



CHRIST ACADEMY
INSTITUTE FOR ADVANCED STUDIES

AFFILIATED TO BANGALORE UNIVERSITY ||| BENGALURU - 83 |||



MCA

2023



VISION

To be a premier MCA program that illuminates the path to success for our students and empowers them to become agents of change who enlighten the world with their knowledge and skills.

MISSION

Our mission is to provide our students with a world-class education that prepares them to excel in the field of computer science and information technology. We strive to create a learning environment that encourages critical thinking, innovation, and creativity. Through our rigorous academic standards and holistic approach, we aim to light the way to a brighter future for our students and the world.

CORE VALUES

- Faith in God
- Integrity of Character
- Respect for Every Individual
- Pursuit of Excellence
- Commitment to the Country

Principal's Message



Dear Students

Welcome to Christ Academy Institute for Advanced Studies !

Christ Academy Institute for Advanced Studies (CAIAS), affiliated to Bangalore University, is a unique academic community that has a great heart and passion for serving the needs of its students. It has been a privilege and a pleasure to see how much this fraternity has grown academically and socially during these years as the college renders valuable service to the society at large. In today's rapidly evolving digital landscape, the need for skilled professionals in the field of computer science has never been greater.

Our MCA program is designed to equip students with a comprehensive understanding of cutting-edge technologies, programming languages, software development methodologies, and much more. Whether you aspire to become a software developer, systems analyst, data scientist, or pursue a career in research and innovation, our MCA program lays a solid foundation for your ambitions. I am glad to be a part of this academic community, and welcome the students, staff and all academic fraternity.

I am sure that the efforts that we put in as a team will indeed bear fruit and bring forth a hundredfold. God's Blessings!

Dr. Fr. Babu Paul

Principal

About Us



Christ Academy Institute for Advanced Studies (CAIAS), Bangalore is a higher educational institution, affiliated to Bangalore University, administered by the members of Carmelites of Mary Immaculate (CMI) who pioneered the cause of social uplift through their service in the fields of education and various other humanitarian activities for more than a century and a half. Christ Academy Institute for Advanced Studies, a great academic fraternity formed as a part of a precious CMI heritage, has a great heart and passion for serving the higher educational needs of its students through its bachelor and graduate degree programs. CAIAS is dedicated to Jesus Christ, a guiding light that enlightens every individual who is a part of our academic community. Our source of inspiration is the founder of CMI, St. Kuriakose Elias Chavara, a great educationist who brought about revolutionary changes in the society through his decisive mission and farsighted vision.

CAIAS strives to kindle the light of knowledge and wisdom in the hearts of all, thereby enlightening the various strata of society irrespective of gender, caste, region and religion. CAIAS is a premier institution of higher education in South India. Quality education aimed at directing the students towards research, innovation and extension is the defining element of CAIAS. CAIAS has state-of-the-art infrastructure, eco-friendly campus with parks to unwind, well-maintained Wi-Fi enabled campuses, well-equipped central library and hi-tech laboratories, Cafe coffee day & Spacious -clean cafeteria. The residential facilities are world class and students have access to a soccer Turf, Basketball courts, Volleyball courts, gym with latest equipment, swimming pool and squash courts on the campus.

Why CAIAS?

At CAIAS, we believe that learning is a transformative act. Our focus as an institution of higher learning is to provide our students with all the necessary resources to achieve this transformation. Our innovative pedagogical methods include a peer learning environment focused on assured contemporary learning. The academic infrastructure coupled with learning resources and skill centres fosters market-ready competencies in our students. A comprehensive network that includes business firms and research institutions ensure that our students find the most suitable internships and placements that are in line with their capabilities. At CAIAS, we are committed to provide our students with the best that education can offer.

About Department



The Department of Computer Science & Applications at Christ Academy Institute for Advanced Studies (CAIAS) provides students with an exceptional education in the field of computer science, while also preparing them for a successful career in the industry. The department offers a variety of programs, including the Bachelor of Computer Applications (BCA) and Master of Computer Applications (MCA) which are affiliated to Bangalore University. The BCA program offers students a comprehensive education in the field of computer science and includes a specialization in Industrial Applications. The curriculum is designed to provide students with a solid foundation in programming concepts, while also keeping them current with the latest industry trends and technologies. Additionally, the program includes several value-added activities such as international and national conferences, workshops, seminars, guest lectures, industrial visits, hands-on training programs, and internships.

The MCA program is designed to provide students with advanced knowledge in computer science and applications. The curriculum includes coursework in programming, software development, data structures, algorithms, and more. Additionally, the program offers students the opportunity to specialize in a particular area of computer science, such as Artificial Intelligence, Machine Learning, Data Science and many more. Both the BCA & MCA program are designed with an industry-oriented approach to ensure that students are well-prepared for careers in the computer science field. With a mix of theoretical and practical learning, the department provides students with the skills and knowledge they need to excel in the industry. Additionally, students have the opportunity to benefit from several add-on courses, certificate programs, and various extra curricular activities.



Department Highlights

- International Tie-ups
- Academic alliances
- Qualified and experienced faculty
- Continuous industry- academia interface.
- Research, sports, and cultural opportunities
- Int-elegance Club
- Internships, mini and major project works.
- Google Classroom for Assignments and Notes
- Industrial Visits
- Conferences
- Webinars / Seminars
- Workshops
- IT Quiz
- FDP's
- Training to develop real time project models.

Greetings and Welcome to Master of Computer Application at CAIAS

Master of Computer Applications (MCA) is a master's degree in computer science offered as a two-year programme. The programme is affiliated to Bangalore University. The course is intended to produce qualified professionals well-equipped with the necessary skills and knowledge to meet the growing demand in the field of computer science and applications. The course comprises of four components like mathematics behind computer science, concepts in core computers, non-core computer courses and software development. Introducing practical teaching aids to enhance every aspirant's ability to identify, analyse, model, and solve a problem through computation has been the primary objective of this course.

The course also offers several value addition programmes such as international and national conferences, workshops, seminars, guest lectures, industrial visits, hands-on training programmes and internships. Furthermore, there are opportunities to benefit from several add-on courses, certificate programmes and various extracurricular activities. The department is committed to maintain strong ties with industry, collaborating and engaging in a mutually beneficial exchange programme regarding advances in technology. The department has International Tie-ups with Harrisburg University of Science and Technology, United States and Connected Computing and Media Processing Lab, Kyungpook National University, Daegu, South Korea.

The academic alliances include IIT Bombay Spoken Tutorial Programme, IIT Madras NPTEL local chapter (4176), ICT Academy, Sogo Synergy Private Ltd and Networkers Home.

The IT Club (Int-elegance) of the department conducts placement training programmes to fill the gap between industrial demands and academics. It helps students to understand industry requirements, develop technical knowledge, and soft skills in terms of career planning and goal setting.

The faculty at CAIAS fulfil multiple roles as educators, researchers and professionals having broad range of expertise in various areas thereby bringing substantial achievement in professional practice and research at the classroom level. The faculty members are actively involved in applied research through high quality scholarly publications in reputed peer reviewed journals. They are BOE members of reputed universities and members of various technical organizations.



SCHEME OF STUDY AND EXAMINATION FOR MASTER OF COMPUTER APPLICATIONS (MCA)

Sem	Paper Code	Title of the paper	Hours / Week	Marks			Credits	
				IA	Exam	Total	Subject	Sem
I	1MCA1	The Art of Programming	4	30	70	100	4	28
	1MCA2	Discrete Mathematics	4	30	70	100	4	
	1MCA3	Computer Organization and Architecture	4	30	70	100	4	
	1MCA4	Theory of Computation	4	30	70	100	4	
	1MCA5	Object Oriented Programming	4	30	70	100	4	
	1MCA6	Data Structures	4	30	70	100	4	
	1MCA7	Data Structures Lab	8	30	70	100	2	
	1MCA8	Object Oriented Lab	8	30	70	100	2	
II	2MCA1	Operating Systems	4	30	70	100	4	28
	2MCA2	Database Management Systems	4	30	70	100	4	
	2MCA3	Computer Networks	4	30	70	100	4	
	2MCA4	Software Engineering	4	30	70	100	4	
	2MCA5	The Design and Analysis of Algorithm	4	30	70	100	4	
	2MCA6	Artificial Intelligence	4	30	70	100	4	
	2MCA7	Database Management System Lab	8	30	70	100	2	
	2MCA8	Unix Programming Lab	8	30	70	100	2	
III	3MCA1	Open Elective	3	30	70	100	3	26
	3MCA2	Soft Core	3	30	70	100	3	
	3MCA3	Research Methodology	4	30	70	100	4	
	3MCA4	Elective I	4	30	70	100	4	
	3MCA5	Elective II	4	30	70	100	4	
	3MCA6	Elective III	4	30	70	100	4	
	3MCA7	MINI PROJECT	8	30	70	100	4	
IV		MAIN PROJECT					16	16

OBJECTIVES AND OUTCOME

MCA Course Objective:

- Gain the ability to plan, analyse, design, implement, and maintain software solutions for practical applications.
- Instill professional skills, ethical behaviour, and traits of leadership among individuals.
- Develop lifelong learning skills with the aim to begin their own firm in various computer application areas and seek higher education.

MCA Course Outcomes:

- Apply knowledge of mathematics and computing basics to diverse real-life applications in solving technological challenges with an absolute focus to function as a successful entrepreneur.

Association with Networkers Home

The Department of Computer Science and Applications, Christ Academy Institute for Advanced Studies (CAIAS) and NETWORKERS HOME(CISCO Certified), Bengaluru, Karnataka entered into a Memorandum of Understanding on June 1st 2022. Networkers Home in association with Christ Academy Institute for Advanced Studies offers BCA with Industrial Specialization. The objective of this MOU is to establish close co-operation between the two parties to benefit the student community to enhance their skills and knowledge, design the curriculum of the courses offered for skill development, monitor the training sessions, conduct evaluation to assess the student's performance, assist in Industrial Training and visits, assist in research and development, skill development programs, guest lectures, Faculty development programs and making students industry ready.



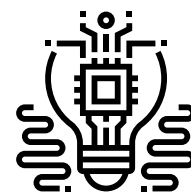
About Networkers Home

Networkers Home is a 15 years old Training company. NH uniqueness lies in strong proven presence at designing, developing and delivering world-class IT training in diverse trending domains like Enterprise Infrastructure, Network Security, Cloud Computing (Amazon, Microsoft, Google Cloud), Cyber Security, Collaboration, Service Provider, Data Centre, Wireless, Internet of Things (IOT), Microsoft Products (MCSA, MCSE & Azure), PaloAlto, Checkpoint.



Sogo Synergy

The Department of Computer Science and Applications, Christ Academy Institute for Advanced Studies has signed the memorandum of undertaking on 14th December 2021 with Sogo Synergy Private Limited (<https://sogoewaste.com/>). Sogo Synergy is a micro-enterprise unit having the capacity to handle 135 MT of E-waste per month, stationed at Bangalore. They provide solutions for the collection, storage, dismantling and recycling of E-waste. SOGO Synergy is one of the Industry's experienced E-waste recycling providers and a strong proponent for "Green IT Re-cycling". Karnataka State Pollution Control Board has authorised SOGO Synergy to provide solutions for the collection, storage, dismantling and recycling of E-waste. It abides by the Pollution Control Board's guidelines for properly disposing of hazardous E-waste. Our college has taken the initiative for EWASTE management to help in building a sustainable future by recycling e-waste and recovering commodities.



Knowledge Partner Spoken Tutorial Program, IIT Bombay

The Department of Computer Science and Applications, Christ Academy Institute for Advanced Studies (CAIAS) established an association with Knowledge Partner Spoken Tutorial Program, IIT Bombay on 20th December 2019. The programme is a part of the National Mission on Education through ICT, MHRD, Govt. of India, aimed at spreading IT literacy all over India. It provides an opportunity for the students to learn about Free & Open Source Software (FOSS), through an Audio/Video teaching tool.

IIT Madras - Local Chapter for NPTEL

CAIAS also established a Local Chapter for NPTEL (National Programme on Technology Enhanced Learning), a project funded by MHRD, Govt. of India on 7th October, 2017. This lets students access free online domain specialization certification courses like Artificial Intelligence, Cloud Computing and Data Science. Thus, it enriches their knowledge and upgrades their skills. CAIAS Local Chapter ID is 4176

(for more details, visit: <https://nptel.ac.in/LocalChapter/details.html>).



ICT Academy

The Department of Computer Science and Applications, Christ Academy Institute for Advanced Studies (CAIAS) established an association with ICT Academy with the Membership ID: 142350 on 20th December 2021. ICT Academy is an initiative of the Government of India in collaboration with the state Governments and Industries. It is a not-for-profit society, the first of its kind pioneer venture under the Public-Private-Partnership(PPP) model that endeavours to train higher education teachers and students thereby on developing the next generation of teachers and industry-ready students. With exercising training of teachers and students as the primary objective, they have been working through a seven-pillar program in the areas of Faculty Development, Student Skill Development, Entrepreneurship Development, Youth Empowerment, Industry-Institute Interaction, Digital Empowerment and Research & Publications. It is a pioneering venture under the Public-Private - Partnership (PPP) model. (www.ictacademy.in). It is recently endorsed and recommended by NITI Aayog (National Institution for Transforming India Aayog), the National Planning body of Government of India as one of the unique organization for dissemination and replication, which is aligned to the Skill India Vision of the Government of India.

Harrisburg University, Pennsylvania

A new agreement between Christ Academy Institute for Advanced Studies and Harrisburg University of Science and Technology will make U.S. education accessible to overseas students. Under the agreement between Christ Academy and Harrisburg University, Bachelor of Computer Applications students and bachelor's graduates from the India-based school can pursue an M.S. in Cybersecurity Operations and Control Management at Harrisburg University. "At HU, I'm sure that our students will have an experience of a lifetime. They will personally, professionally and academically grow in ways they may not even have ever imagined. And all the more, they will be exploring a different culture from their own while earning their degree," says Dr. Fr. Babu Paul, Principal, of Christ Academy Institute for Advanced Studies. "This creates more opportunities so even more of the best and brightest students from India can study here, enriching our campus and community," says Dr. Eric Darr, President, of Harrisburg University of Science and Technology. "The students from Christ Academy are academically prepared for the rigour of graduate studies and we are looking forward to having them join our classrooms. "Known for creating a welcoming environment for international students, Harrisburg University is home to more than 4,000 international students from more than 102 countries pursuing graduate studies. Harrisburg University expects to welcome the first students from Christ Academy in Spring 2023.





Association with Connected Computing and Media Processing Lab, Kyungpook National University, Daegu, South Korea

The Department of Computer Science and Applications, Christ Academy Institute for Advanced Studies (CAIAS) and Connected Computing and Media Processing Lab, Kyungpook National University, Daegu, South Korea entered into a Memorandum of Understanding on May 2nd 2022.

The objective of this MOU is to establish a basic framework for conducting cooperative activities that provide a mechanism for scientific and technical cooperation that is beneficial to both sides of the Department of Computer Science and Applications, CAIAS and CCMP Lab. The scope of the cooperative activities between The Department of Computer Science and Applications, Christ Academy Institute for Advanced Studies and CCMP Lab shall primarily consist of the following.

- Collaborative research and development activities.
- Joint and articulated degree programs.
- Facilitate faculty, staff and student exchanges and visits.
- Sharing or creation of educational materials and resources.
- Organize joint conferences, seminars, workshops, and symposia on subjects of mutual interest.

About Kyungpook National University, CCMP Lab

Kyungpook National University, Connected Computing and Media Processing Lab, CCMP Lab research mission is to identify, persuade and evaluate pioneering technologies that address current and future challenges of M2M and Big Data. The lab also focuses on improving them performance of big data analytics systems in particular for business intelligence through efficient parallel computing methods for multi core processors, GPUs, processor clusters and clouds. CCMP Lab which expression unless repugnant to the context shall mean and include its successor in office, administrators and assigns represented by its Director Dr. Anand Paul the sole proprietor.



FACILITIES



LIBRARY

Libraries are crucial to the input, creation, and retention of ideologies of a knowledge seeker. The College Library aims to make this necessary information accessible to each of the beneficiaries at the right time. Its objective is to improve student success rates by maintaining a balanced collection of books, journals, periodicals, dailies, and other national and international publications along with reference books for the student community. The library functions in coordination with the specialized libraries in the city and are curated by qualified and experienced librarians. Library Timings: Monday to Friday - 7.00 a.m to 6.00 p.m, Saturday - 7:00 a.m to 1.00 p.m

PLACEMENT & CAREER GUIDANCE

The Placement and Career Guidance Unit primarily assists students in their career planning and takes the initiative to explore new career avenues for graduates and post graduates. Career counseling programs and interactive sessions by eminent persons (of their respective fields) are conducted regularly by the placement coordinator to guide the students. The objective of the Placement Office is to facilitate professional development of the students by training them towards honing their employability skills such as resume building, group discussion, and personal interviews. This will enable them to move into their desired occupation and/or apply to prestigious postgraduate and professional schools.

COUNSELLING CENTRE

We understand that the phase of late teenage and early adulthood can be physically, mentally and emotionally taxing. CAIAS hosts a professional counselling centre in order to meet the intrapersonal and interpersonal needs of the students. A six-member Counselling Committee that prioritises the upkeep of the mental well being of the students has been set up separately for boys and girls.



ADMISSION PROCEDURE:

Refer to the website : www.caiaa.in

PLACEMENT AND CAREER GUIDANCE

The Placement and Career Guidance Unit primarily assists students in their career planning and takes the initiative to explore new career avenues for graduates and post-graduates. Career counselling programs and interactive sessions by eminent persons of respective fields are conducted regularly by the placement coordinator to guide the students.

The objective of the Placement Office is to facilitate professional development of the students by training them towards honing their employability skills such as resume building, group discussion and personal interviews. This will enable them to move into their desired occupation and/or apply to prestigious postgraduate and professional schools.

Top Recruiters:





CHRIST ACADEMY INSTITUTE FOR ADVANCED STUDIES

AFFILIATED TO BANGALORE UNIVERSITY ||| BENGALURU - 83 |||

Christ Nagar, Hullahalli, Begur – Koppa Road,
Sakkalwara Post, Bangalore – 560 083, Karnataka.

Tel: +91 8884444462 / +91 8884421057

Email: office@caias.in