



BGU
BIRLA GLOBAL
UNIVERSITY

Birla School of Applied Sciences



www.bgu.ac.in

Prospectus

- MCA
- BCA
- B.Sc. Hons. Data Science



**“TO CREATE AND
DISSEMINATE KNOWLEDGE IN
A GLOBAL CONTEXT WHILE
PURSUING EXCELLENCE,
INNOVATIONS AND
INCLUSIVENESS.”**

Birla Heritage

Late Syt. Basant Kumar Birla and Late Dr. (Smt.) Sarala Birla, successors of Late Syt. G.D. Birla, are our Founders and Patrons who established the Birla Academy of Art & Culture (BAAC) in Calcutta in 1964 to promote arts, culture, literature and education. The academy has been vital in establishing Birla Global University, formerly BIMTECH, Bhubaneswar.

Late Syt. B.K. Birla has been involved in management since he was fifteen. Apart from being associated with management of several companies like Birla Brothers Pvt. Ltd. and Kesoram Industries & Cotton Mills Ltd., he has established many new industries for producing cotton, paper, polyester and nylon yarns, cement, chemical, tea, coffee, and cardamom.

While he was associated with Birla Institute of Technology & Sciences, Pilani, Birla Education Trust, Pilani and BITS, Biwani as trustee, he was also associated with educational institutions noted below:

- Birla Global University (BGU), Bhubaneswar
- Birla Institute of Management Technology, Greater Noida
- Birla Vidya Vihar Trust, Calcutta
- Birla Sanskriti Trust, Calcutta
- Birla Vidya Mandir, Nainital
- Birla Vidya Niketan, New Delhi
- G.D Birla Memorial School, Ranikhet
- Sarla Birla University, Ranchi



Mission

- To globalize through international collaborations and exchange of students and faculty.
- To strive for excellence in teaching and research.
- To continuously innovate pedagogy and course content.
- To encourage diversity and inclusiveness.

Vision

To create and disseminate knowledge in global context while pursuing Excellence, Innovations and Inclusiveness

Values

Honesty and integrity

We believe in being truthful and adhering to the highest ethical standards in personal and professional conduct.

Empathy

We recognize the needs of human development and respect diverse social, cultural and economic perspectives.

Transparency

We believe in openness and assume responsibility as well as accountability in all our dealings and actions.

Freedom

We value the freedom of thought and expression to develop one's creativity and innovation in pursuit of academic excellence.

Respect

We foster a culture of respecting self and others.

Collaboration

We encourage teamwork and partnership in all endeavors for knowledge creation, acquisition and dissemination



Birla Global University (BGU) is a self-financed private unitary University

About Birla Global University

Birla Global University (BGU) is a self-financed private unitary University and has been established by the enactment of Birla Global University Odisha Act, 2015 with its main campus spread over an area of nearly 30 acres of land situated at IDCO Plot No.2, Gothapatna, Bhubaneswar. As per the Act, the management of the university is carried out by a Board of Governors headed by Smt. Jayashree Mohta, Chairperson, Birla Academy of Art & Culture being the main promoter of Birla Global University. Honorable Governor of Odisha is the Chancellor of the University.

The University has been established with a goal to be the best destination for aspiring new-gen professionals. It is committed to redefine 'quality' in education with state-of-the-art facilities, best of the infrastructure and finest faculty. Presently, the University operates with six schools i.e. Birla School of Management, Birla School of Communication, Birla School of Commerce, Birla School of Social Sciences & Humanities, Birla School of Law, Birla School of Applied Sciences.



Master of Computer Applications (MCA)

The modern era has seen significant advancements in computer-driven technology. We've been reliant on computers for decades, and the expanding demand for specialists has created new opportunities for those with master's degrees in Computer Applications.

The Master of Computer Applications (MCA) is a two-year professional post-graduate programme that offers education related to computers, programming, and applications to students who wish to dig deeper into the field of computer application development. The curriculum combines both theoretical and practical expertise.

The program's razor-sharp curriculum was developed in collaboration with industry experts to ensure its understandability and applicability in a real-world setting. Project-based learning, internships, and research-based projects are among the program's highlights, which span two years/ four semesters of study and allow students to explore and apply what they've learned in the classroom while working on real-world business problems. The course format includes the tools and technology used by industries. Artificial Intelligence, Data Science, Machine Learning, Cloud Computing, Mobile Applications, and other emerging technologies will be the emphasis of the curriculum.



Programme Objective

- To effectively apply core Computer Science skills to bridge the gap between computer industry specialists and business executives, as well as to create and initiate innovation.
- To educate students about being innovative, generate innovative and long-term solutions, and collaborate in communities to achieve a common objective.
- To equip graduates to work and communicate effectively in an interdisciplinary environment, either alone or in teams, and to demonstrate scientific leadership in academia and industry.

Learning Outcome

After completion of the course the participants will be able to:-

- Develop an understanding and knowledge of the fundamental theory of Computer Science and Information Technology with a solid foundation on theory, systems, and applications such as algorithms, data structures, data handling, data communication, and computation after completing the course.
- Develop the capacity to apply what have been learned to new situations and come up with long-term, inventive solutions.
- Acquire the necessary and cutting-edge skills to meet industry issues.
- Use tools and technology to come up with new ideas, business models, interpret the results, and forecast future developments.



Eligibility

Passed BCA/ Bachelor Degree in Computer Science Engineering or equivalent degree or

Passed B.Sc./ B.Com./ B.A. with Mathematics at 10+2 Level or at Graduation Level (with additional bridge Courses as per the norms of the Birla Global University).

Obtained at least 50% marks (45% marks in case of candidates belonging to reserved category) in the qualifying examination

Program Duration

2 Years (Full Time, 4 Semesters), As per NEP 2020 guidelines

Employment Opportunity

The curriculum is tailored to fulfill the growing demand for computer/IT specialists in industries, corporations, multinational corporations, and public sector organizations. After successfully completing this professional programme, there are numerous employment options available. Students who desire to further their knowledge and improve their career prospects might pursue advanced degrees such as MS, M.Tech. (Computer Science & Engineering or related fields), and Ph.D in Indian and abroad.

Our curriculum structure has been planned and developed with the active collaboration of industry experts, practitioner, and academicians in order to prepare students for careers in IT-related jobs and the software sector.

A MCA degree opens up senior-level work prospects. The following are some examples of such opportunities:

- Software Developer/ Software Specialists/ Software Engineer
- IT Project Manager/ Project Manager/ Software Consultant
- DevOps Specialist/ IT Specialists/ Full Stack Developers/
- Data Analyst/ Data Scientist/ Machine Learning Specialists/ AI Specialists
- Cloud Specialists
- Network Specialists, etc.

Bachelor in Computer Application (BCA)

Bachelor in Computer Application (BCA) is a three-year full-time undergrad programme that is the most sought-after in the Information Technology (IT) field. The IT industry is expanding at an exponential rate, creating a huge array of job opportunities. This multi-tracked elective course programme can lead to positions such like Software Engineer, System Engineer, Software Quality Engineer, System Programmer, System Analyst, Information Technology Professional, Data Analyst, Data Science Specialist, Cloud Specialist, Networking Specialists, and Cyber Security Specialist, among others.

The razor-sharp programme curriculum has been developed in partnership with industry experts to ensure its comprehension and applicability in a real-world scenario. The program's main draws are projects-based learning, internships, and research-based projects spread across three years of study in which students will explore and apply their classroom knowledge while working on real-world business problems and use cases. The tools and technologies used by industries are incorporated into the course structure.

Programme Objective

- To effectively use core computer science skills and knowledge to bridge the gap between computing industry experts and business leaders, and to create and initiate innovation.
- To prepare students to be resourceful, to develop innovative and sustainable solutions, and to collaborate in teams to achieve a common goal.
- To prepare graduates to work and communicate effectively in an interdisciplinary environment, either independently or in groups, and to demonstrate scientific leadership in academia and industry.

Learning Outcome

Following completion of the undergrad course, participants will be able to:

- Acquire an understanding and knowledge of the fundamental theories of computer science and information technology, including algorithms, data structures, data handling, data communication, and computation.
- Gain the ability to implement this knowledge to analyse new situations and provide long-term innovative solutions.
- Acquire the necessary and cutting-edge skills to take on industry challenges.



Coding



Eligibility

The Candidate should have passed +2 Examinations in Arts / Science / Commerce or equivalent. having Mathematics/ Business Mathematics or Statistics in +2 or three year Diploma in Engineering Examination conducted by State Council of Technical Education and Training, Orissa or equivalent degree with 50% aggregated marks

Duration

Program Duration: 3 Years

(As per NEP 2020 guidelines there is also option of 4th year for research which is applied only for interested students)

Employment Opportunity

The programme is specifically designed to meet the demand for computer/IT professionals in industries, corporations, multinational corporations, and public sector organisations. After completing this undergraduate programme, there are numerous career opportunities available. Students who want to expand their knowledge and find better job opportunities can pursue advanced degrees such as a Masters in Computer Application (MCA), a Masters in Information Management, or a Masters in Computer Management. Master of Business Administration (MBA)/ Post Graduate Diploma in Management (PGDM), etc.

Our programme structure has been designed and developed with the active participation of industry experts and top academicians in such a way that it prepares students for careers in IT-related jobs and software industries.

The job profiles offered to a Bachelors in Computer Application (BCA) graduate are:

- Software Engineer/ Software Specialists
- IT Project Manager/ Project Manager
- DevOps Specialist/ IT Specialists
- Data Analyst/ Data Scientist/ Machine Learning Specialists/ AI Specialists
- Cloud Specialists
- Network Specialists,
- Software Quality Engineer/ Software Test Engineer etc.



B.Sc. (Hons.) Data Science

B.Sc. Hons. (Data Science) is a 3 year full-time course that comes under the domains of Computer Science, Business Analytics and Artificial Intelligence. Data Science is an interdisciplinary subject that includes the use of Statistics, Big Data Analytics, Machine Learning and related aspects in order to understand the problem or phenomena with respect to a set of real-world data. This course is greatly appreciated among students in India and Abroad due to its progressively high importance and diverse future scope in tech companies, consultancies, market research companies and energy sector.

B.Sc. Data Science is intended to provide a comprehensive knowledge of big data techniques, and their applications for effective decision making in improving business processes. This course spreads over six semesters. The programme curriculum has been designed with feedback from industry and academia. The main attraction of the programme is live projects during 3rd year in which students will explore their knowledge while working on real-world business problems.



Programme Objective

- To prepare the students be employable in Multi-national companies and in various other sectors.
- To explicate data analysis techniques and quantitative modeling for the solution of real world business problems.
- To report findings of analysis and effectively present them using data visualization techniques.
- To Demonstrate knowledge of statistical data analysis techniques utilized in business decision making.
- To provide insights about the roles of a Data Scientist, such as a developer, an analyst, a statistical expert etc.
- To understand techniques and tools for transformation of data , Data Mining, Data formats , Machine Learning Algorithms, Data Visualization and Optimization.

Learning Outcome

- After completion of the course the participants will be able to
- Use proper techniques for understanding and presenting data.
- Learn how to use optimization techniques and software tools for data analysis.
- Sharpen their analytical skills and develop the ability of analyzing data properly.
- Acquire problem solving ability of complex business decisions, quantitative literacy and critical thinking in seeking solutions to complex business problems.

Eligibility

(10+2) Science or equivalent with mathematics as a subject at 10th

Duration

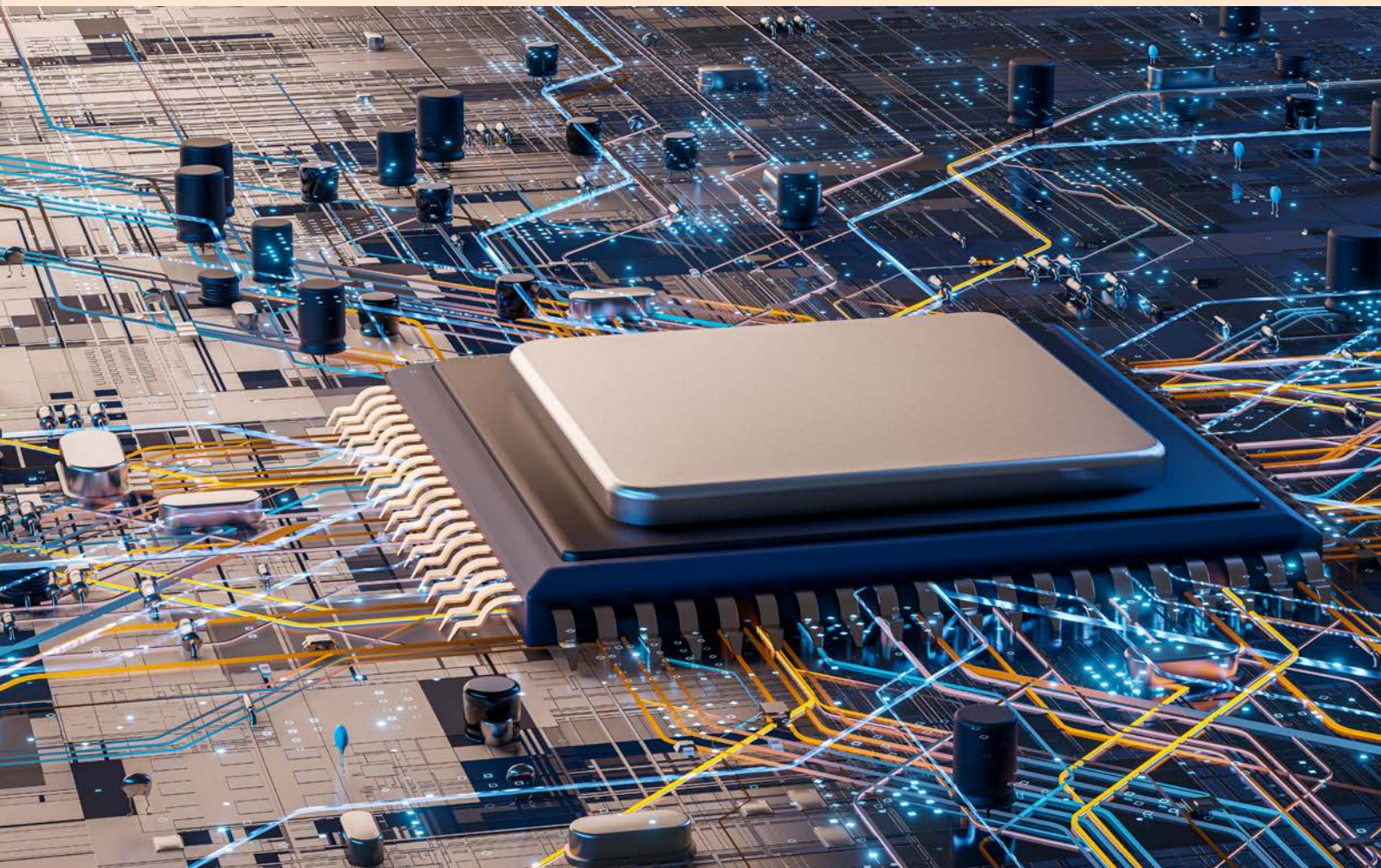
Program Duration: 3 Years

(As per NEP 2020 guidelines there is also option of 4th year for research which is applied only for interested students)

Employment Opportunity

The data science sector is flourishing to such an extent that there are currently more than '97,000 job openings for analytics and data science in India right now'. It is evident that the job market trend is showing an increasing demand for skilled data scientists across various industries. Students who have great expertise in working on tools such as SAS, R, Tableau and Python get recruited instantly by top MNC's such as Google, Flipkart, IBM, Cognizant, GE Capital, HCL, Dell, IBM, and more. When there is such a huge opportunity, students from different background are looking for an opportunity to enter this newly growing field and start a successful career in Data science.

Companies in India hire Data Scientists/ Professionals who can resolve the data management issues in their domain. According to the Analytics India Salary study, the Annual income of Data Science professionals ranges from 7 to 11 Lacs per annum in India. It is interesting to note that the demand for Data Science courses is also witnessing a rise year after year. The Data Science courses help to acknowledge this demand. Amidst the rising demand for Data Scientists in India and abroad, the importance of Data Science courses is also growing.





Birla Global University

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