



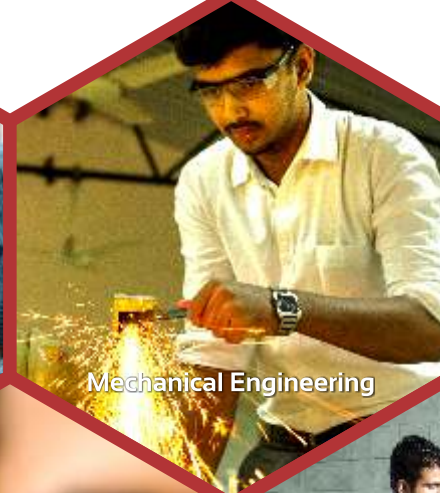
ALLIANCE UNIVERSITY

Private University established in Karnataka State by Act No.34 of year 2010
Recognized by the University Grants Commission (UGC), New Delhi

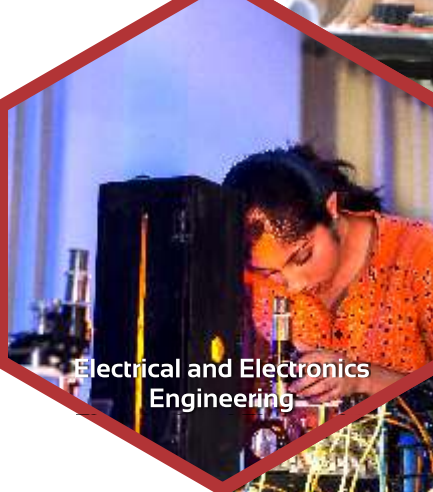
Alliance College of Engineering and Design



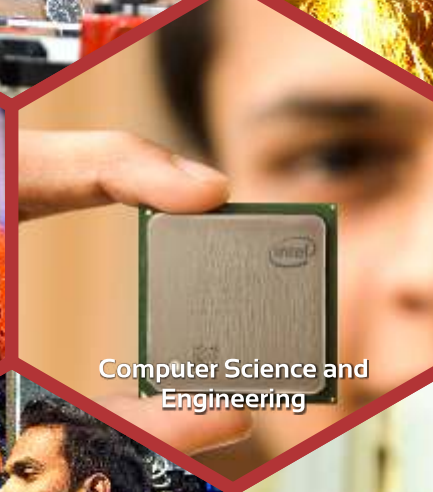
Civil Engineering



Mechanical Engineering



Electrical and Electronics Engineering



Computer Science and Engineering



Aerospace Engineering



Information Technology



Electronics and Communication Engineering



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January 2014

Contents

Alliance University	04
Officers of the University	06
Vision and Mission	07
Message from the Chancellor	08
Message from the Pro Vice-Chancellor	09
Academic Units	10
Alliance College of Engineering and Design	13
Alliance University - Advisory Board	15
International Linkages	16
Career Advancement and Networking	19
Infrastructure	21
Academic Services	23
Support Services	25
Bachelor of Technology (B. Tech.)	27
• Civil Engineering	29
• Mechanical Engineering	33
• Electrical and Electronics Engineering	37
• Electronics and Communication Engineering	41
• Aerospace Engineering	45
• Computer Science and Engineering	49
• Information Technology	53
Student Life	57
Corporate Social Responsibility	59
Admissions	60
Terms and Conditions	61

Alliance University

Alliance University is a Private University established in Karnataka State by Act No.34 of year 2010. The University is jointly recognized by the University Grants Commission (UGC) and the All India Council for Technical Education (AICTE), New Delhi.

Alliance University is a renowned university of higher learning located on an extensive state-of-the-art campus in Bangalore offering a variety of degree courses. The University has baccalaureate concentrations, postgraduate offerings, doctoral degree programs and several professional certificate programs.

Alliance University aspires to be among the best universities in the world by the year 2025 through a series of strategically crafted moves, precisely calibrated action plans and an unwavering commitment to the pursuit of excellence.

While its oldest professional school—Alliance School of Business—is consistently ranked among the top ten private business schools in India by various ranking agencies, the University having already



established Alliance College of Engineering and Design; Alliance School of Law; Alliance Ascent College; Department of Continuing Education; and Department of Performing Arts, is in the process of establishing many other prominent academic units, viz., Alliance College of Arts and Humanities; Alliance College of Science; Alliance College of Medicine and Dentistry; Alliance College of Education and Human Services; Alliance School of Health Sciences; and Alliance College of Media and Communications.

The ambience and serenity of a world-class infrastructure housed in a 'green' campus; faculty who have proven themselves in their respective fields by providing an excellent blend of rigor and relevance in their teachings; staff who are ever ready to reach out; robust industry interactions; research aimed at solving problems of the real world; a plethora of international collaborative arrangements; outreach activities that touch the lives of a wide cross section of society; an exemplary track record in career counseling and placement facilitation—combine to provide a rare synergy that transcends artificial barriers and enables students to follow their hearts with passion and confidence.





Officers of the University

- **The Visitor** (His Excellency The Governor of Karnataka State)
- **The Pro-Visitor** (Honourable Minister for Higher Education, Karnataka State)
- **The Chancellor**
- **The Vice-Chancellor**
- **Pro Vice-Chancellors**
- **The Registrar**
- **Deans of Faculties**
- **The Finance Officer**



Vision

To be a world-class University that nurtures talent and catalytically transforms the lives of millions through excellence in teaching, research, service and community development. To uphold a commitment to shaping lives through scholarly teaching and learning, and that which contributes to an equitable and holistic transformation of society at large.

Mission

To create and sustain a community of lifelong learners in an environment that emphasizes literacy, critical thinking and humanistic and scientific inquiry.

The University shall provide a dynamic, challenging and ethical environment for pursuing high-quality teaching, research, learning and service across all areas of the University, where students, faculty and other key constituents can interact, collaborate, and partner with the global community for the creation and dissemination of knowledge and transform the lives of people through innovation and excellence in higher education.

The University shall:

1. Pursue excellence in teaching, learning and scholarship.
2. Prepare students for leadership through enlightened learning partnerships with faculty mentors and the community.
3. Support faculty and other scholars in pursuing world-class research: clinical, theoretical, empirical, experiential and foster creative endeavor.
4. Develop mastery of disciplines and professions and instil confidence among its key constituents in their application for a future of meaningful pursuits and productive work in the service of humanity.
5. Channelize faculty and student talent for professionally-related service to the University, the community and society at large.
6. Promote and preserve academic freedom, diversity, equality, harmony and justice.





Message from the Chancellor

Dear Student:

Greetings from Alliance University!

Not long ago, education merely meant the transfer of knowledge from the teacher to the taught. Today, education is much more than that and it ought to aim at achieving the active use of knowledge and skill in ways that are decidedly enlightened, noble and legacy creating. After all, if it is mere information that one seeks, then a vast and growing repository of digitized content is readily available to be easily accessed.

At Alliance University, we strive to reach out, educate, mentor, guide and champion all those who choose to be part of this great University. The key differentiator at Alliance University has its genesis in its ethos. Its ethos of student centeredness, which guides every action at Alliance and is central to its founding philosophy of creating and sustaining a community of lifelong learners, in an environment of literacy and critical thinking who can contribute significantly as value creators to the greater social wellbeing. Guiding this core value system at the University is a leadership that believes in the universalization of education for humanity.

Alliance University stands for excellence. The pursuit of excellence in all its myriad dimensions is a continuous and relentless endeavor at the University, and it follows an eclectic and inclusive approach that is committed to take the benefits of education and learning to the society at large. This is amply demonstrated in its magnificent infrastructure—comparable to the best in the world that facilitates learning for life.

The courses and programs offered at Alliance University have been crafted with care and devotion, reflecting not just the realities of the marketplace but the very future that it is helping to define. The rigorous, research-oriented faculty community excels in inspiring learning in the classroom. The staff is truly committed, warm and friendly. With a deep focus on its key constituents, the community of scholars at the University strives to push the frontiers of education and set higher standards. Together, these are a remarkable combination that can shape your careers and transform you into the extraordinary.

I invite you to be a part of this exciting learning experience.

Madhukar Angur, B. Tech. (NIT); PGDM (IIM-A); Ph. D. (Texas)
Chancellor
Alliance University



Message from the Pro Vice-Chancellor

Dear Student:

Welcome to Alliance College of Engineering and Design, Alliance University, a premier institute of higher learning with world-class intellectual and technological resources committed to prepare the engineers of tomorrow. The College is dedicated to building a strong future for its graduates by preparing them to become problem solvers, project leaders, communicators and ethical citizens of a global community.

Through the determined, strategic and committed efforts of our faculty, staff, industry and community leaders—the Alliance College of Engineering and Design is uniquely positioned and is renowned for its innovative curricula, intellectual rigor and interdisciplinary research. Our faculty are scholars who chose Alliance University because they are committed foremost to their graduates' success and the ideals of engineering education. In addition to the experienced full-time faculty, the teaching team is complemented by a panel of distinguished international visiting faculty from a consortium of leading, accredited universities, worldwide.

In its quest to provide world-class engineering education in India, the institution offers several branches of the Bachelor of Technology with a global perspective and focus on innovative design. The College also offers a host of international programs to ensure that students gain international experience and develop as global citizens.

I invite you to visit the Alliance College of Engineering and Design, where you will discover an intellectual environment with engineering excellence, and a campus that enables a collaborative culture while providing a sense of community through students' participation in social, club, athletic, and service activities, as well as a plethora of other co-curricular activities.

We take pride in being one of the most sought after universities in India both by students and recruiters. This Prospectus presents the courses offered at the Alliance College of Engineering and Design. We encourage you to choose a course that suitably matches with your interests and skill sets.

Welcome to a new world of opportunities. Welcome to the Alliance College of Engineering and Design.

Anubha Singh, Ph. D.
Pro Vice-Chancellor (Academics)
Alliance University

Academic Units

Our journey, like many of the futuristic institutions in the world, has been an enriching and fulfilling experience, and one that has taught us to rise even in challenges. To us, the future definitely looks bright and our ambitions will take us far. Since the time ALLIANCE became a university, plans have started taking shape in creating an enduring and sustainable educational model for the vast majority of the society through defined and structured courses.

Alliance School of Business

Alliance School of Business, Alliance University has carved a niche for itself among the best B-schools in the country, having been ranked consistently among the top B-schools and for being the first Indian B-school to be accredited by the International Assembly for Collegiate Business Education (IACBE), USA. The Alliance School of Business enjoys a high-level of recruiter satisfaction from recruiting partners. Top brands and companies consistently recruit from the B-school and even visit it more than once in a year in search of exceptional talent from among its graduates. It has an excellent array of international collaborative arrangements with reputed universities and business schools that enable student and faculty exchanges, paving the way for a unique multicultural and eclectic experience. The Department of Commerce at the Alliance School of Business offers degree courses, both at the undergraduate and postgraduate levels that seek to build and nurture graduates equipped with strong academic skills and expertise in commerce, finance, taxation, accountancy and other related disciplines of business studies. The innovatively crafted courses of the Department of Commerce also instill in graduates a high-level of integrity and professionalism, while preparing them for rewarding and fulfilling careers in banking, insurance, auditing, taxation and business management.



Alliance College of Engineering and Design

Alliance College of Engineering and Design, Alliance University offers degree courses that build skill, expertise and knowledge among its graduates in higher technological education, pure sciences and scientific research. The Alliance College of Engineering and Design is committed to achieving excellence in technology development, and envisages course offerings under the various fields of science, engineering and technology to achieve in its graduates competent and motivated engineers and scientists. The Alliance College of Engineering and Design offers a Bachelor of Technology (B. Tech.) degree in the following disciplines: Civil Engineering; Mechanical Engineering; Electrical and Electronics Engineering; Electronics and Communication Engineering; Aerospace Engineering; Computer Science and Engineering; and Information Technology.

Alliance School of Law

Alliance School of Law, Alliance University aims to further teaching, learning and scholarship in law. As a professional law school that offers courses both at the undergraduate and postgraduate levels: the five-year, integrated degree and short-term diploma—it prepares its graduates for rewarding careers in various roles and responsibilities in legal services organizations. Graduates of the Alliance School of Law are highly sought after by law firms as well as other businesses as they possess strong subject-matter expertise in law and legal institutions, justice and governance as well as demonstrable skills of legal counsel and professional argumentation. The teaching at the Alliance School of Law is exceptional and the carefully crafted curriculum includes pedagogical features such as simulation and live, client-based teaching. Alliance School of Law, Alliance University is approved by the Bar Council of India (BCI), New Delhi.

Alliance Ascent College

Alliance Ascent College provides a high-quality academic environment with dedicated teaching staff and recognized strength in applied research, underpinned by an outstanding support of the University. The Alliance Ascent College is an affordable, premier institution of higher learning with state-of-the-art facilities providing world-class education, training and research in the areas of business and management. The objective is to provide graduates with the knowledge and skills to be successful business leaders as well as responsible social stewards. The Alliance Ascent College prides itself on a rigorous and relevant curriculum that is designed to train young professionals to be responsible and responsive to the demands of society in a dynamic milieu.

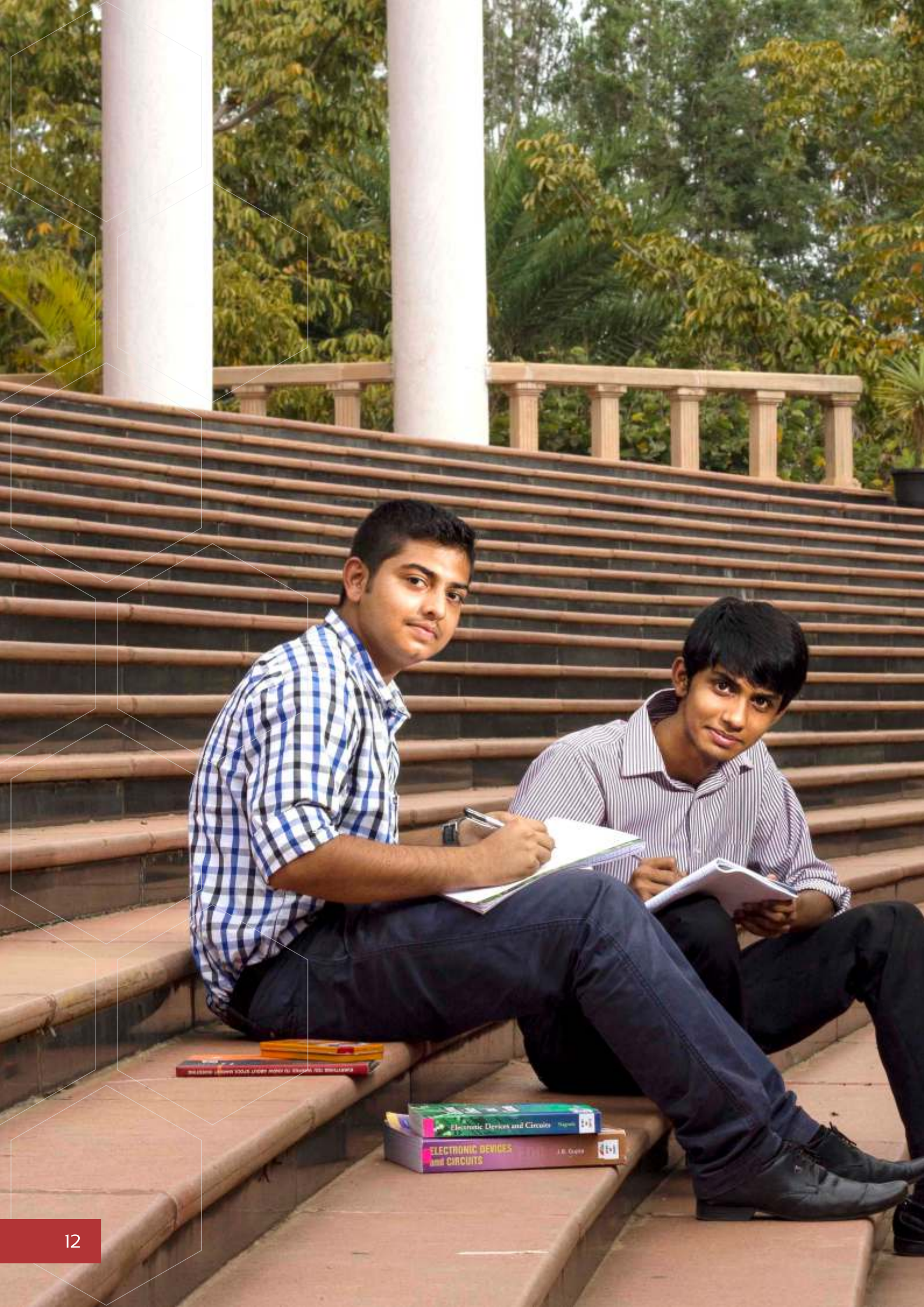
Department of Continuing Education

The Alliance University Department of Continuing Education extends the strengths and learning benefits of flagship programs in management, engineering and law education by customizing the design of diploma programs for other beneficiaries: working professionals, decision makers, managers, scholars, entrepreneurs, civil servants, defense personnel and full-time students among others—who are unable to pursue full-time courses of study, and seek to acquire a sound knowledge of their core disciplines and expertise in a specialization area. These career and job skill oriented programs, which are delivered through a distributed mode of learning at select study centers are flexible and learning is self-paced, which enables participants to acquire the skills of employability across various domains without interruptions in careers or a degree-level education.

Department of Performing Arts

Alliance University Department of Performing Arts furthers teaching, learning and scholarship in classical art forms. The Department offers programs in dance, music and theater that aim at preparing world-class artists who are passionate about acquiring a strong conceptual foundation in performing art education as well as classical traditions in art forms. The Department imparts performing art education by customizing the design of its programs for a range of key constituents—artists, scholars, instructors and full-time students among others—who are unable to pursue full-time courses of study, and seek to acquire a sound knowledge and expertise in the performing arts.







Alliance College of Engineering and Design

Alliance College of Engineering and Design offers degree courses aimed at building skill, expertise and knowledge among its graduates in the areas of higher technology and design. The College is committed to achieving excellence in technology development and its courses, under the various fields of engineering and technology aim at achieving in its graduates competent and motivated engineers and designers.

The Alliance College of Engineering and Design has been built on a strong foundation of achieving technological development through a curriculum that places a high emphasis on the design aspects of engineering by developing design professionals who are passionate and creative problem-solvers, and who possess strong multi-disciplinary fundamentals that are combined with a keen sense of aesthetics. Real-world, industry-driven internships and project work; centers of excellence and incubation for cutting-edge research and development; and learning outcomes aligned with the criteria outlined by the Accreditation Board for Engineering and Technology (ABET), USA—the Alliance College of Engineering and Design provides unparalleled opportunities for graduates to pursue technological education with passion and confidence.

The Alliance College of Engineering and Design currently offers seven, four-year, full-time Bachelor of Technology (B. Tech.) degree courses at the undergraduate level. The undergraduate courses at the Alliance College of Engineering and Design are unique offerings where graduates receive a Bachelor of Technology degree in their chosen discipline of engineering alongside minor specializations.





Why Alliance Engineering?

The key features of the Alliance College of Engineering and Design that make it the preferred destination of choice for students and recruiting partners are :

- ❖ The Bachelor of Technology (B. Tech.) degree is awarded by Alliance University
- ❖ Rigorous, progressive and industry relevant curriculum that places a high emphasis on the design aspects of engineering
- ❖ Advanced engineering laboratories
- ❖ State-of-the-art infrastructure for a high-quality living and learning experience on campus
- ❖ Delivered by accomplished full-time faculty and embellished by international adjunct faculty as well as renowned industry practitioners
- ❖ The B. Tech. degree course offers a choice of three minor specializations:
 - Business Administration
 - Computer Science and Engineering
 - Electronics and Communication Engineering
- ❖ Internship opportunities and placement facilitation across industry sectors
- ❖ Articulation agreements with foreign universities and institutions provide for student exchanges, internships and short-term certification programs
- ❖ Generous scholarship schemes for merit and other categories
- ❖ Center for Development of Entrepreneurship and Leadership for innovation and business ideas
- ❖ Professional, career-oriented student clubs enhance skill development and provide opportunities to network
- ❖ The B. Tech. degree course is comprised of the Learner's Value Proposition, Core Subjects, Elective Subjects, Industry Internship Program and Professional Skills Development

Alliance University - Advisory Board

Alliance University is a world-class university, and is turning into an instrumental force for nurturing young graduates, seasoned professionals and experienced scholars from India and abroad. The vision of Alliance University is to become an iconic learning destination, which is supported and mentored by an advisory board that has successful and renowned professionals and academicians.



The Advisory Board

Dr. Jagdish N. Sheth

Charles H. Kellstadt Professor of Marketing
Goizueta Business School
Emory University, USA

Dr. D. Ayyappa

Vice-Chancellor
Alliance University

Dr. Tan Chi Tiong

President
Singapore Institute of Technology, Singapore

Dr. Howard Hunter

Professor of Law
Singapore Management University, Singapore
Professor of Law and Dean Emeritus
School of Law, Emory University, USA

Mr. Bhaskar Bhat

Managing Director and Chief Operating Officer
Titan Industries Ltd.

Dr. Madhukar Angur

Chancellor
Alliance University

Dr. Robert A. Easter

President
University of Illinois, USA

Dr. W. Ken Harmon

Provost and Vice President for Academic Affairs
Kennesaw State University, USA

Dr. Bharat K. Singh

Chairman, SBRC
Aditya Birla Group

Mr. Pratik Kumar

Executive Vice-President Group Human Resource
Wipro



International Linkages

Alliance University - Nurturing Global Leaders

Of the numerous opportunities available at Alliance University, International Programs—semester exchange, international summer school, dual degree, credit transfer and the overseas learning program—are among the most exciting and career enhancing. Learning and understanding new cultures, improving foreign language skills, studying a discipline with an international perspective and seeking out new challenges are significant elements of a study abroad experience. International Programs are often the first stepping stone towards a student's global awareness and there are many tailor-made options for students to choose from. International Programs at Alliance University give students a distinct and definitive advantage, going forward.

International Partnerships

Alliance University has a host of articulation agreements with accredited universities across the world. Through collaborative arrangements with international universities, Alliance University offers International Programs and facilitates educational experiences for students in several countries such as Belgium, People's Republic of China, France, Germany, Russia, Switzerland, The Netherlands, UK and USA. Apart from providing an opportunity to understand different cultures in a globalized economy, students who participate in these Programs get to gain a first-hand international experience and develop as global citizens.



Semester Exchange

A Semester Exchange program gives B. Tech. students a choice to intersperse their semesters at Alliance University with one semester abroad at a partner university during either the second or third year of their undergraduate program. The Semester Exchange Program provides definitive immersive learning in engineering at an international partner institution and acquaints students with the new developments in their field.

International Partner Institutions

PEOPLE'S REPUBLIC OF CHINA

- Nanjing University of Aeronautics and Astronautics
- Beijing Institute of Technology

FRANCE

- ISEP

UK

- University of Dundee

Twining Program

A unique and exciting opportunity awaits the B. Tech. students who are looking to enhance their study abroad experience. The articulation agreements of Alliance University with international partners enable B. Tech. students to study their third and final year of the course at an international partner university. The students gain unparalleled and superior skills in the Twining Program that prepares them for careers with a distinctive edge.

International Partner Institution

UK

- University of Dundee

Dual Degree Program

The Dual Degree Program enables the B. Tech. students to undertake a four-year period of undergraduate, cumulative study at an international partner institution. Under the Dual Degree Program study option, a B. Tech. student is required to complete the first four semesters at Alliance College of Engineering and Design, Alliance University and then continue with the remaining four semesters of study at an international partner university. The B. Tech. students, upon completion of their final year, obtain a degree from Alliance University as well as a degree from the partner university.

International Partner Institutions

PEOPLE'S REPUBLIC OF CHINA

- Nanjing University of Aeronautics and Astronautics
- Beijing Institute of Technology

FRANCE

- ISEP

International Summer School

Spending two to four weeks at one of our international partner institutions, intensive classroom learning, earning credits, working knowledge of a foreign language, cultural trips to places of historical significance—all constitute elements of an International Summer School Program. This program is offered by Alliance University in convenient and affordable packages that allow our students to experience a foreign country, its culture and its people in an inclusive manner. The International Summer School Program is a great peer learning opportunity for our B. Tech. students in a multicultural, academic setting.

International Partner Institutions

PEOPLE'S REPUBLIC OF CHINA

- Nanjing University of Aeronautics and Astronautics
- Beijing Institute of Technology

FRANCE

- ISEP
- Telecom Sud Paris

UK

- University of Dundee





Career Advancement and Networking

The Office of Career Advancement and Networking provides an interface between students and industry by extending assistance to students for industry internships and campus recruitments. The Office builds relations and networks with industry professionals from across industry sectors, advises students on career options and provides them with the latest information on industry internships and campus recruitment opportunities. Apart from these facilitation services, the Center also arranges for industry interactions and maintains a strong alumni network.

Recruiting Partners 2012-13

- Aayuja Technologies
- Adiquity
- Aditya Birla Retail
- Akamai
- Amazon.com
- Analytics Quotient
- Aon Benfield Analytics
- Artha Property
- Atria Convergence Technologies
- Aurus Network
- Berger Paints
- Beroe
- Continental Corporation
- Decathlon Sports India
- Deloitte
- DSV-Global Transport and Logistics
- EDS Technologies
- Ernst & Young
- Four Clover Realty
- Google
- Grant Thornton
- GSS Infotech Limited
- HCL Infosystems
- HCL Technologies & Comnet
- Holiday IQ
- HSBC EDPI
- IBM India
- Idea Cellular
- Infiniti Research
- Infoedge
- ITC Infotech
- KPMG
- Kuehne+Nagel India
- L&T Infotech
- LG Electronics
- Locon Solutions
- Mahaveer Group
- Mahindra Automotive
- Mahindra FES
- Matrimony.com
- Maveric Systems
- Misys Software Solutions
- NEC India
- New Wave Computing
- NIIT
- NTT Data
- Odessa Technologies
- Oracle
- Pagalguy.com
- Photon Infotech
- Piaggio Vehicles
- Puravankara Projects
- Quadwave Consulting
- Quickjet Cargo
- Reliance Communication
- Samsung Research India
- Schneider Electric India
- Societe Generale
- SuccessFactors
- Target Corporation
- TAS Analytic Services
- Tata Consultancy Services
- TeamLease
- Titan Industries
- Total Environment
- Toyota Kirloskar Motor
- Trident Group
- TW Metals
- Vodafone
- Wipro Consumer Care and Lighting
- Wipro Technologies
- Yodlee Infotech
- Zomato







Infrastructure

Alliance University has magnificent infrastructure comparable to the best in the world. Some of the outstanding features include:

- State-of-the-art ambience created by the appropriate use of technology
- Spacious seminar halls with excellent acoustics for interactions with practitioners and other professionals
- Amphitheater classrooms
- An information technology backbone for seamless integration
- An excellent library with unmatched brilliance and aesthetics
- Halls of residence for students
- Residential accommodation for faculty and staff
- A food court built to the highest standards of hygiene
- Administrative block
- Departmental stores
- Fitness center
- Recreational facilities
- Healthcare center, and
- Many more features that provide a unique learning and living experience to all residents

In short, the campus provides an ideal environment for young minds to explore new ideas, and encourages creativity and independent thinking, even as it facilitates faculty to engage in research that combines both rigor and relevance; the staff to cultivate empathy toward students, and for all to develop the twin qualities of a lifelong yearning for learning and a compassionate and caring attitude towards fellow human beings.







Academic Services

Laboratories

The Alliance College of Engineering and Design has well-equipped, state-of-the-art laboratory facilities that further applied learning in engineering and design.



Library

The Central Library has one of the best collections of information sources in management, science and technology and law-related disciplines. The library has a large collection of text, reference books and multimedia, which is continuously updated with the latest editions. It subscribes to national and international periodicals, databases and online journals. The library maintains a website through which students can access online databases, journals and catalogues anywhere in the world. The library has a digital library providing a full-text collection of documents and faculty publications. It has ample reading room facilities spread over four floors with a seating capacity for over 1,000 students.



IT Infrastructure

Alliance University has implemented an IT network infrastructure and a state-of-the-art Unified Communication Solution for the university campus with the latest technology that suits the present and future needs of higher education. The University in association with Cisco and Wipro has built a strong network and communication infrastructure, which includes excellent campus-wide Wi-Fi connectivity.



Lecture and Seminar Halls

Spacious, gallery-type lecture and seminar halls are equipped with the latest audio-visual facilities for an enhanced learning experience. Seminar halls, which accommodate large groups at a time are used often for seminars and group meetings with speakers and guests from industry.





Support Services

Center for Industry Interaction

One of the major challenges of technical education today is the need to constantly innovate and adapt to the changing requirements of industry. The Center for Industry Interaction provides an interface between academics and the industry through interactive sessions. Leading practitioners from diverse industry backgrounds share their insights at these interactive sessions with students.

As a facilitator between academics and the corporates, the Center for Industry Interaction creates distinct spill-over benefits for the Alliance College of Engineering and Design in areas such as curriculum review, alignment with recruiter expectations and as reinforcement for wider internship and campus placement opportunities for students.

Hostel accommodation

The University provides comfortable and well-appointed hostel accommodation to students both at on-campus and off-campus locations. Room accommodation is extended on a first-come-first-served basis to students. Students can avail of hostel rooms either on a single or a shared basis.

Healthcare

At Alliance University, we strongly believe in healthy living. We provide the facility of a resident doctor to cater to the healthcare and wellbeing of the students. A round-the-clock ambulance service is also available for medical emergencies.

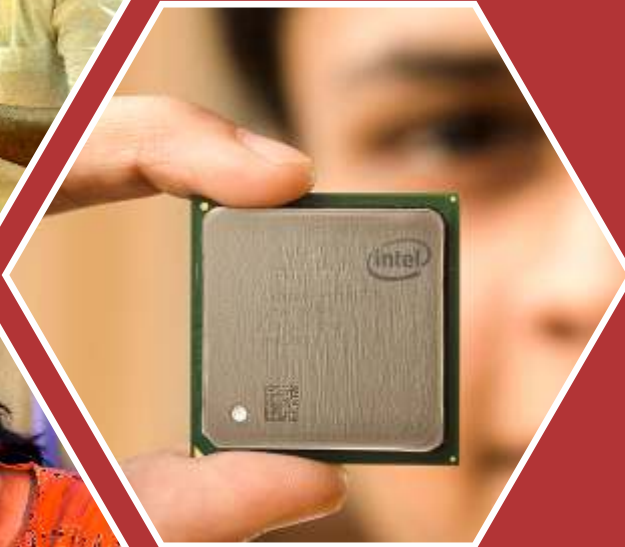
Counseling

Personal, non-academic counseling is provided by a trained counselor to help and motivate the students and to attend to their overall developmental needs. Counseling helps to maintain and enhance the psychological, emotional and relational wellbeing of the students. Consultations with the counselor are treated with sensitivity, care and confidentiality.

Sports and recreation

A fit mind is an active mind. With its expansive sports ground, state-of-the-art gymnasium and the availability of expert gym and yoga instructors as well as martial arts training, the University encourages students to participate in various sports and recreational activities apart from their regular academic schedules.





BACHELOR OF TECHNOLOGY (B. Tech.)





The industry relevant course curriculum at the Alliance College of Engineering and Design imparts a strong foundation in learning to each aspiring engineer.

**AJU PILLAI
B. Tech. 2012-16**



B. Tech. in Civil Engineering



B. Tech. in Civil Engineering

The field of civil engineering, which is based on the principles of science, mathematics and computational tools, enhances the quality of life of society at large by furthering advancements in civil engineering infrastructure. The B. Tech. degree course in Civil Engineering at the Alliance College of Engineering and Design, imparts strong theoretical foundations to graduate students and combines practical learning in various areas such as surveying, construction engineering, geotechnical engineering, structural engineering, transportation engineering and town planning. The course is interdisciplinary and covers a wide spectrum of electives that are aimed at an in-depth understanding among graduates of atmospheric science, computational fluid mechanics, soil mechanics, geographical information systems and remote sensing.

SEMESTER I/II		SEMESTER I/II			
PHYSICS CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Basics of Mechanical Engineering ➤ Foundations of Computing ➤ Engineering Physics ➤ Basics of Civil Engineering ➤ Environmental Engineering ➤ Foundations of Computing Laboratory ➤ Engineering Physics Laboratory ➤ Basic Engineering Workshop 	CHEMISTRY CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Engineering Graphics ➤ Basics of Electrical Engineering ➤ Engineering Chemistry ➤ Basics of Electronics Engineering ➤ Technical English ➤ Engineering Chemistry Laboratory ➤ Electrical and Electronics Laboratory 		
	SEMESTER III		SEMESTER IV		
	<ul style="list-style-type: none"> ➤ Engineering Mathematics III ➤ Engineering Geology ➤ Engineering Mechanics ➤ Fluid Mechanics ➤ Building Technology I ➤ Surveying I ➤ Civil Engineering Materials Laboratory ➤ Surveying Practice I 		<ul style="list-style-type: none"> ➤ Engineering Mathematics IV ➤ Building Technology II ➤ Strength of Materials ➤ Surveying II ➤ Hydrology and Irrigation Engineering ➤ Open Channel Hydraulics and Hydraulic Machines ➤ Fluid Mechanics and Hydraulic Machines Laboratory ➤ Surveying Practice II 		
	SEMESTER V		SEMESTER VI		
	<ul style="list-style-type: none"> ➤ Ground Water Hydrology ➤ Structural Analysis I ➤ Transportation Engineering I ➤ Geotechnical Engineering I ➤ Structural Design I ➤ Elective I ➤ Civil Engineering Drawing I ➤ Material Testing Laboratory 		<ul style="list-style-type: none"> ➤ Environmental Engineering I ➤ Structural Analysis II ➤ Structural Design II ➤ Geotechnical Engineering II ➤ Transportation Engineering II ➤ Elective II ➤ Civil Engineering Drawing II ➤ Geotechnical Engineering Laboratory 		

SEMESTER VII	SEMESTER VIII
<ul style="list-style-type: none"> ➤ Environmental Engineering II ➤ Design of Steel Structures ➤ Estimation and Costing ➤ Elective III ➤ Design of Prestressed Concrete ➤ Construction and Project Management ➤ Computer Aided Design Laboratory ➤ Environmental Engineering Laboratory ➤ Minor Elective 	<ul style="list-style-type: none"> ➤ Elective IV ➤ Elective V ➤ Elective VI ➤ Project Work and Viva Voce ➤ Minor Elective

Electives


<ul style="list-style-type: none"> • Ecology and Environmental Chemistry • Surface Hydrology and Water Power • Architecture and Town Planning • Alternative Building Materials and Technologies • Ground Improvement Techniques • Remote Sensing and GIS • Advanced Structural Design I • Advanced Geotechnical Engineering I • Highway Pavement Design • Experimental Stress Analysis • Structural Dynamics and Seismic Design • Environmental Pollution Control Engineering • Advanced Structural Design II • Advanced Geotechnical Engineering II 	<ul style="list-style-type: none"> • Soil Exploration, Testing and Evaluation • Design of Earthquake Resistant Structures • Urban Transportation Planning • Coastal Engineering and Marine Structures • Matrix Method of Structural Analysis • Industrial Structures • Advanced Construction Engineering and Management • Maintenance and Repair of Buildings • Finite Element Methods • Quality Management System in Civil Engineering • Industrial Waste Water Treatment • Advanced Prestressed Concrete
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Minor Electives

Business Administration	
<ul style="list-style-type: none"> • Customer Relationship Management • Entrepreneurship Management • Operations Research • Fundamentals of Accounting • Financial Management • Human Resource Management 	<ul style="list-style-type: none"> • Marketing Management • Managerial Economics • Quality Management • Management Information Systems • Principles and Practices of Management
Computer Science and Engineering	
<ul style="list-style-type: none"> • Algorithms • Object Oriented Technology • Databases 	<ul style="list-style-type: none"> • Client-Server Technology • Java Technology

Note: An elective subject is offered in the B. Tech. in Civil Engineering course only if a minimum number of students enroll in it.





The hands-on experience that accompanies learning in engineering theory makes the course truly exhilarating.

**THILAK RAO
B. Tech. 2013-17**



B. Tech. in Mechanical Engineering



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33

B. Tech. in Mechanical Engineering

Graduates in mechanical engineering are adept at designing innovations and technological advancements in the high technology areas of mechanical systems, robotics, nanotechnology and mechatronics, and are renowned for their generalist engineering expertise. Choosing and pursuing a degree course in mechanical engineering—one of the oldest and broadest engineering branches—provides graduates with an opportunity to acquire knowledge and expertise that can be applied to the various branches of engineering. At the Alliance College of Engineering and Design, the B. Tech. in Mechanical Engineering degree is crafted with a high emphasis on the design aspects of mechanical engineering: tool and die design, industrial robotics, gears and cams as well as oil hydraulics and pneumatics.

SEMESTER I/II		SEMESTER I/II			
PHYSICS CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Basics of Mechanical Engineering ➤ Foundations of Computing ➤ Engineering Physics ➤ Basics of Civil Engineering ➤ Environmental Engineering ➤ Foundations of Computing Laboratory ➤ Engineering Physics Laboratory ➤ Basic Engineering Workshop 	CHEMISTRY CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Engineering Graphics ➤ Basics of Electrical Engineering ➤ Engineering Chemistry ➤ Basics of Electronics Engineering ➤ Technical English ➤ Engineering Chemistry Laboratory ➤ Electrical and Electronics Laboratory 		
	SEMESTER III		SEMESTER IV		
	<ul style="list-style-type: none"> ➤ Engineering Mathematics III ➤ Fluid Mechanics ➤ Material Science and Metallurgy ➤ Manufacturing Process I ➤ Engineering Mechanics ➤ Engineering Thermodynamics ➤ Engineering Drawing Laboratory (On Board) ➤ Manufacturing Process Laboratory ➤ Fluid Mechanics Laboratory 		<ul style="list-style-type: none"> ➤ Engineering Mathematics IV ➤ Applied Thermodynamics ➤ Kinematics of Machines ➤ Manufacturing Process II ➤ Mechanical Measurements ➤ Computer Aided Machine Design Laboratory ➤ Machine Shop ➤ Material Testing Laboratory 		
	SEMESTER V		SEMESTER VI		
	<ul style="list-style-type: none"> ➤ Energy Engineering ➤ Machine Design I ➤ Heat Transfer ➤ Dynamics of Machines ➤ Value Engineering ➤ Elective I ➤ Measurements and Metrology Laboratory ➤ Energy Laboratory 		<ul style="list-style-type: none"> ➤ Computer Aided Design/Computer Aided Machine Design ➤ Manufacturing Process III ➤ Machine Design II ➤ Finite Element Methods ➤ Renewable Energy Sources ➤ Elective II ➤ Heat Transfer Laboratory ➤ Computer Aided Design/Computer Aided Machine Design Laboratory 		

SEMESTER VII	SEMESTER VIII
<ul style="list-style-type: none"> ➤ Control Engineering ➤ Vibrations ➤ Turbomachinery ➤ Elective III ➤ Elective IV ➤ Design and Vibrations Laboratory ➤ Finite Element Analysis Practice ➤ Minor Elective 	<ul style="list-style-type: none"> ➤ Elective V ➤ Elective VI ➤ Basics of Research and Development ➤ Project Work ➤ Minor Elective

Electives

<ul style="list-style-type: none"> • Processing of Plastics • Mechanics of Composite Materials • Refrigeration and Air Conditioning • Agile Manufacturing • Project Management • Product Life Cycle Management • Design of Experiments • Industrial Management • Quality Engineering • Combustion Engineering • Biomass Energy Systems • Experimental Stress Analysis • Fracture Mechanics • Reliability Engineering • Theory of Elasticity 	<ul style="list-style-type: none"> • Nuclear Energy • Design of Tubes and Pipe Heat Exchangers • Engineering Design • Gas Dynamics • Tool Design • Tribology • Measurements in Thermal Sciences • Automotive Engineering • Computational Fluid Mechanics • Fundamentals of Boundary Layer Theory • Computational Heat Transfer • Operations Research • Theory of Plasticity 	<ul style="list-style-type: none"> • Rapid Prototyping • Smart Materials • Industrial Drives • Mechatronics • Statistical Quality Control • Robotics • Introduction to Bio Engineering • Analysis of Gas Turbines • Pollution Control and Environmental Management • Micro-Electromechanical Systems • Compressible Flow • Design of Thermal Systems • Introduction to Intellectual Property Rights
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Minor Electives

Business Administration	
<ul style="list-style-type: none"> • Customer Relationship Management • Entrepreneurship Management • Fundamentals of Accounting • Financial Management • Human Resource Management 	<ul style="list-style-type: none"> • Marketing Management • Managerial Economics • Management Information Systems • Principles and Practices of Management
Computer Science and Engineering	Electronics and Communication Engineering
<ul style="list-style-type: none"> • Algorithms • Object Oriented Technology • Databases • Client-Server Technology • Java Technology 	<ul style="list-style-type: none"> • Digital Image Processing • Embedded Systems Design • Computer Vision • Artificial Intelligence • Biomedical Instrumentation • Neural Networks and Fuzzy Logic • Introduction to VLSI

Note: An elective subject is offered in the B. Tech. in Mechanical Engineering course only if a minimum number of students enroll in it.





The international exchange programs at Alliance University give students global exposure and experience, which facilitates the exchange of ideas and culture while building in them global citizens.

**NIHARIKA
B. Tech. 2013-17**



B. Tech. in Electrical and Electronics Engineering



B. Tech. in Electrical and Electronics Engineering

The field of electrical and electronics engineering engages in the study and application of electricity, electronics and electromagnetism and has resulted in significant inventions ranging from the radio and television to laser and fiber optics. Graduates in electrical and electronics engineering are drivers of technological change and innovation in engineering-based industries. The B. Tech. degree course in Electrical and Electronics Engineering at the Alliance College of Engineering and Design, imparts to graduates a strong foundation in physical and mathematical sciences as well as computational methods related to electrical circuitry. In addition to offering common core subjects, the course also covers basic concepts such as analog systems, digital systems, communication systems as well as advanced concepts such as signal and image processing, microwaves, antennas and propagation.

SEMESTER I/II		SEMESTER I/II			
PHYSICS CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Basics of Mechanical Engineering ➤ Foundations of Computing ➤ Engineering Physics ➤ Basics of Civil Engineering ➤ Environmental Engineering ➤ Foundations of Computing Laboratory ➤ Engineering Physics Laboratory ➤ Basic Engineering Workshop 	CHEMISTRY CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Engineering Graphics ➤ Basics of Electrical Engineering ➤ Engineering Chemistry ➤ Basics of Electronics Engineering ➤ Technical English ➤ Engineering Chemistry Laboratory ➤ Electrical and Electronics Laboratory 		
	SEMESTER III		SEMESTER IV		
	<ul style="list-style-type: none"> ➤ Engineering Mathematics III ➤ DC Machines and Transformers ➤ Electrical Circuits ➤ Analog Electronics I ➤ Electromagnetic Fields ➤ Electrical Power Generation ➤ Analog Electronics Laboratory I ➤ DC Machines and Transformers Laboratory ➤ Electrical Circuits Laboratory 		<ul style="list-style-type: none"> ➤ Engineering Mathematics IV ➤ AC Machines ➤ Analog Electronics II ➤ Electrical Power Systems I ➤ Measurement and Instrumentation ➤ Digital Electronics ➤ AC Machines Laboratory ➤ Measurement and Instrumentation Laboratory ➤ Electrical Engineering Simulation Laboratory 		
	SEMESTER V		SEMESTER VI		
	<ul style="list-style-type: none"> ➤ Electrical Power System II ➤ Control Systems ➤ Linear Integrated Circuits ➤ Renewable Energy Systems ➤ Communication Systems ➤ Network Analysis and Synthesis ➤ Power Systems Simulation Laboratory ➤ Linear Integrated Circuits Laboratory ➤ Control Systems Laboratory 		<ul style="list-style-type: none"> ➤ Power Electronics ➤ High Voltage Engineering ➤ Microprocessors and Microcontrollers ➤ Signals and Systems ➤ Elective I ➤ Artificial Intelligence and Intelligent Systems ➤ Power Electronics Laboratory ➤ Microprocessors and Microcontrollers Laboratory ➤ Electric Machine Design 		

SEMESTER VII	SEMESTER VIII
<ul style="list-style-type: none"> ➤ Utilization of Electrical Energy ➤ Digital Signal Processing ➤ Power System Protection and Switchgear ➤ VLSI Design ➤ Elective II ➤ Elective III ➤ Power System Protection and Switchgear Laboratory ➤ Digital Signal Processing Laboratory ➤ Minor Elective 	<ul style="list-style-type: none"> ➤ Elective IV ➤ Elective V ➤ Elective VI ➤ Project Work ➤ Minor Elective

Electives


<ul style="list-style-type: none"> • Energy Auditing and Management • Operating Systems • Distribution Systems Planning and Control • Modern Control Systems • Testing and Commissioning of Electrical Equipment • Safety Engineering • Consumer Electronics • Biomedical Instrumentation • Electrical Energy Conservation and Management • Advanced Electrical Machines • Computer Aided Power System Analysis • Process Control and Instrumentation 	<ul style="list-style-type: none"> • Mechatronics and Robotics • HVDC Transmission • FACTS • Power Quality • Generation Operation and Control • Data Structures and C++ • Advanced Power Electronics • Power Apparatus Systems • Intelligent Systems Application to Power Systems • Power System Stability and Control • Microwave and Radar Engineering • Programmable Logic Controllers • Database Management Systems • Wireless Communication Systems 	<ul style="list-style-type: none"> • Operations Research • VHDL • Power System Automation • Project Management • Digital Image Processing • Embedded Systems Design • Industrial Transducers and Sensors • Satellite Communication • Power System Restructuring and Deregulation • Advanced Electrical Drives • Software Engineering • Electromagnetic Compatibility • Advanced VLSI Design • Avionics and Aircraft Instrumentation
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Minor Electives

Business Administration	
<ul style="list-style-type: none"> • Customer Relationship Management • Entrepreneurship Management • Fundamentals of Accounting • Financial Management • Human Resource Management 	<ul style="list-style-type: none"> • Marketing Management • Managerial Economics • Quality Management • Management Information Systems • Principles and Practices of Management
Computer Science and Engineering	
<ul style="list-style-type: none"> • Algorithms • Object Oriented Technology • Databases 	


Note: An elective subject is offered in the B. Tech. in Electrical and Electronics Engineering course only if a minimum number of students enrol in it.





The rigor of a carefully crafted curriculum at the Alliance College of Engineering and Design as well as projects and industry internships in reputed companies—combine to impart the skill sets needed for market readiness.

**FATEMA MUSTAFA
B. Tech. 2013-17**

A young woman with glasses is focused on adjusting a piece of electronic equipment in a laboratory. In the background, other students are working at their desks, creating a busy academic environment.

B. Tech. in Electronics and Communication Engineering



B. Tech. in Electronics and Communication Engineering

The B. Tech. degree course in Electronics and Communication Engineering at the Alliance College of Engineering and Design, imparts strong theoretical foundations and practical learning to its graduates on electronic devices as well as rigorous training in research, design and development of such devices, and their broad-based applications. The course offers a wide spectrum of elective subjects that cover the application of sophisticated and cutting-edge technologies for device design such as satellite transponder technology and signal processing chip technology. In addition to common core subjects offered in the course, other elective subjects aim to sharpen technical expertise in graduates on the recent advances and innovations in electronics and communication such as Sensor Networks; Wavelength Division Multiplexing (WDM); Wavelet Transformations; Digital Signal Processing (DSP); Data and Image Compressions; and Satellite Communication.

SEMESTER I/II		SEMESTER I/II	
PHYSICS CYCLE	➤ Engineering Mathematics I/II	CHEMISTRY CYCLE	➤ Engineering Mathematics I/II
	➤ Basics of Mechanical Engineering		➤ Engineering Graphics
	➤ Foundations of Computing		➤ Basics of Electrical Engineering
	➤ Engineering Physics		➤ Engineering Chemistry
	➤ Basics of Civil Engineering		➤ Basics of Electronics Engineering
	➤ Environmental Engineering		➤ Technical English
	➤ Foundations of Computing Laboratory		➤ Engineering Chemistry Laboratory
	➤ Engineering Physics Laboratory		➤ Electrical and Electronics Laboratory
	➤ Basic Engineering Workshop		
SEMESTER III		SEMESTER IV	
➤ Engineering Mathematics III	➤ Engineering Mathematics IV	➤ Computer Organization and Architecture	
➤ Electronic Devices and Circuits	➤ Control Systems	➤ Digital Systems Design using Hardware Description Language	
➤ Field Theory	➤ Network Analysis	➤ Linear Integrated Circuits and Applications	
➤ Logic Design	➤ Hardware Description Language Laboratory	➤ Analog Communication Laboratory and Linear Integrated Circuits Laboratory	
➤ Signal and Systems			
➤ Analog Communication			
➤ Electronic Devices and Circuits Laboratory			
➤ Logic Design Laboratory			
SEMESTER V		SEMESTER VI	
➤ Digital Signal Processing	➤ Operations Research	➤ Microwave Engineering	
➤ Information Theory and Coding	➤ Digital Communication	➤ Digital Communication	
➤ Transmission Lines and Wave Guides	➤ Fiber Optic Communication	➤ Advances in VLSI	
➤ Microprocessors and Microcontrollers	➤ Elective I	➤ VLSI Laboratory	
➤ VLSI Design	➤ VLSI Laboratory	➤ Advanced Communication Laboratory	
➤ Antenna and Wave Propagation			
➤ Digital Signal Processing Laboratory			
➤ Microprocessors and Microcontrollers Laboratory			

SEMESTER VII	SEMESTER VIII
<ul style="list-style-type: none"> ➤ Telecommunication Switching Systems ➤ Computer Communication Networks ➤ Embedded Systems Design ➤ Elective II ➤ Elective III ➤ Mini Project and Technical Writing/Presentation ➤ Embedded Systems Laboratory ➤ Minor Elective 	<ul style="list-style-type: none"> ➤ Elective IV ➤ Elective V ➤ Elective VI ➤ Project Work ➤ Minor Elective

Electives


<ul style="list-style-type: none"> • VLSI Design • Artificial Intelligence • Satellite Communication • Embedded Systems Design • Digital Systems Design • Neural Networks and Fuzzy Logic • Biomedical Instrumentation • Digital Image Processing 	<ul style="list-style-type: none"> • Modern Digital Communication Systems • Wireless Communication • Digital Signal Processing and Architecture • Spread Spectrum Techniques • Antenna and Wave Propagation • Sensor Technology • Computer Vision
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Minor Electives

Business Administration	
<ul style="list-style-type: none"> • Customer Relationship Management • Entrepreneurship Management • Fundamentals of Accounting • Financial Management • Human Resource Management 	<ul style="list-style-type: none"> • Marketing Management • Managerial Economics • Quality Management • Management Information Systems • Principles and Practices of Management
Computer Science and Engineering	
<ul style="list-style-type: none"> • Algorithms • Object Oriented Technology • Databases 	<ul style="list-style-type: none"> • Client-Server Technology • Java Technology

Note: An elective subject is offered in the B. Tech. in Electronics and Communication Engineering course only if a minimum number of students enrol in it.





**The Alliance College of Engineering
and Design pursues excellence in
engineering and technology
education.**

**NAVNEET KRISHNAN
B. Tech. 2012-16**



B. Tech. in Aerospace Engineering



B. Tech. in Aerospace Engineering

Aerospace engineering has emerged as a field that focuses on using materials, structures, thermodynamics and control towards enhancing human mobility. Aerospace engineers, who specialize in areas such as structural design, propulsion, navigation and control, instrumentation, and propulsion communication—develop new technologies used in aviation, space exploration and defense systems. The B. Tech. degree course in Aerospace Engineering at the Alliance College of Engineering and Design, ensures that its graduates not only have a strong theoretical foundation but receive relevant practical experience through its advanced testing, simulation, and workshop and laboratory based learning. Aligning to industry demands, the course also offers emerging subjects such as satellite communication, hardware-software integration and the use of computer-based tools that assist in solving engineering problems.

SEMESTER I/II		SEMESTER I/II			
PHYSICS CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Basics of Mechanical Engineering ➤ Foundations of Computing ➤ Engineering Physics ➤ Basics of Civil Engineering ➤ Environmental Engineering ➤ Foundations of Computing Laboratory ➤ Engineering Physics Laboratory ➤ Basic Engineering Workshop 	CHEMISTRY CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Engineering Graphics ➤ Basics of Electrical Engineering ➤ Engineering Chemistry ➤ Basics of Electronics Engineering ➤ Technical English ➤ Engineering Chemistry Laboratory ➤ Electrical and Electronics Laboratory 		
	SEMESTER III		SEMESTER IV		
	<ul style="list-style-type: none"> ➤ Engineering Mathematics III ➤ Introduction to Aerospace Engineering ➤ Fluid Mechanics ➤ Engineering Mechanics ➤ Material Science ➤ Thermal Engineering ➤ Fluid Mechanics Laboratory ➤ Machine Shop 		<ul style="list-style-type: none"> ➤ Engineering Mathematics IV ➤ Theory of Elasticity ➤ Heat and Mass Transfer ➤ Manufacturing Process ➤ Aerodynamics I ➤ Theory of Machines ➤ Machine Drawing ➤ Aerodynamics Laboratory ➤ Material Testing Laboratory 		
	SEMESTER V		SEMESTER VI		
	<ul style="list-style-type: none"> ➤ Aircraft Structures I ➤ Propulsion I ➤ Mechanical Vibrations ➤ Flight Dynamics I ➤ Aerodynamics II ➤ Elective I ➤ Energy Conversion Laboratory ➤ Structures Laboratory 		<ul style="list-style-type: none"> ➤ Propulsion II ➤ Aerospace Materials ➤ Flight Dynamics II ➤ Introduction to Space Technology ➤ Aircraft Structures II ➤ Elective II ➤ Propulsion Laboratory ➤ Computer Aided Design/Computer Aided Machine Design 		

SEMESTER VII	SEMESTER VIII
<ul style="list-style-type: none"> ➤ Aerospace Control Systems ➤ Aerospace Avionics ➤ Aero Elasticity ➤ Elective III ➤ Aircraft Design I ➤ Project Work ➤ Summer Industrial Training (Internship) ➤ Aerospace Control Systems Laboratory ➤ Minor Elective 	<ul style="list-style-type: none"> ➤ Aircraft Design II ➤ Elective IV ➤ Elective V ➤ Project Work ➤ Minor Elective

Electives


<ul style="list-style-type: none"> • Reliability Engineering • Aviation Business Management • Advanced Manufacturing Techniques • Digital Signal Processing • Environment Control System • Composite Structures • Quality Management System • Supply Chain Management • Remote Sensing 	<ul style="list-style-type: none"> • Nanotechnology • Finite Element Analysis • Combustion • Rocket Propulsion • Computational Fluid Dynamics • Rotary Wing Aerodynamics • Hypersonic Aerodynamics • Gas Dynamics • Space Flight Mechanics • Satellite Communications 	<ul style="list-style-type: none"> • Aircraft Navigation, Guidance and Control • Aircraft Instrumentation • Flight Control System • Flight Simulation • Helicopters • Aircraft Acoustics and Noise Control • Acoustic Instabilities in Aerospace Propulsion
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Minor Electives

Business Administration	
<ul style="list-style-type: none"> • Customer Relationship Management • Entrepreneurship Management • Operations Research • Fundamentals of Accounting • Financial Management • Human Resource Management 	<ul style="list-style-type: none"> • Marketing Management • Managerial Economics • Quality Management • Management Information Systems • Principles and Practices of Management
Computer Science and Engineering	Electronics and Communication Engineering
<ul style="list-style-type: none"> • Algorithms • Object Oriented Technology • Databases • Client-Server Technology • Java Technology 	<ul style="list-style-type: none"> • Digital Image Processing • Embedded Systems Design • Computer Vision • Artificial Intelligence • Biomedical Instrumentation • Neural Networks and Fuzzy Logic • Introduction to VLSI

Note: An elective subject is offered in the B. Tech. in Aerospace Engineering course only if a minimum number of students enrol in it.





Alliance University in collaboration with the Vision Group on Science and Technology (VGST), Government of Karnataka has actively encouraged me to work on its Technology Related Innovative Projects (TRIP)—bringing me closer to my dream of becoming a world-class engineering professional.

ARSHIYAN KHAN
B. Tech. 2013-17



B. Tech. in Computer Science and Engineering



B. Tech. in Computer Science and Engineering

The B. Tech. degree in Computer Science and Engineering at the Alliance College of Engineering and Design, apart from offering common core subjects, extends to its graduates the flexibility to select from a wide range of elective subjects, which enables them to gain domain knowledge and practice-oriented learning in the key aspects of computer science and engineering—as well as newer academic insights into the salient advancements and emerging technologies. Electives thus offered aim at equipping graduates with the skills and expertise required to design and develop computer software that is applied to diverse system-based environments; computing solutions for optimizing and enhancing the performance of systems; and computers to solve challenges in areas such as robotics, computer vision, digital forensics, image processing and pattern recognition techniques, machine learning, and protocol verification techniques.

SEMESTER I/II		SEMESTER I/II	
PHYSICS CYCLE	➤ Engineering Mathematics I/II	CHEMISTRY CYCLE	➤ Engineering Mathematics I/II
	➤ Basics of Mechanical Engineering		➤ Engineering Graphics
	➤ Foundations of Computing		➤ Basics of Electrical Engineering
	➤ Engineering Physics		➤ Engineering Chemistry
	➤ Basics of Civil Engineering		➤ Basics of Electronics Engineering
	➤ Environmental Engineering		➤ Technical English
	➤ Foundations of Computing Laboratory		➤ Engineering Chemistry Laboratory
	➤ Engineering Physics Laboratory		➤ Electrical and Electronics Laboratory
	➤ Basic Engineering Workshop		
SEMESTER III		SEMESTER IV	
➤ Engineering Mathematics III	➤ Engineering Mathematics IV	➤ Unix Programming	
➤ Object Technology	➤ Microprocessors and Interfacing	➤ Design and Analysis of Algorithms	
➤ System Analysis and Design	➤ Principles of Data Communication	➤ Computer Graphics	
➤ Computer Organization and Architecture	➤ Microprocessors Laboratory	➤ Computer Graphics Laboratory	
➤ Design of Digital Systems			
➤ Data Structures			
➤ Data Structures and OOPS Laboratory			
➤ Digital Systems Laboratory			
SEMESTER V		SEMESTER VI	
➤ Theory of Computation	➤ Compiler Design	➤ Software Engineering	
➤ Operating Systems	➤ Java Programming	➤ Distributed Computing Systems	
➤ Database Systems	➤ Elective II	➤ Elective III	
➤ Systems Programming	➤ Compiler Design Laboratory	➤ Java Programming Laboratory	
➤ Computer Networks			
➤ Elective I			
➤ Computer Networks Laboratory			
➤ Database Systems Laboratory			

SEMESTER VII	SEMESTER VIII
<ul style="list-style-type: none"> ➤ Internet Applications Design ➤ Cryptography ➤ Fault Tolerant Computing ➤ Artificial Intelligence ➤ Elective IV ➤ Elective V ➤ Internet Applications Design Laboratory ➤ Minor Elective 	<ul style="list-style-type: none"> ➤ Elective VI ➤ Elective VII ➤ Elective VIII ➤ Project Work ➤ Minor Elective

Electives


<ul style="list-style-type: none"> • Advanced Networks • Data Warehousing and Business Intelligence • Advanced Microprocessors • Mobile Computing • Data Mining • Image Processing • Cloud Computing • Enterprise Resource Planning (ERP) 	<ul style="list-style-type: none"> • Neural Networks and Applications • Grid Computing • Cyber Forensics • Advance Analytics • Software Quality Assurance • Advanced Graph Theory • Operations Research • Multi-Agent Systems • Advanced Database Systems 	<ul style="list-style-type: none"> • Internet Technology • Research Methodology • Embedded Systems Design • Fuzzy Logic and Applications • Game Theory • Robotics: Vision and Control • Optimization Techniques • Service Oriented Architecture (SOA)
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Minor Electives

Business Administration	
<ul style="list-style-type: none"> • Customer Relationship Management • Entrepreneurship Management • Fundamentals of Accounting • Financial Management • Human Resource Management 	<ul style="list-style-type: none"> • Marketing Management • Managerial Economics • Quality Management • Management Information Systems • Principles and Practices of Management
Electronics and Communication Engineering	
<ul style="list-style-type: none"> • Digital Image Processing • Embedded Systems Design • Computer Vision • Artificial Intelligence 	<ul style="list-style-type: none"> • Biomedical Instrumentation • Neural Networks and Fuzzy Logic • Introduction to VLSI

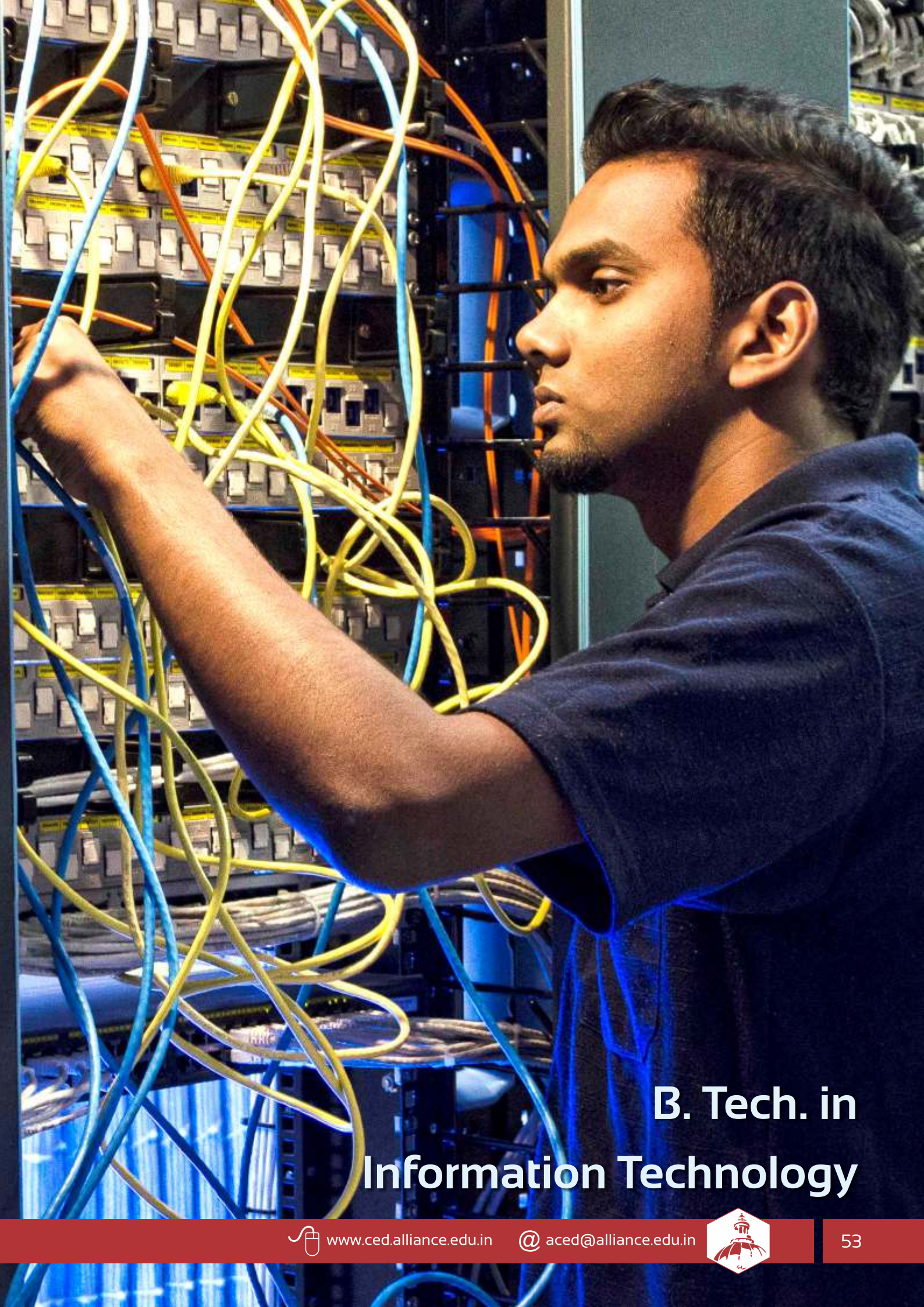
Note: An elective subject is offered in the B. Tech. in Computer Science and Engineering course only if a minimum number of students enrol in it.





The Alliance College of Engineering and Design places a high emphasis on the design aspects of engineering by developing design professionals who are passionate and creative problem-solvers, and possess strong fundamentals that are combined with a keen sense of aesthetics.

**JOHN HEBRON
B. Tech. 2012-16**



B. Tech. in Information Technology



B. Tech. in Information Technology

The B. Tech. degree course in Information Technology at the Alliance College of Engineering and Design focuses on developing its graduates into professionals and domain specialists in the area of information technology management, which it achieves by blending the application functionalities of software project management with software systems audit as applied to diverse programming paradigms. Apart from common core subjects, graduates also study elective subjects that deepen their expertise in the development of application software deployed across organizations to integrate and converge diverse processes: enterprise-wide applications; automation and system audit; and security management. In addition, graduates in the course are proficient in the applications of emerging technologies such as content management solutions, strategic computing, web engineering techniques, semantic web techniques as well as in other related areas such as cyber laws and ethics.

SEMESTER I/II		SEMESTER I/II			
PHYSICS CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Basics of Mechanical Engineering ➤ Foundations of Computing ➤ Engineering Physics ➤ Basics of Civil Engineering ➤ Environmental Engineering ➤ Foundations of Computing Laboratory ➤ Engineering Physics Laboratory ➤ Basic Engineering Workshop 	CHEMISTRY CYCLE	<ul style="list-style-type: none"> ➤ Engineering Mathematics I/II ➤ Engineering Graphics ➤ Basics of Electrical Engineering ➤ Engineering Chemistry ➤ Basics of Electronics Engineering ➤ Technical English ➤ Engineering Chemistry Laboratory ➤ Electrical and Electronics Laboratory 		
	SEMESTER III		SEMESTER IV		
	<ul style="list-style-type: none"> ➤ Engineering Mathematics III ➤ Data Structures ➤ Electronic Devices and Circuits ➤ Digital Design and Computer Organization ➤ Unix Programming and Practice ➤ Analysis and Design of Algorithms ➤ Data Structures and Algorithm Laboratory ➤ Digital Design Laboratory 		<ul style="list-style-type: none"> ➤ Engineering Mathematics IV ➤ System Analysis and Design ➤ Object Oriented Programming ➤ Microprocessors and Interfacing ➤ Computer Graphics ➤ Data Communication and Networks ➤ Microprocessors Laboratory ➤ Computer Graphics Laboratory 		
	SEMESTER V		SEMESTER VI		
	<ul style="list-style-type: none"> ➤ System Software ➤ Operating Systems ➤ Database Systems ➤ Software Engineering ➤ Automata Theory ➤ Elective I ➤ Operating Systems Laboratory ➤ Database Systems Laboratory 		<ul style="list-style-type: none"> ➤ Internet Applications Design ➤ Information Security ➤ Java Programming ➤ Distributed Computing Systems ➤ Elective II ➤ Elective III ➤ Internet Applications Design Laboratory ➤ Java Programming Laboratory 		

SEMESTER VII	SEMESTER VIII
<ul style="list-style-type: none"> ➤ Cryptography ➤ Software Testing ➤ Machine Learning ➤ Simulation and Modelling ➤ Elective IV ➤ Elective V ➤ Software Testing Laboratory ➤ Minor Elective 	<ul style="list-style-type: none"> ➤ Elective VI ➤ Elective VII ➤ Elective VIII ➤ Project Work ➤ Minor Elective

Electives

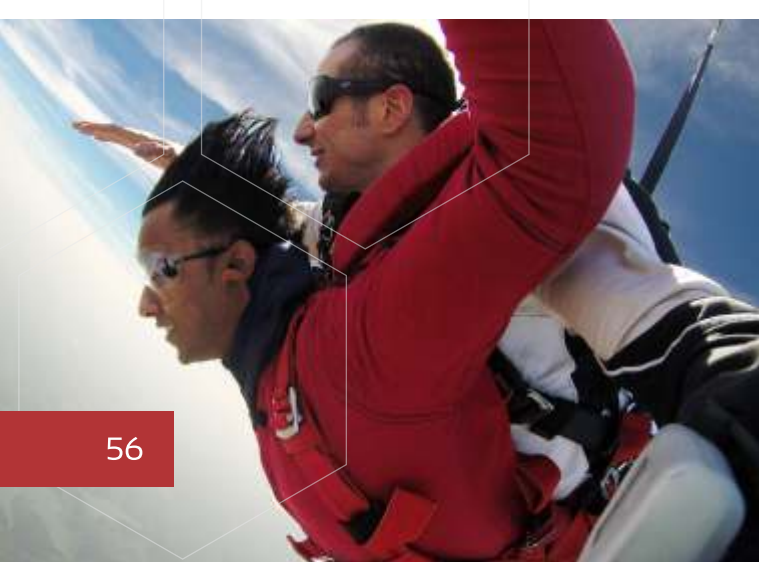
<ul style="list-style-type: none"> • Advanced Networks • Data Warehousing and Business Intelligence • Advanced Microprocessors • Mobile Computing • Data Mining • Image Processing • Cloud Computing • Enterprise Resource Planning (ERP) • Neural Networks and Applications • Geographic Information Science • Grid Computing • Cyber Forensics 	<ul style="list-style-type: none"> • Advance Analytics • Software Quality Assurance • Advanced Graph Theory • Operations Research • Multi-Agent Systems • Internet Technology • Research Methodology • Embedded Systems Design • Game Theory • Robotics: Vision and Control • Optimization Techniques • Service Oriented Architecture (SOA)
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Minor Electives

Business Administration	
<ul style="list-style-type: none"> • Customer Relationship Management • Entrepreneurship Management • Fundamentals of Accounting • Financial Management • Human Resource Management 	<ul style="list-style-type: none"> • Marketing Management • Managerial Economics • Quality Management • Management Information Systems • Principles and Practices of Management
Electronics and Communication Engineering	
<ul style="list-style-type: none"> • Digital Image Processing • Embedded Systems Design • Computer Vision • Artificial Intelligence 	<ul style="list-style-type: none"> • Biomedical Instrumentation • Neural Networks and Fuzzy Logic • Introduction to VLSI

Note: An elective subject is offered in the B. Tech. in Information Technology course only if a minimum number of students enroll in it.







Student Life

Student Services

The Office of Student Services functions with the motto of facilitating students to enhance their campus experience through accessing services, which cater to their holistic development—so as to make their living and learning experience at the Alliance campus truly memorable.

The Office of Student Services includes:

- Student welfare
- Sports and extra-curricular activities
- Student competitions and festivals
- Corporate Social Responsibility and related humanitarian services to society
- Campus living and discipline

Cultural and Sports Club

The Club targets and promotes athletic and aesthetic development of all students through varied competitive activities and events that endorse such knowledge. The motto is to encourage good sportsmanship and respect for all participants. Also, the Club:

- Emphasizes fun, teamwork and leadership
- Promotes good entertainment that is intellectually enriching
- Endorses cultural activities that uphold talent, creativity as well as curiosity and openness towards unfamiliar situations

Alliance Adventure Club

Adventure sports for students is highly popular with both undergraduate and postgraduate students of the University. This activity is championed by the Alliance Adventure Club where the students take a leadership role, and under the guidance of trained professionals and experts. The emphasis is on physical fitness, games, sports and adventure that aim to increase student productivity levels as well as build team spirit in an environment of friendship and trust. Also, participation in adventure and related outdoor activities promotes among students leadership, courage, vigor, and a sense of self-growth and comradeship.

Activities

- Air Gun Shooting
- Bamboo Rafting
- Camping
- Certificate course in Cardio Pulmonary Resuscitation
- Certified First Aid course
- Microlight Flight
- Paint Ball
- White Water Rafting
- Scuba Diving
- Wave Surfing
- Trekking
- Rappelling
- River Crossing, Zip Line and High Rope Crossing
- Tunnel Exploring
- Cave Exploring
- Zummaring
- Kayaking
- Chimney Climbing
- Archery
- Rock Climbing
- Para Sailing
- Summer Adventure Camp







Corporate Social Responsibility

Corporate Social Responsibility (CSR) at Alliance University has evolved to include the participation of all stakeholders: students, faculty, non-government organizations (NGOs) and the local community. Over the years, students and faculty at the University have actively participated in outreach program initiatives where they contribute their knowledge, skills and technical expertise to the community. At the same time, the University has enthusiastically supported the program activities of several NGOs operating in the community.

The CSR Center at the University encourages and propels graduates to imbibe the qualities of enlightened leadership and thereby instills in them a level of trust and confidence about themselves and the community. The values of social responsibility that graduates imbibe are:

- Genuine respect for others and their points of view
- The ability to be sensitive and to draw a line when making profits and contributing towards social investment
- Strong personal integrity and reaching out to those whose lives they can touch and make a difference
- Ability to handle challenging situations and providing workable solutions for the same



Corporate Social Responsibility at Alliance University aligns itself and works towards achieving the UN Millennium Development Goals, by 2015. In this context, several innovative programs in the thematic areas of health, education, environment, livelihood, natural resource management and the preservation of traditional arts and culture as well as other related areas are designed and implemented. These innovative programs are developed bearing in mind the local cultural context and the needs of beneficiaries. Apart from funding various activities of the communities, the University also extends its expertise in terms of knowledge and human resources for the success of the programs.

Key CSR activities include:

- T-20 Series – Cricket Match with the visually impaired, Samarthanam Trust for the Disabled, Bangalore
- “Alcoholism as a disease:” a lecture by Alcoholics Anonymous, Bangalore to students of Alliance University
- Blood donation and health camps organized in collaboration with Indira Gandhi Institute of Child Health and Narayana Health, Bangalore
- Orientation visits of students to the NGOs in collaboration with Youth for Seva, Bangalore
- Distribution of uniforms, shoes and stationery to underprivileged school children, Anekal, Bangalore
- Center for Women Empowerment, Alliance University
- Waste management workshops
- Earth Day Celebrations



Admissions

Bachelor of Technology (B. Tech.)

Eligibility	<ul style="list-style-type: none">• Passed 10+2 examination with Physics and Mathematics as compulsory subjects along with one of the Chemistry/Biotechnology/Biology/Technical Vocational subject• Obtained at least 45% marks (40% in case of candidate belonging to reserved category) in the above subjects taken together• JEE (Main); JEE (Advanced); Karnataka CET; COMED-K; Alliance University Engineering Entrance Test (AUEET); or any other State-level engineering entrance examination
Duration	Four years; Full time

Lateral Entry: Through the lateral entry option, candidates are directly admitted to the third semester (second year of study) of the B. Tech. degree course at the Alliance College of Engineering and Design.

Eligibility	Diploma or an equivalent qualification from a recognized university or institution with 45% marks (40% in case of candidate belonging to reserved category) in the final year examination (fifth and sixth semesters) and in an appropriate branch of engineering. Provided further that all candidates seeking lateral entry to the B. Tech. degree course are required to clear the prescribed subjects as specified by Alliance University.
Duration	Three years; Full time

Admission to the Bachelor of Technology (B. Tech.) course at Alliance College of Engineering and Design, Alliance University is strictly based on merit.

Application Procedure

- Applicants are encouraged to apply online at www.ced.alliance.edu.in
- The Application Form and Prospectus for the Bachelor of Technology (B. Tech.) course are also available at the Office of Admissions on the payment of ₹ 1000/- (₹ 2000/- for NRI / SAARC applicants and US\$ 50 for Foreign National applicants) in cash or through demand draft drawn in favour of "Alliance University College of Engineering" payable at Bangalore

Scholarships

Scholarships are available to support full-time study at Alliance University for resident Indian nationals only. Each year Alliance University awards several scholarships in the form of fee remission to outstanding candidates. These scholarships of positive inclusive effort vary in value and have different criteria on which they are awarded.

The Karnataka CET code for the Alliance College of Engineering and Design is E220.

Terms and Conditions

Students are required to abide by the following terms and conditions upon admission to the courses offered by Alliance University.

1. Every effort has been made to ensure the accuracy of the information contained in this Prospectus and it is issued on the express condition that all matters in it are subject to change from time to time without notice. While the Alliance University will make all reasonable endeavors to deliver the courses of study and other educational services as set out in this Prospectus, circumstances may change prompting the Alliance University to reserve the right to vary the content and delivery of courses and programs, to either discontinue or combine courses and programs or, alternatively, to discontinue educational services.
2. The subject titles, descriptions and contents are subject to change based on the University guidelines.
3. The fee schedule for the courses offered by the Alliance College of Engineering and Design can be downloaded at www.ced.alliance.edu.in Fees payable for the courses offered by the Alliance University are subject to review periodically. Ensuring that fees are paid before the announced due dates is the sole responsibility of the student. Non-payment of the prescribed fees within the due dates will result in the cancellation of the registration to the course or to the subsequent semester/year.
4. Students will also be liable for any travel and accommodation costs incurred for placement. For certain courses, students may incur additional specific charges for such items or activities as sports and games fees, specialized material or field trips. The Alliance University reserves the right to make additional charges to students for such activities.
5. The Alliance University may withdraw or amend its offer of admission, or terminate the registration, if it is found that either a false or a misleading statement has been made or that significant information has either been omitted or withheld in a candidate's application form.
6. The Alliance University does not accept responsibility and expressly excludes all liability that may result from any loss, damage or injury caused to a student or to the student's property.
7. Students enrolled in the courses offered by the Alliance University are required to sign an undertaking at the time of the commencement of the academic year consenting to abide by the rules, regulations and the code of conduct of Alliance University.
8. Scholarships are available to support full-time study at Alliance University for resident Indian nationals only. Each year Alliance University awards several scholarships in the form of fee remission to outstanding candidates. These scholarships of positive inclusive effort vary in value and have different criteria on which they are awarded. For further details, please visit: www.alliance.edu.in
9. Policy regarding refund of course fee:
 - a. The course fee has two components: Registration Fee and Tuition Fee.
 - b. The Registration Fee will not be refunded by Alliance University under any circumstances. The primary objective of this stipulation is to discourage frivolous applications.
 - c. The refund of Tuition Fee paid will be considered subject to the following criteria:
 - i. If a candidate withdraws from the course prior to its commencement, 75 percent of the tuition fee will be refunded.
 - ii. If a candidate withdraws from the course within one week after the commencement of the course, 60 percent of the tuition fee will be refunded.
 - iii. If a candidate withdraws from the course any time after one week from the date of commencement of the course, no refund of tuition fee will be made.



d. Additional provisions:

Reasons for seeking refund	Fee refund
Cancellation of admission is due to concealment or falsification of facts, submission of false or fake certificates, providing misleading information by the student or, alternatively, an error or mistake on the part of the student.	Nil.
If a student is provisionally admitted to a course, and becomes ineligible for admission on the declaration of the result of the qualifying examination and the student's admission is cancelled.	The amount already deposited by the student, after deduction of the processing fee of INR 1,000/-; the tuition fee is refunded on a <i>pro rata</i> basis.

Note: The University policy regarding procedure for refund of fees is enumerated on the website of respective courses.

10. Disputes of any kind are subject to the jurisdiction of the Courts in Bangalore only.

Ragging

The Alliance College of Engineering and Design has zero-tolerance policy on ragging and will strictly enforce it.

- ❖ Ragging in any form inside or outside the campus and hostel premises is strictly prohibited under the UGC Regulations on Ragging
- ❖ Ragging as defined by the Hon'ble Supreme Court of India:

"Any disorderly conduct whether by words spoken or written, or by an act with the effect of teasing, treating or handling with rudeness any other student; indulging in rowdy or undisciplined activities which causes or is likely to cause annoyance, hardship or psychological or to raise fear or apprehension thereof, in a fresher or a junior student, or asking the students to do any act or perform something which such student will not do in the ordinary course and which has the effect of causing or generating essence of shame or embarrassment so as to adversely affect the physique or psyche of a fresher or a junior student."

Other undergraduate courses offered by Alliance University

Bachelor of Business Management (BBM)

Full time; Three years

Bachelor of Arts, Bachelor of Law Honors (B.A., LL. B. Hons.)

Full time; Five years

Bachelor of Business Administration, Bachelor of Law Honors (BBA., LL. B. Hons.)

Full time; Five years




Bachelor of Commerce (B. Com. Hons.)

Full time; Three years



Alliance University received the Brands Academy Education Excellence Award (2013) for the Most Innovative University in South India

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	http://allianceuniversitybangalore.wordpress.com/



Scan the QR code to register your interest

Disclaimer: The information provided in this Prospectus aims to be correct at the time of going to the press; however, the University reserves the right to make changes or add to any of the information contained herein without prior notice.
Any dispute that may arise is subject to the jurisdiction of the Courts of Bangalore.



ALLIANCE UNIVERSITY

*Private University established in Karnataka State by Act No.34 of year 2010
Recognized by the University Grants Commission (UGC), New Delhi*

Alliance College of Engineering and Design

For more details, visit: www.ced.alliance.edu.in

Office of Admissions, Alliance University

City Campus: 2nd Cross, 36th Main, Dollars Scheme, BTM I Stage, Bangalore - 560 068, Karnataka, India

Central Campus: Chikkahagade Cross, Chandapura-Anekal Main Road, Anekal, Bangalore - 562 106, Karnataka, India

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