

SUBBALAKSHMI LAKSHMIPATHY COLLEGE OF SCIENCE

An Autonomous Institution

T.V.R. NAGAR, ARUPPUKOTTAI ROAD, MADURAI-22



Program Outcomes, Program Specific Outcomes & Course Outcomes

B.Sc Computer Science

(Security System Specialization)

(To be followed for the batch 2017 – 2020

from Semester I to VI from the academic Year 2017 -18)

Department of Computer Science

SUBBALAKSHMI LAKSHMIPATHY COLLEGE OF SCIENCE

An Autonomous Institution

T.V.R. NAGAR, MADURAI – 22

B.Sc Computer Science (Security System Specialization)

Programme Code : CS1002

Choice Based Credit System

ANNEXURE – I

REGULATIONS OF THE COURSE

**SYLLABUS TO BE FOLLOWED FOR STUDENTS THOSE WHO JOINED IN
THE ACADEMIC YEAR 2017-2018 (BATCH : 2017 - 2020)**

Programme Outcomes (PO)

The Programme Outcomes of the B.Sc Computer Science (Security System Specialization) degree are

- i. To attract young minds to the potentially rich & employable field of computer Science & Security Systems.
- ii. To Train & Equip the students by providing highest quality education and professional experience to meet the requirement of the Industrial standards and excel in their career.
- iii. To develop skills in the fields of Software Development & Cyber Security, which enable the students to take up employment in Indian & global market.
- iv. To provide a strong foundation to pursue Post Graduation Programme in Computer Science/Applications.

Programme Specific Outcomes (PSO)

The Programme Specific Outcomes of the B.Sc Computer Science (Security System Specialization) degree are to make the graduates to become

- i. Software Developer.
- ii. Web Programmer.
- iii. Mobile Application Developer
- iv. Cyber Security Professional.

Course Outcomes (CO)

I SEMESTER

I B.Sc Computer Science (Security System Specialization)

Semester	: I	Batch	: 2017-2020
Course Code	: 17CS103	Course Name	: Programming in C
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This course will enable the students to

- Understand the basic programming structure.
- Have the ability in writing C Programming
- Learn permanent data storage using files.

I B.Sc Computer Science (Security System Specialization)

Semester	: I	Batch	: 2017-2020
Course Code	: 17CS104	Course Name	: Digital Principles & Computer Organization
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Understand the digital principles & digital gates.
- Learn the basic functions, principles and concepts of Computer.
- Understand data representation.
- Understand the concepts of ALU Unit, Memory Unit and I/O unit.

I B.Sc Computer Science (Security System Specialization)

Semester	: I	Batch	: 2017-2020
Course Code	: 17CS105	Course Name	: Operating System Principles
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Understand the basic concepts and functions of operating system.
- Gain Knowledge about the scheduling process to handle multiple processes.
- Know about prevention and detection of deadlocks.

I.B.Sc Computer Science (Security System Specialization)

Semester	: I	Batch	: 2017-2020
Course Code	: 17CS107	Course Name	: Secure Programming using C – Lab
Internal Marks	: 25	External Marks	: 75
Part	: III [Core Practical]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Learn the basic concepts in C Programming language.
- Inculcate logical thinking by writing programs.

I.B.Sc Computer Science (Security System Specialization)

Semester	: I	Batch	: 2017-2020
Course Code	: 17CS108	Course Name	: Linux Lab
Internal Marks	: 25	External Marks	: 75
Part	: III [Core Practical]	Credits	: 3

Course Outcomes:

This Course will enable the students to

- Understand the Linux fundamentals and commands
- Write shell scripts

I.B.Sc Computer Science (Security System Specialization)

Semester	: I	Batch	: 2017-2020
Course Code	: 17VE107	Course Name	: Value Education
Internal Marks	: 50	External Marks	: 50
Part	: IV	Credits	: 2

Course Outcomes:

This Course will enable the students to

- Know the social values, ethics which have to be reflected in one's behavior
- Get the opportunities for the continuous development of their knowledge, skills and attitudes related to certain values.

I.B.Sc Computer Science (Security System Specialization)

Semester	: I	Batch	: 2017-2020
Course Code	: 17PE108	Course Name	: Physical Education
Internal Marks	: 100 (Theory : 60 Practical : 40)		
Part	: V [Extension Activity]	Credit	: 1

Course Outcomes:

This Course will enable the students to

- Know the importance of physical fitness through the exercises.
- Develop the organic systems of the body.
- Incorporate a healthy eating lifestyle and physical activity into daily life.

II SEMESTER

I B.Sc Computer Science (Security System Specialization)

Semester	: II	Batch	: 2017-2020
Course Code	: 17CS203	Course Name	: Object Oriented Programming with C++
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Develop the knowledge on Object-oriented concept and programming with C++.
- Understand the buzz words inheritance, polymorphism, virtual base class etc.

I B.Sc Computer Science (Security System Specialization)

Semester	: II	Batch	: 2017 - 2020
Course Code	: 17CS204	Course Name	: Fundamentals of Networks Security
Part	: III	Credit	: 4
Internal	: 25	Semester Exam	: 75

Course Outcomes:

This Course will enable the students to

- Learn basics of Network and its design, Common Network components
- Understand Physical Network topology and Internetworking models

I B.Sc Computer Science (Security System Specialization)

Semester	: II	Batch	: 2017-2020
Course Code	: 17CS206	Course Name	: Data Structures
Internal Marks	: 25	External Marks	: 75
Part	: III [ELECTIVE - 1]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Learn about the various data structures, algorithms and their applications.
- Understand the memory representation of data in the computer.
- Gain knowledge about algorithm complexity.

LB.Sc Computer Science (Security System Specialization)

Semester	: II	Batch	: 2017-2020
Course Code	: 17CS207	Course Name	: System Software
Internal Marks	: 25	External Marks	: 75
Part	: III [ELECTIVE - 2]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Understand the basic concepts and components of system software

LB.Sc Computer Science (Security System Specialization)

Semester	: II	Batch	: 2017-2020
Course Code	: 17CS208	Course Name	: Client-Server Computing
Internal Marks	: 25	External Marks	: 75
Part	: III [ELECTIVE - 3]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Have the knowledge on Client / Server Concepts and various components of client / server Applications.
- Know the benefits and requirements of Client server technology

LB.Sc Computer Science (Security System Specialization)

Semester	: II	Batch	: 2017-2020
Course Code	: 17CS209	Course Name	: Object Oriented Programming with C++ Lab
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE PRACTICAL]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Gain knowledge of the basics in C++ programming language.
- Understand the series of operations that a computer can perform to accomplish a task using C++.
- Implement stack and queue operations using C++.

I B.Sc Computer Science (Security System Specialization)

Semester	: II	Batch	: 2017-2020
Course Code	: 17CS210	Course Name	: Web Programming Lab
Internal Marks	: 25	External Marks	: 75
Part	: IV [SKILL BASED PRACTICAL]	Credits	: 3

Course Outcomes:

This Course will enable the students to

- Gain the knowledge in HTML for the beginners.
- Acquire the knowledge of CSS & DHTML.

I B.Sc Computer Science (Security System Specialization)

Semester	: II	Batch	: 2017-2020
Course Code	: 17ES207	Course Name	: Environmental Studies
Internal	:50	External	: 50
Part	: IV	Credits	: 2

Course Outcomes:

This Course will enable the students to

- Understand the terms of ecological, economic, social, aesthetic and educational factors.
- Have opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment.

III SEMESTER

II B.Sc Computer Science (Security System Specialization)

Semester	: III	Batch	: 2017-2020
Course Code	: 17CS301	Course Name	: Relational Database Management System
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Understand the concept of Database languages and Database Design
- Know the concept of ER Models and Normalization
- Have the knowledge about Storage and File structure, Transaction management, Recovery system

II B.Sc Computer Science (Security System Specialization)

Semester	: III	Batch	: 2017-2020
Course Code	: 17CS302	Course Name	: Cryptography
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Know the fundamentals of Network Security
- Understand the cryptography algorithms
- Gain the knowledge of the Internet security

II B.Sc Computer Science (Security System Specialization)

Semester	: III	Batch	: 2017-2020
Course Code	: 17CS303	Course Name	: Java Programming
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Get knowledge on Java Programming concepts.
- Understand the concept of Interface, Packages and AWT.
- Acquire the concept of Multithreading, Exception handling and applets.

II B.Sc Computer Science (Security System Specialization)

Semester	: III	Batch	: 2017-2020
Course Code	: 17CS304	Course Name	: Database Security Lab
Internal Marks	: 25	External Marks	: 75
Part	: III [Core Practical]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Know the fundamental operations such as Creating, searching, and managing SQL tables and entries.
- Perform SQL queries and joins, and manage the results.
- Understand of advanced SQL syntax for date, time, math, and string functions.
- Implement security features in the database.

II B.Sc Computer Science (Security System Specialization)

Semester	: III	Batch	: 2017-2020
Course Code	: 17CS305	Course Name	: Secure Programming using Java - Lab
Internal Marks	: 25	External Marks	: 75
Part	: III [Core Practical]	Credits	: 3

Course Outcomes:

This Course will enable the students to

- Understand fundamentals of programming such as variables, conditional and iterative execution, methods, etc.
- Know fundamentals of object-oriented programming in Java, including defining classes, invoking methods, using class libraries, etc.

II B.Sc Computer Science (Security System Specialization)

Semester	: III	Batch	: 2017-2020
Course Code	: 17CS308	Course Name	: Office Automation Lab-I
Internal Marks	: 50	External Marks	: 50
Part	: IV [NME – I]	Credits	: 2

Course Outcomes:

This Course will enable the students to

- Get the knowledge in document & worksheet preparation using MS Word & Excel.
- Understand the basic features of MS Word and Excel

IV SEMESTER

II B.Sc Computer Science (Security System Specialization)

Semester	: IV	Batch	: 2017-2020
Course Code	: 17CS401	Course Name	: Penetration Testing Fundamentals
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Understand the fundamentals of Ethical Hacking
- Gather knowledge about attacks such as snoofing, sniffing, System Hijacking etc
- Learn the tools used for preventing Hacking

II B.Sc Computer Science (Security System Specialization)

Semester	: IV	Batch	: 2017-2020
Course Code	: 17CS402	Course Name	: Computer Graphics
Internal Marks	: 25	External Marks	: 75
Part	: III [Core]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Understand the basics of computer graphics
- Get the knowledge about the concept of drawing fundamentals
- Know the properties of colors.

II B.Sc Computer Science (Security System Specialization)

Semester	: IV	Batch	: 2017-2020
Course Code	: 17CS403	Course Name	: Penetration Testing Lab
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 3

Course Outcomes:

This Course will enable the students to

- Use the tools used for preventing Hacking.
- Know about Penetration testing fundamentals
- Learn about physical security

ILB.Sc Computer Science(Security System Specialization)

Semester	: IV	Batch	: 2017-2020
Course Code	: 17CS404	Course Name	: .Net Programming Lab
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE PRACTICAL]	Credits	: 3

Course Outcomes:

This Course will enable the students to

- Solve problems using of VB.Net Programming
- Solve problems using of C# Programming
- Solve problems using of ASP.Net Programming

ILB.Sc Computer Science (Security System Specialization)

Semester	: IV	Batch	: 2017-2020
Course Code	: 17CS405	Course Name	: Object Oriented Modeling and Design with UML - Lab
Internal Marks	: 100		
Part	: IV[Skill Based Elective- I Practical]	Credits	: 2

Course Outcomes:

This Course will facilitate the students to:

- Gain knowledge in designing phase of Software development life cycle using UML tools.
- Gain knowledge in basic concepts and terms used in the object-oriented analysis and design.
- Understand the modeling concepts like class modeling, state modeling etc

ILB.Sc Computer Science (Security System Specialization)

Semester	: IV	Batch	: 2017-2020
Course Code	: 17CS406	Course Name	: Mobile Apps Development Lab
Internal Marks	: 100		
Part	: IV[Skill Based Elective-II Practical]	Credits	: 4

Course Outcomes:

This Course will facilitate the students to

- Develop mobile applications using Android
- Gain the knowledge in android application

II B.Sc Computer Science (Security System Specialization)

Semester	: IV	Batch	: 2017-2020
Course Code	: 17CS407	Course Name	: Computer Graphics Lab
Internal Marks	: 100		
Part	: IV [SKILL BASED PRACTICAL]	Credits	: 2

Course Outcomes:

This Course will enable the students to

- Understand the fundamentals of Computer Graphics and Photoshop
- Relate Computer Graphics and Photoshop

II B.Sc Computer Science (Security System Specialization)

Semester	: IV	Batch	: 2017-2020
Course Code	: 17CS408	Course Name	: Office Automation Lab-II
Internal Marks	: 50	External Marks	: 50
Part	: IV [NME – II]	Credits	: 2

Course Outcomes

This Course will enable the students to

- Understand the fundamentals of presentation software
- Get basic knowledge about the data storage using MS Access.

V SEMESTER

III B.Sc Computer Science(Security System Specialization)

Semester	: V	Batch	: 2017-2020
Course Code	: 17CS501	Course Name	: PHP Programming
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to:

- Inculcate the knowledge in web programming using PHP.
- Get the basic knowledge in PHP programming.
- Realize the role of PHP programming in web development.

III B.Sc Computer Science(Security System Specialization)

Semester	: V	Batch	: 2017-2020
Course Code	: 17CS502	Course Name	: Cloud Computing & Security
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 4

Course Outcomes:

This Course will enable the students to

- Understand the basics of cloud computing concepts.
- Comprehend the usage of cloud computing in business.
- Know the service providers of cloud storage.
- Obtain the knowledge in services of cloud.
- Know the future of cloud.

III B.Sc Computer Science(Security System Specialization)

Semester	: V	Batch	: 2017-2020
Course Code	: 17CS503	Course Name	: Cyber Forensics
Internal Marks	: 25	External Marks	: 75
Part	: III [CORE]	Credits	: 5

Course Outcomes:

This course will enable the students to,

- Understand the basics of Computer Forensics
- Know about acquisition and tools used for data acquisition
- Learn about hiding data with images
- Learn about report writing

III B.Sc COMPUTER SCIENCE(SEcurity SYSTEM SPECIALIZATION)

Semester	: V	Batch	: 2017-2020
Course Code	: 17CS504	Course Name	: Cyber Forensics Lab
Internal Marks	: 25	External Marks	: 75
Part	: III[Elective Practical - I]	Credits	: 3

Course Outcomes:

This Course will enable the students to,

- Learn about practical implementation of Cyber Forensics.
- Know about application password cracking
- Investigate wireless attacks

III B.Sc COMPUTER SCIENCE(SEcurity SYSTEM SPECIALIZATION)

Semester	: V	Batch	: 2017-2020
Course Code	: 17CS506	Course Name	: Python Programming Lab
Internal Marks	: 25	External Marks	: 75
Part	: III[Elective Practical -II]	Credits	: 3

Course Outcomes:

This course will enable the students to,

- Learn the fundamentals of Python programming
- Get knowledge in web page creation using Python programming
- Write scripts in python.

III B.Sc Computer Science(Security System Specialization)

Semester	: V	Batch	: 2017-2020
Course Code	: 17CS505	Course Name	: PHP Programming Lab
Internal Marks	: 25	External Marks	: 75
Part	: III [Core Practical]	Credits	: 3

Course Outcomes:

This course will enable the students to,

- Understand the operators, control structures of PHP
- Understand the session, cookies concepts of PHP
- Gain knowledge of SQL commands, ODBC connection with PHP

III B.Sc Computer Science (Security System Specialization)

Semester	: V	Batch	: 2017-2020
Course Code	: 17CS507	Course Name	: Mini Project
External Marks	: 100		
Part	: III [Project]	Credits	: 3

Course Outcomes:

This course will enable the students to learn about the software development using the SDLC Phases.

VI SEMESTER

III B.Sc Computer Science(Security System Specialization)

Semester	: VI	Batch	: 2017-2020
Course Code	: 17CS601	Course Name	: Internship Training / Project
Internal Marks	: 50	External Marks	: 50
Part	: III [Core]	Credits	: 12

Course Outcomes:

This course will enable the students to learn the working principals of software industry during their course itself.