



# ALPHA

COLLEGE OF ENGINEERING  
— THIRUMAZHISAI —



# ALPHA COLLEGE OF ENGINEERING

## About Alpha Group of Institutions

The Alpha Group of Institutions has scripted success stories in the field of education ever since its inception in the year 1967. The Group presently runs and manages seven educational institutions offering state, national and international curricula – nurturing students to be global achievers for tomorrow's world.

## About Alpha College of Engineering

The Alpha College of Engineering (established in 2006) is affiliated to the Anna University. The internationally acclaimed TUV Sudeutschland, Germany, awarded ISO 9001:2008 certificate for Academic Standard. A Christian minority college, it cultivates values that foster a community of competent youth who contribute towards national and global development, serving humanity at large.

## Chairperson's Message

Warm greetings from Alpha Group of Institutions. Our propensity to learning has steered us to expand our horizons as we complete our first decade of the engineering college. The institution has already made a mark in discipline and academic pursuits apart from extra-curricular activities. Our search is incessant, our service is ceaseless and our perseverance untiring. Imparting right knowledge, enhancing wisdom and creating distinct individuals is our pursuit. Wishing you many memorable moments in Alpha College of Engineering.

**Dr. MRS. GRACE GEORGE**  
Founder Chairperson, Alpha Group of Institutions



## Vice Chairperson's Message

The belief that education is a preparation for life and not acquired just to make a living is the edifice on which Alpha has been established. To prepare and empower the students for life by imparting holistic education encompassing the intellectual, emotional, social, physical and spiritual facets and attributes is the core essence of our pedagogy and training. Lateral thinking and the ability to process knowledge and information in a critical and analytical manner are very essential in today's competitive world. The skills to be imbibed in order to interpret and apply the knowledge and to provide solutions to complex problems and the ability to make informed decisions is a very essential quality much sought after in the corporate environment. Hence we ensure that these skills are developed by benchmarking our teaching and training to the best global practices and research. The true goal of education is not to be self-serving but to serve and contribute to society with empathy and benevolence. We aspire to make every student in our care to blossom into responsible and thinking individual who would be a life-long learner and also be an agent of transformation and a trust worthy citizen.

**MRS. SUJA GEORGE**

Vice Chairperson, Alpha Group of Institutions



## Principal's Message

I welcome you all to Alpha College of Engineering. Established in the year 2006, it is approved by the All India Council of Technical Education and affiliated to Anna University, Chennai.

Today, education does not end in a classroom and means much more than merely acquiring knowledge. It is acquisition of skills, building character and improving employability of our young talent, the future leadership.

No efforts are spared to make the educational experience of our students meaningful and relevant to the socio-economic needs of the times and to equip our youth to face the challenges of the future for leading the society from the front, while ensuring that at the same time they are enjoying their experience of learning.

I hope that the coming years of your study in this institution, will prove to be the most fruitful and glorious part of your educational career.

**DR. ANITA TITUS**

Principal, Alpha College of Engineering



“When educating the mind of our youth, we must not forget to educate their hearts”.

- Dalai Lama



# ALPHA EXCELLENCE

SCHOLARSHIPS  
AND LOANS

## CAREER ORIENTED ACADEMICS

Graduate Engineering Employability Programme (GEEP)

Career Development Cell & Softskills Development

E-Cell for Entrepreneurship



## PLACEMENT

The placement record of Alpha is one of its celebrated features.

The 2016-2017 batch at Alpha got 500 + offers from various companies.

100%



# CAREER ORIENTED ACADEMICS

We have integrated the Graduate Engineering Employability Programme (GEEP) with our regular courses to empower students. GEEP is accredited to National Skill Developmental Council (NSDC) and National Occupational Standards (NOS). It increases the engagement of the students with the industry. Students will be able to interact with top industry leaders and gain insights into the working of the industry. Top performing students also have a chance of getting sponsorships from the industry. At the end of the programme students are completely job ready. After getting placed in companies they do not require the usual training to start working as they are already trained. The accredited programme is also certified by the industry with whom we collaborate. Skills required by the industry will be imparted at Alpha which are aligned to NOS and certified by industry.

We also conduct programmes for life skills of students through structured programmes in a fun and entertaining way. Engaging sessions managed, developed and run by students help them to adapt to different circumstances and learn through experience.



## E-CELL FOR ENTREPRENEURSHIP

The objective of the E-Cell is to throw light into the opportunities of entrepreneurship and to nurture the passion for creativity and innovation among the students. Various activities are organized by e-cell, to encourage the students to identify the entrepreneurial skills and pave way for developing them. E-cell provides a platform for students to convert their ideas into business plans that can be implemented. Various other activities include e-talks by eminent speakers and exposure to seminars and conferences that enhance overall development of students and help them become hardcore entrepreneurs.





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## GRADUATE ENGINEERING EMPLOYABILITY PROGRAMME (GEEP)

To bridge the gap between the industry requirements and the availability of surplus students, Graduate Engineering Employability Programme is offered as a Value Added Training program to students along with their regular degree course to make the students industry ready and employable when they complete their graduation. It is a comprehensive program, catering to all students irrespective of their departments. The courses are designed to meet the ever-changing demands of various industries. The course contents are frequently updated by industry experts in order to keep the students up-to date.



### Why GEEP?

- Training backed by industry experts
- Right training to right person at right place
- Provides quality training in line with industry requirements and expectations
- Syllabus in line with the current trend and industry requirements
- Employment oriented
- Good platform to learn both hard skills and soft skills simultaneously
- Team of certified & qualified faculties with several years of experience
- Trusted name among academicians and in the industry

### PLACEMENT ASSISTANCE

At GEEP, placement assistance will be provided to students as they are assessed based on the Continuous & Comprehensive Evaluation Method (CCE Method).

## CAREER DEVELOPMENT CELL & SOFTSKILLS DEVELOPMENT

The mission of the CDC is to help the students achieve their educational and career goals, acquire job assuring skills and get placed in reputed firms.

### Career Guidance Help Desk

This is yet another special initiative of ACE with the following features:

Will be open for students during the short breaks, lunch break and after college hours.

Information related to companies, competitive exams and certifications made available to students

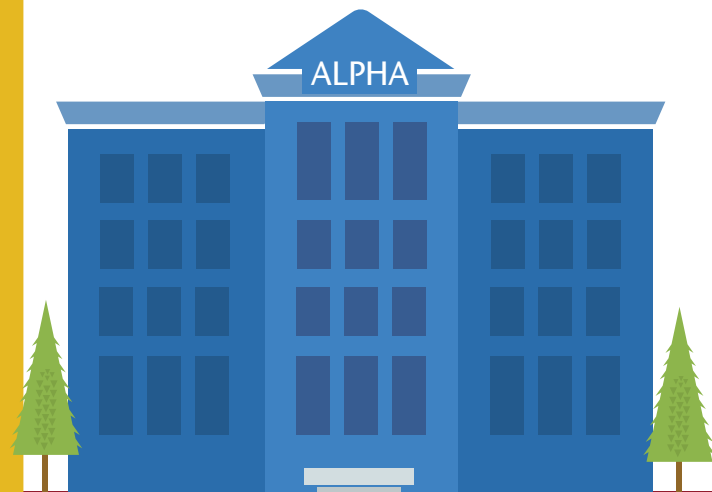
The same information is also made available in APSE.

Aptitude test questions (every evening 25 questions) uploaded in APSE and the solutions are displayed on the notice board and also in APSE, the next morning.

Students at Alpha go through a set of soft skill development programmes that are aimed to empower them. Fluency in English, 'people skills'- which include team work, managing people, leadership etc., are some of the areas that are focused upon.



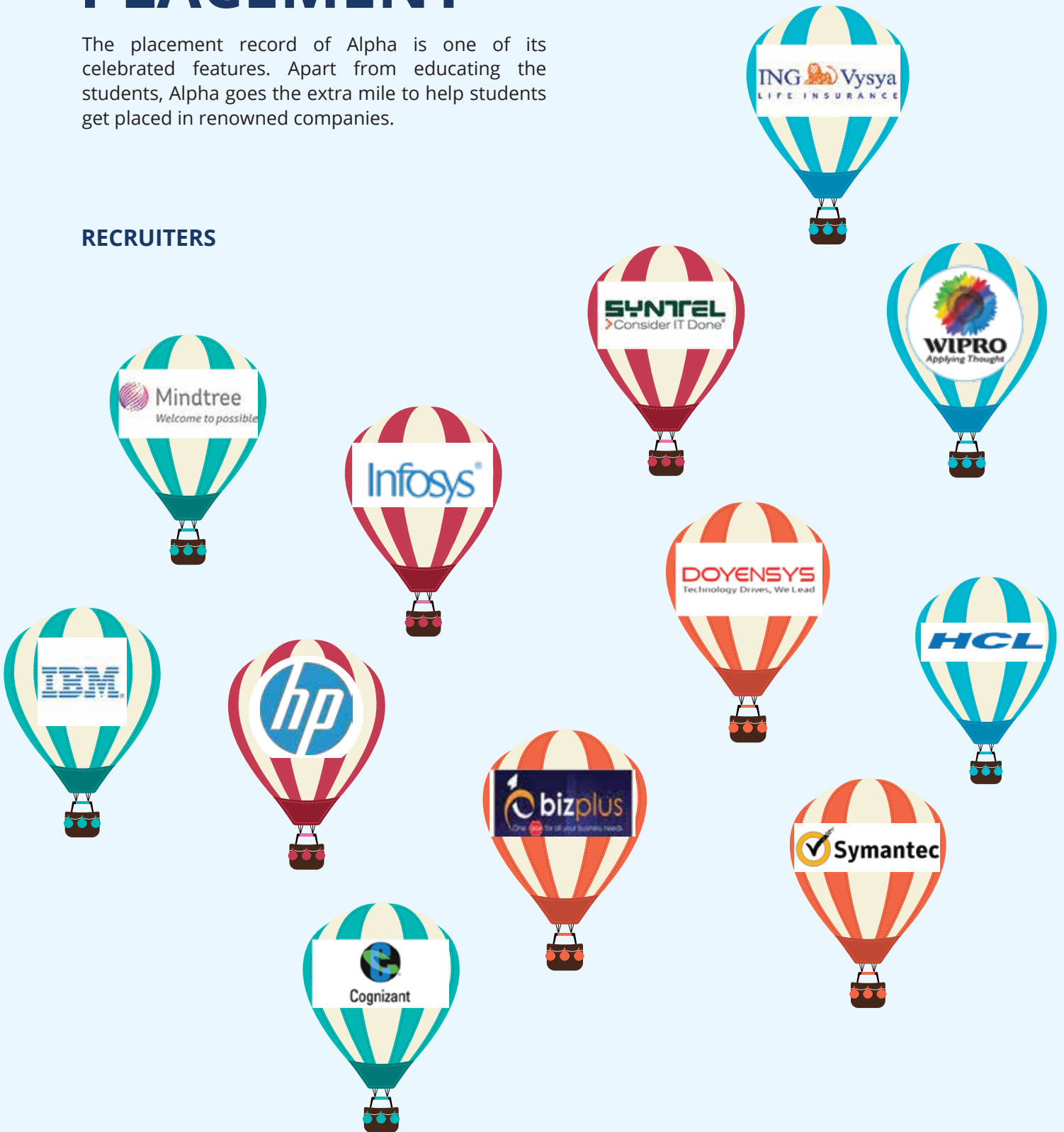
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# PLACEMENT

The placement record of Alpha is one of its celebrated features. Apart from educating the students, Alpha goes the extra mile to help students get placed in renowned companies.

## RECRUITERS



## ALPHA MERIT SCHOLARSHIP SCHEME

The Alpha Group of Institutions and its promoters have been passionate about extending the benefit of their endeavours to all deserving students irrespective of their social or economic background.

### Objective

The objective is to recognize and reward excellence by offering merit scholarships to students who secure admission to Alpha College of Engineering based on their academic performance in the qualifying examination.

### Eligibility & Selection

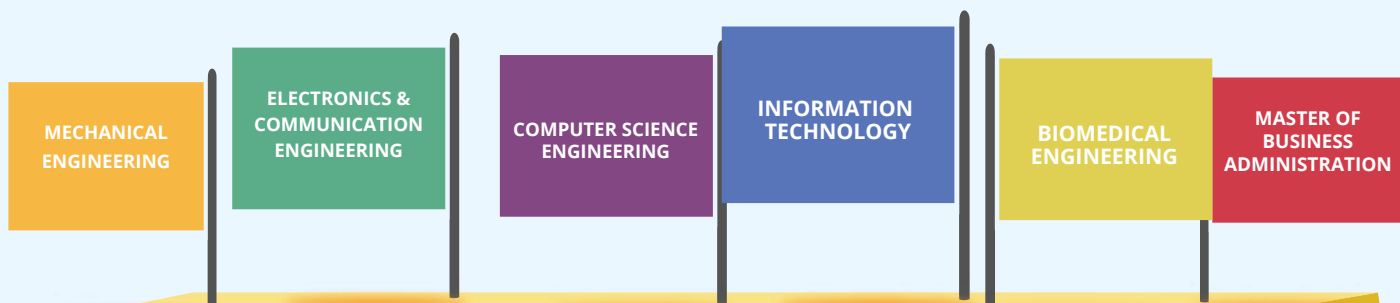
Students who secure not less than 90% marks in the qualifying public examination as prescribed by Anna University will be eligible to apply for a merit scholarship. All applicants will be ranked in the order of their merit. The grant of scholarship will be subject to the applicant securing admission to the Alpha College of Engineering. The award of scholarship will be restricted to the number of scholarships approved for that academic year. The awardee will be designated as Alpha Scholar during the tenure of the scholarship. A candidate may decline an award of scholarship. In such instance, the scholarship will be offered to a wait-listed candidate next in the order of merit.

### Number of Scholarships

The number of scholarships for each academic year will be determined by the management and will be notified before the commencement of admission process. Generally, 5% to 10% of the sanctioned seats in each stream will be earmarked for award of merit scholarship.

## PLACEMENT RECORD 2016 - 2017

Alpha Students got 500 + Offers from various companies.



**ALPHA**  
COLLEGE OF ENGINEERING  
**100%**  
**PLACEMENT**

Department Achievements: (Placement %)



# ELECTRONICS & COMMUNICATION ENGINEERING

The Department of Electronics and Communication Engineering was established in the year 2006. It is focused on creating a high-standard academic environment that provides students with a solid, technical foundation that enables students to be key players in the local, regional and national markets.

The department has excellent infrastructural facilities to provide quality education in the area of Information Technology.



## THE TEAM

The team is well qualified and experienced. It is focused on establishing, maintaining and advancing a broad understanding of electronics and communication concepts in order to fulfill their academic and professional goals.

## LABS

The department's laboratories are well equipped with the latest hardware and advanced software to facilitate students in their pursuit to acquire practical knowledge of Electronics and Tele-Communication. Laboratories are available in-house for - VLSI & Communication | DSP & Networks | Microprocessor & Microcontrollers | Digital & Linear Integrated Circuits | Microwave and Optical | Embedded System | Electrical Machines | Electron Devices & Circuits

## PROFESSIONAL BODY

The department has excellent infrastructural facilities, to provide quality education to students. The department has a strong association with professional bodies like IEEE & ISTE

## INDUSTRY INTERFACE

The department is part of CISCO Networking Academy through which the students become network experts and get CCNA Certification. The department is a member of ICTACT Academy which helps develop the Communication skills of students through their Youth Circle Program. The department promotes continuous learning and research in core and emerging areas with help of IIT alumni club "PALS".

## SPECIALISATIONS FOR HIGHER STUDIES

Nanotechnology | Robotics | High Speed Automated Processors in Embedded Systems and Image Processors

## CAREER SCOPE

Scientists and Engineers | Industrial Manufacturing Engineers | Technical Sales and Marketing | Technical Writers | Customer Support Officers | Laboratory Technicians | Field Service Technicians | Service-shop Technicians | Engineering Assistants

# BIOMEDICAL ENGINEERING

The Department of Biomedical Engineering was established in the year 2006. Biomedical Engineering is a distinctive field that encompasses engineering disciplines, biology, life sciences, medicine, clinical applications and the improvement of human health. It offers BE Degree in Bio Medical Engineering.



### THE TEAM

The department is headed by an experienced and energetic team dedicated to impart theoretical and practical knowledge to the students and empower them to succeed on a global level.

### LABS

- Biochemistry and Human physiology LAB - In this laboratory two lab classes are conducted - during odd semester Biochemistry and Human Physiology Lab, and in even semester, Pathology and Microbiology.
- Biomedical Instrumentation LAB - In this laboratory two lab classes are conducted - during odd semester, Biomedical Instrumentation Lab and in even semester Diagnostic and Therapeutic Equipments LAB.

### PROFESSIONAL BODY

The department is associated with BMESI (Bio-Medical Engineering Society of India), the professional body for BME.

### INDUSTRY INTERFACE

The department has signed MOUs with - Nice Neotech Medical Systems Pvt. Ltd, Chennai; CSC Corporation, Chennai; Frontier Lifeline Hospital, Chennai.

It has a very strong network with all leading hospitals such as Sri Ramachandra University – under which students regularly work for their assignments and projects.

### SPECIALISATIONS FOR HIGHER STUDIES

Biomedical Instrumentation | Medical Simulation

### CAREER SCOPE

Bio-medical engineers are employed in industries, hospitals, research facilities, pharmaceutical and biomedical research organisations. They are involved in the design, development and research of devices, technologies which include modifying the existing equipment, software development, and networking.

# MECHANICAL ENGINEERING



The Mechanical Engineering branch started in the academic year 2012-2013. Since its inception it has scaled up to one of the most popular branches of Engineering. The department offers four year BE Degree in Mechanical Engineering. The Mechanical Engineering Department strives to be recognized globally for outstanding education and research leading to well-qualified engineers, who are innovative, entrepreneurial and successful in advanced fields of engineering and research.

## THE TEAM

Department of Mechanical Engineering offers four year BE Degree in Mechanical Engineering. It is headed by a team of experienced and energetic faculty members.

## LABS

Laboratories are available for Engineering Practices - Manufacturing Technology | Fluid Mechanics and Machinery | Strength of Materials | Thermal Engineering (2 labs) | Dynamics | Metrology and Measurement | Mechatronics | CAD/CAM

## PROFESSIONAL BODY

The department commenced the "SAE Collegiate Club" for mechanical engineers.

## INDUSTRY INTERFACE

The department is highly connected with industry through which students are exposed to industry practices. Guest lectures by eminent industrialists, visits to industrial houses and industrial tours enhance the quality of the students. Students are engaged in industry assignments, internships and projects. Students have undergone In-plant training in various factories like Hyundai, Ashok Leyland, Ford Motors, Spic etc

## SPECIALISATIONS FOR HIGHER STUDIES

Manufacturing Engineering | Aerodynamics | Aerospace Propulsion | Aerospace Structure | Thermal Energy and Environmental Engineering | Refrigeration and Air Conditioning

## CAREER SCOPE

Automobile Industries | Aerospace Industries | Steel Plants | Computer Industries | Postal Departments | Banking Sectors

# INFORMATION TECHNOLOGY

The Department of Information Technology was established in the year 2006. It has excellent infrastructural facilities to provide quality education in the area of Information Technology. It offers B.Tech Degree in Information Technology. It is focused on creating a high-standard academic environment that provides Information Technology students with a solid, technical foundation that enables them to be key players in the local, regional and national markets.



## THE TEAM

The team headed by experienced and committed faculty members is focused on establishing, maintaining and advancing a broad understanding of computer science

## LABS

- IT Lab I - The pre-final year students are allotted a separate computer with tools such as Case Tools, IBM Rational Rose, Eclipse, and Netbeans for conducting security and network projects.
- Communication Lab - Equipped with english mastery software, students are trained in the areas of verbal communication and group communication.

## PROFESSIONAL BODY

The department has a strong association with professional bodies like CSI & ISTE.

## INDUSTRY INTERFACE

The Department of Computer Science and Engineering has Oracle Academy, and CISCO Networking Accademy which enables the students to excel in Oracle packages and become network experts with CCNA Certification. The department is a member of ICTACT Academy which helps develop the Communication skills of students through their Youth Circle Program. The department has signed an MOU with ICTACT for creating Center of Excellence for Data Analytics Programme. The department also promotes continuous learning and research in core and emerging areas with help of IIT alumni club "PALS".

## SCOPE OF INFORMATION TECHNOLOGY

Year after year, IT students are placed in various reputed Companies like Infosys, CTS, TCS, Syntel, Enchanter, CSS Corp, Sutherland, etc.

## SPECIALISATIONS FOR HIGHER STUDIES

Computer Science and Engineering | Networking and Communication, Software Engineering / Architecture | Automation and Computing in Industrial Technologies | Technology in Knowledge Engineering | Image Processing and Computer Vision | Computer Engineering and Information Systems | Cyber Security

## CAREER SCOPE

Business Analyst | Database Administrator | IT Consultant | Multimedia Programmer | Systems Developer | UX Analyst | Digital Copywriter | IT Sales Professional | Network Engineer

# MASTER OF BUSINESS ADMINISTRATION

Department of Management Studies at Alpha College of Engineering was established in the year 2008. It is affiliated to Anna University and offers a 2 year Full time MBA Program with specialization in – Finance, Marketing, Human Relations, Systems and Operations. The Department is set against a backdrop of lush green campus, thus creating a conducive environment for holistic learning.



The programme aims to offer students an understanding of the context of business and the range of career options. This programme equips students with the fundamental skills in the area of problem analysis, quantitative methods, accounting and economic analysis, information technology and communication which enable the students to gain an integrative perspective of functional areas of business providing them with the competencies needed to address complex business problems.

## THE ALPHA ADVANTAGE

The Alpha MBA programme is designed to empower you to take the lead in all aspects of your life by providing :

- a professional growth environment
- the system to explore new opportunities
- the nuances to lead an enterprise
- the zeal to better your community and
- the drive to take the lead and make a difference

## INDUSTRY INTERNSHIP

Industry Internship aims to provide students with an insight into the working of a real organization and provides a platform to apply the acquired knowledge. It also helps them explore various career opportunities as well as develop their professional skills. Students will be doing a mini project after their 2nd semester and a major project during their 4th semester.

## THE INFRASTRUCTURE

The department has spacious class rooms, faculty rooms, well stocked library, fully equipped lab, medical room, rest rooms, administrative area, fully air conditioned auditorium, smart class rooms with projectors, seminar halls, Student Learning Center, etc.

## SCOPE OF MBA

The graduates of MBA Dept can pursue research at MPhil / Doctoral Programs; can take advantage of career opportunities in any company; or can become a teacher and teach BBA / BCom/ BCA / MBA students in Arts and Science Colleges, Engineering Colleges, Government or Self Financing Colleges etc. They can opt for starting their own ventures, or they can opt for higher studies abroad.



# INFRASTRUCTURE & PEDAGOGY

## EDUCATIONAL INFRASTRUCTURE

We attach great importance to research based teaching. The state-of-the-art infrastructure includes well equipped laboratories and advanced instrumentation research facilities. The 'Centre for Advanced Biomedical Instrumentation' houses CT scan/X-Ray machines, c-arm and other high-end biomedical instrumentation facilities rarely found in educational institutions.

## PEDAGOGY

The teaching ensures that the students get more exposure on the theory as well as practice through hands on training. Academic delivery is done through a combination of tools such as - board and chalk, Power point, videos etc.

## GENERAL AMENITIES

### Library

The college library, which is the heart of this academic institution, caters to the needs of both the staff and student community. The library is well stocked with text and reference books recommended by Anna University. The library also procures primary source materials like national and international journals, magazines, encyclopaedias, dictionaries, CD ROM databases, and journals to enhance the student's individual technical knowledge. It has a collection of over 20,000 volumes of management books, national and international journals. To facilitate learning, the library has a collection of corporate reports, project reports and dissertation of students. The Library facilitates IEEE and NPTEL video access.

### Transport

The college has a fleet of buses providing excellent transport facility, covering different parts of the city. All students in their own interest are expected to travel in the college bus.

### Sports

A healthy mind dwells in a healthy body. Sports and games require great level of concentration and kindle a fire in the young minds to succeed. It develops a sportive spirit in the personality to produce a responsible and disciplined engineer. The college has a 200-meters athletic track, football ground, cricket ground, volley ball court, basket ball court and badminton court. Indoor games like table tennis, chess and carrom are also available.

### Hostel

The college has separate hostels for boys and girls. It is run in a congenial atmosphere and it is really a home away from home offering care and protection. Study hours are maintained under the strict supervision of wardens. The hostel provides library, reading materials and internet facilities.

### Canteen

The college canteen is located in the college premises and provides breakfasts, lunch, takeaways, beverages and snacks for students. The rates too are affordable. The college canteen is a spacious area, with a view of greenery all around. It tends to be the most popular place on campus, not only for refreshments but also for student bonding, discussions and even working on assignments and projects.



# ACADEMIC SUPPORT & GUIDANCE

## TRAINING

Technical training - apart from the academic delivery by highly qualified and dedicated faculty, students undergo extensive training in relevant technical value added courses like - HW & Networking, PHP, Python, Linux, Computer Hardware etc. by Futurenet Technologies India Pvt Ltd.

Non - technical training, including Language and Soft skills is given by in-house CDC and Futurenet Technologies India Pvt Ltd. For improving their language skills, students take their BEC (Business English Certificate) certification by the British Council. Students are also members of ICTACT Youth Circle.

## TARGETING SUCCESS-INTERNSHIPS

The Alpha Group has to its credit a proven track record of industry internships and 100% placements.

Alpha College of Engineering has geared up its students for recruitment in coveted corporates such as Cognizant, Mphasis, Infosys, HCL Technologies, Sun Pharmaceuticals, Bajaj Capital, Google and others.

## EXPANDING HORIZONS-INDUSTRY INTERFACE

Alpha perceives academia and industry as complementary entities that stand to mutually

gain from each other's strengths. To this end, we place great emphasis on developing strong links with the industry through joint programs, invited lectures and workshops. Doyensys, Accel Animation Studios, Orchid Pharmaceuticals, Ford India, St. Thomas Hospitals and New Hope Hospitals are some of our esteemed industry partners who support us in our ventures. Students are constantly exposed to a host of activities that hone their technical and intellectual skills.

Highlights : Regular seminars | Paper presentations | Mini projects | Industrial visits | Study tours | In-plant training etc.

## ENGLISH & FOREIGN LANGUAGE DEVELOPMENT CELL

We believe in multilingual capabilities as they enable students integrate into global village. French, Japanese, Chinese, Spanish and English -- speaking and writing capabilities are built up in this cell.

## STUDENT FOR STUDENT PROGRAMME (S4S)

This programme promotes

- Peer learning
- Group study



### STUDENT LEARNING CENTRE (SLC)

Students utilize this centre, during FAP and exam times.

Highlights:

- 10 systems with internet connections
- LCD projector for video presentations
- T4S and S4S programmes
- Students can use APSE & MLM from SLC

### FACULTY ADVISOR PROGRAMME (FAP)

Every class is divided into three groups of 15 to 20 students each, based on the class strength. The faculty advisor is the local guardian for the students who caters to the academic needs of the students and periodically monitors their progress. The eighth period of every day is earmarked for this purpose.

### TEACHER FOR STUDENT PROGRAMME (T4S)

Students can fix an appointment with any faculty based on the expertise and experience of the faculty member to clear doubts, discuss project work, prepare for symposiums and get guidance for competitive examinations such as GATE, GRE, TOEFL, GMAT etc.

### ALPHA PORTAL FOR STUDENT EXCELLENCE (APSE)

Material such as notes, minimum learning material, question bank, model question paper with solutions, announcements from the lecturer, reference material are available for all

the subjects of all the departments for all the four years. Material related to placement training, preparation for Graduate Aptitude Test in Engineering (GATE), Graduate Record Examination (GRE), Test of English as a Foreign Language (TOEFL), Common Admission Test (CAT) are available in APSE. A username and password will be provided to students for gaining access to APSE.

### MINIMUM LEARNING MATERIAL (MLM)

This MLM can help the students to pass in university exams.

- Book contains material for all 6 (Theory) + 3 (Practicals)
- Syllabus - framed by Anna university
- Lesson plan (unit wise/ period wise)
- Key points – unit wise, topic wise
- Question bank (unit wise, part A- 2 marks & part B – 16 marks)
- Model University questions papers

Lab manual – list of experiments, procedures, detailed diagrams, sample results.

### STUDENT CLUBS & ACTIVITIES

#### YOUTH RED CROSS (YRC)

The Youth Red Cross unit of the college is a constituent of its mother organization, Indian Red Cross. It was started in the college in the year



2006 to create awareness about personal and public health, encourage a humanitarian approach in addressing related issues, promote a spirit of dedicated service and foster affable relationships without discrimination. Every year the YRC wing of the college organizes Blood Donation Camps, Medical Camps, AIDS Awareness Programmes, First Aid Training Programmes, Anti-Smoking Campaigns and Programmes on Environmental Pollution Control.

#### **RED RIBBON CLUB (RRC)**

The Red Ribbon Club of the college works to create awareness amongst students on various issues of crucial importance related to health. It works to create awareness on sexually transmitted infections among youth, HIV/AIDS and sexual reproductive health. The RRC also prepares its youth as peer educators/agents of change by developing their leadership and team building skills to help them effectively communicate the knowledge gained on self-protection and prevention and also to encourage blood donations. For this purpose, the club organizes seminars, camps and competitions for students at regular intervals.

#### **NATIONAL SERVICE SCHEME (NSS)**

The NSS unit of the college is actively engaged right through the year in conducting awareness programmes on several issues of social and environmental relevance like eye donation and global warming. It conducts blood donation camps and free eye camps for the benefit of the

local community. The unit also attempts to create awareness on environmental conservation through an annual sapling planting programme.

## **LATERAL ENTRY CANDIDATES**

### **QUALIFYING EXAMINATION**

#### **Diploma Candidates**

A pass with prescribed minimum eligibility marks in any diploma in appropriate branch of Engineering/ Technology of the State Board of Technical Education and Training, Tamilnadu or equivalent prescribed for admission to the degree course.

#### **B.Sc Candidates**

A pass with prescribed minimum eligibility marks in any recognized Bachelor's degree in science of minimum 3 years duration (10+2+3 pattern) with core mathematics as one of the subjects at degree level.

**Note:** Candidates with degree other than Bachelor of Science are not eligible. With regard to diploma qualifications, clarifications if any will be sought from DOTE before admission. On any account, candidates without prescribed qualifications will not be given admission approval.



**Alpha College of Engineering**

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