

SRI KRISHNA ARTS AND SCIENCE COLLEGE

An Autonomous College Affiliated to Bharathiar University
Coimbatore-641008, Tamil Nadu, India.

LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (LOCF)

**B.Sc. Computer Technology
(I to VI Semester)**

for 2024-25 admitted Students

**DEPARTMENT OF COMPUTER TECHNOLOGY AND
DATA SCIENCE**



SRI KRISHNA ARTS AND SCIENCE COLLEGE
COIMBATORE – 641008

DEPARTMENT OF COMOUTER TECHNOLOGY AND DATA SCIENCE

(2024-2027)

I. PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

Graduates from the B.Sc. Computer Technology Programme are expected to achieve the following PEOs

| | |
|--------------|--|
| PEO 1 | Prepare industry relevant quality graduates with programming and critical AEC skills to serve the domestic and global community. |
| PEO 2 | Disseminate the conceptual knowledge in the concerned discipline for societal development and transformation. |
| PEO 3 | Develop as a capable technical industry leader with outstanding communication skills. |
| PEO 4 | Become technically competent in the field of computer science with a passion for lifelong learning. |

II. PROGRAMME LEARNING OUTCOMES (PLOs)

The Graduates of B.Sc. Computer Technology programme will be able to:

| | |
|-------------|---|
| PLO1 | Knowledge:(Cognitive) Identify the programming and technical knowledge acquired in the current computational demands. |
| PLO2 | Critical Thinking Skills:(Cognitive) Analyze the complex problems and identify solutions through critical thinking skills. |
| PLO3 | Practical Skills:(Psychomotor) Adapt to the latest tools and techniques used to develop domain based innovative solutions with the acquired technical and operational skills. |
| PLO4 | Teamwork Skills:(Affective) Function and contribute as a team in the diversified environment in taking competitive decision. |
| PLO5 | Communication Skills:(Affective) Communicate effectively with the computing community as well as society to Comprehend effective documentation and presentation. |
| PLO6 | Digital Skills:(Affective) Incorporate advanced digital skills in designing, developing, managing and deploying in media and technical field. |
| PLO7 | Numeracy Skills:(Cognitive) Apply quantitative, numerical and statistical skills to solve challenging |

| | |
|--------------|---|
| | problems with effective solutions. |
| PLO8 | Leadership Skills:(Affective) Articulate leadership skills in motivating the team towards the target in a multi-disciplinary environment. |
| PLO9 | Lifelong Learning Skills:(Affective) Recognize the need and ability to involve independent and life long learning in the changing era of technology. |
| PLO10 | Entrepreneurial Skills:(Affective) Interpret the impact of professional business solutions on business environment for sustainable development. |
| PLO11 | Ethics & Professional Skills:(Affective) Follow ethical principles and commit to professional responsibilities for a relevant technical practice. |

| III. PROGRAMME LEARNING OUTCOMES vs GRADUATE ATTRIBUTES vs TAXONOMY OF VERBS | | | | | | | | | | | | | | |
|--|---------------------|-------------------|------------------|-----------|----------------------|----------------|----------|-------------------|-------------------|------------------------|--------------------------|-----------|-------------|-----------|
| PLO | Graduate Attributes | | | | | | | | | | Blooms | | | |
| | Knowledge | Critical Thinking | Practical Skills | Team work | Communication Skills | Digital Skills | Numeracy | Leadership Skills | Lifelong learning | Entrepreneurial Skills | Ethics & Professionalism | Cognitive | Psychomotor | Affective |
| 1 | √ | | | | | | | | | | | √ | | |
| 2 | | √ | | | | | | | | | | √ | | |
| 3 | | | √ | | | | | | | | | | √ | |
| 4 | | | | √ | | | | | | | | | | √ |
| 5 | | | | | √ | | | | | | | | | √ |
| 6 | | | | | | √ | | | | | | | | √ |
| 7 | | | | | | | √ | | | | | √ | | |
| 8 | | | | | | | | √ | | | | | | √ |
| 9 | | | | | | | | | √ | | | | | √ |
| 10 | | | | | | | | | | √ | | | | √ |
| 11 | | | | | | | | | | | √ | | | √ |

| | PEO 1 | PEO 2 | PEO 3 | PEO 4 |
|-------|-------|-------|-------|-------|
| PLO 1 | √ | | | |
| PLO 2 | √ | | | |
| PLO 3 | | √ | | |
| PLO 4 | | | √ | |
| PLO 5 | | | √ | |
| PLO 6 | | √ | | |
| PLO 7 | | √ | | |
| PLO 8 | | | √ | |

| | | | | |
|--------|--|---|--|---|
| PLO 9 | | | | √ |
| PLO 10 | | | | √ |
| PLO 11 | | √ | | |

IV. ADDITIONAL PROGRAMME OUTCOMES (APOs)

| | |
|--------------|--|
| APO 1 | The students will have an ability to be socially intelligent with intelligent quotient and emotional quotient. |
| APO 2 | They will be having virtual collaborating ability. |
| APO 3 | They will have the ability to use the social media effectively for productive use. |
| APO 4 | They will have critical thinking and innovative skills. |
| APO 5 | They will be provided with good digital footprint. |

V. PROGRAMME SPECIFIC OUTCOMES (PSOs)

| | |
|--------------|---|
| PSO 1 | Ability to understand the programming concepts, methodologies, and algorithm to solve computational problems. |
| PSO 2 | Ability to apply emerging software development techniques and tools in providing real-time solutions. |

VI. MAPPING of PEOs with PSOs

| | PSO 1 | PSO 2 |
|--------------|-------|-------|
| PEO 1 | √ | |
| PEO 2 | | √ |
| PEO 3 | √ | |
| PEO 4 | | √ |

VIII. Curriculum Structure for B.Sc. Computer Technology

Course Components, Credits & Marks Distribution

| Part No | Group | Basic Structure: Distribution of Courses | Number of Courses | Total Marks | Total Credits |
|--------------|-------|--|-------------------|-------------|--------------------|
| I - IV | 1 | AEC – Ability Enhancement Courses | 10 | 1000 | 24 |
| III& IV | 2 | DSC – Discipline Specific Courses | 20 | 1500 | 65 |
| | 3 | DSE – Discipline Specific Electives | 11 | 1000 | 35 |
| | 4 | GEC – Generic Elective Courses | 4 | 400 | 12 |
| | 5 | SEC – Skill Enhancement Courses | 2 | 100 | 4 |
| IV | 6 | ANCC I & II – Audit Non-Credit Courses | 2 | Completed | |
| V | | ANCC III – Audit Non-Credit Courses | 1 | | |
| - | 7 | Drive Through Courses (DTCs) – (SWAYAM-NPTEL, Coursera, any courses certified by statutory bodies, etc.) | Any number | - | Additional Credits |
| Total | | | | 4000 | 140 |

Group 1. Ability Enhancement Courses (AECs)(10 Courses) –Part (I–IV)

AEC are the courses based upon the content that leads to knowledge enhancement. Ability Enhancement Courses (AEC) are the following:

| S. No. | Course Code | Course Title | Semester | Ownership Department | Contact Hours | Marks | Credits |
|--------|---------------------------------|---|----------|----------------------|---------------|-------|---------|
| 1 | 24AEC02/ 24AEC07/ 24AEC11 | AEC Part I: Language – I: Tamil-I – Tamil Nila - I/ Hindi – I/ French – I | I | Language | 5 | 100 | 3 |
| 2 | 24AEC22 | AEC Part II: English-I: English Language Dynamics | I | English | 5 | 100 | 3 |
| 3 | 24AEC33 | AEC Part III: Academic Skills for Computer Studies | I | CS Stream | 2 | 100 | 2 |
| 4 | 24AEC04/ 24AEC08/ 24AEC12 | AEC Part I: Language – II: Tamil - II- Tamil Nila - II/ Hindi – II/ French – II | II | Language | 5 | 100 | 3 |

| | | | | | | | |
|--------------|---------------------|---|-----|-----------|---|-------------|-----------|
| 5 | 24AEC24 | AEC Part II: English – II: Campus to Corporate | II | English | 5 | 100 | 3 |
| 6 | 24AEC43 | AEC Part III: Comprehensive Project for Computer Studies | III | CS Stream | - | 100 | 4 |
| 7 | 24AEC83 | AEC Part IV: Communication Enhancement Course: Communication Excellence | III | English | 2 | 100 | 1 |
| 8 | 24AEC81/ 24AEC82 | AEC Part IV: Spoken Hindi/ Spoken Tamil | IV | Language | 2 | 100 | 1 |
| 9 | 24AEC71 | AEC Part III: Artificial Intelligence | V | CS Stream | 5 | 100 | 3 |
| 10 | 24AEC51 | AEC Part III: Cyber Ethics | VI | CS Stream | 2 | 100 | 1 |
| Total | | | | | | 1000 | 24 |

Group 2. Discipline Specific Courses (DSCs)(20 Courses) – Part III

These courses are to be studied compulsorily by the students as a core requirement. The students are required to take DSCs across six semesters. The courses designed under this category aim to cover the basics that a student is expected to imbibe in the particular discipline. It includes major project.

| S.No | Course Code | Course Title | Semester | Contact Hours | Marks | Credits |
|------|-------------|--|----------|---------------|-------|---------|
| 1. | 24CSS01 | DSC 1: Digital Computer Fundamentals | I | 4 | 100 | 3 |
| 2. | 24CSS02 | DSC 2: Programming in C | I | 5 | 50 | 4 |
| 3. | 24CSS03 | DSC 3: Practical: Programming in C | I | 2 | 50 | 2 |
| 4. | 24CSS04 | DSC 4: Data Structures and Algorithms | II | 5 | 100 | 4 |
| 5. | 24CSS05 | DSC 5: Object Oriented Programming using C++ | II | 5 | 50 | 4 |
| 6. | 24CSS06 | DSC 6: Practical: Object Oriented Programming using C++ | II | 3 | 50 | 3 |
| 7. | 24CSS07 | DSC 7: Operating System | III | 4 | 100 | 4 |
| 8. | 24CSS08 | DSC 8: Programming in Java | III | 4 | 100 | 4 |
| 9. | 24CSS09 | DSC 9: Practical: Programming in Java | III | 3 | 50 | 3 |
| 10. | 24CSS10 | DSC 10: Software Engineering | III | 4 | 50 | 3 |

| | | | | | | |
|--------------|---------|---|-----|---|-------------|-----------|
| 11. | 24CSS11 | DSC 11: Practical: Software Testing using Selenium | III | 3 | 50 | 2 |
| 12. | 24CSS12 | DSC 12: Computer Networks | IV | 5 | 100 | 4 |
| 13. | 24CSS13 | DSC 13: Relational Database Management Systems | IV | 5 | 100 | 4 |
| 14. | 24CSS14 | DSC 14: Practical: SQL and PL/SQL | IV | 3 | 100 | 3 |
| 15. | 24CSS15 | DSC 15: Machine Learning using Python | V | 5 | 100 | 4 |
| 16. | 24CSS16 | DSC 16: Practical: Machine Learning using Python | V | 4 | 50 | 3 |
| 17. | 24CSS17 | DSC 17: Major Project | VI | 5 | 100 | 4 |
| 18. | 24CSS18 | DSC 18: Data Mining using R | VI | 5 | 100 | 4 |
| 19. | 24CSS19 | DSC 19: Practical: Data Mining using R | VI | 3 | 50 | 2 |
| 20. | 24CSS20 | DSC 20: Developing Thinking Skills | VI | 2 | 50 | 1 |
| Total | | | | | 1500 | 65 |

Project Work

During the Sixth semester each student should undertake a project work and submit the report. A guide will be allotted to each student by the Department. A student can select any research topic in discussion with the guide. The project report shall be subject to internal evaluation followed by a Viva-Voce. The project should be demonstrated at the time of examination.

Internal Evaluation:

| | |
|-------------|--|
| Reviews (3) | – 60 Marks |
| Report | – 20 Marks |
| Attendance | – 20 Marks |
| Total | – 100 Marks will be converted to 40 (Internal) Marks |

End Semester Viva-Voce will be conducted for 60 Marks.

(Dissertation - 40 Marks & Viva-voce - 20 Marks)

Group 3. Discipline Specific Elective (DSEs) (11 Courses) – Part III

Discipline Specific Elective courses offered under the main discipline of study which may be specialized or advanced or supportive to the discipline of study. Students can choose any one course from two courses each in the list of following DSEs.

| S. No. | Course Code | Course Title | Ownership Department | Contact Hours | Marks | Credits |
|--------|-------------|--|----------------------|---------------|-------|---------|
| 1 | 24CSS21 | DSE 1: Self Study Paper: Practical: Excel Macro | CS Stream | - | 100 | 2 |
| | 24CSS44 | DSE 1: Self Study Paper: Practical: Graphics and | | | | |

| | | | | | | |
|----|---------|--|-----------------|---|-----|---|
| | | Multimedia | | | | |
| 2 | 24CTU01 | DSE 2: Distributed Computing | CT& DS Dept. | 5 | 100 | 4 |
| | 24CTU02 | DSE 2: Mobile Computing | | | | |
| 3 | 24CSS22 | DSE 3: Visual Basic .NET | CS Stream | 4 | 100 | 3 |
| | 24CSS23 | DSE 3: UI/UX Design | | | | |
| | 24CSS24 | DSE 3: Web Designing using PHP | | | | |
| 4 | 24CSS25 | DSE 4: Practical: Visual Basic.NET | CS Stream | 3 | 100 | 2 |
| | 24CSS26 | DSE 4: Practical: UI/UX Design | | | | |
| | 24CSS27 | DSE 4: Practical: Web Designing using PHP | | | | |
| 5 | 24CSS28 | DSE 5: Industrial Exposure Training | CS Stream | - | 100 | 4 |
| 6 | 24CSS29 | DSE 6: Ethical Hacking | CS/ IT/CA Dept. | 5 | 100 | 4 |
| | 24CSS30 | DSE 6: Web Intelligence | | | | |
| | 24CSS31 | DSE 6: Programming in C#.NET | | | | |
| 7 | 24CSS32 | DSE 7: Practical: Ethical Hacking | CS/ IT/CA Dept. | 3 | 50 | 2 |
| | 24CSS33 | DSE 7: Practical: Web Intelligence | | | | |
| | 24CSS34 | DSE 7: Practical: Programming in C#.NET | | | | |
| 8 | 24CTU03 | DSE 8: Web Services and API Design | CT& DS Dept. | 5 | 100 | 4 |
| | 24CTU04 | DSE 8: Digital Marketing | | | | |
| 9 | 24CSS35 | DSE 9: Mobile Application Development | CT/CS/CA Dept. | 5 | 100 | 4 |
| | 24CSS36 | DSE 9: Linux Programming | | | | |
| | 24CSS37 | DSE 9: Visualization Analysis and Design | | | | |
| 10 | 24CSS38 | DSE 10: Practical: Mobile Application Development | CT/CS/CA Dept. | 3 | 50 | 2 |
| | 24CSS39 | DSE 10: Practical: Linux Programming | | | | |
| | 24CSS40 | DSE 10: Practical: Data Visualization Techniques | | | | |
| 11 | 24CSS41 | DSE 11: Internet of Things | CS Stream | 5 | 100 | 4 |
| | 24CSS42 | DSE 11: Cryptography and Network Security | | | | |
| | 24CSS43 | DSE 11: Cloud Computing | | | | |

| | | |
|--------------|-------------|-----------|
| Total | 1000 | 35 |
|--------------|-------------|-----------|

Industrial Exposure Training (IET)

Students can opt for Industrial Exposure Training during fifth semester for a period of 4 weeks.

The Continuous Internal Assessment mark distribution for IET is as follows:

| Component | Mode of Conduct | Project Coverage | Marks |
|--------------|-----------------|------------------|-------------|
| 3 Reviews | Presentation | Phase by Phase | 60 |
| Work Diary | Written | Phase by Phase | 20 |
| Report | Submission | Entire Process | 20 |
| Total | | | 100* |

*100 Marks will be converted to 40 (Internal) Marks

The end semester examination of the Industrial Exposure Training will be given based on the report and viva-voce for 60 marks, conducted by the Department.

Report:40 Marks

Viva-voce: 20 Marks

Group 4. Generic Elective Courses (GECs) (4 Courses) –Part III

Generic Elective Courses are interdisciplinary in nature. They are additional courses based on expertise, specialization, requirements, scope, and need of the department.

| Sl. No. | Course Code | Course Title | Semester | Ownership Department | Contact Hours | Marks | Credits |
|---------|-------------|--|----------|----------------------|---------------|-------|---------|
| 1 | 24GEU07 | GEC 1: Probability and Statistics | I | Mathematics Dept. | 5 | 100 | 3 |
| | 24GEU14 | GEC 1: Mathematical Foundation for Computer Science | | | | | |
| 2 | 24GEU08 | GEC 2: Discrete Mathematics | II | Mathematics Dept. | 5 | 100 | 3 |
| | 24GEU15 | GEC 2: Numerical Methods and Statistics | | | | | |
| 3 | 24GEU13 | GEC 3: Applied Mathematics | III | Mathematics Dept. | 5 | 100 | 3 |
| | 24GEU16 | GEC 3: Operations Research for Computer Studies | | | | | |
| 4 | 24GEU47 | GEC 4: Embedded Systems | IV | ECS Dept. | 5 | 100 | 3 |
| | 24GEU48 | GEC 4: Robotics and Applications | | | | | |
| | 24GEU49 | GEC 4: PC Hardware | | | | | |

| | | |
|--------------|------------|-----------|
| Total | 400 | 12 |
|--------------|------------|-----------|

Group 5. Skill Enhancement Courses(SECs)(2 Courses)

SEC I: Compulsory Course: **Talent Enhancement Course**-Arithmetical Ability (24SEC01B)

SEC II: A Bucket of Skill based Courses are offered for the Under Graduate programmes by the departments aimed at imparting skill. A Student has to subscribe one course from list offered by the department.

| S.No | Course Code | Course Title | Ownership Department |
|------|-------------|--|--|
| 1. | 24SEC02 | SEC II :Search Engine Optimization | Computer Science |
| 2. | 24SEC03 | SEC II: Practical: Modeling Data Using Tableau | Computer Technology & Data Science |
| 3. | 24SEC04 | SEC II: Practical: Data Visualization using Tableau | Information Technology & Cognitive Systems |
| 4. | 24SEC05 | SEC II: Full Stack Web Development | Computer Application |

Group 6. Audit Non-Credit Courses (ANCC)– Part IV & V

Non-Credit Courses are intended for students who want to gain general knowledge, learn a new skill, upgrade existing skills, enrich their understanding of a wide range of topics, or develop personal interests. A student has to complete any two courses during Semester I and II.

| Part IV- ANCC | | | |
|--|-------------|--------------------------------|----------------------|
| S. No. | Course Code | Course Title | Ownership Department |
| ANCC I (Semester I) | | | |
| 1 | 24ANC01 | Environmental Studies | Bioscience |
| ANCC II - Values & Ethics (Semester II) | | | |
| 2 | 24ANC02 | Human Rights | Social Work |
| 3 | 24ANC03 | Women's Rights | Social Work |
| 4 | 24ANC04 | Yoga for Human Excellence | Psychology |
| 5 | 24ANC05 | Indian Culture and Heritage | English |
| 6 | 24ANC06 | Introduction to Cyber Security | CS |
| 7 | 24ANC07 | Consumer Protection | Commerce |
| 8 | 24ANC08 | Constitution of India | Commerce |
| 9 | 24ANC09 | Waste Management | Bioscience |
| 10 | 24ANC10 | Sustainable | Management |

| | | | |
|--|--|-------------------|--|
| | | Development Goals | |
|--|--|-------------------|--|

Student has to take part in any one extension activity during their course of study.

| Part V- ANCC | | |
|---------------------------------|-------------|-------------------------|
| ANCC III - Extension Activities | | |
| S. No. | Course Code | Course Name |
| 1 | 24ANC11 | National Service Scheme |
| 2 | 24ANC12 | National Cadet Corps |
| 3 | 24ANC13 | Youth Red Cross |
| 4 | 24ANC14 | Red Ribbon Club |
| 5 | 24ANC15 | Rotaract Club |
| 6 | 24ANC16 | Sports |
| 7 | 24ANC17 | Association Activities |
| 8 | 24ANC18 | Club Activities |

Group 7

i) Drive-Through Courses (DTCs) I & II – Additional Credits

These courses are intended to bring out and promote the self-learning initiative of the students – where their own motivation is what drives them to complete the course and not external compulsions. This fosters the habit of keeping oneself updated always by means of self-study. It gives opportunities to the students to explore new areas of interest and earn additional credits. Students can take any number of courses under this cafeteria system. The credits will not be taken for CGPA calculation. Additional 4/3/2 credits per course will be given on submission of certificate.

1. Coursera
2. NPTEL
3. Any courses certified by statutory bodies.

ii) Drive-Through Course (DTC – III)

Internship Training/Mini Project/ Spoken Tutorial/etc.

Students individually or with the maximum of four members per batch should take up either Internship training or mini project for a period of fifteen days during IV Semester vacation. The report will be evaluated and viva-voce examination will be conducted during V semester. Otherwise, the students have to complete one spoken tutorial course or any certification course suggested by the department.

IX. Semester-wise Scheme

| Semester I | | | | | | | | | | |
|-------------|--------------|-------|---------------|--------------|-----------|----------|-------------|---------|----------|------------|
| Course Code | Course Title | T/P/E | Ins. Hrs/Week | ESE Dur. Hrs | CIA Marks | ES Marks | Total Marks | Credits | SD/EM/EN | L/ R/ N/ G |

| 24AEC02/ 24AEC07/ 24AEC11 | AEC Part I: Language – I: Tamil-I - Tamil Nila– I/ Hindi – I/ French – I | T | 5 | 3 | 25 | 75 | 100 | 3 | SD | L/ N/ G | |
|---|--|-------|---------------|--------------|-----------|----------|--------------------|-----------|-----------|---------------|--|
| 24AEC22 | AEC Part II: English-I: English Language Dynamics | T | 5 | 3 | 25 | 75 | 100 | 3 | SD | G | |
| 24AEC33 | AEC Part III: Academic Skills for Computer Studies | T | 2 | 3 | 100 | - | 100 | 2 | SD | G | |
| 24CSS01 | DSC 1: Digital Computer Fundamentals | T | 4 | 3 | 25 | 75 | 100 | 3 | SD | G | |
| 24CSS02 | DSC 2: Programming in C | T | 5 | 3 | 10 | 40 | 50 | 4 | SD/ EM | G | |
| 24CSS03 | DSC 3: Practical: Programming in C | P | 2 | 3 | 20 | 30 | 50 | 2 | SD/ EM | G | |
| 24GEU07/ 24GEU14 | GEC 1: Probability and Statistics/ Mathematical Foundation for Computer Science | T | 5 | 3 | 25 | 75 | 100 | 3 | EM | G | |
| 24ANC01 | ANCCI (NF2F) Environmental Studies | T | 2 | - | - | - | Completed | | SD | G | |
| Drive Through Course I: Additional Credit Courses | | | | | | | Additional Credits | | | | |
| Total | | | 30 | | | | 600 | 20 | | | |
| Semester II | | | | | | | | | | | |
| Course Code | Course Title | T/P/E | Ins. Hrs/Week | ESE Dur. Hrs | CIA Marks | ES Marks | Total Marks | Credits | SD/EM/EN | L/ R/ N/ G | |
| 24AEC04/ 24AEC08/ 24AEC12 | AEC Part I: Language – II Tamil – II- Tamil Nila - II/ Hindi – II/ French – II | T | 5 | 3 | 25 | 75 | 100 | 3 | SD | L/ N/ G | |
| 24AEC24 | AEC Part II: English – II: Campus to Corporate | T | 5 | 3 | 25 | 75 | 100 | 3 | SD | G | |
| 24CSS04 | DSC 4: Data Structures and Algorithms | T | 5 | 3 | 25 | 75 | 100 | 4 | SD/ EM | G | |

| 24CSS05 | DSC 5: Object Oriented Programming using C++ | T | 5 | 3 | 10 | 40 | 50 | 4 | SD/EM | G |
|---|---|-------|---------------|--------------|-----------|----------|--------------------|-----------|----------|------------|
| 24CSS06 | DSC 6: Practical: Object Oriented Programming using C++ | P | 3 | 3 | 20 | 30 | 50 | 3 | SD/EM | G |
| 24CSS21 / 24CSS44 | DSE 1: Self-Study Paper- Practical: Excel Macro / Practical: Graphics and Multimedia | P | - | 3 | - | 100 | 100 | 2 | SD | G |
| 24GEU08/ 24GEU15 | GEC2: Discrete Mathematics / Numerical Methods and Statistics | T | 5 | 3 | 25 | 75 | 100 | 3 | EM | G |
| 24ANC02/ 24ANC03/ 24ANC04/ 24ANC05/ 24ANC06/ 24ANC07/ 24ANC08/ 24ANC09/ 24ANC10 | ANCCII (NF2F) Human Rights/ Women's Rights/ Yoga for Human Excellence/ Indian Culture and Heritage/ Introduction to Cyber Security/ Consumer Protection/ Constitution of India/ Waste Management/ Sustainable Development Goals | T | 2 | - | - | - | Completed | | SD | G |
| Drive Through Course II: Additional Credit Courses | | | | | | | Additional Credits | | | |
| Total | | | 30 | | | | 600 | 22 | | |
| Semester III | | | | | | | | | | |
| Course Code | Course Title | T/P/E | Ins. Hrs/Week | ESE Dur. Hrs | CIA Marks | ES Marks | Total Marks | Credits | SD/EM/EN | L/ R/ N/ G |
| 24AEC43 | AEC III: Comprehensive Project for Computer Studies | P | - | 3 | 100 | - | 100 | 4 | EN | G |

| | | | | | | | | | | |
|---------------------|---|---|-----------|---|-----|----|------------|-----------|------------------|---|
| 24AEC83 | AEC IV: Communication Enhancement Course: Communication Excellence | T | 2 | 2 | 100 | - | 100 | 1 | SD | G |
| 24CSS07 | DSC 7: Operating System | T | 4 | 3 | 25 | 75 | 100 | 4 | SD | G |
| 24CSS08 | DSC 8: Programming in Java | T | 4 | 3 | 25 | 75 | 100 | 4 | SD/ EM | G |
| 24CSS09 | DSC 9: Practical: Programming in Java | P | 3 | 3 | 20 | 30 | 50 | 3 | SD/ EM | G |
| 24CSS10 | DSC 10: Software Engineering | T | 4 | 3 | 10 | 40 | 50 | 3 | SD/ EM | G |
| 24CSS11 | DSC 11: Practical: Software Testing using Selenium | P | 3 | 3 | 20 | 30 | 50 | 2 | SD/ EM | G |
| 24CTU01/ 24CTU02 | DSE 2: Distributed Computing /Mobile Computing | T | 5 | 3 | 25 | 75 | 100 | 4 | SD/ EM/ EN | G |
| 24GEU13/ 24GEU16 | GEC 3: Applied Mathematics / Operations Research for Computer Studies | T | 5 | 3 | 25 | 75 | 100 | 3 | SD/ EM | G |
| Total | | | 30 | | | | 750 | 28 | | |

Semester IV

| Course Code | Course Title | T/P/E | Ins. Hrs/Week | ESE Dur. Hrs | CIA Marks | ES Marks | Total Marks | Credits | SD/EM/EN | L/ R/ N/ G |
|---------------------|---|-------|---------------|--------------|-----------|----------|-------------|---------|-----------|------------|
| 24AEC81/ 24AEC82 | AEC Part IV: Spoken Hindi/ Spoken Tamil | T | 2 | 2 | 100 | - | 100 | 1 | SD | N/ R |
| 24CSS12 | DSC 12: Computer Networks | T | 5 | 3 | 25 | 75 | 100 | 4 | SD/ EM | G |
| 24CSS13 | DSC 13: Relational Database Management Systems | T | 5 | 3 | 25 | 75 | 100 | 4 | SD | G |
| | DSC 14: | P | 3 | 3 | 40 | 60 | 100 | 3 | SD | G |

| | | | | | | | | | | |
|---------------------------------|---|---|-----------|---|----|----|------------|-----------|-----------|---|
| 24CSS14 | Practical: SQL and PL/SQL | | | | | | | | | |
| 24CSS22/ 24CSS23/ 24CSS24 | DSE 3: Visual Basic .NET/ UI/UX Design / Web Designing using PHP | T | 4 | 3 | 25 | 75 | 100 | 3 | EN/ EM | G |
| 24CSS25/ 24CSS26/ 24CSS27 | DSE 4: Practical: Visual Basic.NET/ Practical: UI/UX Design / Practical: Web Designing using PHP | P | 3 | 3 | 40 | 60 | 100 | 2 | EN/ EM | G |
| 24GEU47/ 24GEU48/ 24GEU49 | GEC 4: Embedded Systems/ Robotics and Applications/ PC Hardware | T | 5 | 3 | 25 | 75 | 100 | 3 | EM | G |
| 24SEC01B | SEC 1: Talent Enhancement Course: Arithmetical Ability | T | 3 | 3 | 50 | - | 50 | 2 | SD | G |
| Total | | | 30 | | | | 750 | 22 | | |

Semester V

| Course Code | Course Title | T/P/E | Ins. Hrs/Week | ESE Dur. Hrs | CIA Marks | ES Marks | Total Marks | Credits | SD/EM/EN | L/ R/ N/ G |
|---------------------------------|--|-------|---------------|--------------|-----------|----------|-------------|---------|-----------|------------|
| 24CSS28 | DSE 5: Industrial Exposure Training | - | 4 Weeks | - | 40 | 60 | 100 | 4 | EM | G |
| 24AEC71 | AEC Part III: Artificial Intelligence | T | 5 | 3 | 25 | 75 | 100 | 3 | SD/ EM | G |
| 24CSS15 | DSC 15: Machine Learning using Python | T | 5 | 3 | 25 | 75 | 100 | 4 | SD/ EM | G |
| 24CSS16 | DSC 16: Practical: Machine Learning using Python | P | 4 | 3 | 20 | 30 | 50 | 3 | SD/ EM | G |
| 24CSS29/ 24CSS30/ 24CSS31 | DSE 6: Ethical Hacking/ Web Intelligence/ Programming in C#.NET | T | 5 | 3 | 25 | 75 | 100 | 4 | EN | G |

| 24CSS32/ 24CSS33/ 24CSS34 | DSE 7: Practical: Ethical Hacking /Practical: Web Intelligence/ Practical: Programming in C#.NET | P | 3 | 3 | 20 | 30 | 50 | 2 | EN | G |
|---|---|-------|---------------|--------------|-----------|----------|-------------|-----------|-----------|------------|
| 24CTU03 / 24CTU04 | DSE 8: Web Services and API Design / Digital Marketing | T | 5 | 3 | 25 | 75 | 100 | 4 | SD/ EM | G |
| 24SEC03 | SEC II: Practical: Modeling Data Using Tableau | P | 3 | 3 | 20 | 30 | 50 | 2 | SD/ EM | G |
| Drive Through Course III –Spoken Tutorial | | | | | | | Completed | | | |
| Total | | | 30 | | | | 650 | 26 | | |
| Semester VI | | | | | | | | | | |
| Course Code | Course Title | T/P/E | Ins. Hrs/Week | ESE Dur. Hrs | CIA Marks | ES Marks | Total Marks | Credits | SD/EM/EN | L/ R/ N/ G |
| 24AEC51 | AEC 10: Cyber Ethics | T | 2 | 2 | 25 | 75 | 100 | 1 | SD | G |
| 24CSS17 | DSC 17: Major Project | - | 5 | - | 40 | 60 | 100 | 4 | EN | G |
| 24CSS18 | DSC 18: Data Mining using R | T | 5 | 3 | 25 | 75 | 100 | 4 | EN | G |
| 24CSS19 | DSC 19: Practical: Data Mining using R | P | 3 | 3 | 20 | 30 | 50 | 2 | EN | G |
| 24CSS20 | DSC 20: Developing Thinking Skills | T | 2 | 3 | 10 | 40 | 50 | 1 | SD | G |
| 24CSS35/ 24CSS36/ 24CSS37 | DSE 9: Mobile Application Development / Linux Programming / Visualization Analysis and Design | T | 5 | 3 | 25 | 75 | 100 | 4 | EN | G |
| 24CSS38/ 24CSS39/ 24CSS40 | DSE 10: Practical: MobileApplication Development /Practical: Linux | P | 3 | 3 | 20 | 30 | 50 | 2 | EN | G |

| | | | | | | | | | | | |
|--|--|--|-----------|---|----|----|----------------------------------|------------|-----------|---|--|
| | Programming / Practical: DataVisualization Techniques | | | | | | | | | | |
| 24CSS41/ 24CSS42/ 24CSS43 | DSE 11: Internet of Things/ Cryptography and Network Security/ Cloud Computing | T | 5 | 3 | 25 | 75 | 100 | 4 | SD/ EM | G | |
| 24ANC11/ 24ANC12/ 24ANC13/ 24ANC14/ 24ANC15/ 24ANC16/ 24ANC17/ 24ANC18 | ANCC III Extension Activities: National Service Scheme / National Cadet Corps / Youth Red Cross / Red Ribbon Club / Rotaract Club / Sports / Association Activities/ Club Activities | - | - | - | - | - | Grade | - | SD | G | |
| Total | | | 30 | | | | 650 | 22 | | | |
| Total | | | | | | | 4000 | 140 | | | |
| Drive-Through Courses (DTCs): Courses offered in Coursera (OR) NPTEL Or Any courses certified by statutory bodies. | | Additional 4 credits per course will be given on submission of Certificate | | | | | During Semester I to Semester VI | | | | |

| The courses focus on the following needs | |
|--|-------------------|
| SD | Skill Development |
| EM | Employability |
| EN | Entrepreneurship |
| L | Local |
| R | Regional |
| N | National |
| G | Global |

Semester-wise Distribution of Marks and Credits

| Semester | Total Marks | Total Credits |
|----------|-------------|---------------|
| I | 600 | 20 |
| II | 600 | 22 |

| | | |
|--------------|-------------|------------|
| III | 750 | 28 |
| IV | 750 | 22 |
| V | 650 | 26 |
| VI | 650 | 22 |
| Total | 4000 | 140 |

OFFERED BY**List of Courses Offered by Mathematics Department**

| Semester | Course Code | Course Name | Programme | T/P/E | Ins. hrs | CIA | ES | Total Marks | Credit | SD/EM/EN | L/R/N/G |
|----------|-------------|--|-----------|-------|----------|-----|----|-------------|--------|----------|---------|
| I | 24GEU07 | GEC 1: Probability and Statistics | B.Sc. CT | T | 5 | 25 | 75 | 100 | 3 | EM | G |
| | 24GEU14 | GEC 1: Mathematical | | | | | | | | | |

| | | | | | | | | | | | | |
|-----|---------|--|----------|---|---|----|----|-----|---|-------|---|--|
| | | Foundation for Computer Science | | | | | | | | | | |
| II | 24GEU08 | GEC 2: Discrete Mathematics | B.Sc. CT | T | 5 | 25 | 75 | 100 | 3 | EM | G | |
| | 24GEU15 | GEC 2: Numerical Methods and Statistics | | | | | | | | | | |
| III | 24GEU13 | GEC 3: Applied Mathematics | B.Sc. CT | T | 5 | 25 | 75 | 100 | 3 | SD/EM | G | |
| | 24GEU16 | GEC 3: Operations Research for Computer Studies | | | | | | | | | | |

List of Courses Offered by Electronics and Communication Systems Department

| Semester | Course Code | Course Name | Programme | T/P/E | Ins. hrs | CIA | ES | Total Marks | Credit | SD/EM/EN | L/R/N/G |
|----------|-------------|---|-----------|-------|----------|-----|----|-------------|--------|----------|---------|
| IV | 24GEU47 | GEC 4: Embedded Systems | B.Sc. CT | T | 5 | 25 | 75 | 100 | 3 | EM | G |
| | 24GEU48 | GEC 4: Robotics and Applications | | | | | | | | | |
| | 24GEU49 | GEC 4: PC Hardware | | | | | | | | | |

OFFERED TO

List of Courses Offered to B. Sc (BT) /B. Sc (MB) Department

| Semester | Course Code | Course Name | Programme | T/P/E | Ins. hrs | CIA | ES | Total Marks | Credit | SD/EM/EN | L/R/N/G |
|----------|-------------|--|-----------------------|-------|----------|-----|----|-------------|--------|----------|---------|
| IV | 24GEU45A | GEC 4: Programming in ANSI C | B.Sc. BT/ B.Sc. MB | E | 3 | 10 | 40 | 50 | 2 | SD | G |
| IV | 24GEU45B | GEC 4: Practical: Programming in ANSI C | | E | 2 | 10 | 40 | 50 | 2 | SD | G |
| IV | 24GEU46A | GEC 4: PERL Programming | | E | 3 | 10 | 40 | 50 | 2 | SD | G |
| IV | 24GEU46B | GEC 4: PERL Programming Lab | | E | 2 | 10 | 40 | 50 | 2 | SD | G |