Department of Computer Science

Pavanatma College, Murickassery

Idukki-685604

Curriculum Implementation Plan

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Course – I Semester – I

COMPUTER FUNDAMENTALS

1.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA1VOT01
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	80
7	Internal Assessment	20
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	10 (2 × 5 = 10)

1.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Fundamentals of Computers	Chalk and talk, ICT	10	5
2	Basic Computer organization and number systems	Chalk and talk	6	3
3	Components of Computer	Chalk and talk	10	5
4	Software components and computer languages	Chalk and talk	10	5

1.3 Continuous Evaluation Schedule

1.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	80	3 Hours	Model Examination

1.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

1.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – II Semester – I

COMPUTER NETWORK AND INTERNET TECHNOLOGIES

2.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA1VOT02
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

2.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Computer Networks	Chalk and talk, ICT	8	4
2	Transmission media	Chalk and talk	10	5
3	Network Model	Chalk and talk	11	6
4	Internet	Chalk and talk	7	4

2.3 Continuous Evaluation Schedule

2.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

2.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

2.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – III Semester – III

Database Management systems

3.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA1VOT03
4	Credit	4
5	Duration of External Examination	3 hours
6	External Assessment	80
7	Internal Assessment	20
8	Total hours	90
9	Hours per Week	6
10	Number of Modules	5
11	Total Week to complete	18
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	10 ($2 \times 5 = 10$)

3.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Basic concepts	Chalk and talk, ICT	15	3
2	Data Models	Chalk and talk	15	3
3	Relational algebra modification of database	Chalk and talk,	20	4
4	Object oriented database	Chalk and talk,ICT	25	5
5	Query Processing	Chalk and talk,ICT	15	3

3.3 Continuous Evaluation Schedule

3.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	6	20	1 Hours	Assessment Test
2	12	20	1 Hours	Assessment Test
3	18	80	3 Hours	Model Examination

3.3.2 Assignments

No.	Week	Duration	Assignments type
1	6	1 Week	Problem solving
2	12	1 Week	Problem solving
3	18	1 Week	Problem solving

3.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	6	3	20 Minute	Lecture
2	12	3	20 Minute	Lecture
3	18	3	20 Minute	Lecture

Course – IV Semester – IV

Operating systems

4.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA1VOT04
4	Credit	4
5	Duration of External Examination	3 hours
6	External Assessment	80
7	Internal Assessment	20
8	Total hours	90
9	Hours per Week	6
10	Number of Modules	5
11	Total Week to complete	18
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	10 ($2 \times 5 = 10$)

4.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Introduction to operating systems	Chalk and talk	15	3
2	Process management and CPU scheduling	Chalk and talk ICT	25	5
3	Memory management basics	Chalk and talk,ICT	15	3
4	File systems	Chalk and talk	15	3
5	Protection and security	Chalk and talk ICT	20	4

4.3 Continuous Evaluation Schedule

4.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	6	20	1 Hours	Assessment Test
2	12	20	1 Hours	Assessment Test
3	18	80	3 Hours	Model Examination

4.3.2 Assignments

No.	Week	Duration	Assignments type
1	6	1 Week	Problem solving
2	12	1 Week	Problem solving
3	18	1 Week	Problem solving

4.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	6	3	20 Minute	Lecture
2	12	3	20 Minute	Lecture
3	18	3	20 Minute	Lecture

Course – I Semester – I

COMPUTER FUNDAMENTALS

5.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA1VOT01
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	80
7	Internal Assessment	20
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	10 (2 × 5 = 10)

5.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Fundamentals of Computers	Chalk and talk, ICT	10	5
2	Basic Computer organization and number systems	Chalk and talk	6	3
3	Components of Computer	Chalk and talk	10	5
4	Software components and computer languages	Chalk and talk	10	5

5.3 Continuous Evaluation Schedule

5.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	80	3 Hours	Model Examination

5.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

5.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – II Semester – I

COMPUTER NETWORK AND INTERNET TECHNOLOGIES

6.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA1VOT02
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

6.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Computer Networks	Chalk and talk, ICT	8	4
2	Transmission media	Chalk and talk	10	5
3	Network Model	Chalk and talk	11	6
4	Internet	Chalk and talk	7	4

6.3 Continuous Evaluation Schedule

6.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

6.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

6.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – III Semester – II

WORD AND DATA PROCESSING PACKAGES

7.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA2VOT03
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	80
7	Internal Assessment	20
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	3
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	5
14	Assessment Test	10 (2 × 5 = 10)

7.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Word processing packages	Chalk and talk, ICT	12	6
2	Page Maker	Chalk and talk	12	6
3	MS-Excel	Chalk and talk	12	6

7.3 Continuous Evaluation Schedule

7.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	80	3 Hours	Model Examination

7.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

7.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – IV Semester – II

PROGRAMMING IN ANSI C

8.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA2VOT04
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

8.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Basic concept of programming	Chalk and talk, ICT	8	4
2	Decision making and Branching	Chalk and talk	10	5
3	Arrays and strings	Chalk and talk,	8	4
4	User defined functions	Chalk and talk,ICT	10	5

8.3 Continuous Evaluation Schedule

8.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

8.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

8.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – V Semester – III

CONCEPTS OF OBJECT ORIENTED PROGRAMMING

9.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA3VOT05
4	Credit	4
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

9.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Basic concept of object oriented languages	Chalk and talk	9	3
2	Classes and objects	Chalk and talk	12	4
3	constructor and destructor	Chalk and talk,ICT	10	4
4	Inheritance and operator overloading	Chalk and talk	23	8

9.3 Continuous Evaluation Schedule

9.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

9.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

9.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – VI Semester – III

OPERATING SYSTEMS

10.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA3VOT06
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	4
10	Number of Modules	4
11	Total Week to complete	17
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

10.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Introduction to operating systems	Chalk and talk, ICT	10	3
2	Process management	Chalk and talk ICT	8	2
3	CPU scheduling	Chalk and talk	18	5
4	Memory management basics	Chalk and talk	18	5

10.3 Continuous Evaluation Schedule

10.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	5	20	1 Hours	Assessment Test
2	11	20	1 Hours	Assessment Test
3	17	60	3 Hours	Model Examination

10.3.2 Assignments

No.	Week	Duration	Assignments type
1	5	1 Week	Problem solving
2	11	1 Week	Problem solving
3	17	1 Week	Problem solving

10.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	5	3	20 Minute	Lecture
2	11	3	20 Minute	Lecture
3	17	3	20 Minute	Lecture

Course – VII Semester – IV

VISUAL BASIC PROGRAMMING

11.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA4VOT07
4	Credit	4
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	5
10	Number of Modules	4
11	Total Week to complete	14
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

11.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Introduction	Chalk and talk	22	5
2	methos, properties and events	Chalk and talk	14	3
3	Function and file handling	Chalk and talk	8	2
4	File handling	Chalk and talk ICT	10	2

11.3 Continuous Evaluation Schedule

11.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	4	20	1 Hours	Assessment Test
2	9	20	1 Hours	Assessment Test
3	14	60	3 Hours	Model Examination

11.3.2 Assignments

No.	Week	Duration	Assignments type
1	4	1 Week	Problem solving
2	9	1 Week	Problem solving
3	14	1 Week	Problem solving

11.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	4	3	20 Minute	Lecture
2	9	3	20 Minute	Lecture
3	14	3	20 Minute	Lecture

Course – VIII Semester – IV

WEB DEVELOPMENT AND PHP PROGRAMMING

12.1 Course Overview

1	Course	Vocational
2	Course Type	Theory
3	Course Code	CA4VOT08
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	15
8	Total hours	54
9	Hours per Week	3
10	Number of Modules	4
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	5
13	Assignment/Seminar	2
14	Assessment Test	8 (2 × 4 = 8)

12.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	HTML and CSS	Chalk and talk, ICT	18	6
2	Javascript	Chalk and talk	12	4
3	PHP And Mysql	Chalk and talk,	15	5
4	implementing MySQL using PHP	Chalk and talk,ICT	9	3

12.3 Continuous Evaluation Schedule

12.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

12.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

12.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – I Semester – I

Computer Fundamentals

13.1 Course Overview

1	Course	Complementary
2	Course Type	Theory
3	Course Code	CA1CMT01
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	10
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	5
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	0
13	Assignment/Seminar	0
14	Assessment Test	0 (0 × 0 = 0)

13.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Fundamentals of Computers	Chalk and talk, ICT	10	5
2	Number systems	Chalk and talk	6	3
3	Boolean Algebra and Logic circuits	Chalk and talk	8	4
4	Computer Software and Languages	Chalk and talk	6	3
5	Operating system	Chalk and talk, ICT	6	3

13.3 Continuous Evaluation Schedule

13.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

13.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

13.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – II Semester – II

Progarmming In C Language

14.1 Course Overview

1	Course	Complementary
2	Course Type	Theory
3	Course Code	CA2CMT02
4	Credit	3
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	10
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	5
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	0
13	Assignment/Seminar	0
14	Assessment Test	0 (0 × 0 = 0)

14.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Basic concepts of programming	Chalk and talk	6	3
2	Decision making and Branching	Chalk and talk	10	5
3	Arrays	Chalk and talk	8	4
4	User defined functions	Chalk and talk	8	4
5	Structure	Chalk and talk	4	2

14.3 Continuous Evaluation Schedule

14.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

14.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

14.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – III Semester – III

Web Technology and Programming

15.1 Course Overview

1	Course	Complementary
2	Course Type	Theory
3	Course Code	CA3CMT03
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	10
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	5
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	0
13	Assignment/Seminar	0
14	Assessment Test	0 (0 × 0 = 0)

15.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Computer networks	Chalk and talk, ICT	6	3
2	Concept of ISP	Chalk and talk	6	3
3	Web server	Chalk and talk,	8	4
4	The art of creating the website	Chalk and talk,ICT	10	5
5	Introduction web browsers	Chalk and talk, ICT	6	3

15.3 Continuous Evaluation Schedule

15.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

15.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

15.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – IV Semester – IV

Visual Programming Techniques

16.1 Course Overview

1	Course	Complementary
2	Course Type	Theory
3	Course Code	CA4CMT04
4	Credit	2
5	Duration of External Examination	3 hours
6	External Assessment	60
7	Internal Assessment	10
8	Total hours	36
9	Hours per Week	2
10	Number of Modules	5
11	Total Week to complete	21
Distribution of Internal Marks		
12	Attendance	0
13	Assignment/Seminar	0
14	Assessment Test	0 (0 × 0 = 0)

16.2 Implementation Schedule

Module	Module Title	Delivery Methods	Total hours	Number of Weeks to complete
1	Data Base Management System	Chalk and talk	4	2
2	Visual Basic - Basic Concepts	Chalk and talk	10	5
3	Designing the User Interface	Chalk and talk,ICT	8	4
4	Controls	Chalk and talk	8	4
5	Mastering Menus and Toolbars	Chalk and talk	6	3

16.3 Continuous Evaluation Schedule

16.3.1 Test paper

No.	Week	Total marks	Time duration	Exam type
1	7	20	1 Hours	Assessment Test
2	14	20	1 Hours	Assessment Test
3	21	60	3 Hours	Model Examination

16.3.2 Assignments

No.	Week	Duration	Assignments type
1	7	1 Week	Problem solving
2	14	1 Week	Problem solving
3	21	1 Week	Problem solving

16.3.3 Seminar

No.	Week	Number of seminars	Time duration	Delivery method
1	7	3	20 Minute	Lecture
2	14	3	20 Minute	Lecture
3	21	3	20 Minute	Lecture

Course – I Semester – I & II

Software Lab I (P)

17.1 Course Overview

1	Course Type	Practical
2	Course Code	CA1VOP01
3	Credit	3
4	Duration of External Examination	3 hours
5	External Assessment	80
6	Internal Assessment	20
7	Total hours	144
8	Hours per Week	4
9	Number of Experiments	15
10	Total Week to complete	21
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)

Course – II Semester – I & II

Software Lab II(P)

18.1 Course Overview

1	Course Type	Practical
2	Course Code	CA2VOP02
3	Credit	3
4	Duration of External Examination	3 hours
5	External Assessment	80
6	Internal Assessment	20
7	Total hours	144
8	Hours per Week	4
9	Number of Experiments	15
10	Total Week to complete	21
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)

Course – III Semester – II & III

Software Lab III(P)

19.1 Course Overview

1	Course Type	Practical
2	Course Code	CA3VOP03
3	Credit	3
4	Duration of External Examination	3 hours
5	External Assessment	80
6	Internal Assessment	20
7	Total hours	180
8	Hours per Week	6
9	Number of Experiments	15
10	Total Week to complete	18
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)

Course – IV Semester – III & IV

Software Lab IV Project(P)

20.1 Course Overview

1	Course Type	Practical
2	Course Code	CA4VOP04
3	Credit	3
4	Duration of External Examination	3 hours
5	External Assessment	80
6	Internal Assessment	20
7	Total hours	180
8	Hours per Week	6
9	Number of Experiments	15
10	Total Week to complete	18
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)

Course – I Semester – I & II

Introduction to Computers and ANSI C Programming(P)

21.1 Course Overview

1	Course Type	Practical
2	Course Code	CA2VOP01
3	Credit	2
4	Duration of External Examination	3 hours
5	External Assessment	40
6	Internal Assessment	10
7	Total hours	72
8	Hours per Week	2
9	Number of Experiments	15
10	Total Week to complete	21
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)

Course – II Semester – III & IV

Data Processing Packages, Operating System and Visual Basic Programming(P)

22.1 Course Overview

1	Course Type	Practical
2	Course Code	CA4VOP02
3	Credit	2
4	Duration of External Examination	3 hours
5	External Assessment	40
6	Internal Assessment	10
7	Total hours	72
8	Hours per Week	2
9	Number of Experiments	15
10	Total Week to complete	21
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)

Course – III Semester – III & IV

C++ Programming and Web Development(P)

23.1 Course Overview

1	Course Type	Practical
2	Course Code	CA4VOP03
3	Credit	2
4	Duration of External Examination	3 hours
5	External Assessment	40
6	Internal Assessment	10
7	Total hours	72
8	Hours per Week	2
9	Number of Experiments	15
10	Total Week to complete	21
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)

Course – I Semester – I & II

Software Lab I (P)

24.1 Course Overview

1	Course Type	Practical
2	Course Code	CA2CMP01
3	Credit	2
4	Duration of External Examination	3 hours
5	External Assessment	40
6	Internal Assessment	20
7	Total hours	144
8	Hours per Week	2
9	Number of Experiments	15
10	Total Week to complete	39
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)

Course – II Semester – III & IV

Software Lab II(P)

25.1 Course Overview

1	Course Type	Practical
2	Course Code	CA2CMP02
3	Credit	2
4	Duration of External Examination	3 hours
5	External Assessment	40
6	Internal Assessment	20
7	Total hours	144
8	Hours per Week	2
9	Number of Experiments	15
10	Total Week to complete	39
Distribution of Internal Marks		
11	Attendance	2
12	Record	4
13	Assessment Test	4 (1 × 4 = 1)