu P M	**2**
8.	**1C 01 Mat-BCA Mathematics for BCA I**	Remya Raj	**4**
	Class Incharge	**Sruthi N**	

TIME TABLE

Day	09.50 Am - 10.45 Am	10.45 Am -11.40 Am	11.55 Am -12.50 Pm	01.40 Pm - 02.35 Pm	02.35 Pm - 03.30 Pm
1	1A 11 BCA Informatics for Computer Applications	1A 07 2MAL Sahithya Ganangal/ 1A 07 HIN Kavitha Aur Kahani	1A 01 ENG Communicative English	1B 01 BCA Programming in C	1B 01 BCA Programming in C
2	1A 02 ENG Readings on Kerala	1C 01 Mat-BCA Mathematics for BCA I	1A 07 2MAL Sahithya Ganangal/ 1A 07 HIN Kavitha Aur Kahani	1A 11 BCA Informatics for Computer Applications	1A 01 ENG Communicative English
3	1A 01 ENG Communicative English	1A 07 2MAL Sahithya Ganangal/ 1A 07 HIN Kavitha Aur Kahani	1B 01 BCA Programming in C	1C 01 Mat-BCA Mathematics for BCA I	1A 02 ENG Readings on Kerala
4	1B 01 BCA Programming in C	1C 01 Mat-BCA Mathematics for BCA I	1A 02 ENG Readings on Kerala	1A 01 ENG Communicative English	1A 07 2MAL Sahithya Ganangal/ 1A 07 HIN Kavitha Aur Kahani
5	1A 02 ENG Readings on Kerala	1A 07 2MAL Sahithya Ganangal/ 1A 07 HIN Kavitha Aur Kahani	1A 01 ENG Communicative English	1A 11 BCA Informatics for Computer Applications	1C 01 Mat-BCA Mathematics for BCA I

Subject Code:	**1A01 ENG**
Subject Name:	**Communicative English**
No. of Credits:	**4**
No. of Contact Hours:	**90**
Hours per Week:	**5**
Name of Faculty:	Amrutha Lakshmanan N.V.

Objective: -

1. Understand and apply the rubrics of English grammar
2. Recognize and apply the basic patterns in English vocabulary
3. Read and elicit data, information, inferences and interpretations based on a given material in English
4. Develop the ability to speak in English in real life situations
5. Elicit necessary information after listening to an audio material in English
6. Compose academic and non-academic writings including letters, paragraphs and essays on a given topic and CV's for specific purposes

Module –I: Grammar and Usage

Grammar

Articles, Modals, Tenses, Voices, Subject- Verb Agreement, Direct & Reported speech

Usage

Question Tags, Types of Words, Phrasal Verbs and Idiomatic Expressions.

Module – II: Listening and Speaking

Listening

What is Communication?, Phonemes in English, Syllables and Word Stress, Listening to NewsBulletins, Listening to Instructions and Directions, Listening to Lectures, Listening to Speeches

Speaking

Greetings and Introductions, Small Conversations, Talking on Telephone, Making Requests,Making Enquiries, Making Suggestions, Expressing Gratitude, Complaining.

Module – III: Reading and Writing

Reading

Reading Official Letters and Profiles, Reading Advertisements, Reading News Reports, ReadingCharts, Reading Online Content.

Writing

Writing Paragraphs, Taking and Making Notes, Essay and Academic Writing, Writing Letters,Writing Resumes.

Prescribed Textbook: *Equip: English for Undergraduates* by Cambridge University Pre

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	01-07-2019 To 05-07-2019	1	Introduction to Communication
		2	Terms of Communication
		3 July	St. Thomas Day
		3	Article (a, an, and the)
		4	Definite Article (the) and Indefinite Article (a and an)
		5	Discussion on Article
		6	Class Test
2	08-07-2019 To 12-07-2019	7	Modals – Modal Auxiliary and non-Modal Auxiliary
		8	Modals
		9	Introduction to Tenses
		10	Present Tense
		11	Past Tense
		12	Future Tense
		13	Discussion on Modals and Tenses
3	15-07-2019 To 19-07-2019	14	Examination
		15	Voices- Passive and Active
		16	Passive Voice
		17	Passive Voice
		18	Examination
		19	SEMINAR PRESENTATION
4	22-07-2019 To 26-07-2019	20	SEMINAR PRESENTATION
		21	SEMINAR PRESENTATION
		22	Subject –Verb Agreement
		23	Subject –Verb Agreement
		24	Speech - Direct and Reported
		25	Direct and Indirect Speech
5	29-07-2019 To 02-08-2019	26	Direct and Indirect Speech
		27	Examination
		28	Question Tag
		31 July	Karkadaka Vavu
		29	Question Tag
		30	Phrasal Verbs (Separable, Inseparable, Transitive and Intransitive)
		31	Phrasal Verbs
6	05-08-2019	32	CLASS PRESENTATION ON IDIOMS
		33	DISCUSSION

No of Weeks	Dates	Session	Topic
	To 09-08-2019	34	Examination
		35	Types of Words (Synonyms, Antonyms, Homonyms, Homophones, Acronyms and Eponyms)
		36	Synonyms, Antonyms and Eponyms
		37	Homonyms, Homophone and Acronyms
		38	Examination
		39	What is Communication?
7	12-08-2019 To 16-08-2019	40	Phonemes in English
		41	Phonemes in English
		15 Aug	Independence day
		42	Syllables and Word Stress
		43	Syllables and Word Stress
		44	Listening to News Bulletins
		45	Listening to Lectures
8	19-08-2019 To 23-08-2019	46	Examination
		47	Listening to Speeches
		48	Listening to Instructions and Directions
		49	DISCUSSION
		50	Small Conversation
		51	Greetings and Introductions
		52	REVISION
		23 Aug	Sreekrishna Jayanthi
9	26-08-2019 To 30-08-2019	26 Aug	First Internal Exam
			First Internal Exam
		28 Aug	Ayyankali Jayanthi
			First Internal Exam
			First Internal Exam
			First Internal Exam
10	02-09-2019 To 06-09-2019		First Internal Exam
		53	Talking to Telephone
		54	Making Requests
		55	Making Enquiries
		56	Making Suggestions
		57	SEMINAR PRESENTATION
		58	SEMINAR PRESENTATION
		59	SEMINAR PRESENTATION
			Onam Celebration
11	09-09-2019		Muharram

No of Weeks	Dates	Session	Topic
	To 13-09-2019		First Onam
			Thiruvonam
			Third Onam
			Fourth Onam - SreeNarayana Guru Jayanthi
12	16-09-2019 To 20-09-2019	60	Expressing Gratitude
		61	Complaining
		62	SEMINAR PRESENTATION
		63	SEMINAR PRESENTATION
		64	READING
		65	Reading Official Letters and Profiles
		66	Reading Advertisements
		67	Reading News Reports
		68	Reading News Reports
13	23-09-2019 To 27-09-2019	69	Reading Charts
		70	Reading Online Content
		71	Examination
		72	Writing Paragraphs
		73	Writing Paragraphs
		74	DISCUSSION
		75	DISCUSSION
		76	Essay and Academic Writing
		77	Essay and Academic Writing
14	30-09-2019 To 04-10-2019	78	Writing Letters
		79	Writing Letters
		2 Oct	Gandhi Jayanthi
		80	SEMINAR PRESENTATION
		81	SEMINAR PRESENTATION
		82	SEMINAR PRESENTATION
		83	Writing Resumes
		84	Writing Resumes
15	07-10-2019 To 11-10-2019	07 Oct	Mahanavami
		08 Oct	Vijayadashami
		85	Taking and Making Notes
		86	Taking and Making Notes
		87	Examination
		88	REVISION
		89	REVISION
		90	REVISION

No of Weeks	Dates	Session	Topic
16	14-10-2019 To 18-10-2019	14 Oct	Second Internal
			Second Internal
			Second Internal
			Second Internal
			Second Internal
			Second Internal
17	21-10-2019 To 25-10-2019		Study Leave
			Study Leave
			Study Leave
			Study Leave
			Study Leave
18	28-10-2019 To 01-11-2019		Study Leave
			Study Leave
		30 Oct	University Exam Begin

Subject Code:	**1A 02 ENG**
Subject Name:	**Readings on Kerala**
No. of Credits:	**3**
No. of Contact Hours:	**72**
Hours per Week:	**4**
Name of Faculty:	Alisha Vasu

Objective: -

1. Understand the basic facts and patterns regarding the cultural evolution of Kerala through articles, poems, stories, life writings and historical narratives.
2. Acquaint with the life and works of the illustrious leaders of Kerala Renaissance and the major events.
3. Assimilate the notion of Kerala as an emerging society and critically examine the salient features of its evolution.
4. Understand the evolution and contemporary state of the concept of "gender" with reference to Kerala
5. Understand the form and content of Kerala's struggle against "casteism" and for "secularism".
6. Develop an awareness about the ecological problems and issues in Kerala

Module - I

1. "Conversation" :SreeNarayana Guru
2. "Curing Caste" :SahodaranAyyappan
3. Excerpts from "Eri" :PradeepanPambirikkunnu
4. Excerpts from *Kelu*: N. Sasidharan, E.P.Rajagopalan
5. Excerpts from "Parting from the Path of Life" :CherukadGovindaPisharodi

Module – II

1. "Not an Alphabet in Sight" :PoykayilAppachan
2. "KuttippuramPalam" :Idasseri
3. "Courageous Act" :AnasuyaMenon
4. "Vaikom Satyagraha" : K. N.Panikkar
5. "The Voice" : Suresh Menon

Prescribed Textbook: ***Multiple Modernities: Readings on Kerala*** published by Hornbill
Publications

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	01-07-2019 To 05-07-2019	1	Introduction
		2	Introduction to Malayalam literature
		3 July	St. Thomas Day
		3	"Conversation" :Sree Narayana Guru
		4	"Conversation" :Sree Narayana Guru
		5	"Conversation" :Sree Narayana Guru
		6	Question answer discussions
2	08-07-2019 To 12-07-2019	7	Introduction to Dalit literature
		8	"Curing Caste" :Sahodaran Ayyappan
		9	"Curing Caste" :Sahodaran Ayyappan
		10	Question answer discussions
		11	Excerpts from "Eri" :Pradeepan Pambirikkunnu
		12	Excerpts from "Eri" :Pradeepan Pambirikkunnu
3	15-07-2019 To 19-07-2019	13	Excerpts from "Eri" :Pradeepan Pambirikkunnu
		14	Excerpts from "Eri" :Pradeepan Pambirikkunnu
		15	Question answer discussions
		16	Excerpts from *Kelu*: N. Sasidharan, E.P.Rajagopalan
		17	Excerpts from *Kelu*: N. Sasidharan, E.P.Rajagopalan
		18	Excerpts from *Kelu*: N. Sasidharan, E.P.Rajagopalan
4	22-07-2019 To 26-07-2019	19	Excerpts from *Kelu*: N. Sasidharan, E.P.Rajagopalan
		20	Excerpts from *Kelu*: N. Sasidharan, E.P.Rajagopalan
		21	Enactment of the play
		22	Excerpts from "Parting from the Path of Life" :CherukadGovindaPisharodi
		23	Excerpts from "Parting from the Path of Life" :Cherukad Govinda Pisharodi
		24	Excerpts from "Parting from the Path of Life" :Cherukad Govinda Pisharodi
5	29-07-2019 To 02-08-2019	25	Excerpts from "Parting from the Path of Life" :Cherukad Govinda Pisharodi
		26	Question answer discussions
		27	Seminar
		31 July	Karkadaka Vavu
		28	Seminar
		29	Revision
		30	Class Test

No of Weeks	Dates	Session	Topic
6	05-08-2019 To 09-08-2019	31	Introduction to Dalit representations of kerala
		32	“Not an Alphabet in Sight” :Poykayil Appachan
		33	“Not an Alphabet in Sight” :Poykayil Appachan
		34	“Not an Alphabet in Sight” :Poykayil Appachan
		35	“Not an Alphabet in Sight” :Poykayil Appachan
		36	Question answer discussions
		37	“Kuttippuram Palam” :Idasseri
7	12-08-2019 To 16-08-2019	38	“Kuttippuram Palam” :Idasseri
		39	“Kuttippuram Palam” :Idasseri
		15 Aug	Independence day
		40	“Kuttippuram Palam” :Idasseri
		41	Question answer discussions
		42	Class Test
8	19-08-2019 To 23-08-2019	43	Seminar presentations
		44	Seminar presentations
		45	Seminar presentations
		46	“Courageous Act” :Anasuya Menon
		47	“Courageous Act” :Anasuya Menon
		23 Aug	Sreekrishna Jayanthi
9	26-08-2019 To 30-08-2019	26 Aug	**First Internal Exam**
			First Internal Exam
		28 Aug	Ayyankali Jayanthi
			First Internal Exam
			First Internal Exam
			First Internal Exam
10	02-09-2019 To 06-09-2019		**First Internal Exam**
		48	“Courageous Act” :Anasuya Menon
		49	“Courageous Act” :Anasuya Menon
		50	“Courageous Act” :Anasuya Menon
			Onam Celebration
11	09-09-2019 To 13-09-2019		Muharram
			First Onam
			Thiruvonam
			Third Onam
			Fourth Onam - Sree Narayana Guru Jayanthi
12	16-09-2019 To	51	Question answer discussions
		52	Question answer discussions
		53	Question answer discussions

No of Weeks	Dates	Session	Topic
	20-09-2019	54	Revision
		55	“Vaikom Satyagraha” : K. N. Panikkar
		56	“Vaikom Satyagraha” : K. N. Panikkar
13	23-09-2019 To 27-09-2019	57	“Vaikom Satyagraha” : K. N. Panikkar
		58	“Vaikom Satyagraha” : K. N. Panikkar
		59	“Vaikom Satyagraha” : K. N. Panikkar
		60	Question answer discussions
		61	Class Test
		62	“The Voice” : Suresh Menon
14	30-09-2019 To 04-10-2019	63	“The Voice” : Suresh Menon
		64	“The Voice” : Suresh Menon
		2 Oct	Gandhi Jayanthi
		65	“The Voice” : Suresh Menon
		66	“The Voice” : Suresh Menon
		67	“The Voice” : Suresh Menon
		68	Question answer discussions
15	07-10-2019 To 11-10-2019	07 Oct	Mahanavami
		08 Oct	Vijayadashami
		69	Revision of first module
		70	Revision of second module
		71	Seminar presentations
		72	Seminar presentations
16	14-10-2019 To 18-10-2019	14 Oct	**Second Internal**
			Second Internal
			Second Internal
			Second Internal
			Second Internal
			Second Internal
17	21-10-2019 To 25-10-2019		Study Leave
			Study Leave
			Study Leave
			Study Leave
			Study Leave
18	28-10-2019 To 01-11-2019		Study Leave
			Study Leave
		30 Oct	University Exam Begin

Subject Code:	**1A 11 BCA**
Subject Name:	**Informatics for Computer Applications**
No. of Credits:	**2**
No. of Contact Hours:	**54**
Hours per Week:	**3**
Name of Faculty:	Sruthi N.

Objective: -

1: Understand the basic concepts and functional knowledge in the field of Informatics.
2: Equip the students with fundamentals of Computer.
3:Awareness about social issues and concerns in the use of digital technology
4:Skills to enable students to use free software.

Module – I

Concept of Hardware and Software: Computer Languages – Machine Language, Assembly Language, High-level Language, Language translators: Compiler, Interpreter,Assembler, Features of good language.

Module - II

Basic Computer Organization: Von Neumann model, Input Unit, Output Unit, Storage Unit, Control Unit, Memory hierarchy, RAM, ROM, PROM and EPROM, cache memoryand registers. Secondary storage devices. Storage capacity: bit, byte, nibble.

Module - III

Introducing Input output devices with examples. Introduction to operating System: needof OS, Types of OS, Functions of OS (introduction only). Introduction to ComputerNetworks: definition and applications.

Module - IV

Introduction to Linux: Basic commands in Linux such as listing files, viewing contentsin files, creating and deleting directories, moving and copying files and/or directories,man pages, setting permissions on files/directories and vi editor. Steps to install LinuxOS.

Module - V

IT & Society- issues and concerns- digital divide, IT & development, free software movement, cyber ethics, cybercrime, cyber threats, cyber security, privacy issues, cyberlaws, cyber addictions, guide lines for proper usage of computers, internet and mobilephones.

Books for Study:

1. V. Rajaraman and T. Radhakrishnan, An Introduction to Digital Computer Design, 5th Ed, PHI.
2. B.Ram, Computer Fundamentals, Architecture & Organization, 4th Ed, New Age

International Publishers
3. Pradeep K. Sinha and PritiSinha, Computer Fundamentals, 6th Ed, BPB Publications
4. Ellen Siever, Stephen Figgins, Robert Love and Arnold Robbins, Linux in a Nutshell: A Desktop Quick Reference, 6thEdition, O_Reilly

Books for Reference:

1. George Beekman and Eugene J. Rathswohl, Computer Confluence, Pearson
2. Alexis Leon and Mathews Leon, Fundamentals of Information Technology, Vikas Publishing
3. Barbara Wilson, Information Technology: The Basics, Macmillan International Higher Education
4. John Ray, Sams Teach Yourself Linux in 10 Minutes, Sams
5. Ramesh Bangia, Learning Computer Fundamentals, Khanna Publishers

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	01-07-2019 To 05-07-2019	1	Concept of Hardware and Software
		2	Concept of Hardware and Software
		3 July	St. Thomas Day
		3	Computer Languages – Machine Language
		4	Assembly Language, High-level Language
		5	Language translators: Compiler
2	08-07-2019 To 12-07-2019	6	Interpreter, Assembler
		7	Features of good language
		8	Basic Computer Organization
		9	Von Neumann model, Input Unit, Output Unit, Storage Unit, Control Unit,
		10	**Class test Module 1**
3	15-07-2019 To 19-07-2019	11	Memory hierarchy
		12	RAM, ROM, PROM and EPROM
		13	Cache memory and registers.
		14	Secondary storage devices.
		15	Storage capacity: bit, byte, nibble
4	22-07-2019 To 26-07-2019	16	**Class test Module 2**
		17	Introducing Input output devices with examples
		18	Introduction to operating System
		19	Need of OS
		20	Types of OS
		21	Functions of OS
5	29-07-2019 To 02-08-2019	22	Functions of OS
		23	Introduction to ComputerNetworks: definition and applications
		24	Introduction to ComputerNetworks: definition and applications
		31 July	KarkadakaVavu
		25	Class test module 3
		26	Introduction to Linux
6	05-08-2019 To	27	Introduction to Linux
		28	Basic commands in Linux such as listing files
		29	Viewing contentsin files

No of Weeks	Dates	Session	Topic
	09-08-2019	30	Creating and deleting directories
7	12-08-2019 To 16-08-2019	31	Moving and copying files and/or directories
		15 Aug	Independence day
		32	man pages
		33	Setting permissions on files/directories
8	19-08-2019 To 23-08-2019	34	**Revision module 1**
		35	**Revision module 2**
		36	**Revision module 3**
		23 Aug	SreekrishnaJayanthi
9	26-08-2019 To 30-08-2019	26 Aug	**First Internal Exam**
			First Internal Exam
		28 Aug	AyyankaliJayanthi
			First Internal Exam
			First Internal Exam
			First Internal Exam
10	02-09-2019 To 06-09-2019		**First Internal Exam**
		37	VI editor
		38	VI editor
			Onam Celebration
11	09-09-2019 To 13-09-2019		Muharram
			First Onam
			Thiruvonam
			Third Onam
			Fourth Onam - SreeNarayana Guru Jayanthi
12	16-09-2019 To 20-09-2019	39	Steps to install LinuxOS
		40	IT & Society
		41	Issues and concerns- digital divide
		42	IT & development
13	23-09-2019 To 27-09-2019	43	Free software movement
		44	Cyber ethics
		45	Cybercrime
		46	Cyber threats
14	30-09-2019 To 04-10-2019	47	Cyber security
		48	Privacy issues
		2 Oct	Gandhi Jayanthi
		49	Cyberlaws
		50	Cyber addictions
		51	Guide lines for proper usage of computers

No of Weeks	Dates	Session	Topic
15	07-10-2019 To 11-10-2019	07 Oct	Mahanavami
		08 Oct	Vijayadashami
		52	Internet and mobile phones.
		53	Revision module 4 and 5
		54	Revision module 3,2 and 1
16	14-10-2019 To 18-10-2019	14 Oct	Second Internal
			Second Internal
			Second Internal
			Second Internal
			Second Internal
			Second Internal
17	21-10-2019 To 25-10-2019		Study Leave
			Study Leave
			Study Leave
			Study Leave
			Study Leave
18	28-10-2019 To 01-11-2019		Study Leave
			Study Leave
		30 Oct	University Exam Begin

Subject Code:	**1B 01 BCA**
Subject Name:	**Programming in C**
No. of Credits:	**2**
No. of Contact Hours:	**36**
Hours per Week:	**2**
Name of Faculty:	Sindhu P.M.

Objective: -

1: Understanding the basic concepts inprogramming.
2: Familiarize the basic syntax and semantics of C language.
3:Familiarize with advanced features ofc.
4: Develop skill inprogramming

Module - I

Algorithms and Flow charts: Definitions, Symbols, Program:structure, top-down design,source code, object code, executable file, file extensions. Importance of C; Basicstructure of C, programming style, executing a C program. Character set, C tokens,Keywords, identifiers, Constants, data types, declaration of variables, arithmeticoperators , logical operators, Relational operators, Assignment operators, Increment anddecrement operators, conditional operators, Bitwise operators. Precedence and order ofevaluation.type conversion in expression. common programming errors, program testingand debugging, programefficiency.

Module - II

Managing Input output operation: reading a character, writing a character, formatted input output.Branching statements-if, if..else, nested if...else, else...if ladder, switch statement, go to statement.Looping statements- while, do...while, for loop. Break and continue statements.

Module - III

Arrays: One dimensional arrays, two dimensional arrays, Initializing array elements, Multidimensional arrays. Strings: declaration and initializing, reading and writing. Arithmeticoperations on character. String handling functions, Functions: Library and user defined, defininga function, calling a function. Parameter passing techniques, Scope and life time of variables infunction, recursive functions, arrays andfunctions.

Module - IV

Structure and union: definition, giving values to members, initialization. Array of structures, array within structure, structure within structure, union. Pointers: accessing theaddress of a variable, declaration and initializing pointers, accessing a variable through itspointers, pointer arithmetic, pointers and arrays (pointer to array and array of pointers),pointers and character string, pointer and functions. Dynamic memory allocation:malloc(), calloc(), free(),realloc().

Module - V

File Management: Text and binary files, Defining and opening a file, closing a file, input andoutput operations on file, error handling, random access file. Command line arguments.

Books for Study:

1. E. Balaguruswamy, Programming in ANSI C, 7th Ed, TMH

Books for Reference:

1. V. Rajaraman, Computer Basics and C Programming, PHI
2. Ashok N. Kamthane, Programming with ANSI and Turbo C, Pearson
3. YeshavantKanetkar, Let Us C, 16thEd, BPB
4. Noel Kalicharan, C by Example, Cambridge University Pres

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	01-07-2019 To 05-07-2019	1	Algorithms
		3 July	St. Thomas Day
		2	Flow charts: Definitions, Symbols
2	08-07-2019 To 12-07-2019	3	Program: structure.
		4	Top-down design, source code, object code, executable file, file extensions
		5	Importance of C; Basic structure of C
3	15-07-2019 To 19-07-2019	6	Programming style, executing a C program.
		7	Character set, C tokens, Keywords, identifiers, Constants,
		8	Data types
4	22-07-2019 To 26-07-2019	9	Declaration of variables, arithmetic operators
		10	Logical operators, Relational operators, Assignment operators, Increment and decrement operators
		11	Conditional operators, Bitwise operators. Precedence and order of evaluation.
5	29-07-2019 To 02-08-2019	12	Type conversion in expression. common programming errors.
		31 July	KarkadakaVavu
		13	Program testing and debugging, program efficiency
6	05-08-2019 To 09-08-2019	14	**Class test module I**
		15	Managing Input output operation
		16	Reading a character, writing a character.
7	12-08-2019 To 16-08-2019	17	Formatted input output.
		15 Aug	Independence day
		18	Branching statements-if, if..else, nested if...else, else...if ladder.
		19	Switch statement, go to statement.
8	19-08-2019 To 23-08-2019	20	Looking statements- while, do...while, for loop.
		21	Break and continue statements
		22	**Class test module II**
		23 Aug	SreekrishnaJayanthi
9	26-08-2019 To 30-08-2019	26 Aug	**First Internal Exam**
			First Internal Exam
		28 Aug	AyyankaliJayanthi
			First Internal Exam

No of Weeks	Dates	Session	Topic
			First Internal Exam
			First Internal Exam
10	02-09-2019 To 06-09-2019		**First Internal Exam**
		23	Arrays: One dimensional arrays
		24	Two dimensional arrays, Initializing array elements, Multidimensional arrays.
			Onam Celebration
11	09-09-2019 To 13-09-2019		**Muharram**
			First Onam
			Thiruvonam
			Third Onam
			Fourth Onam - SreeNarayana Guru Jayanthi
12	16-09-2019 To 20-09-2019	25	Strings: declaration and initializing, reading and writing.
		26	Arithmetic operations on character. String handling functions. Functions: Library and user defined, defining a function, calling a function.
		27	Parameter passing techniques, Scope and life time of variables in function
		28	Recursive functions, arrays and functions
13	23-09-2019 To 27-09-2019	29	**Class test module III**
		30	Structure and union: definition, giving values to members, initialization.
		31	Array of structures, array within structure, structure within structure, union.
14	30-09-2019 To 04-10-2019	32	Pointers: accessing the address of a variable, declaration and initializing pointers, accessing a variable through its pointers, pointer arithmetic, pointers and arrays and character string, pointer and functions.
		33	Dynamic memory allocation: malloc(), calloc(), free(), realloc().
		2 Oct	**Gandhi Jayanthi**
		34	File Management: Text and binary files, Defining and opening a file, closing a file,
15	07-10-2019 To 11-10-2019	**07 Oct**	**Mahanavami**
		08 Oct	**Vijayadashami**
		35	Input and output operations on file, error handling, and random access file. Command line arguments.
		36	**Class test module IV & V**
16	14-10-2019 To	**14 Oct**	**Second Internal**
			Second Internal

No of Weeks	Dates	Session	Topic
	18-10-2019		Second Internal
			Second Internal
			Second Internal
			Second Internal
17	21-10-2019 To 25-10-2019		Study Leave
			Study Leave
			Study Leave
			Study Leave
			Study Leave
18	28-10-2019 To 01-11-2019		Study Leave
			Study Leave
		30 Oct	University Exam Begin

Subject Code:	**2B 04 BCA Lab I**
Subject Name:	**Programming in C**
No. of Credits:	**1**
No. of Contact Hours:	**36**
Hours per Week:	**2**
Name of Faculty:	**Sindhu P.M.**

Program List

Students have to practice all programs

1. Write a program to print the size of any five data types in C and its range.
2. Write a program to convert Fahrenheit to Celsius.
3. Write a program to accept three numbers and find the largest and second largest (ifstmt)
4. Write a program to to find the roots of a quadratic equation (if stmt)
5. Write a program to print all prime numbers between any 2 given limits. (while/for stmt)
6. Write a program to check whether a given matrix is an Identity matrix or not. (2D array)
7. Write a program matrix multiplication. (2D array)
8. Write a program to accept two numbers and perform various arithmetic operations (+,-,*,/) based on the symbol entered. (switchstmt)
9. Write a recursive program to find the factorial of a number.(recursive function)
10. Write a program to check whether the string is a Palindrome. (string, 1D array)
11. Write a program to count and display the different vowels in a line of text. (string)
12. Create an employee structure and display the same. (structure)
13. Write a function to swap two numbers using pointers (pointers, call by value, call by ref)
14. Write a program to access an array of integers using pointers (pointers to arrays)
15. Create a file and store some records in it. Display the contents of the same.(file)

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	01-07-2019 To 05-07-2019	1	Write a program to print the size of any five data types in C and its range
		3 July	St. Thomas Day
		2	Write a program to print the size of any five data types in C and its range
2	08-07-2019 To 12-07-2019	3	Write a program to convert Fahrenheit to Celsius
		4	Write a program to convert Fahrenheit to Celsius
		5	Write a program to accept three numbers and find the largest and second largest (if stmt)
3	15-07-2019 To 19-07-2019	6	Write a program to accept three numbers and find the largest and second largest (if stmt)
		7	Write a program to to find the roots of a quadratic equation (if stmt)
		8	Write a program to to find the roots of a quadratic equation (if stmt)
4	22-07-2019 To 26-07-2019	9	Write a program to print all prime numbers between any 2 given limits. (while/for stmt)
		10	Write a program to print all prime numbers between any 2 given limits. (while/for stmt)
		11	Write a program to check whether a given matrix is an Identity matrix or not. (2D array)
5	29-07-2019 To 02-08-2019	12	Write a program to check whether a given matrix is an Identity matrix or not. (2D array)
		31 July	KarkadakaVavu
		13	Write a program matrix multiplication. (2D array)
6	05-08-2019 To 09-08-2019	14	Write a program matrix multiplication. (2D array)
		15	Write a program to accept two numbers and perform various arithmetic operations (+,-,*,/) based on the symbol entered. (switch stmt)
		16	Write a program to accept two numbers and perform various arithmetic operations (+,-,*,/) based on the symbol entered. (switch stmt)
7	12-08-2019 To 16-08-2019	17	Write a program to accept two numbers and perform various arithmetic operations (+,-,*,/) based on the symbol entered. (switch stmt)
		15 Aug	Independence day
		18	Write a recursive program to find the factorial of a number.(recursive function)
		19	Write a recursive program to find the factorial of a number.(recursive function)

No of Weeks	Dates	Session	Topic
8	19-08-2019 To 23-08-2019	20	Write a recursive program to find the factorial of a number.(recursive function)
		21	Write a program to check whether the string is a Palindrome. (string, 1D array)
		22	Write a program to check whether the string is a Palindrome. (string, 1D array)
		23 Aug	SreekrishnaJayanthi
9	26-08-2019 To 30-08-2019	26 Aug	First Internal Exam
			First Internal Exam
		28 Aug	AyyankaliJayanthi
			First Internal Exam
			First Internal Exam
			First Internal Exam
10	02-09-2019 To 06-09-2019		First Internal Exam
		23	Write a program to count and display the different vowels in a line of text. (string)
		24	Write a program to count and display the different vowels in a line of text. (string)
			Onam Celebration
11	09-09-2019 To 13-09-2019		Muharram
			First Onam
			Thiruvonam
			Third Onam
			Fourth Onam - SreeNarayana Guru Jayanthi
12	16-09-2019 To 20-09-2019	25	Write a program to count and display the different vowels in a line of text. (string)
		26	Create an employee structure and display the same. (structure)
		27	Create an employee structure and display the same. (structure)
		28	Create an employee structure and display the same. (structure)
13	23-09-2019 To 27-09-2019	29	Write a function to swap two numbers using pointers (pointers, call by value, call by ref)
		30	Write a function to swap two numbers using pointers (pointers, call by value, call by ref)
		31	Write a function to swap two numbers using pointers (pointers, call by value, call by ref)
14	30-09-2019 To	32	Write a program to access an array of integers using pointers (pointers to arrays)
		33	Write a program to access an array of integers using

No of Weeks	Dates	Session	Topic
	04-10-2019		pointers (pointers to arrays)
		2 Oct	Gandhi Jayanthi
		34	Create a file and store some records in it. Display the contents of the same.(file)
15	07-10-2019 To 11-10-2019	07 Oct	Mahanavami
		08 Oct	Vijayadashami
		35	Create a file and store some records in it. Display the contents of the same.(file)
		36	Lab Model exam
16	14-10-2019 To 18-10-2019	14 Oct	**Second Internal**
			Second Internal
			Second Internal
			Second Internal
			Second Internal
			Second Internal
17	21-10-2019 To 25-10-2019		Study Leave
			Study Leave
			Study Leave
			Study Leave
			Study Leave
18	28-10-2019 To 01-11-2019		Study Leave
			Study Leave
		30 Oct	University Exam Begin

Subject Code:	**1C 01 Mat-BCA**
Subject Name:	**Mathematics for BCA I**
No. of Credits:	**4**
No. of Contact Hours:	**72**
Hours per Week:	**4**
Name of Faculty:	Remya Raj

Objective: -

1. Understand differentiation, derivative of functions namely constant function, trigonometric function, inverse trigonometric functions, y = log x, hyperbolic functions and parametrically defined function, Logarithmic differentiation and derivative of implicitly defined functions.
2. Understand Successive differentiation and Leibnitz's theorem for the nth derivative of the product of two functions.
3. Understand Basics of Boolean Algebra: Definition, duality and basic theorems.
4. Understand Rank of a matrix, elementary transformation of a matrix, equivalent matrices, elementary matrices, Gauss-Jordan method of finding the inverse, normal form of a matrix and partition method of finding the inverse.
5. Understand solution of linear system of equations – method of determinants – Cramer's rule, matrix inversion method, consistency of linear system of equations, Rouche's theorem, procedure to test the consistency of a system of equations in n unknowns, system of linear homogeneous equations.
6. Understand Linear transformations, orthogonal transformation and linear dependence of vectors.

Module – I: Differential Calculus – Differentiation
Text: Differential Calculus, Shanti Narayan and P.K. Mittal
Basics of differentiation – Derivative of a constant function, some general theorems on derivation (theorems without proof), derivatives of trigonometricfunctions, derivatives of inverse trigonometric functions, derivative of $y = \log x$,hyperbolic functions, derivation of parametrically defined functions,logarithmic differentiation, derivation of implicitly defined functions.(Sections 4.2, 4.3 except 4.3.5, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10)

Module – II: Differential Calculus– Successive Differentiation
Text: Higher Engineering Mathemaics (41st edition), B.S. Grewal
Successive differentiation, standard results, preliminary transformations, use ofpartial fractions, Leibnitz's theorem for the nth derivative of the product of twofunctions
(Sections 4.1, 4.2)

Module – III: Boolean Algebra
Text: Set Theory and Related Topics, S. Lipschitz, Schaum's Series
Introduction, basic definition, duality, basic theorems(Sections 11.1, 11.2, 11.3, 11.4)

Module – IV: Linear Algebra - Matrices and System of Equations, Linear

Transformations

Text: Higher Engineering Mathematics (41st edition), B.S. Grewal

Rank of a matrix, elementary transformation of a matrix, equivalent matrix,elementary matrices, Gauss-Jordan method of finding the inverse, normal formof a matrix, partition method of finding the inverse, solution of linear systemof equations – method of determinants – Cramer's rule, matrix inversionmethod, consistency of linear system of equations, Rouche's theorem,procedure to test the consistency of a system of equatios in n unknowns, systemof linear homogeneous equations. Linear transformations, orthogonaltransformation, vectors – linear dependence(Sections 2.7, 2.8,2.9, 2.10, 2.11, 2.12)

References

1. Advanced Engineering Mathematics (10th edition), E. Kreyszig, Wiley
2. Calculus (10th edition), Anton, Bivens, Davis, Wiley-India
3. A Textbook of Matrices, Shanti Narayan and P.K. Mittal, S. Chand &Co
4. Higher Engineering Mathematics (41st edition), B.S. Grewal, KhannaPub.
5. Theory of and Problems of Matrices, Frank Ayres JR, Schaum's OutlineSeries, McGraw- Hill Book Company

TEACHING SCHEDULE

No of Weeks	Dates	Session	Topic
1	01-07-2019 To 05-07-2019	1	Basics of differentiation – Derivative of a constant function, some general theorems on derivation (theorems without proof-problems
		2	basics
		3 July	St. Thomas Day
		3	derivatives of trigonometric functions-problems
		4	problems
		5	problems
		6	derivatives of inverse trigonometric functions-problems
2	08-07-2019 To 12-07-2019	7	problems
		8	problems
		9	derivative of $y = \log x$ -problems
		10	Hyperbolic functions-derivatives-problems
		11	problems
		12	problems
3	15-07-2019 To 19-07-2019	13	derivation of parametrically defined functions-problems
		14	logarithmic differentiation-problems
		15	problems
		16	derivation of implicitly defined functions-problems
		17	problems
		18	revision
4	22-07-2019 To 26-07-2019	19	Class test
		20	Successive differentiation, standard results
		21	problems
		22	problems
		23	problems
		24	problems
5	29-07-2019 To 02-08-2019	25	preliminary transformations-problems
		26	problems
		27	problems
		31 July	KarkadakaVavu
		28	Use ofpartial fractions
		29	problems
		30	problems
6	05-08-2019	31	Revision

No of Weeks	Dates	Session	Topic
	To 09-08-2019	32	Class test
		33	Leibnitz's theorem for the nth derivative of the product of twofunctions ,problems
		34	problems
		35	problems
		36	problems
		37	problems
7	12-08-2019 To 16-08-2019	38	revision
		39	Class test
		15 Aug	Independence day
		40	Introduction, basic definition of Boolean algebra
		41	Examples of Boolean Algebra
		42	Duality,theorems
8	19-08-2019 To 23-08-2019	43	problems
		44	problems
		45	basic theorems,problems
		46	problems
		47	Class test
		23 Aug	SreekrishnaJayanthi
9	26-08-2019 To 30-08-2019	26 Aug	**First Internal Exam**
			First Internal Exam
		28 Aug	AyyankaliJayanthi
			First Internal Exam
			First Internal Exam
			First Internal Exam
10	02-09-2019 To 06-09-2019		**First Internal Exam**
		48	Rank of a matrix,problems
		49	problems
		50	elementary transformation of a matrix,problems
			Onam Celebration
11	09-09-2019 To 13-09-2019		Muharram
			First Onam
			Thiruvonam
			Third Onam
			Fourth Onam - SreeNarayana Guru Jayanthi
12	16-09-2019 To	51	problems
		52	equivalent matrix,elementary matrices,problems
		53	problems

No of Weeks	Dates	Session	Topic
	20-09-2019	54	Gauss-Jordan method of finding the inverse,problems
		55	prroblems
		56	problems
13	23-09-2019 To 27-09-2019	57	normal formof a matrix, problems
		58	problems
		59	partition method of finding the inverse,problems
		60	problems
		61	solution of linear system of equations – method of determinants – Cramer's rule, problems
		62	problems
14	30-09-2019 To 04-10-2019	63	matrix inversion method,problems
		64	problems
		2 Oct	Gandhi Jayanthi
		65	consistency of linear system of equations, Rouche's theorem-problems
		66	procedure to test the consistency of a system of equatios in n unknowns, problems
		67	systemof linear homogeneous equations. problems
		68	Linear transformations, orthogonal transformation, vectors – linear dependence
15	07-10-2019 To 11-10-2019	07 Oct	Mahanavami
		08 Oct	Vijayadashami
		69	problems
		70	problems
		71	revision
		72	Class test
16	14-10-2019 To 18-10-2019	14 Oct	**Second Internal**
			Second Internal
			Second Internal
			Second Internal
			Second Internal
			Second Internal
17	21-10-2019 To 25-10-2019		Study Leave
			Study Leave
			Study Leave
			Study Leave
			Study Leave
18	28-10-2019		Study Leave

No of Weeks	Dates	Session	Topic
	To 01-11-2019		Study Leave
		30 Oct	University Exam Begin