



## BACHELOR COMPUTER APPLICATIONS

### CHOICE BASED CREDIT SYSTEM -

### LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK (CBCS - LOCF)

(Applicable to the candidates admitted from the academic year 2022-2023 onwards)

(Naan Mudhalvan scheme has been implemented from 2nd to 5th semester for the 2023-2024 Batch)

| Sem.         | Part                              | Course  | Title                          | Ins. Hrs.                               | Credits   | Exam Hours | Marks |      | Total      |     |
|--------------|-----------------------------------|---|--------------------------------|---|-----------|------------|-------|------|------------|-----|
|              |                                   |   |                                |   |           |            | Int.  | Ext. |            |     |
| I            | I                                 | Language Course – I<br>Tamil \$ / Other Languages + #   |                                | 6                                       | 3         | 3          | 25    | 75   | 100        |     |
|              | II                                | English Course - I  |                                | 6                                       | 3         | 3          | 25    | 75   | 100        |     |
|              | III                               |   | Core Course – I (CC)           | Programming in C and<br>Data Structures | 5         | 5          | 3     | 25   | 75         | 100 |
|              |                                   |   | Core Practical – I (CP)        | Programming in C Lab                    | 4         | 4          | 3     | 40   | 60         | 100 |
|              |                                   |   | First Allied Course – I (AC)   |   | 4         | 4          | 3     | 25   | 75         | 100 |
|              |                                   | First Allied Course – II (AC)   |                                | 3                                       | -         | -          | -     | -    | -          |     |
|              | IV                                | Value Education   |                                | 2                                       | 2         | 3          | 25    | 75   | 100        |     |
| <b>TOTAL</b> |                                   |   |                                | <b>30</b>                               | <b>21</b> | -          | -     | -    | <b>600</b> |     |
| II           | I                                 | Language Course - II<br>Tamil \$ / Other Languages + #  |                                | 6                                       | 3         | 3          | 25    | 75   | 100        |     |
|              | II                                | English Course – II   |                                | 4                                       | 3         | 3          | 25    | 75   | 100        |     |
|              | III                               |   | Core Course – II (CC)          | Programming in Java                     | 5         | 5          | 3     | 25   | 75         | 100 |
|              |                                   |   | Core Practical – II (CP)       | Programming in Java Lab                 | 4         | 4          | 3     | 40   | 60         | 100 |
|              |                                   |   | First Allied Course – II (AC)  |   | 3         | 2          | 3     | 25   | 75         | 100 |
|              |                                   |   | First Allied Course – III (AC) |   | 4         | 4          | 3     | 25   | 75         | 100 |
|              |                                   | Add on Course – I ##  | Professional English – I       | 6*                                      | 4         | 3          | 25    | 75   | 100        |     |
|              | IV                                | Environmental Studies   |                                | 2                                       | 2         | 3          | 25    | 75   | 100        |     |
| VI           | Naan Mudhalvan Scheme<br>(NMS) @@ | Language Proficiency for<br>Employability –<br>Overview of English<br>Language<br>Communication | 2                              | 2                                       | 3         | 25         | 75    | 100  |            |     |
| <b>TOTAL</b> |                                   |   |                                | <b>30</b>                               | <b>29</b> | -          | -     | -    | <b>900</b> |     |

|     |              |   |  |   |           |           |          |          |          |            |
|-----|--------------|---|--|---|-----------|-----------|----------|----------|----------|------------|
| III | I            | Language Course – III<br>Tamil \$ / Other Languages + #   |  | 6 | 3         | 3         | 25       | 75       | 100      |            |
|     | II           | English Course - III  |  | 6 | 3         | 3         | 25       | 75       | 100      |            |
|     | III          | Core Course – III (CC)  | Programming in Python  |   | 5         | 5         | 3        | 25       | 75       | 100        |
|     |              | Core Practical - III (CP)   | Programming in Python<br>Lab   |   | 4         | 4         | 3        | 40       | 60       | 100        |
|     |              | Second Allied Course – I (AC)   |  |   | 4         | 4         | 3        | 25       | 75       | 100        |
|     |              | Second Allied Course – II (AC)  |  |   | 3         | -         | -        | -        | -        | -          |
|     |              | Add on Course – II ##   | Professional English - II  |   | 6*        | 4         | 3        | 25       | 75       | 100        |
|     | IV           | Non-Major Elective I @ - Those who choose Tamil in Part I can choose a non-major elective course offered by other departments.<br>Those who do not choose Tamil in Part I must choose either<br>a) Basic Tamil if Tamil language was not studied in school level <b>or</b><br>b) Special Tamil if Tamil language was studied upto 10 <sup>th</sup> & 12 <sup>th</sup> std.  | Fundamentals of Information Technology   |   | 2         | 2         | 3        | 25       | 75       | 100        |
|     | VI           | Naan Mudhalvan Scheme (NMS) @@  | Computational Skills for Employability - Foundation of Coding & Cloud Using Python |   | -         | 2         | 3        | 25       | 75       | 100        |
|     | <b>TOTAL</b> |   |  |   | <b>30</b> | <b>27</b> | <b>-</b> | <b>-</b> | <b>-</b> | <b>800</b> |
| IV  | I            | Language Course –IV<br>Tamil \$ / Other Languages + #   |  | 6 | 3         | 3         | 25       | 75       | 100      |            |
|     | II           | English Course – IV   |  | 6 | 3         | 3         | 25       | 75       | 100      |            |
|     | III          | Core Course - IV (CC)   | Database Management Systems  |   | 5         | 5         | 3        | 25       | 75       | 100        |
|     |              | Core Practical - IV (CP)  | Database Management Systems Lab  |   | 4         | 4         | 3        | 40       | 60       | 100        |
|     |              | Second Allied Course – II (AC)  |  |   | 3         | 2         | 3        | 25       | 75       | 100        |
|     |              | Second Allied Course – III (AC)   |  |   | 4         | 4         | 3        | 25       | 75       | 100        |
|     | IV           | Non-Major Elective II @ - Those who choose Tamil in Part I can choose a non-major elective course offered by other departments.<br>Those who do not choose Tamil in Part I must choose either<br>a) Basic Tamil if Tamil language was not studied in school level <b>or</b><br>b) Special Tamil if Tamil language was studied upto 10 <sup>th</sup> & 12 <sup>th</sup> std. | Working Principles of Internet   |   | 2         | 2         | 3        | 25       | 75       | 100        |
|     | VI           | Naan Mudhalvan Scheme (NMS) @@  | Fundamentals of Web Development  |   | -         | 2         | 3        | 25       | 75       | 100        |
|     | <b>TOTAL</b> |   |  |   | <b>30</b> | <b>25</b> | <b>-</b> | <b>-</b> | <b>-</b> | <b>800</b> |

|                    |              |                                    |  |            |            |           |          |          |             |
|--------------------|--------------|------------------------------------|--|------------|------------|-----------|----------|----------|-------------|
| V                  | III          | Core Course - V (CC)               | Fundamentals of Algorithms                                   | 5          | 5          | 3         | 25       | 75       | 100         |
|                    |              | Core Course – VI (CC)              | Computer Networks  | 5          | 5          | 3         | 25       | 75       | 100         |
|                    |              | Core Course – VII (CC)             | Web Technology   | 5          | 5          | 3         | 25       | 75       | 100         |
|                    |              | Core Practical -V (CP)             | Web Technology Lab   | 4          | 4          | 3         | 40       | 60       | 100         |
|                    |              | Major Based Elective – I (Any one) | 1. Multimedia Technologies<br>2. Data Mining and Warehousing | 5          | 4          | 3         | 25       | 75       | 100         |
|                    | IV           | Skill Based Elective I             | Mobile Application Development                               | 4          | 2          | 3         | 25       | 75       | 100         |
|                    |              | Soft Skills Development            |  | 2          | 2          | 3         | 25       | 75       | 100         |
|                    | VI           | Naan Mudhalvan Scheme (NMS) @@     | Generative AI with IBM                                       | -          | 2          | 3         | 25       | 75       | 100         |
|                    | <b>TOTAL</b> |                                    |  |            | <b>30</b>  | <b>29</b> | <b>-</b> | <b>-</b> | <b>-</b>    |
| VI                 | III          | Core Course - VIII (CC)            | Operating Systems  | 6          | 5          | 3         | 25       | 75       | 100         |
|                    |              | Core Course - IX (CC)              | Programming in PHP   | 6          | 5          | 3         | 25       | 75       | 100         |
|                    |              | Core Practical – VI (CP)           | Programming in PHP Lab                                       | 4          | 4          | 3         | 40       | 60       | 100         |
|                    |              | Major Based Elective II (Any one)  | 1. Software Project Management<br>2. E-Commerce Technologies | 5          | 4          | 3         | 25       | 75       | 100         |
|                    |              | Project                            |  | 4          | 3          | -         | 20       | 80       | 100         |
|                    | IV           | Skill Based Elective – II          | Internet of Things   | 4          | 2          | 3         | 25       | 75       | 100         |
|                    | V            | Gender Studies                     |  | 1          | 1          | 3         | 25       | 75       | 100         |
|                    |              | Extension Activities **            |  | -          | 1          | -         | -        | -        | -           |
|                    | <b>TOTAL</b> |                                    |  |            | <b>30</b>  | <b>25</b> | <b>-</b> | <b>-</b> | <b>-</b>    |
| <b>GRAND TOTAL</b> |              |                                    |  | <b>180</b> | <b>156</b> | <b>-</b>  | <b>-</b> | <b>-</b> | <b>4600</b> |

### List of Allied Courses

#### First Allied Course

Mathematics

#### Second Allied Course

Accounting and Organizational Behaviour

\$ For those who studied Tamil upto 10<sup>th</sup> +2 (Regular Stream).

+ Syllabus for other Languages should be on par with Tamil at degree level.

# Those who studied Tamil upto 10<sup>th</sup> +2 but opt for other languages in degree level under Part- I should study special Tamil in Part – IV.

## The Professional English – Four Streams Course is offered in the 2<sup>nd</sup> and 3<sup>rd</sup> Semester (only for 2022-2023 Batch) in all UG Courses. It will be taught apart from the Existing hours of teaching / additional hours of teaching (1 hour /day) as a 4 credit paper as an add on course on par with Major Paper and completion of the paper is must to continue his / her studies further. (As per G.O. No. 76, Higher Education (K2) Department dated: 18.07.2020).

\* The Extra 6 hrs / cycle as per the G.O. 76/2020 will be utilized for the Add on Professional English Course.

@ NCC Course is one of the Choices in Non-Major Elective Course. Only the NCC cadets are eligible to choose this course. However, NCC Course is not a Compulsory Course for the NCC Cadets.

\*\* Extension Activities shall be outside instruction hours.

@@ Naan Mudhalvan Scheme as per Government instruction.

## SUMMARY OF CURRICULUM STRUCTURE OF UG PROGRAMMES

| Sl. No.      | Part                         | Types of the Courses                                | No. of Courses        | No. of Credits | Marks       |     |
|--------------|------------------------------|---|-----------------------|----------------|-------------|-----|
| 1.           | I                            | Language Courses                                    | 4                     | 12             | 400         |     |
| 2.           | II                           | English Courses                                     | 4                     | 12             | 400         |     |
| 3.           | III                          | Core Courses  | 9                     | 45             | 900         |     |
| 4.           |                              | Core Practical                                      | 6                     | 24             | 600         |     |
| 5.           |                              | Allied Courses (1 <sup>st</sup> & 2 <sup>nd</sup> ) | 6                     | 20             | 600         |     |
| 6.           |                              | Major Based Elective Courses                        | 2                     | 8              | 200         |     |
| 7.           |                              | Add -on Course<br>(Professional English I & II)     | 2                     | 8              | 200         |     |
| 8.           |                              | Project   | 1                     | 3              | 100         |     |
| 9.           |                              | IV  | Value Education       | 1              | 2           | 100 |
| 10.          |                              |   | Environmental Studies | 1              | 2           | 100 |
| 11.          | Non-Major Elective Courses   |   | 2                     | 4              | 200         |     |
| 12.          | Skill Based Elective Courses |   | 2                     | 4              | 200         |     |
| 13.          | Soft Skills Development      |   | 1                     | 2              | 100         |     |
| 14.          | V                            | Gender Studies                                      | 1                     | 1              | 100         |     |
| 15.          |                              | Extension Activities                                | 1                     | 1              | 0           |     |
| 16.          | VI                           | Naan Mudhalvan Scheme                               | 4                     | 8              | 400         |     |
| <b>Total</b> |                              |   | <b>47</b>             | <b>156</b>     | <b>4600</b> |     |

### PROGRAMME OUTCOMES:

- Graduates will be able to comprehend the basic concepts learnt and apply in real life situations with analytical skills.
- Graduates with acquired skills and enhanced knowledge will be employable / become entrepreneurs or will pursue higher Education.
- Graduates with acquired knowledge of modern software tools will be able to contribute effectively as software engineers.
- Graduates will be able to comprehend the related concepts to Computer Science with Allied papers
- Graduates will be imbued with ethical values and social concerns to ensure peaceful society.

### PROGRAMME SPECIFIC OUTCOMES:

After completing the Bachelor of Computer Applications Programme, the graduates would have

- Understand and analyze the fundamental knowledge in the domain of computer applications.
- Enhance the logical and analytical thinking to understand the computational systems.
- Ability to comprehend the structure, development methodologies of software systems and to design the software solutions.
- Explore the developing areas in the sphere of computer applications and to enrich themselves to be skilful to meet the diverse expectations of the industry.
- Equip them to be competent to provide optimal and ethical solutions to the technological challenges laid by the professional societies

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