





## 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 SCIENCE

The Department of Science at Christ Academy Institute for Advanced Studies (CAIAS) offers a dynamic and interdisciplinary education that equips students with the knowledge and skills needed to excel in science and technology. With undergraduate programs in Physics, Mathematics, Computer Science, Psychology, and Journalism, alongside an MSc in Psychology, the department provides a holistic academic foundation.

Focusing on critical thinking, research, and problem - solving, the department fosters intellectual curiosity and innovation. Students gain hands-on experience through well - equipped labs, real-world projects, internships, and industry interactions. The curriculum is designed to integrate theoretical principles with practical applications, ensuring readiness for careers in research, healthcare, technology, and education.

Supported by accomplished faculty and cutting - edge resources, the department also emphasises ethical practices and community engagement. Add-on courses, workshops, and seminars further enhance learning and skill development. The Department of Science at CAIAS is committed to shaping future scientists, psychologists, and professionals who contribute meaningfully to society and the global community.

#### **DEPARTMENT VISION**

To be a centre for scientific advancement fostering educational equity through progressive research & innovation, community engagement and enhancing professional competencies for achieving holistic growth and excellence to create a global society.

#### **DEPARTMENT MISSION**

- To provide a rigorous and inclusive learning environment that supports the development of fundamental and applied research.
- To promote critical thinking, analytical skills and effective communication of scientific ideas.
- To be at the forefront of scientific advancement and technological innovations.
- To promote community engagement that fosters well being and promote sustainable outcomes.

#### **DEPARTMENT HIGHLIGHTS**

- Offers diverse undergraduate and postgraduate programs in science and technology.
- Interdisciplinary curriculum integrating theory with practical applications.
- Well-equipped labs and modern facilities for hands-on learning.
- Focus on critical thinking, research, and problem-solving skills.
- Accomplished faculty with academic and industry expertise.
- · Add on courses, workshops, and seminars to enhance skill development.
- Career pathways in research, healthcare, technology, and education.
- Regular industry interactions, internships, and real world projects.
- Emphasis on ethical practices and community engagement.
- · Holistic development through extracurricular and academic activities.

#### ADD ON COURSES

- · Coaching for General Competitive Exams
- · Quantitative Aptitude
- · Microsoft Excel Beginner to Advanced
- Basic Counselling Skills
- Basics of Cognitive Behavioral Therapy and REBT
- · Crisis Intervention / How to take care of someone who is having a crisis
- · Personality development
- · Mentoring Skills: The Art and Science of Mentoring

#### **DEPARTMENT CLUB**

Step into the exciting world of science with the vibrant Science Club at CAIAS. This dynamic platform brings together curious minds to explore, innovate, and showcase their talents.

Engage in science exhibitions, quiz competitions, technical workshops, and mini-projects that challenge and inspire. Celebrate milestones like National Science Day with events that highlight creativity and collaboration. Participate in debates, model-making, and seminars that fuel your passion for discovery.

At the Science Club, you don't just learn — you lead, experiment, and push the boundaries of what's possible. Join us and be part of the journey to shape the future of science.

#### **IS THIS RIGHT FOR ME?**

Are you curious about the world around you and passionate about understanding how things work? The Department of Science at CAIAS is perfect for students with a strong desire to explore, innovate, and contribute to advancements in science and technology.

You're in the right place if you:

- Have a keen interest in subjects like Physics, Chemistry, Mathematics, Psychology, or Computer Science.
- Enjoy solving complex problems and analysing data to find practical solutions.
- Are eager to develop critical thinking, research, and technical skills.
- Thrive in hands on learning environment with experiments, projects, and fieldwork.
- Want to make a meaningful impact in fields like healthcare, technology, education, or research.

If you're ready to push boundaries, engage in innovative learning, and prepare for a dynamic career in science, the Department of Science at CAIAS is your gateway to endless possibilities!



### B.SC - PHYSICS, MATHEMATICS AND COMPUTER SCIENCE

The B.Sc. (Physics, Mathematics, and Computer Science) program at Christ Academy Institute for Advanced Studies (CAIAS) is a multidisciplinary course designed to build a strong foundation in pure and applied sciences. The program combines the principles of physics, the precision of mathematics, and the innovation of computer science, equipping students with the analytical and technical skills required for modern careers.

Students engage in hands - on learning through experiments, programming labs, and industry - aligned projects. The curriculum fosters problem - solving, critical thinking, and mathematical modeling abilities, preparing graduates for diverse career paths in research, technology, education, and data - driven industries.

#### PROGRAM HIGHLIGHTS

- Provides broader and wider scope for through the learning of pure science subjects of Physics, Mathematics and the contemporary subject of computer science.
- Creates opportunities, explore, design and implement industry-standard projects.
- Opportunity to build a research career in the areas of pure sciences as well as applied sciences.
- · Experienced faculty
- Multiple Invited Talks and Seminars from Leading Mental Health Practitioners and Career Guidance.
- A degree in B.Sc in Physics, Mathematics, and Computer Science opens the door to numerous job opportunities in the fields such as technology, finance, research, and education.
- Graduates are prepared for roles that require strong analytical and technical skills.

#### **LEARNING OUTCOME**

- Physics Applications: Apply fundamental physics concepts to solve real world problems.
- Mathematical Proficiency: Develop precision, analytical reasoning, and problem solving through advanced mathematical techniques.
- Computing Skills: Master modern programming languages and IT tools for diverse computing challenges.
- Interdisciplinary Knowledge: Integrate physics, mathematics, and computer science for innovative solutions.
- Research Abilities: Conduct experiments and analyze data effectively for academic or industry research.
- Critical Thinking: Enhance logical reasoning and decision-making skills applicable to various domains.
- Technical Expertise: Use technologies in AI, data science, and full stack development to solve complex problems.
- · Career Preparedness: Build skills for roles in research, technology, data analytics, and education.

#### **SYLLABUS**

SEMESTER 1	SEMESTER 2
	Mathematics II
Mathematics I	Mathematics Practical II
Mathematics Practical I	Kinetic Theory of Gases, Heat &
Mechanics and Properties of Matter ( Theory )	Thermodynamics ( Theory )
Mechanics and Properties of Matter ( Practical )	Kinetic Theory of Gases, Heat &
Problem Solving Technique	Thermodynamics ( Practical )
Problem-Solving Techniques Lab	Data Structures
Environmental Studies	Data Structures Lab
Language L1	Computer Application
Language L2	Language L1
	Language L2

#### WHAT ARE MY CAREER OPPORTUNITIES?

- Software Developer
- · Data Analyst
- · Artificial Intelligence/Machine Learning Engineer
- Full Stack Developer
- · Research Scientist in Physics or Mathematics
- Laboratory Technician
- · Data Scientist in scientific research institutions
- School Teacher or College Lecturer ( with further qualifications )
- · Academic Researcher
- · Computational Physicist
- · Systems Analyst
- · Mathematical Modeller
- · Actuarial Analyst
- Financial Modeller
- Cryptographer
- · Roles in ISRO, DRDO, or similar organisations
- · Scientific Officer
- Technology Startup Founder
- EdTech Innovator
- · Quantum Computing Specialist
- Bioinformatics Analyst

#### **ELIGIBILITY**

Completion of 12th grade or 10+2 with Physics and Mathematics as core subjects from a recognized board, with minimum 50% aggregate.





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

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