**Progressive Education Society's**

# Modern College Of Arts, Science & Commerce (Autonomous)

## Ganeshkhind, Pune – 411016

**Three Year Degree Program in B.C.A.(Science)**

**(Faculty of Science & Technology)**

**T.Y.B.C.A. (Science)**

**Choice Based Credit System Syllabus**

**To be implemented from Academic Year 2024-2025**

**Title of the Course:** Bachelor of Computer Applications (Science)

### Preamble of the syllabus

The B.C.A. (Science) program is a combination of computer and applied courses from science stream. The computer related courses introduce techniques of programming, databases, web designing, system analysis, design tools and different computing environments. The applied courses include mathematics, statistics and electronics that provide theoretical and practical foundation for the learner.

### Objectives:

- To produce knowledgeable and skilled human resources that is employable in IT and ITeS.
- To impart knowledge required for planning, designing and building Complex Application Software Systems as well as to provide support for automated systems or applications.
- It helps students analyse the requirements for system development and exposes students to business software and information systems.
- This course provides students with options to specialize in legacy application software, system software or mobile applications.
- To produce entrepreneurs

### Introduction

The Program is of Three Years duration with six semesters. It is a Full Time Degree Program. The program will be based on Choice-based credit system comprising 132+8 (140) credit points.

### Eligibility for Admission:

Any candidate who has passed the XII standard Examination in Science stream from, Maharashtra State Board of Secondary and Higher Secondary Education or equivalent Board of Examination, is eligible for admission to the First Year of this program.

OR

Passed Three Year Diploma Course approved by the DTE, Maharashtra State or Equivalent authority.

### Lateral Entry to SYBCA

Any candidate who has passed a three Year Diploma course in Computer Engineering/ Technology/ Information Technology/ Electronics Communication/ Electronics Telecommunications/ Electronics approved by the DTE, Maharashtra State or Equivalent authority is eligible for admission to direct second year (SYBCA) of this program.

| Course Code | Course Title | Credits | | Evaluation | | |
|---|---|---|---|---|---|---|
| **Semester -V T.Y. B.C.A (Science)** | | | | | | |
| | | **T** | **P** | **CIA** | **CE** | **Total** |
| 24-BCA-351 | Advanced Java | 4 | - | 30 | 70 | 100 |
| 24-BCA-352 | Data Mining and Data Science | 4 | - | 30 | 70 | 100 |
| 24-BCA-353 | Operating Systems | 4 | - | 30 | 70 | 100 |
| 24-BCA-354 | Artificial Intelligence | 2 | - | 15 | 35 | 50 |
| 24-BCA-355 | Computer Network | 2 | - | 15 | 35 | 50 |
| 24-BCA-356 | Advanced Java Laboratory | - | 2 | 15 | 35 | 50 |
| 24-BCA-357 | Data Mining and Data Science Laboratory | - | 2 | 15 | 35 | 50 |
| 24-BCA-358 | Operating Systems Laboratory | - | 2 | 15 | 35 | 50 |
| **Total** | | **16** | **6** | **165** | **385** | **550** |

**Total Credits: [16(TH) + 6 (PR)] = 22**

**TH**: Theory **PR**: Practical **CIA**: Continuous Internal Assessment **CSE**: College Semester Examination

| Semester -VI T.Y. B.C.A (Science) | | | | | | |
|---|---|---|---|---|---|---|
| **Course Code** | **Course Title** | **Credits** | | **Evaluation** | | |
| | | **T** | **P** | **CIA** | **CE** | **Total** |
| 24-BCA-361 | Android Programming | 4 | - | 30 | 70 | 100 |
| 24-BCA-362 | Programming in GO | 4 | - | 30 | 70 | 100 |
| 24-BCA-363 | Internet of Things (IoT) | 4 | - | 30 | 70 | 100 |
| 24-BCA-364 | Blockchain Technology | 2 | - | 15 | 35 | 50 |
| 24-BCA-365 | Cloud Computing | 2 | - | 15 | 35 | 50 |
| 24-BCA-366 | Android Programming Laboratory | - | 2 | 15 | 35 | 50 |
| 24-BCA-367 | Programming in GO and IoT Laboratory | - | 2 | 15 | 35 | 50 |
| 24-BCA-368 | Project Laboratory | - | 2 | 15 | 35 | 50 |
| **Total** | | **16** | **6** | **165** | **385** | **550** |

**Total Credits: [16(TH) + 6 (PR)] = 22**

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