



**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.

### **Suggested internal assessment tools for courses:**

The concerned teacher shall announce the units for which internal assessment will take place. A teacher may choose one of the methods given below for the assessment.

1. Library notes
2. Students Seminar
3. Short Quizzes / MCQ Test
4. Home Assignments
5. Tutorials/ Practical
6. Oral test
7. Research Project
8. Group Discussion
9. Open Book Test
10. Written Test
11. PPT presentation
12. Industrial Visit
13. Viva

### **Teaching Methodology:**

1. Classroom Teaching

2. Guest Lectures
3. Group Discussions
4. Surveys
5. Power Point Presentations
6. Visit to Industries
7. Research Papers & Projects
8. E-content

**Eligibility:**

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.

Semester -V T.Y. B.C.A (Science)						
Course Code	Course Title	Credits		Evaluation		
		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 & AI Laboratory	-	2	15	35	50
<b>Total</b>		<b>16</b>	<b>6</b>	<b>165</b>	<b>385</b>	<b>550</b>

**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
<b>Total</b>		<b>16</b>	<b>6</b>	<b>165</b>	<b>385</b>	<b>550</b>

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