



BCA

WITH SPECIALIZATION IN
DATA ENGINEERING

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AMITY - A LEADING GLOBAL EDUCATION GROUP

Amity Education Group is one of the largest education groups, established over thirty years ago, offering globally benchmarked education right from pre-school to Ph.D. level with over 400 UG & PG programs across various disciplines in education.



“Each one of our students will
be a success story.
This is my dream;
this is my commitment.”

Dr. ASHOK K. CHAUHAN

Founder President, Ritnand Balved Education Foundation

(The Foundation of Amity Institutions and the
sponsoring body of Amity Universities)
Chairman, AKC Group of Companies





MESSAGE FROM CHAIRMAN

Mr. Ajit Chauhan

Hon'ble Chairman
Amity University Online



In today's fast-paced and interconnected world, the pursuit of knowledge has never been more accessible. Amity is committed to providing you with a world-class education that transcends geographical boundaries. Whether you are a working professional seeking to advance your career, a dedicated lifelong learner, or someone taking your first steps into higher education, our digital platform is designed to accommodate your needs and aspirations.

As the landscape of education evolves, so do we. Our esteemed faculty, staff, and state-of-the-art technology are here to support your educational journey. From interactive online courses to digital libraries and academic forums, you'll have access to a wealth of resources that will enhance your learning experience.

At Amity, we're not just preparing you for a career; we're empowering you to make a positive impact on this world. So, whether you're ready to take the next step in your career or explore new horizons, we invite you to join us at Amity University Online and embark on a journey of discovery and growth.





MESSAGE FROM VICE CHANCELLOR

Prof. Dr. Balvinder Shukla

Vice Chancellor
Amity University Online

Amity University Online epitomizes an unwavering pursuit of excellence, cutting-edge innovation, and transformative learning. Rooted in knowledge, research, and comprehensive education, your learning journey at Amity Online is tailored to transcend knowledge barriers and shape your destiny.

At Amity Online, we embrace a legacy of brilliance that empowers you with industry-centric skills, knowledge and expertise to achieve success confidently through lifelong learning and values.



MESSAGE FROM DIRECTOR

Prof. Abhinash Kumar

Director
Amity University Online

Amity University Online provides an 'Anytime, Anywhere' educational experience, intensive corporate interaction, and industry-oriented teaching delivered by eminent corporate experts and world-class faculty.

Designed to suit both graduate students and working professionals, our programs adhere to UGC's stringent criteria, and we are at par with campus programs.



MESSAGE FROM CVP & BUSINESS HEAD

Srimathi Shivashankar

CVP & Business Head
HCLTech Edtech Services

“

With HCLTech's expertise and Amity University's commitment to excellence, you can trust that you're receiving top-notch education and support every step of the way. Together, let's embark on a journey towards success and unlock endless opportunities in the world of technology.

”



MESSAGE FROM HEAD, CUSTOMER SUCCESS

Ambika Natarajan

SVP, HCLTech Edtech Services

“

The generative economy has added emphasis on deep and contextual learning like never before. At HCLTech, our endeavour has been to be proactive in continuously pivoting learning around where it matters. Our commitment is towards learning with a purpose and with this collaboration, we are furthering the cause.

”

ABOUT AMITY UNIVERSITY ONLINE

Amity University Online stands as a pioneering institution in the realm of digital education, breaking down barriers and providing access to millions worldwide.

Through our platform, we are democratising education, ensuring that regardless of geographical location or socio-economic background, individuals have the opportunity to pursue knowledge and skills vital to their personal and professional growth.

Our commitment to inclusivity and innovation drives us forward as we continue to expand access to high-quality education in the digital age.



Today, **Amity Online** offers the **largest number of approved online degrees to the largest number of online students** across India, reflecting Amity's commitment to empowering our youth through world-class education, which in turn will ensure a **Viksit Bharat**.



Years of Excellence



Recruiters



Learners



Programs & specializations

INDIA'S FIRST UNIVERSITY TO GET **APPROVAL TO OFFER ONLINE DEGREES**

Post the University Grants Commission (Online Courses or Programmes) Regulations, 2018

60+ PROGRAMS & SPECIALIZATIONS: Bachelors · Masters

AMITY UNIVERSITY ONLINE'S ACCREDITATIONS & RECOGNITIONS

Endorsements of Academic Quality & Excellence



ONLINE MBA RANKINGS 2024

INDIA'S ONLY ONLINE MBA RANKED Asia Pacific Top 10



First university in India to receive UGC approval for Online Degrees and Learning Platform



The Western Association of Schools and Colleges



Ranked 35 by National Institutional Ranking Framework



Ranked among the top 3% globally



Degree programs approved by All India Council of Technical Education



WES accredited in Canada



India's first private university to be a member



AMITY UNIVERSITY ONLINE ADVANTAGES

Top-Notch Online Learner Experience



Top International Faculty

Lectures delivered by top international faculty offer captivating insights with a global perspective



AI Professor AMI

AI-Professor AMI, powered by Chat-GPT 4 & Open AI Tech for 24/7 doubt clearing & support



Diverse Learning Mediums

Diverse learning options through recorded lectures, audio books, physical books, e-books & more



Industry Aligned Curriculum

Program curriculum aligned with industry demand for better employability



Interactive Faculty Sessions

Engage in a dynamic learning environment with our continuous faculty interaction and dedicated doubt-clearing sessions



Career Services & Placement Assistance

Career services & placement assistance with 500+ hiring partners ensuring opportunities for professional growth



Remote Proctored Exams

Take exams with ease, integrity and convenience from the comfort of your own space



Dedicated Academic Advisor

Expert guidance by professionals who support you in your academic journey



1:1 Industry Mentorship

Elevate your skills and career prospects with tailored insights, cultivating a pathway to professional success

ON CAMPUS EXPERIENCE

Extensive Interaction With **Faculty and Peers**

- Campus orientation for new learners at all Amity University campuses
- Last-minute revision classes at select Amity University campuses
- Guest lecture series on campus
- Access to the library and programming labs on campus
- Exam preparation classes
- Access to campus events



A photograph of a modern, multi-story office building with a prominent 'HCL' logo on its facade. The building is set against a clear blue sky. In the foreground, there is a paved area with some greenery and a person on a motorcycle. A large blue text box is overlaid on the middle of the image.

ABOUT HCLTech

HCLTech is a global technology company, home to more than 224,000 people across 60 countries, delivering industry-leading capabilities centered around digital, engineering, cloud, AI, and software, powered by a broad portfolio of technology services and products. They work with clients across all major verticals, providing industry solutions for Financial Services, Manufacturing, Life Sciences, and Healthcare, Technology and Services, Telecom and Media, Retail and CPG, and Public Services. Consolidated revenues as of the 12 months ending December 2023 totaled \$13.1 billion.

HCLTech's Career Shaper™ is a learning and assessment platform offering a suite of products and solutions that include 150+ tech roles- based learning programs in Digital, Cybersecurity, Cloud, Engineering, Data Science, AI/ ML and more. Since 2015, it has enabled thousands of diverse aspirants across India to gain relevant skills and get employed in the IT industry.

HCLTech Career Shaper™ ADVANTAGE



Legacy:

With over 47 years of rich heritage, HCLTech stands as a trusted partner, having served Fortune 500 and Global 2000 enterprises with distinction.



Industry Relevance:

Renowned as a tech giant, HCLTech offers unparalleled tech learning opportunities, leveraging its legacy of innovation to stay at the forefront of the digital age.



Expert Pool:

Drawing upon expertise from various service lines within HCLTech business, learners benefit from a powerhouse of skilled professionals dedicated to driving excellence across diverse domains.



Purposeful Outcomes:

HCLTech's learning initiatives are meticulously crafted to facilitate job-based career pathways, providing immersive learning experiences through innovative tools such as learning labs, work ware, and capstones.



Ever-growing Inventory:

Learners can access a vast array of tech learning offerings spanning multi-disciplinary tracks, ensuring continuous growth and adaptability in today's dynamic market landscape.



The Right Balanced Delivery:

HCLTech strikes a harmonious balance between industry practitioners and academicians, delivering unparalleled value through a blend of practical experience and theoretical expertise.





ABOUT THE PROGRAM

BCA with specialization in Data Engineering

A Bachelor of Computer Applications (BCA) program with a specialization in Data Engineering focuses on merging core computer science principles with practical data management and processing skills. Students begin with foundational courses covering programming languages, data structures, and database management systems. Then, they advance into specialized data engineering topics such as data modeling, data warehousing, and big data technologies.

Throughout the program, students gain hands-on experience with tools and platforms commonly used in data engineering, such as Hadoop, Spark, and Apache Kafka. They learn to design and build data pipelines, integrate data from various sources, and ensure the reliability and efficiency of data workflows.

Practical projects and internships provide students with real-world exposure, allowing them to apply their data engineering skills to solve practical challenges. Upon completion of the program, graduates are well-prepared for roles as data engineers, data architects, or database administrators, equipped to design, build, and manage robust data infrastructure to support the needs of modern organizations.

COURSE CURRICULUM

Semester 1

S.No.	Course Title	Credit Units
1	Basic Mathematics- I	5
2	Business Communication	4
3	Computer and Information Technology	6
4	Human Computer Interaction	4
5	Programming in C	6
Total number of credits		25

Semester 2

S.No.	Course Title	Credit Units
1	Data Structures using C	6
2	Environmental Studies	5
3	Individual Excellence and Social Dynamic	4
4	Operating System Concepts	5
5	Software Engineering and Modeling	5
Total number of credits		25

Semester 3

S.No.	Course Title	Credit Units
1	Introduction to Database Management Systems	4
2	Computational Statistics	4
3	Green Computing	2
4	Network Basics	5
5	Object Oriented Programming using Java	5
Total number of credits		20

COURSE CURRICULUM

Semester 4

S.No.	Course Title	Credit Units
1	Unix Operating System and Shell Programming	6
2	Python Programming	6
3	Fundamentals of Data and Data Management	3
4	Data Engineering Fundamentals	3
5	Understanding of Big Data and its Application	3
Total number of credits		21

Semester 5

S.No.	Course Title	Credit Units
1	Introduction to Artificial Intelligence	6
2	Fundamentals of Ecommerce	4
3	Professional Ethics	2
4	Understanding Statistical Concepts for Data Transformation	5
5	Exploratory Data Analysis and Visualisation using Python	5
Total number of credits		22

Semester 6

S.No.	Course Title	Credit Units
1	Major Project	9
2	PySpark Data Analytics and Visualisation	4
3	Introduction to Cloud (AWS)	4
4	Cloud Data Engineering	4
Total number of credits		21

PLACEMENT AND CAREER READINESS



Specialization Courses Curriculum Overview:

- Designed to prepare students for careers in Information Technology
- Emphasis on industry readiness through projects
- Curriculum and syllabus details to be provided separately



HCLTech Career Shaper™ Job Readiness Assessments:

- Scheduled at the end of the program
- Designed to evaluate students' preparedness for industry roles
- Criteria and format aligned with industry standards



Career Paths and Job Roles:

- Inputs on career paths and job roles
- Aligned with the specialization courses offered
- Intern with HCLTech as you complete your major project



Collaboration with Industry Partner:

- Partnership with HCLTech to infuse job readiness in the learning pathway
- **Opportunities to enrich learning through, guest lectures by industry experts**



Unlock Tech Career Opportunities:

- Opportunity to apply for jobs at top tech companies, based on eligibility
- **Industry-tailored internships available for final semester students to gain invaluable industry exposure**

PLACEMENT AND CAREER READINESS



Experience Industry-Immersive Learning:

- Learning through courses, labs, projects, and assessments tailored to industry standards
- **Capstone projects integrated into the curriculum for enhanced industry readiness**



Continuous Improvement:

- Feedback mechanisms in place to refine curriculum and training based on industry trends and student performance



ACADEMIC FACULTY



Mr. Luke Pearce
MA in Education,
University of Sheffield, UK



Prof. Alice Ghimisian
M.Sc. Public Relations and
Corporate Communication, NYU



Dr. Divya Sharma
Ph.D. in Mathematics,
Jaypee Institute of Information Technology



Dr. Ron C. Darnell
Ph.D. in Organization
Management - IT Management,
Capella University



Dipali Patki
Associate Coach, HCLTech



Rupa Srivastava
Associate Coach, HCLTech



Abhishek Chaudhuri
Associate Coach, HCLTech

LEARNING PEDAGOGY

Digital Learning Resources

The content will be available in formats such as videos and ebooks as applicable

15 Digital Lectures per Subject in a Semester

- Delivered by academicians and industry experts through online live sessions in a webcast or webinar format, spread across the entire duration of the course
- The schedule will be published by HCLTech in advance

ELIGIBILITY

For Students with Indian Education

- 10th Class Certificate (completing 10 years of formal schooling)
- 12th Class Certificate (completing 12 years of formal schooling)

For Students with Foreign Education

- O level Certificate (completing 10 years of formal schooling. Diploma will not be acceptable)
- A level Certificate (completing 12 years of formal schooling. Diploma will not be acceptable)
- Certificate of Equivalence from the Association of Indian Universities (required by any student with foreign education to apply in any University in India. Refer to <https://www.aiu.ac.in/>)

FAQs

1. What is Amity University Online?

India's first university to get approval to offer online degrees, Amity University Online is the online learning platform of Amity University, one of India's leading private universities. It offers a wide range of undergraduate, postgraduate, and diploma programs across various disciplines, delivered entirely online.

2. How does online learning with Amity University Online work?

Our online learning platform provides students with access to course materials, lectures, assignments, and discussions through an intuitive and user-friendly interface. Students can engage with their studies at their own pace and convenience, accessing resources from anywhere with an internet connection.

3. Are the programs offered by Amity University Online accredited?

Yes, all programs offered by Amity University Online are accredited by the relevant accreditation bodies. Our online degree programs are recognized and respected by employers and institutions worldwide.

4. What are the admission requirements for Amity University Online programs?

Admission requirements vary depending on the program and level of study. Generally, applicants are required to meet certain academic qualifications and need to submit documents such as transcripts and national identity cards.

5. How are online classes conducted?

Online classes are conducted through live lectures, pre-recorded videos, interactive discussions, and virtual classrooms. Students can participate in real-time or access recordings later, providing flexibility to accommodate various schedules and time zones.

6. Can I interact with faculty and classmates in an online program?

Yes, our online programs encourage interaction and collaboration among students and faculty. You can engage in discussions, ask questions, and seek guidance from instructors and classmates through various online communication channels.

7. What academic support services are available to online students?

Amity University Online offers a range of academic support services to help students succeed, including academic advising and technical support.

FAQs

8. How are exams and assessments conducted in online programs?

Assessments may vary depending on the course but typically include a combination of quizzes, assignments and projects. Exams are conducted through a remote online proctoring system and can be taken from anywhere.

9. Can I transfer credits earned from other institutions to Amity University Online programs?

Yes, we accept transfer credits from accredited institutions, subject to evaluation and approval by our admissions team.

10. How do I apply for an online program at Amity University Online?

To apply for an online program, simply visit our website, select the program you're interested in, and follow the application instructions provided.

11. Are student loans available for online students?

Yes, we offer various options, including scholarships, loans, and easy payment plans, to help make education more accessible for our students.

12. Are there any opportunities for hands-on practical projects as part of the course?

Yes, there are opportunities for practical projects, lectures from industry experts and industry exposure as part of the offered program. Practical projects allow students to apply their skills to real-world problems, gaining valuable industry experience.

13. Are there opportunities for connecting with industry professionals or experts as part of the course?

Yes, there are opportunities for connecting with industry professionals and guest speakers through online sessions.

Empowering Learners Across the Globe with Future-Focused Programs



OTHER PROGRAMS OFFERED:

- BBA with specialization in Data Analytics
- BCA with specialization in Software Engineering
- MCA with specialization in Cyber Security
- MCA with specialization in Software Engineering

GET IN TOUCH WITH US:

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