AREAS OF SPECIALIZATION

UNIVERSITY ADMISSION CONSULTANCY

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CIVIL& ENVIRONMENTAL ENGINEERING

- **Structural Engineering**
- **Hydraulic Engineering**
- **Environmental Engineering**
- **Geo-technical Engineering**
- **Transportation Engineering**
- **Structural Dynamics and Earthquake Engineering**
- **Civil Engineering Systems**
- **Water Resources**
- **Urban Planning**
- **Town Planning**
- **Process Engineering**
- **Hazardous and Radioactive waste Treatment**
- **Contaminant Characterization**
- **Contaminant Fate and Transportation**
- **Analysis of Natural Systems**
- **Environmental Restoration**
- **Risk Assessment and Waste Management**
- **Air Pollution and Solid Waste**
- **Biological Treatment of Waste Water**

BUILDING ENGINEERING

- **Computer Aided Building Design**
- **Performance of Building Envelope**
- **Building Environment (Acoustics, Illumination, Air Quality, Thermal Comfort)**
- **Mechanical Systems and Control**
- **Wind Effects on Buildings**
- **Building Structures**
- **Construction Engineering and Management**

Our observations

- ***Not many students opt for these branches of Engineering, especially from India, hence competition is less for financial Assistance and Admission.***
- ***Requirement for admission into the top twenty:***
- ***Academics – Above Average***
- ***GRE - does not matter if on the lower side, and can be offset by excellent academics.***
- ***Aid- Assured in most cases***

MECHANICAL ENGINEERING

- ***Industrial Control Systems and Robotics Engineering***
- ***Material Sciences and Composites***
- ***Mechanical Systems and Manufacturing***

- ***Thermo-fluid and Propulsion Engineering***
- ***Aerospace and Automotive Engineering***
- ***Biomedical and Human Factor Engineering***
- ***Vehicle Engineering***
- ***Solid Mechanics***
- ***Composite Materials***
- ***Numerical Methods and Dynamics***
- ***Mechatronics***
- ***Thermal Power***
- ***Alternative Energy Systems***
- ***Compressible Fluid Flow***
- ***Convective Heat Transfer***
- ***Conduction & Radiation Heat Transfer***
- ***Internal Combustion Engines***
- ***Elasticity/Plasticity***
- ***Wave Propagation in Solids***
- ***Active Materials***
- ***Aerospace***
- ***Biomechanics***
- ***Fracture Mechanics***
- ***Energy Management in Commercial Bldgs.***
- ***Mechanics of Perfect/Viscous Fluids***
- ***Computer Aided Analysis of Thermal/Fluid Systems***

INDUSTRIAL ENGINEERING

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- **Applied non linear programming**
- **Dynamic and Geometric programming**
- **Integer programming**
- **Systems Methodology and Network techniques**
- **Digital Simulation**
- **Analysis, Modeling and design of Man Machine Systems**
- **Accuracy, Dynamics and Controlling of Machining Systems**
- **Human Factors Engineering**
- **Manufacturing Systems**
- **City and Regional Planning**
- **Infrastructure Engineering**
- **Project Management and Construction Material**
- **Applied Fluid Mechanics**
- **Advanced Electronics**
- **Automatic Control Systems**
- **Geosynthetic Engineering**
- **Hydraulic/Coastal Engineering**
- **Construction Science and Management**

Our observations

- ***Though this is one of the most sought after branches, it still remains one of the evergreen fields, and has been relatively insulated from the effects of a recessionary economy.***
- ***A decent academic record and an average GRE score will ensure admission to a decent University***
- ***However the top twenty requires something special, like an excellent project , a paper etc.***
- ***Assistantship is almost guaranteed to most of the top 100 Universities, but arranging telephonic interviews with professors from your department is strongly recommended if you want to leave the country with a financial Aid on your I-20.***

POLYMER SCIENCE

- **Polymer processing**
- **Engineering properties of Polymers**
- **Plastic technology**

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CHEMICAL ENGINEERING

- **Polymers and Composite Materials**
- **Thermodynamics and Separation Processes**
- **Process Automation**
- **Kinetics and Catalysis**
- **Membrane Applications**
- **Carbon Fiber Composite Materials**
- **Expert Systems**
- **Biotechnology**
- **Supercritical Fluids**
- **Molecular Simulation of Fluids**
- **Biofluoresence**
- **Biomedical Applications**
- **Bioreactors**
- **Biosensors**
- **Controlled Release Technology**
- **Electronics Materials Processing**
- **Industrial Hygiene**
- **Mammalian Cell Technology**
- **Micro encapsulation**
- **Rheology**
- **Reactor Engineering**
- **Textile Engineering**

CERAMIC ENGINEERING

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- **Optoelectronics**

- **Ceramic Fibers**
- **Ceramic Matrix Composites**
- **Advanced Heat Engine Ceramics**

Our observations

- ***Students having a background in Chemical Engineering have the option of going for Environmental, Polymer or Chemical Engineering***
- ***For Polymer/ Chemical Engineering admission to a good University does not require anything exceptional except decent academics and GRE score.***
- ***Financial assistance depends solely on how wisely you select your Universities.***

ELECTRICAL/ELECTRONICS ENGINEERING

- **Energy Systems**
- **Instrumentation**
- **Control Systems**
- **DSP**
- **Power Electronics and Drives**
- **Advanced Electronics**
- **Automatic Control Systems**
- **VLSI**
- **Embedded Systems**
- **Material Science**
- **Telecommunications**

ELECTRICAL AND COMPUTER ENGINEERING

- **Telecommunications**
- **VLSI Circuits/Systems/Formal Verifications**
- **Systems and Control**
- **Micro devices and Fabrication processes**
- **Real Time/Fault Tolerant Systems**
- **Communications protocols**
- **Electromagnetics**
- **Image Analysis**
- **Digital Multimedia Systems**
- **Natural Language Processing**
- **Asynchronous Systems**
- **Analysis and Synthesis of Computer Communication Networks**
- **System Measurement and Modeling**

Our observations

- ***This is not a field to be trifled with***

- ***Be very sure you are interested in this field before you take on your MS, Else you may face problems for obtaining financial aid.***
- ***No other field exemplifies the adage "there is always room at the top" better than this discipline.***
- ***To secure admission into a reputed university, good academics is important, and cannot be compensated for by a high GRE score.***

COMPUTER SCIENCE

- **Parallel and Computer Distributed Systems**
- **Database and Information Systems**
- **Human Computer Interactions and Natural Language Processing**
- **Computational Mathematics and Visualization**
- **Bioinformatics**
- **Pattern Recognition, Machine Intelligence, Image Processing**
- **Programming languages and Methodology**
- **Software Engineering**
- **Theoretical Computer Science**
- **Pattern Recognition/Artificial Intelligence**
- **Image Processing**
- **Computer Architecture**
- **Micro Computer Applications**
- **Computer Organizations and Program**
- **Dynamic Programming**
- **Computer Assembly Language**
- **Data Structures**
- **Compiler Design**
- **Computing with Logic Operating Systems**
- **Computer Security**
- **Design and Analysis of Algorithms**
- **Computer Graphics and Virtual reality**
- **Computer Architecture**
- **Computer Graphics and Virtual Reality**
- **Design and Analysis of Algorithms**
- **System measurement and modeling**
- **Integrated Circuits**
- **Internet Protocols**
- **Light Wave Engineering**
- **Photonics**
- **Solid State Electronics**

Our observations

- ***"EVEN THE BEST ARE AVERAGE" best sums up the attitude if you wish to avoid disappointments***
- ***Having a realistic approach will help you secure both admission and financial aid***

- ***To aim for the top twenty colleges you need to have exceptional academic credentials, excellent GRE scores, excellent recommendations with a extremely well written SOP and a few notable co-curricular achievements to your credit.***
- ***And even then some of them insist on Subject GRE***

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BIOSYSTEMS ENGINEERING

- **Agricultural Waste Management**
- **Aqua cultural Engineering**
- **Computer Control**
- **Image Processing & Geographic Information Systems**
- **Agricultural Structure and Environmental Control**
- **Food Engineering**
- **Power and Machinery**
- **Agricultural Meteorology**

BIOMEDICAL, BIOCHEMICAL ENGINEERING & BIOTECHNOLOGY

- **Biomechanics**
- **Materials and Mechanics**
- **Bioelectrodes**
- **Biomaterials**
- **Biomedical Imaging**
- **Biomedical Instrumentation**
- **Biomedical Signal Processing**
- **Biophysics and Bioelectric Chemistry**
- **Biostatistics**
- **Cardiovascular System Dynamics**
- **Clinical Engineering**
- **Computational Biomedicine**
- **Computers in Health Care**
- **Diagnostic Ultrasound**
- **Health Care Delivery**
- **Medical Devices**
- **Medical Information & Processing**
- **Neural Networks/Neuro Engineering**
- **Rehabilitative Engineering**
- **Sensory Systems**
- **Tissue & Cellular Engineering**
- **Ultrasound Tissue Characterization**
- **Animal Cell Culture Science & Technology**

- **Biomedical Ultrasound Imaging**
- **Biosensors**
- **Controlled Release Systems**
- **Fermentation Process**

OUR OBSERVATIONS

- ***Usually a bachelors degree in Mechanical , Electrical, Chemical or even computer engineering makes you eligible to apply for any one of these programs.***
- ***Having Biology as a subject in your twelfth grade will be an added advantage.***
- ***These being the "in" fields today, many are lured by the bright career prospects. But one will do well to remember that it will not be the "in" thing forever, so it is strongly advisable to really understand what the courses offer, and be sure that it is where your interest lies before applying to the program.***
- ***OTHERS***
- ***Operations Research or Quality Engineering***
- ***Industrial Interior and Visual Communication Design***
- ***Engineering Management***
- ***Acoustic Engineering***

FOR GENERAL GRADUATES

BIOSCIENCE AND BIOTECHNOLOGY

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- **Biochemistry**
- **Biophysics**
- **Cell Biology**
- **Microbiology**
- **Molecular Biology**
- **Molecular Genetics**
- **CHEMISTRY**
- **Analytical Chemistry**
- **Atmospheric Chemistry**
- **Bio-Organic Chemistry**
- **Chemical Education**
- **Chemical Physics**
- **Chemistry of Materials**
- **Computational Chemistry**
- **Environmental Chemistry**
- **Physical Chemistry**
- **Physical Organic Chemistry**
- **Polymer Chemistry**

- **Supracolloidal Chemistry**
- **Synthetic Organic Chemistry**
- **CLINICAL PSYCHOLOGY**
- **Forensic Psychology**
- **Health Psychology**
- **Neuropsychology**
- **General Psychology (JD/Phd)**
- **MATHEMATICS & COMPUTER**
- **SCIENCE**
- **Artificial Intelligence**
- **Applied Mathematics**
- **Combinatorics**
- **Compiler Construction**
- **Computer Algebra**
- **Computer Graphics**
- **Computer Networks**
- **Database Design**
- **Differential Equations**
- **Formal Language Theory**
- **Functional Analysis**
- **Human Computer Interaction**
- **Mathematical Biology**
- **Numerical Analysis**
- **Object Oriented Methodologies**
- **Operating Systems**
- **Operations Research**
- **Parallel Computation**
- **Parallel Languages**
- **Population Dynamics**
- **Probability and Statistics**
- **Programming languages and Compiling**
- **Scientific Computation**
- **Software Engineering**
- **Special Functions**
- **Theory of Algorithms**

NUTRITION AND FOOD SCIENCE

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- **Clinical Nutrition**
- **Food Chemistry**
- **Food Science**
- **Human Nutrition**
- **Nutrition Science**
- **Nutritional Biochemistry**

PHYSICS

- **Astrophysics**
- **Biological Physics(Experimental and Theoretical)**
- **Computational Physics**
- **Cosmology**
- **Experimental Particle Physics**
- **Experimental Solid State Physics**
- **Molecular Physics Theory**
- **Laser Physics Theory**
- **Nonlinear Dynamics**
- **Surface Physics**
- **Theoretical Solid-State Physics**

SCIENCE, TECHNOLOGY AND SOCIETY PUBLIC MANAGEMENT SCHOOL OF EDUCATION

- **Science of Instruction – MS**
- **Teacher Certification**
- **BUSINESS ADMINISTRATION – MBA**
- **Accounting Control**
- **Business Economics**
- **Decision Sciences**
- **E-Commerce**
- **Financial Management**
- **International**
- **MBBS / BDS / BPT**
- **Public health**
- **Hospital administration**
- **Paramedical sciences**
- **Biological sciences**

Post HSC courses

- **Engineering**
- **Core Sciences**
- **Information Technology**
- **Business Management**
- **Bio Technology**
- **Medical Studies…An emerging field**