

The ICFAI Foundation for Higher Education, Hyderabad

(Deemed-to-be-University under Section 3 of the UGC Act, 1956)

Autonomous Institution. Accredited by NAAC with 'A+' Grade

ICFAI
TECH SCHOOL

B.Sc | **B.Sc**
Mathematics | **Physics**
(2018-21)

3 Year Full-time Campus-based Program



ICFAI[®]
GROUP

• 11 Universities • 9 B-Schools • 7 Tech Schools • 5 Law Schools • 3 Decades in Flexible Learning

Contents

The ICFAI Group	4
The ICFAI Universities	5
Message from the Vice Chancellor.....	6
Message from the Director.....	7
The ICFAI Foundation for Higher Education.....	8
Rankings & Accreditations	9
The ICFAI Tech School	10
The BSc Program	11
Mathematics	12
Physics.....	13
Facilities & Resources	14
Education Methodology.	15
Placements.....	16
Campus Life	17
Student Activities	18

The ICFAI Foundation for Higher Education

(A Deemed to be University under Section 3 of the UGC Act, 1956)



The ICFAI Group

Pioneering professional education for over 30 years

ICFAI was established in 1984 as a not-for-profit society with the broad objective of empowering citizens through world class quality education. The Institute announced its arrival into the Indian education arena by launching a high end, innovative professional program in financial analysis in 1985. The Program was first-of-its-kind in India, aimed at equipping students and working professionals with cutting-edge knowledge in contemporary areas of finance. Since its establishment, ICFAI Group has made a significant mark in the Indian educational field with a pan-Indian network and presence.

Innovation has been the mainstay of ICFAI Group with innovation prevalent in its programs and even its culture. Subsequently, there was a big leap when ICFAI Group started its chain of business schools (IBS) across India in 1995 to offer management program. Since its inception, IBS has been consistently ranked among the top ranked B-Schools of India providing excellent academic delivery and infrastructure to its students and transforming them into leaders for the future.

Another example that is a testimony to the culture of innovation is the introduction of Case Study methodology at IBS. The Case Research Center at IBS has become a center of excellence and has won several accolades across the world.

ICFAI Group has 2 Strategic Institutional Units, the ICFAI Universities and the ICFAI Business Schools. In all the programs offered across these units, the emphasis is on adherence to academic rigor and differentiated curriculum that bridges the industry-academia gap.

ICFAI Group focuses on learning rather than instruction. In addition, the institute is engaged in

important areas of research covering environmental sustainability, agricultural economics, health policy, financial economics, banking, intellectual property rights etc. There have been path-breaking research and good quality publications in these areas.

Flexible and tech enabled learning also plays an important role in ICFAI's teaching methodology. The delivery takes place with the use of hi-tech learning management system at campus programs and content delivery for distance learning through online medium.

ICFAI Group practices the value of academic integrity at all levels. As a policy, admissions are purely based on merit and there is nothing like capitation fee et al. The fee payable is published in the application material and that remains unchanged.

The ICFAI Group's culture of teaching and learning supports and fosters intellectual and personality development among its graduating students. They carry an attitude of ownership of their work. ICFAI Group strives to make the students - DOERS. The programs are designed such that the students & professionals graduating from the institution have the ability to take risks, make decisions and own the work. ICFAI Group system, strongly believes in developing an 'entrepreneurial mindset' among its graduating students.

At ICFAI, students inculcate research and analytical orientation due to its institutional strength and support for the research and development activities. Holistically, the student undergoes a transformative change.

The alumni of ICFAI Group are working in renowned companies world-wide. Collectively, ICFAI Group alumni contribute significantly to the growth story of India.

Awards won by The ICFAI Group



The ICFAI Universities

ICFAI has established 11 Universities across India. The ICFAI Universities are located at Hyderabad [The ICFAI Foundation for Higher Education (IFHE), which is a Deemed University], Dehradun, Himachal Pradesh (Baddi), Jaipur, Jharkhand, Meghalaya, Mizoram, Nagaland, Raipur, Sikkim and Tripura



IFHE, Hyderabad



The ICFAI University, Dehradun



The ICFAI University, Jaipur



The ICFAI University, Raipur



The ICFAI University, Meghalaya



The ICFAI University, Jharkhand



The ICFAI University, Himachal Pradesh (Baddi)



The ICFAI University, Mizoram



The ICFAI University, Tripura



The ICFAI University, Sikkim



The ICFAI University, Nagaland



N J Yasaswy
(1950-2011)

Founder's Profile

Mr. N. J. Yasaswy (1950-2011), founder of the ICFAI Group of educational institutions and a pioneer in promoting higher education in the private sector had a brilliant academic career: B.Com (Andhra University 1969 – First Rank), CA Inter (May 1971 – First Rank), CA Final (May 1973 – First Rank), ICWA Inter (July 1970 – First Rank) and ICWA Final (July 1972 – First Rank). He was the recipient of the Basu Foundation Award for the Best Student of the Year from both – The Institute of Cost and Works Accountants of India (in 1972) and The Institute of Chartered Accountants of India (in 1973).

During 1974-1980, Mr. Yasaswy was associated with the Administrative Staff College of India as a Faculty Member. In 1981, he started his consultancy firm, Yasaswy Management Association (P) Limited. Hyderabad.

Mr. Yasaswy was appointed by the Government of Andhra Pradesh as Chairman, Andhra Pradesh State Trading Corporation (1985–88), and Vice-Chairman, Public Enterprises Management Board (1986–88). He was a visiting faculty member at the Indian Institute of Management-Ahmedabad (1986-88) and was nominated as a Member on the SEBI Committee on Accounting Standards. He was a member of the Board of Directors of the Association of Certified International Investment Analysts (ACIIA), Switzerland. He authored several books on finance and investments.

Mr. Yasaswy set up the ICFAI as a single institute in 1985 without governmental sops or institutional funding, in an era where government support was the norm. He chose to spend all his energy on the fledgling institution which over the years grew to become a monument to what ambition can deliver. He was instrumental in building several business schools and universities in the developing states of India, particularly in the North-East region. He stood for professional management, excellence in the quality of education offered in the ICFAI institutions, and absolute discipline.

He was charismatic, a great teacher, an institution builder, a visionary and a genius who was years ahead of his time. His vision will continue to guide ICFAI forever.

Message from the VICE CHANCELLOR



Greetings !

It is with great pleasure that I welcome you to the ICFAI Foundation for Higher Education (IFHE) a Deemed University established under section 3 of the UGC Act, 1956. It has evolved a comprehensive student centric learning approach consisting of several stages, designed to add significant value to the learner's understanding in an integrated manner, covering relevant knowledge, practical skills and positive attitudes.

IFHE is a premier educational institution in Telangana State which is accredited by NAAC with 'A' grade. It is dedicated to the cause of teaching and research of global standards. It offers B.Sc (Mathematics), B.Sc (Physics), B.Tech., BBA, BA (Economics), BBA-LLB(Hons), BA-LLB(Hons), LLM, MBA, M.Sc and Ph.D. Programs. The students are from all parts of India. In fact, there is a mini India on the campus. The University has a student strength of about 4,000 and a faculty strength of over 200.

We envision to develop a new cadre of professionals who will not only command high level of domain proficiency but also have the ability to integrate activities for developing scientific and technological solutions and work standards.

The quality of the programs offered at the University is ensured by the following five factors:

- Designing a relevant curriculum including soft skills and internship program.
- Student-centric academic delivery.
- Continuous evaluation and feedback.
- Focus on research by the faculty.
- Industry and foreign collaborations.

The University maintains a balance between academic, co-curricular, extra-curricular, and social activities so as to enable the students to become well-rounded persons with concern for the society.

Prof. J. Mahender Reddy
Ph.D

Message from the DIRECTOR



The ICFAI Foundation for Higher Education (IFHE) has evolved into a leading University offering a global approach to education and research centered curriculum with unique perspectives. ICFAI Tech School (Faculty of Science & Technology) a constituent of IFHE, aims to nurture graduates who are critical thinkers, creative and have a holistic education experience. Students are given the flexibility to chart their own academic courses from a wide range of electives offered to them.

Innovative methods of teaching, strong curriculum and other educational programs like conducting workshops and internships further broaden the intellectual and global outlook of our students. With a multifaceted education program that meets student aspirations and passion while addressing future challenges, we aim to develop well-rounded academically strong individuals who will become global citizens and leaders of the society.

Besides Technical knowledge, Humanistic, Social and Managerial aspects are also inculcated in the students by way of offering courses like Principles of Management, Heritage of India and Soft Skills Training. This proactive approach will earn respect from employers, educationists and professional institutions.

I welcome all the aspirants of B.Tech. program to join ICFAI Tech School.

Dr. M. Srinivasa Reddy

Director
ICFAI Tech School
Hyderabad

The ICFAI Foundation for Higher Education (IFHE), Hyderabad

Autonomous Institution. Accredited by NAAC with “A+” Grade

The ICFAI Foundation for Higher Education (IFHE), Hyderabad is Deemed-to-be-University under Section 3 of the UGC Act, 1956. It has evolved, over the years, a comprehensive student-centric learning approach consisting of several stages, designed to add significant value to the learner’s understanding in an integrated manner, covering relevant knowledge, practical skills and positive attitudes.



Programs

ICFAI Tech School (ITS) (Faculty of Science and Technology)

BTech | B.Sc (Mathematics) | B.Sc (Physics) | MTech
Ph.D in Basic Sciences & Engineering

ICFAI Business School (IBS) (Faculty of Management)

BBA | BA (Economics) | MBA
PhD (Full-time & Part-time) | Executive MBA (Part-time)
PG Program in Analytics (Part-time)

ICFAI Law School (ILS) (Faculty of Law)

BBA-LLB (Hons.) | BA-LLB (Hons.) | LLM
PhD (Full-time & Part-time)

92 acre lush green campus with built-up area of over 16 lakh sq.ft. The fully residential campus is equipped with the state-of-the-art teaching, sports and recreational facilities. Complete academic monitoring and control is done through the Intranet - the Campus Net and the Faculty Zone. Entire campus is Wi-Fi enabled.



IFHE

Rankings/Ratings	Magazine/ Agency
3.43/4.00 A+ Grade	NAAC
# 13 Under Top Private Universities	Careers 360 University Ranking Survey 2016
Award	
The Indian Institution of Industrial Engineering (IIIE), Navi Mumbai, has conferred the Performance Excellence Award 2014 (Organisation) on The ICFAI Foundation for Higher Education, for its Outstanding contribution made towards excellence	



ICFAI Group Awards	
Awards	Source
Great Place to Study Certification 2017-18	GPTS Research Institute
Thought Leadership Award 2017 for ICFAI Case Research Center	SkillTree Knowledge Consortium



ICFAI Tech School, Hyderabad

ICFAI Tech School (Faculty of Science & Technology) is a constituent of the ICFAI Foundation for Higher Education (IFHE), Hyderabad. It has been established to promote quality education and training in the fields of Science and Technology to match global standards.



Rankings

Ranked 1st among Top 10 Emerging Engineering Colleges in India - Silicon India, 2017

Ranked 9th among Outstanding Engineering Colleges of Excellence - CSR-GHRDC, 2017



B.Sc Programs

• Mathematics • Physics

The ICFAI Foundation for Higher Education (IFHE) has launched Three Year Degree programs: B.Sc Mathematics and B.Sc Physics from the academic year 2018-19. The course consists of six semesters spread across three years.

The program has been structured in such a way that in the first two years, the student gets exposure in the areas of Basic Sciences, Social Sciences, Humanities, Computer Programming, Engineering Sciences and proficiency in the English language along with a strong foundation in Mathematics. These courses equip the students with technical and analytical skills required for higher level courses, negotiating and communication skills vital for professional life, and helps in shaping his overall personality.

The internship offered after the IV semester develops the cognitive skills of the student and prepares him / her to understand industry requirements. In the third year of the program, core courses are offered. A good blend of contemporary and traditional courses have been included keeping in mind the academic needs and the employability of students. In the final semester of the program, courses in four different streams pertaining to a wide range of sub-discipline are offered.

The students are required to pick two streams of their choice. This allows them to get the flavor of these areas, which will help them to make informed choices regarding their specializations, further in their careers. The design of the course is such that it enhances the student's prospects for admission into some of the best institutes of the world.

B.Sc (Mathematics)

Eligibility

Pass with 50% and above aggregate marks in Class XII (or its equivalent) examination with Mathematics, Physics, Chemistry and English as subjects.

Program Structure	
Semester I	Semester II
<ul style="list-style-type: none"> • Chemistry • English Language Skills • Linear Algebra • Physics • Computer Programming-I • Engineering graphics 	<ul style="list-style-type: none"> • Probability • Thermodynamics • Higher Calculus • Computer Programming-II • Measurement Techniques-I • Workshop Practice • Introduction to Psychology
Semester III	Semester IV
<ul style="list-style-type: none"> • Numerical Methods • Principles of Economics • Electrical Sciences-I • Complex Variables • Differential Equations & Fourier Series • Environmental Studies • Professional Communication 	<ul style="list-style-type: none"> • Optimization Techniques • Statistical Methods • Computational Techniques • Structure & Properties of Materials • Dynamics of Social Change • Principles of Management • Partial Diff Equations & Systems of ODEs
Summer Internship Program	
Semester V	Semester VI
<ul style="list-style-type: none"> • Mathematical Physics • Real Analysis • Algebra • Graph Theory • Combinatorial Mathematics • Discrete Structures for Comp Science • Differential Geometry 	<ul style="list-style-type: none"> • 6 Electives Courses (There will be three streams. The student will have to choose any two streams given in the electives) • The students have the flexibility of choosing electives from other undergraduate programs of IFHE

Elective Courses:

Stream-1: Advanced Combinatorics; Cryptography; Boolean Algebra and Automata Theory

Stream-2: Metric Spaces; Rings and Fields; Topology

Stream-3: Advanced Probability Theory; Stochastic Processes; Continuum Mechanics

Program structure is subject to change, if required

B.Sc (Physics)

Eligibility

Pass with 50% and above aggregate marks in Class XII (or its equivalent) with Mathematics, Physics, Chemistry and English as subjects.

Program Structure	
Semester I	Semester II
<ul style="list-style-type: none"> • Chemistry • English Language Skills • Linear Algebra • Physics • Computer Programming-I • Engineering graphics 	<ul style="list-style-type: none"> • Probability • Thermodynamics • Higher Calculus • Introduction to Psychology • Computer Programming II • Measurement Techniques-I • Workshop Practice
Semester III	Semester IV
<ul style="list-style-type: none"> • Principles of Economics • Electrical Sciences I • Complex Variables • Differential Equations & Fourier Series • Mechanics and special theory of relativity • Environmental Studies • Professional Communication 	<ul style="list-style-type: none"> • Structure & Properties of Materials • Dynamics of Social Change • Principles of Management • Digital Electronics & Computer Organization • Optics • Thermal Physics & Classical Statistical Mechanics • Partial differential equations and systems of ODEs
Summer Internship Program	
Semester V	Semester VI
<ul style="list-style-type: none"> • Mathematical Physics • Solid State Physics • Introductory Quantum Mechanics • Electromagnetic Theory • Analog Electronics • Instrumental Methods of Analysis • Atomic, Molecular and Nuclear Physics 	<ul style="list-style-type: none"> • 6 Electives Courses (There will be four streams. The student will have to choose any two streams given in the electives) • The students have the flexibility of choosing electives from other undergraduate programs of IFHE

Elective Courses:

Stream-1: Optical fiber communications; Laser Physics and applications; Introduction to acoustics

Stream-2; Fundamentals of Forced based Molecular Dynamic; Introduction to Event-Driven Molecular Dynamics; Introduction to Monte Carlo Methods

Stream-3: Nanotechnology; Experimental Techniques; Functional materials;

Stream-4: Classical Mechanics; Quantum Mechanics II; Relativity

Program structure is subject to change, if required

Facilities & Resources

Academic Infrastructure

All lecture theatres and classrooms at ICFAI Tech School are networked, Wi-Fi enabled and fitted with audio visual tools to enhance the teaching / learning experience. The complete academic monitoring is done through the Intranet - the Campus Net and the Faculty Zone.



Faculty Resources

The University believes that the student experience is determined greatly by the quality of teachers. The campus has a large and well qualified faculty pool comprising of mostly doctorates with rich industry experience. This mix of real world experience and high academic achievement ensures that the instructional process is practical yet theoretically sound.

Computing Facilities

The campus is equipped with the latest state-of-the-art technology of computer network with high speed backbone (180 MBPS Internet speed) and security through CISCO high end routers. The campus has exclusive subscription of Microsoft products like Windows XP, Windows 7, Office 2010, Microsoft exchange, SQL server, Adobe products (InDesign, PageMaker, Acrobat, Photoshop), Anti-virus (e-scan) which are being used in day-to-day operations. Teaching labs are licensed with SAP, SPSS, SAS, iThink, Rational Rose, E-views, Microsoft CRM, AutoCAD, Canadian Advanced CAD, Oracle etc.



Library

IFHE has well-stocked library containing reference materials, magazines, journals and books of national and international publications. Subscriptions to industry information databases ensure that extensive research resources and publications with search facilities are available to students and faculty. In addition, the library contains directories, industry reports, and statistical compilations that provide timely and concise information for project work.

Hostel

Limited Hostel Facility is available.



Medical Facilities

The medical center is available to cater to the needs of the students.



Transportation

For day scholars, University provides bus service from city to University and back.



Education Methodology



Our pedagogy is student-centric. It delivers quality education churning out young engineers to face the complex global challenges of the competitive world.

- Classroom Learning
- Project and Independent Study Courses
- Assignments & Quizzes
- Learning through Experiments during Lab Sessions
- Language Development Sessions
- Workshop practices through a CNC machine & other Machine Tools
- Skill Development through soft skills, Technical Art and Engineering Science Courses
- Concept Learning through Seminars
- Industrial Experience through Internship Program
- Live classes and virtual labs under MHRD's QEEE Program
- Continuous Assessment & Evaluation

Internships and Projects

Internships and Projects are institutionalized as very important processes that provide a platform where the students handle real-life projects. It provides hands on experience in the chosen areas of interest and helps the students to apply theories and concepts learnt in the classroom in real life situations. Our internships mould students into effective professionals.



Placements

IFHE has an impeccable track record of achieving excellent placements every year, with top companies visiting the campus to recruit our students.

Our rigorous curriculum is designed to train our students to acquire talent in multiple disciplines and their choices of careers also reflect the same. Our students find careers in various sectors including banking, and financial services, FMCG, technology, media, research, sales and marketing, legal practice, business contracts etc.

Campus Life

Our campus is designed to stimulate learning and creating a positive experience for our students. Since memories from college remain forever in our minds, we have made extra efforts to ensure that the campus provides for great interaction between students, faculty members and everyone who comes in contact with the student community on campus.

Campus also features extensive interaction spaces, communication centers, academic blocks and cafeterias which serve tasty, hygienic food.

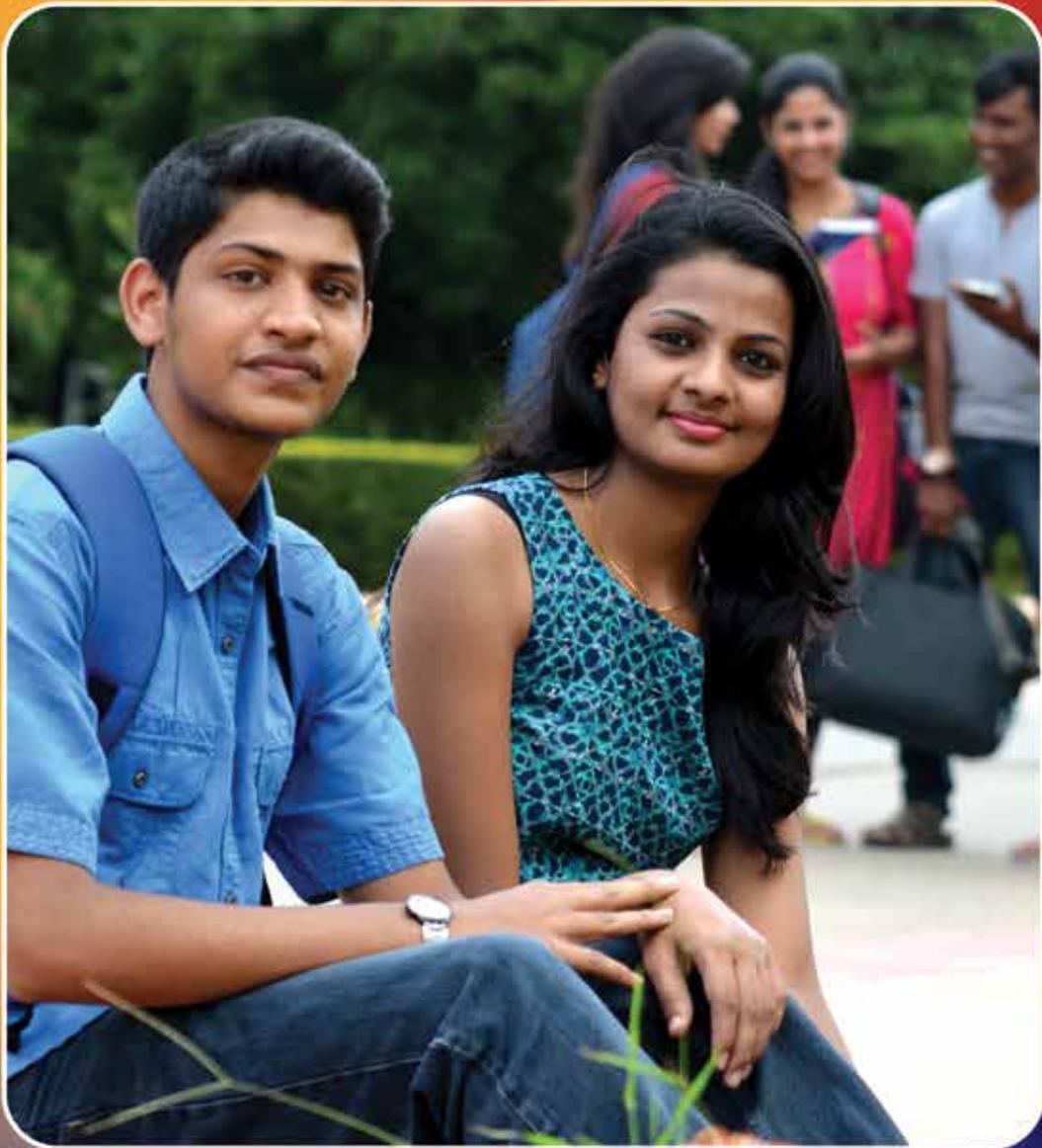


Student Activities

Students organize and participate in extra-curricular activities such as sports, games, social and cultural events and also celebrate different regional festivals. Students organize seminars on contemporary management issues, arrange guest lectures and participate in inter-business school competitions.







ICFAI Tech School, IFHE

Dontanapalli, Shankarpalli Road, Hyderabad-501 203

email: bscadmissions@ifheindia.org

www.ifheindia.org/bsc