





## PROSPECTUS 2025

EMPOWERING MINDS, SHAPING FUTURES Prist Academy Institute for Advanced Studies (CAIAS), established in 2016 in Bangalore, India, is a leading institution of higher learning under the guidance of the Carmelites of Mary Immaculate (CMI), a congregation renowned for its dedication to education. CAIAS offers diverse undergraduate and postgraduate programs in Arts & Humanities, Management Studies, Commerce, Computer Applications, and Science.

With a focus on holistic education, CAIAS combines theoretical knowledge with practical experience, equipping students for successful careers. The curriculum integrates modern trends with industry-relevant practices, providing hands-on learning through internships, research, and projects. The dedicated faculty, comprising experienced professionals and scholars, ensure students receive high-quality, future-ready education.

CAIAS boasts state-of-the-art facilities, including modern classrooms, advanced computer labs, a well-stocked library, and sports amenities. Set amidst a serene campus, the environment fosters both academic and personal growth. Beyond academics, the institution emphasises character formation, values-based education, and community service, preparing students to contribute positively to society. Rooted in excellence and innovation, CAIAS is the ideal choice for students seeking a transformative educational journey, blending academic rigor, ethical values, and a supportive community.

## /ISION

#### Light to Enlighten

To create and disseminate the light of knowledge to one and all for the greater good and a sustainable future.

# **NOISSIV**

To provide a conducive and enabling environment that fosters discipline, promotes motivation and drives the pursuit of excellence in learning.

To transform individuals into independent and enlightened citizens, who care for the community and the Country.

## "Shape your future with values that matter - Choose CAIAS for a holistic education experience!"

# WHY CAIAS?

At Christ Academy Institute for Advanced Studies (CAIAS), students receive a holistic education that blends academic rigor with ethical and socially conscious learning. Our state-of-the-art facilities, experienced faculty, and serene green campus create Rthe perfect environment for growth.

CAIAS ensures students are not only prepared for successful careers but are also equipped to make ethical decisions and create positive social impact. Through workshops, real-world case studies, and hands-on experiences, students learn to lead with integrity and responsibility. Parents and students trust CAIAS to provide not just an education, but a foundation for life.





Christ Academy Institute for Advanced Studies (CAIAS) is nestled in a sprawling, green, and serene campus that offers the perfect environment for holistic learning and personal growth. Surrounded by lush greenery, the campus provides a tranquil space for students to focus on academics, engage in extracurricular activities, and nurture their well-being.

The eco-friendly campus features modern infrastructure, including state-of-the-art classrooms, advanced laboratories, a well-stocked library, and vibrant recreational spaces. This harmonious blend of nature and technology fosters creativity, reduces stress, and enhances concentration. At CAIAS, the campus is not just a place to study; it's a space to thrive.



# SCHOLARSHIP

- ST.CHAVARA EXCELLENCE AWARD
- PADMA BHUSHAN FR.GABRIEL CHIRAMEL CMI MERIT
- VIDYADHANAM SCHOLARSHIP FOR FINANCIAL ASSISTANCE
- ALUMNI ENDURANCE SCHOLARSHIP
- DIVYAANG SCHOLARSHIP
- BISHOP CLEMENT THOTTUNGAL SPORTS & CULTURAL SCHOLARSHIP



#### **NURTURING HOLISTIC DEVELOPMENT**

At CAIAS, we offer eight dedicated centres that promote holistic development, fostering research, community engagement, and professional growth. These centres provide students with valuable platforms for learning and support students' academic pursuits, career preparation, and personal growth to excel in their chosen fields.

























## shape your future with caias where leaders are made!





Excellence in Infrastructure Excellence in Academics Top Emerging College

- Prominent & Futuristic Business Studies & Degree College of the Year 2024
- Excellence In Educational Standards Adaptability & Implementation





#### RECRUITERS







































































#### **FACILITIES**







## DEPARTMENT OF COMPUTER SCIENCE

The Department of Computer Science and Applications at Christ Academy Institute for Advanced Studies (CAIAS) is dedicated to empowering students with cutting-edge knowledge and skills to thrive in the ever - evolving technology landscape. Offering undergraduate and postgraduate programs like BCA and MCA, the department integrates theoretical foundations with practical learning, ensuring students are industry-ready.

The Department emphasises innovation and application through specialised BCA programs in Artificial Intelligence & Machine Learning and Data Science along with BCA Regular program. Students gain hands-on experience through internships, projects, and workshops using advanced tools and technologies.

With a focus on holistic development, the Department supports student growth through clubs like Int-elegance, industry collaborations, and academic alliances with institutions such as IIT Bombay and ICT Academy. Facilities such as state-of-the-art labs and partnerships with global organisations further enhance the learning experience. The department fosters critical thinking, problem-solving, and leadership skills, preparing graduates for impactful careers in roles such as software developers, data scientists, AI specialists, and entrepreneurs. Committed to academic excellence and innovation, the Department of Computer Science and Applications is a gateway to opportunities in the dynamic world of technology.

#### DEPARTMENT VISION

To cultivate a dynamic and innovative learning environment that empowers students with comprehensive knowledge in computer applications, fosters critical thinking, problem solving and equips them with practical skills to excel in the ever - evolving field of technology.

#### **DEPARTMENT MISSION**

- Quality Education: To deliver a robust curriculum designed by the Bangalore University that combines theoretical knowledge with practical application, ensuring students gain a thorough understanding of computer applications.
- Skill Development: To enhance students' technical skills, problem-solving abilities, and critical thinking through hands-on projects, internships, and industry collaborations.
- Innovation and Research: To foster a culture of innovation and research, encouraging students to explore new technologies and contribute to advancements in the field.
- Ethical Values: To instill strong ethical values and a sense of responsibility, preparing students to make positive contributions to society and the professional world.
- Global Competence: To equip students with the skills and knowledge needed to compete and succeed in the global IT industry, promoting lifelong learning and continuous professional development.

#### **DEPARTMENT HIGHLIGHTS**

- · Qualified and experienced faculty members
- · Academic alliances with leading organisations
- Ongoing industry-academia collaboration like Infosys Springboard, IBM Skill Build Program
- · Opportunities for research, sports, and cultural involvement
- IT Club (Int-elegance) for technical and career development activities
- Internships and project work (mini and major)
- Use of Google Classroom for assignments and resources
- · Industrial visits and hands on training sessions
- · Conferences, webinars, and workshops
- Real-time project development training

#### DEPARTMENT ALLIANCES

The department also collaborates with:

- IIT Bombay Spoken Tutorial Programme
- · IIT Madras NPTEL Local Chapter
- ICT Academy
- · Networkers Home
- Vtech Integrated Solutions

#### **DEPARTMENT CLUB**

Step into a world of innovation and creativity with the IT Club - Int-elegance at the Department of Computer Science, CAIAS! This vibrant hub is where ideas meet action, offering a platform for students to explore, innovate, and shine in the tech world.

From coding challenges and hackathons to web design workshops and IT quizzes, our club activities are designed to enhance your technical expertise and problem - solving skills. Engage in real-world projects, collaborate with peers, and showcase your talents through paper presentations and interactive sessions with industry experts.

At Int-elegance, it's not just about learning—it's about leading. Join us to transform your passion for technology into groundbreaking innovations and lifelong connections. Make your mark in the ever-evolving tech landscape!

#### IS THIS RIGHT FOR ME?

If you find yourself resonating with any of the following, this program is for you:

- You want to build a strong foundation in computer applications and master key skills in programming, networking, and database management.
- You aspire to harness the power of technology and develop innovative solutions in a rapidly changing digital landscape.
- You have a passion for data-driven decision-making and want to specialise in fields like AI or machine learning.
- You dream of creating dynamic web applications as a full stack developer, or extracting valuable insights as a
  data scientist.
- You envision becoming a tech entrepreneur or innovator, eager to make your mark in the technology sector.

Join us at CAIAS and embark on a journey that prepares you for a successful career in the dynamic world of technology!



### BCA - DATA SCIENCE

The BCA in Data Science at Christ Academy Institute for Advanced Studies (CAIAS) is an innovative undergraduate program designed to provide students with the skills needed to analyse, interpret, and visualise complex data. The course covers key areas such as data mining, statistical analysis, machine learning, and big data technologies.

Students gain practical experience by working on real-world datasets and solving industry - relevant problems, preparing them to make data - driven decisions in various sectors. The curriculum integrates theoretical knowledge with hands - on projects, ensuring that graduates are well - equipped for careers in data analysis, business intelligence, and analytics.

This program is ideal for students passionate about data and looking to harness the power of data science to drive business insights and innovation.

#### PROGRAM HIGHLIGHTS

- Interdisciplinary approach combining statistics, computer science, and business.
- Practical projects and internships to gain industry relevant experience.
- Opportunities to work with real-world data sets and analytics tools.
- Guest lectures from industry professionals and data scientists.
- IBM Global Certification

#### LEARNING OUTCOME

- · Master data manipulation and analysis techniques.
- Develop proficiency in statistical programming and data visualisation.
- · Gain expertise in predictive modelling and machine learning.
- Enhance critical thinking and problem-solving skills through data analysis.
- Prepare to communicate insights effectively to stakeholders.

#### ELIGIBILITY

Completion of 12th grade (10+2) in any discipline from a recognized board, with a minimum aggregate of 50% & Mathematics in 12 Grade is preferred.

#### <u>REQUIREMENT</u>

To ensure a seamless learning experience, we recommend that students possess a laptop with the following minimum configuration:- Processor: Intel Core i5 (12th Gen) or equivalent, RAM: 8 GB or higher, Operating System: Windows 10/11 or latest macOS & Storage: 256 GB SSD or higher.

#### **SYLLABUS**

SEMESTER 1	SEMESTER 2	
Discrete Structures	Data Structures	
Problem - Solving Techniques	Object - Oriented Programming using Java	
Computer Architecture	Operating Systems	
Problem-Solving Techniques Lab	Data Structures Lab	
Computer Architecture Lab	Object - Oriented Programming Lab	
Office Automation Tools Lab	Linux and Shell Programming Lab	
Language L1	Language L1	
Language L2	Language L2	
Environmental Studies	The Constitution of India	

DATA SCIENCE PAPERS		
SEMESTER 1	SEMESTER 3	SEMESTER 5
<ul><li>Introduction to Data Science</li><li>Programming for Data Science</li><li>Al Ethics and Governance</li></ul>	<ul> <li>Big Data and Cloud Computing for Data Science</li> <li>Introduction to Machine Learning</li> <li>Advanced Machine Learning</li> </ul>	IBM Global Certification     ( Optional )
SEMESTER 2	SEMESTER 4	SEMESTER 6
<ul> <li>Statistics and Probability for Data Science</li> <li>Data Visualisation</li> <li>Data Preprocessing and Feature Engineering</li> </ul>	Deep Learning     Natural Language Processing (NLP)     Database Knowledge for Data     Science	IBM Global Certification (Optional)

#### WHAT ARE MY CAREER OPPORTUNITIES?

- Data Scientist
- Data Analyst
- · Business Intelligence Developer
- Data Engineer
- Statistical Analyst
- Machine Learning Engineer
- Research Analyst
- Quantitative Analyst
- Marketing Analyst
- Entrepreneur in Data Science ventures







#### **CHRIST ACADEMY INSTITUTE FOR ADVANCED STUDIES**

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