**DBMS**

Under engineering and technology there are the following departments:

Aerospace Engineering

School of Architecture and Interior Design

Automobile Engineering

Biomedical Engineering

Biotechnology

Civil Engineering

Chemical Engineering

Chemistry

Computational Intelligence

Computing Technologies

Data Science & Business Systems

Electronics & Communication Engineering

Electrical & Electronics Engineering

Electronics & Instrumentation Engineering

Food Process Engineering

Genetic Engineering

Mathematics

Mechanical Engineering

Mechatronics Engineering

Networking & Communications

Physics and Nanotechnology

**Aerospace Engineering**

* B.Tech. Aerospace Engineering

**School of Architecture and Interior Design**

* B.Arch. Architecture
* B.Des. Interior Design

**Automobile Engineering**

* B.Tech. Automobile Engineering
* B.Tech. Automobile Engineering with Specialization in Vehicles Testing (GARC)
* B.Tech. Automobile Engineering with Specialization in Automotive Electronics
* B.Tech. Automotive Engineering (ARAI)

**Biomedical Engineering**

* B.Tech. Biomedical Engineering
* B.Tech. Biomedical Engineering with Specialization in Machine Intelligence
* Minor Degree Program in Biomechanics
* Minor Degree Program in Biomedical Engineering

**Biotechnology**

* B.Tech. Biotechnology
* B.Tech. Biotechnology with Specialization in Food Technology
* B.Tech. Biotechnology with specialization in Regenerative Medicine

**Civil Engineering**

* B.Tech. Civil Engineering
* B.Tech. Civil Engineering with Computer Applications

**Chemical Engineering**

* B.Tech. Chemical Engineering
* Minor Degree Program in Chemical Engineering
* Minor Degree Program in Energy and Environmental Engineering
* Minor Degree Program in Petroleum Engineering

**Chemistry**

* B.Sc. Chemistry

**Computational Intelligence**

* B.Tech. Artificial Intelligence
* B.Tech. Computer Science And Engineering with Specialization in Artificial Intelligence and Machine Learning
* B.Tech. Computer Science And Engineering with Specialization in Software Engineering
* Minor Degree Program in Artificial Intelligence

**Computing Technologies**

* B.Tech. Computer Science and Engineering
* Minor Degree Program in Computer Science and Engineering

**Data Science & Business Systems**

* B.Tech. Computer Science and Business Systems (In Collaboration with TCS)
* B.Tech. Computer Science And Engineering (Data Science)
* B.Tech. Computer Science And Engineering with Specialization in Big Data Analytics
* B.Tech. Computer Science And Engineering with Specialization in Blockchain Technology
* B.Tech. Computer Science And Engineering with Specialization in Gaming Technology

**Electronics & Communication Engineering**

* B.Tech. Electronics and Communication Engineering
* B.Tech. Electronics And Communication Engineering with Specialization in Cyber Physical Systems
* B.Tech. Electronics And Communication Engineering with Specialization in Data Sciences
* B.Tech. Electronics And Computer Engineering
* B.Tech. Electronics Engineering (VLSI Design and Technology)

**Electrical & Electronics Engineering**

* B.Tech. Electrical and Electronics Engineering
* B.Tech. Electrical Vehicle Technology

**Electronics & Instrumentation Engineering**

* B.Tech. Electronics and Instrumentation Engineering
* B.Tech. Automation & Robotics

**Food Process Engineering**

* B.Tech. Food Process Engineering

**Genetic Engineering**

* B.Tech. Biotechnology with specialization in Genetic Engineering
* B.Tech. Biotechnology (Computational Biology)

**Mathematics**

* B.Sc. Mathematics

**Mechanical Engineering**

* B.Tech. Mechanical Engineering
* B.Tech. Mechanical Engineering with specialization in Artificial Intelligence and Machine Learning
* B.Tech. Mechanical Engineering (Specialization in Automation & Robotics)

**Mechatronics Engineering**

* B.Tech. Mechatronics Engineering
* B.Tech. Mechatronics Engineering (Autonomous Driving Technology)
* B.Tech. Mechatronics Engineering (Immersive Technologies)
* B.Tech. Mechatronics Engineering (Industrial IoT and Systems Engineering)
* B.Tech. Mechatronics Engineering with Specialization in Robotics

**Networking & Communications**

* B.Tech. Computer Science And Engineering with Specialization in Cyber Security
* B.Tech. Computer Science And Engineering with Specialization in Cloud Computing
* B.Tech. Computer Science And Engineering with Specialization in Computer Networking
* B.Tech. Computer Science And Engineering with Specialization in Information Technology
* B.Tech. Computer Science And Engineering with Specialization in Internet of Things

**Physics and Nanotechnology**

* B.Tech. Nanotechnology

DEPT : \*\*1. Aerospace Engineering\*\*

#### \*\*Program: B.Tech. Aerospace Engineering\*\*

1. Aerodynamics

2. Flight Mechanics

3. Aircraft Structures

4. Propulsion Systems

5. Spacecraft Dynamics

6. Avionics

7. Computational Fluid Dynamics (CFD)

8. Aircraft Design

9. Rocket Propulsion

10. Wind Tunnel Testing

11. Orbital Mechanics

12. Structural Analysis

13. Heat Transfer in Aerospace Systems

14. Materials for Aerospace Engineering

15. Stability and Control of Aircraft

16. Space Mission Design

17. Fatigue and Fracture Mechanics

18. Aerothermodynamics

19. Unmanned Aerial Vehicles (UAVs)

20. Aerospace Systems Engineering

----

DEPT: \*\*2. School of Architecture and Interior Design\*\*

#### \*\*Program: B.Arch. Architecture\*\*

1. Architectural Design

2. Building Materials and Construction

3. History of Architecture

4. Urban Planning

5. Landscape Architecture

6. Sustainable Architecture

7. Structural Systems

8. Environmental Studies

9. Building Services

10. Architectural Drawing and Graphics

11. Design Theory

12. Construction Management

13. Digital Design Tools (AutoCAD, Revit, SketchUp)

14. Housing and Community Planning

15. Disaster-Resilient Architecture

16. Architectural Acoustics

17. Building Information Modeling (BIM)

18. Urban Design

19. Architectural Conservation

20. Professional Practice in Architecture

#### \*\*Program: B.Des. Interior Design\*\*

1. Interior Design Studio

2. Furniture Design

3. Lighting Design

4. Interior Materials and Finishes

5. Space Planning

6. Color Theory and Application

7. History of Interior Design

8. Sustainable Interior Design

9. Digital Rendering and Visualization

10. Textiles and Soft Furnishings

11. Interior Detailing

12. Ergonomics in Interior Design

13. Exhibition Design

14. Residential Interior Design

15. Commercial Interior Design

16. Interior Landscape Design

17. Building Codes and Standards

18. Interior Design Portfolio Development

19. Advanced CAD for Interior Design

20. Professional Practice in Interior Design

------

DEPT: \*\*3. Automobile Engineering\*\*

#### \*\*Program: B.Tech. Automobile Engineering\*\*

1. Internal Combustion Engines

2. Vehicle Dynamics

3. Automotive Electronics

4. Automotive Chassis Design

5. Automotive Materials

6. Engine Testing and Calibration

7. Vehicle Aerodynamics

8. Automotive Safety Systems

9. Hybrid and Electric Vehicles

10. Automotive Manufacturing Processes

11. Automotive Transmission Systems

12. Vehicle Testing and Validation

13. Automotive Sensors and Actuators

14. Automotive Control Systems

15. Automotive Pollution and Control

16. CAD in Automotive Design

17. Automotive HVAC Systems

18. Advanced Driver Assistance Systems (ADAS)

19. Automotive Embedded Systems

20. Automotive Cybersecurity

#### \*\*Program: B.Tech. Automobile Engineering with Specialization in Vehicles Testing (GARC)\*\*

1. Vehicle Testing Methods

2. Automotive Performance Testing

3. Durability Testing

4. Crash Testing and Safety Analysis

5. Noise, Vibration, and Harshness (NVH) Testing

6. Environmental Testing

7. Vehicle Dynamics Testing

8. Engine Testing and Calibration

9. Emission Testing and Control

10. Data Acquisition Systems in Testing

11. Fatigue Testing

12. Structural Testing

13. Reliability Testing

14. Advanced Testing Instrumentation

15. Vehicle Simulation and Modeling

16. Regulatory Standards in Testing

17. Testing of Electric and Hybrid Vehicles

18. Computational Testing Techniques

19. Failure Analysis in Testing

20. Testing Report Documentation

#### \*\*Program: B.Tech. Automobile Engineering with Specialization in Automotive Electronics\*\*

1. Automotive Embedded Systems

2. Automotive Sensors and Actuators

3. Automotive Control Systems

4. Automotive Communication Protocols (CAN, LIN, FlexRay)

5. Electric and Hybrid Vehicle Electronics

6. Advanced Driver Assistance Systems (ADAS)

7. Automotive Cybersecurity

8. Automotive Infotainment Systems

9. Automotive Power Electronics

10. Vehicle Networking and Telematics

11. Automotive Microcontrollers

12. Automotive Software Development

13. Automotive Diagnostics and Troubleshooting

14. Automotive Lighting Systems

15. Automotive Battery Management Systems

16. Automotive Radar and Lidar Systems

17. Automotive Human-Machine Interface (HMI)

18. Automotive AI and Machine Learning Applications

19. Automotive IoT Integration

20. Automotive Electronics Testing and Validation

#### \*\*Program: B.Tech. Automotive Engineering (ARAI)\*\*

1. Automotive Design and Development

2. Vehicle Dynamics and Control

3. Automotive Materials and Manufacturing

4. Advanced Powertrain Systems

5. Automotive Safety and Crash Analysis

6. Automotive Aerodynamics

7. Electric and Hybrid Vehicle Technology

8. Automotive Testing and Validation

9. Automotive Electronics and Embedded Systems

10. Automotive Cybersecurity

11. Automotive Regulatory Standards

12. Automotive Sustainability and Green Technologies

13. Advanced Manufacturing Techniques

14. Automotive Simulation and Modeling

15. Automotive Supply Chain Management

16. Automotive Project Management

17. Automotive Innovation and Research

18. Automotive Industry Trends

19. Automotive Quality Assurance

20. Automotive Entrepreneurship

------

DEPT: \*\*4. Biomedical Engineering\*\*

#### \*\*Program: B.Tech. Biomedical Engineering\*\*

1. Human Anatomy and Physiology

2. Biomedical Instrumentation

3. Medical Imaging Systems

4. Biomechanics

5. Biomaterials

6. Biomedical Signal Processing

7. Medical Electronics

8. Rehabilitation Engineering

9. Biomedical Sensors

10. Medical Device Design

11. Tissue Engineering

12. Biomedical Optics

13. Clinical Engineering

14. Biomedical Data Analysis

15. Artificial Organs

16. Biomedical Ethics and Regulations

17. Biomedical Robotics

18. Healthcare Informatics

19. Biomedical Nanotechnology

20. Biomedical Research Methods

#### \*\*Program: B.Tech. Biomedical Engineering with Specialization in Machine Intelligence\*\*

1. Machine Learning for Healthcare

2. Biomedical Data Mining

3. AI in Medical Imaging

4. Neural Networks in Biomedicine

5. Biomedical Signal Processing with AI

6. Healthcare Data Analytics

7. AI in Drug Discovery

8. Biomedical Robotics and AI

9. Natural Language Processing in Healthcare

10. AI in Genomics

11. Predictive Modeling in Biomedicine

12. AI in Wearable Medical Devices

13. Biomedical IoT and AI Integration

14. AI in Clinical Decision Support Systems

15. Biomedical Big Data Analysis

16. AI in Telemedicine

17. Ethical AI in Healthcare

18. AI in Personalized Medicine

19. AI in Biomedical Research

20. AI in Medical Diagnostics

#### \*\*Program: Minor Degree Program in Biomechanics\*\*

1. Introduction to Biomechanics

2. Human Movement Analysis

3. Musculoskeletal Biomechanics

4. Cardiovascular Biomechanics

5. Orthopedic Biomechanics

6. Biomechanics of Soft Tissues

7. Biomechanical Modeling and Simulation

8. Biomechanics of Injury and Rehabilitation

9. Sports Biomechanics

10. Ergonomics and Human Factors

11. Biomechanics of Implants

12. Biomechanics of Gait

13. Biomechanics of Prosthetics

14. Biomechanics of Orthotics

15. Biomechanics of Aging

16. Biomechanics of Exercise

17. Biomechanics of Trauma

18. Biomechanics of Robotics

19. Biomechanics of Wearable Devices

20. Biomechanics Research Methods

#### \*\*Program: Minor Degree Program in Biomedical Engineering\*\*

1. Introduction to Biomedical Engineering

2. Biomedical Instrumentation

3. Medical Imaging Systems

4. Biomechanics

5. Biomaterials

6. Biomedical Signal Processing

7. Medical Electronics

8. Rehabilitation Engineering

9. Biomedical Sensors

10. Medical Device Design

11. Tissue Engineering

12. Biomedical Optics

13. Clinical Engineering

14. Biomedical Data Analysis

15. Artificial Organs

16. Biomedical Ethics and Regulations

17. Biomedical Robotics

18. Healthcare Informatics

19. Biomedical Nanotechnology

20. Biomedical Research Methods

---

DEPT:

### \*\*5. Biotechnology\*\*

#### \*\*Program: B.Tech. Biotechnology\*\*

1. Molecular Biology

2. Genetics

3. Cell Biology

4. Biochemistry

5. Microbiology

6. Bioprocess Engineering

7. Enzyme Technology

8. Immunology

9. Genetic Engineering

10. Bioinformatics

11. Biostatistics

12. Plant Biotechnology

13. Animal Biotechnology

14. Environmental Biotechnology

15. Pharmaceutical Biotechnology

16. Biosensors and Bioinstrumentation

17. Stem Cell Technology

18. Nanobiotechnology

19. Bioreactor Design

20. Industrial Biotechnology

#### \*\*Program: B.Tech. Biotechnology with Specialization in Food Technology\*\*

1. Food Microbiology

2. Food Chemistry

3. Food Processing Technology

4. Food Safety and Quality Assurance

5. Fermentation Technology

6. Dairy Technology

7. Meat and Poultry Processing

8. Food Packaging Technology

9. Food Biotechnology

10. Functional Foods and Nutraceuticals

11. Food Additives and Preservatives

12. Food Product Development

13. Food Laws and Regulations

14. Food Sensory Evaluation

15. Food Engineering

16. Food Supply Chain Management

17. Food Waste Management

18. Food Toxicology

19. Food Nanotechnology

20. Food Marketing and Entrepreneurship

#### \*\*Program: B.Tech. Biotechnology with Specialization in Regenerative Medicine\*\*

1. Stem Cell Biology

2. Tissue Engineering

3. Regenerative Medicine Principles

4. Biomaterials for Regeneration

5. Cell Therapy

6. Gene Therapy

7. Wound Healing and Repair

8. Organ-on-a-Chip Technology

9. 3D Bioprinting

10. Regenerative Immunology

11. Clinical Applications of Regenerative Medicine

12. Ethical Issues in Regenerative Medicine

13. Regenerative Pharmacology

14. Regenerative Medicine in Cardiology

15. Regenerative Medicine in Neurology

16. Regenerative Medicine in Orthopedics

17. Regenerative Medicine in Dermatology

18. Regenerative Medicine in Oncology

19. Regenerative Medicine Research Methods

20. Regulatory Affairs in Regenerative Medicine

---

DEPT:

### \*\*6. Civil Engineering\*\*

#### \*\*Program: B.Tech. Civil Engineering\*\*

1. Structural Analysis

2. Concrete Technology

3. Geotechnical Engineering

4. Fluid Mechanics

5. Surveying

6. Transportation Engineering

7. Environmental Engineering

8. Construction Management

9. Steel Structures

10. Hydraulics and Hydraulic Machines

11. Earthquake Engineering

12. Foundation Engineering

13. Water Resources Engineering

14. Building Materials and Construction

15. Highway Engineering

16. Urban Planning

17. Disaster Management

18. Project Planning and Scheduling

19. Advanced Structural Design

20. Civil Engineering Software (AutoCAD, STAAD Pro)

#### \*\*Program: B.Tech. Civil Engineering with Computer Applications\*\*

1. Structural Analysis

2. Concrete Technology

3. Geotechnical Engineering

4. Fluid Mechanics

5. Surveying

6. Transportation Engineering

7. Environmental Engineering

8. Construction Management

9. Steel Structures

10. Hydraulics and Hydraulic Machines

11. Earthquake Engineering

12. Foundation Engineering

13. Water Resources Engineering

14. Building Materials and Construction

15. Highway Engineering

16. Urban Planning

17. Disaster Management

18. Project Planning and Scheduling

19. Advanced Structural Design

20. Civil Engineering Software (AutoCAD, STAAD Pro)

---

DEPT:

### \*\*7. Chemical Engineering\*\*

#### \*\*Program: B.Tech. Chemical Engineering\*\*

1. Chemical Process Calculations

2. Thermodynamics

3. Fluid Mechanics

4. Heat Transfer

5. Mass Transfer

6. Chemical Reaction Engineering

7. Process Control and Instrumentation

8. Process Equipment Design

9. Petroleum Refining

10. Polymer Technology

11. Environmental Engineering

12. Biochemical Engineering

13. Process Optimization

14. Plant Safety and Hazard Analysis

15. Industrial Catalysis

16. Process Simulation

17. Chemical Process Industries

18. Transport Phenomena

19. Nanotechnology in Chemical Engineering

20. Energy Systems Engineering

#### \*\*Program: Minor Degree Program in Chemical Engineering\*\*

1. Introduction to Chemical Engineering

2. Chemical Process Calculations

3. Thermodynamics

4. Fluid Mechanics

5. Heat Transfer

6. Mass Transfer

7. Chemical Reaction Engineering

8. Process Control and Instrumentation

9. Process Equipment Design

10. Petroleum Refining

11. Polymer Technology

12. Environmental Engineering

13. Biochemical Engineering

14. Process Optimization

15. Plant Safety and Hazard Analysis

16. Industrial Catalysis

17. Process Simulation

18. Chemical Process Industries

19. Transport Phenomena

20. Nanotechnology in Chemical Engineering

#### \*\*Program: Minor Degree Program in Energy and Environmental Engineering\*\*

1. Energy Systems Engineering

2. Renewable Energy Technologies

3. Environmental Engineering

4. Waste Management

5. Air Pollution Control

6. Water Treatment Technologies

7. Sustainable Development

8. Energy Economics

9. Climate Change and Mitigation

10. Environmental Impact Assessment

11. Energy Storage Systems

12. Solar Energy Systems

13. Wind Energy Systems

14. Bioenergy Systems

15. Energy Policy and Regulation

16. Environmental Modeling

17. Green Building Technologies

18. Carbon Capture and Storage

19. Energy Efficiency in Industries

20. Environmental Ethics and Law

#### \*\*Program: Minor Degree Program in Petroleum Engineering\*\*

1. Introduction to Petroleum Engineering

2. Reservoir Engineering

3. Drilling Engineering

4. Production Engineering

5. Petroleum Geology

6. Well Logging and Formation Evaluation

7. Enhanced Oil Recovery

8. Offshore Drilling and Production

9. Petroleum Refining

10. Natural Gas Engineering

11. Petroleum Economics

12. Reservoir Simulation

13. Well Testing and Analysis

14. Petroleum Fluid Properties

15. Pipeline Engineering

16. Health, Safety, and Environment in Petroleum Industry

17. Unconventional Oil and Gas Resources

18. Petroleum Project Management

19. Petroleum Data Analysis

20. Petroleum Industry Regulations

---

DEPT:

### \*\*8. Chemistry\*\*

#### \*\*Program: B.Sc. Chemistry\*\*

1. Inorganic Chemistry

2. Organic Chemistry

3. Physical Chemistry

4. Analytical Chemistry

5. Biochemistry

6. Environmental Chemistry

7. Industrial Chemistry

8. Polymer Chemistry

9. Medicinal Chemistry

10. Spectroscopy

11. Quantum Chemistry

12. Thermodynamics in Chemistry

13. Chemical Kinetics

14. Coordination Chemistry

15. Solid State Chemistry

16. Nanochemistry

17. Green Chemistry

18. Computational Chemistry

19. Chemistry of Materials

20. Research Methods in Chemistry

---

DEPT:

### \*\*9. Computational Intelligence\*\*

#### \*\*Program: B.Tech. Artificial Intelligence\*\*

1. Introduction to Artificial Intelligence

2. Machine Learning

3. Deep Learning

4. Natural Language Processing

5. Computer Vision

6. Reinforcement Learning

7. Neural Networks

8. AI Algorithms

9. Robotics and AI

10. AI in Healthcare

11. AI in Finance

12. AI in Gaming

13. AI Ethics and Governance

14. AI for Social Good

15. AI in Autonomous Systems

16. AI in Natural Sciences

17. AI in Business Applications

18. AI in Cybersecurity

19. AI in IoT

20. AI Research Methods

#### \*\*Program: B.Tech. Computer Science And Engineering with Specialization in Artificial Intelligence and Machine Learning\*\*

1. Introduction to Artificial Intelligence

2. Machine Learning

3. Deep Learning

4. Natural Language Processing

5. Computer Vision

6. Reinforcement Learning

7. Neural Networks

8. AI Algorithms

9. Robotics and AI

10. AI in Healthcare

11. AI in Finance

12. AI in Gaming

13. AI Ethics and Governance

14. AI for Social Good

15. AI in Autonomous Systems

16. AI in Natural Sciences

17. AI in Business Applications

18. AI in Cybersecurity

19. AI in IoT

20. AI Research Methods

#### \*\*Program: B.Tech. Computer Science And Engineering with Specialization in Software Engineering\*\*

1. Software Development Life Cycle

2. Object-Oriented Programming

3. Software Requirements Engineering

4. Software Design and Architecture

5. Software Testing and Quality Assurance

6. Agile Software Development

7. Software Project Management

8. Software Maintenance and Evolution

9. Software Configuration Management

10. Software Metrics and Measurement

11. Software Security

12. Cloud Computing and Software Engineering

13. DevOps and Continuous Integration

14. Software Engineering Tools

15. Software Engineering Ethics

16. Software Engineering for Mobile Applications

17. Software Engineering for Web Applications

18. Software Engineering for Embedded Systems

19. Software Engineering Research Methods

20. Software Engineering Case Studies

#### \*\*Program: Minor Degree Program in Artificial Intelligence\*\*

1. Introduction to Artificial Intelligence

2. Machine Learning

3. Deep Learning

4. Natural Language Processing

5. Computer Vision

6. Reinforcement Learning

7. Neural Networks

8. AI Algorithms

9. Robotics and AI

10. AI in Healthcare

11. AI in Finance

12. AI in Gaming

13. AI Ethics and Governance

14. AI for Social Good

15. AI in Autonomous Systems

16. AI in Natural Sciences

17. AI in Business Applications

18. AI in Cybersecurity

19. AI in IoT

20. AI Research Methods

---

Here’s the continuation of the \*\*complete list of subjects\*\* for \*\*each program\*\* under \*\*all departments\*\*, including core and specialization subjects. Each program has \*\*20 subjects\*\*.

---

### \*\*10. Computing Technologies\*\*

#### \*\*Program: B.Tech. Computer Science and Engineering\*\*

1. Programming in C

2. Data Structures and Algorithms

3. Object-Oriented Programming (OOP)

4. Database Management Systems (DBMS)

5. Operating Systems

6. Computer Networks

7. Software Engineering

8. Web Technologies

9. Artificial Intelligence

10. Machine Learning

11. Cloud Computing

12. Cybersecurity

13. Internet of Things (IoT)

14. Mobile Application Development

15. Computer Architecture

16. Compiler Design

17. Distributed Systems

18. Big Data Analytics

19. Blockchain Technology

20. Project Management

#### \*\*Program: Minor Degree Program in Computer Science and Engineering\*\*

1. Introduction to Programming

2. Data Structures and Algorithms

3. Object-Oriented Programming (OOP)

4. Database Management Systems (DBMS)

5. Operating Systems

6. Computer Networks

7. Software Engineering

8. Web Technologies

9. Artificial Intelligence

10. Machine Learning

11. Cloud Computing

12. Cybersecurity

13. Internet of Things (IoT)

14. Mobile Application Development

15. Computer Architecture

16. Compiler Design

17. Distributed Systems

18. Big Data Analytics

19. Blockchain Technology

20. Project Management

---

### \*\*11. Data Science & Business Systems\*\*

#### \*\*Program: B.Tech. Computer Science and Business Systems (In Collaboration with TCS)\*\*

1. Programming for Data Science

2. Data Structures and Algorithms

3. Database Management Systems (DBMS)

4. Business Analytics

5. Machine Learning

6. Big Data Analytics

7. Artificial Intelligence

8. Business Intelligence

9. Cloud Computing

10. Cybersecurity

11. Internet of Things (IoT)

12. Financial Management

13. Marketing Management

14. Operations Management

15. Supply Chain Management

16. Business Communication

17. Entrepreneurship

18. Project Management

19. Business Ethics

20. Industry Case Studies

#### \*\*Program: B.Tech. Computer Science And Engineering (Data Science)\*\*

1. Programming for Data Science

2. Data Structures and Algorithms

3. Database Management Systems (DBMS)

4. Machine Learning

5. Big Data Analytics

6. Artificial Intelligence

7. Data Visualization

8. Statistical Methods for Data Science

9. Natural Language Processing (NLP)

10. Deep Learning

11. Cloud Computing for Data Science

12. Data Mining

13. Time Series Analysis

14. Business Analytics

15. Data Science Ethics

16. Data Science Tools (Python, R, Tableau)

17. Data Science Project Management

18. Industry Applications of Data Science

19. Research Methods in Data Science

20. Capstone Project in Data Science

#### \*\*Program: B.Tech. Computer Science And Engineering with Specialization in Big Data Analytics\*\*

1. Big Data Fundamentals

2. Hadoop and MapReduce

3. Spark for Big Data

4. NoSQL Databases

5. Data Warehousing

6. Machine Learning for Big Data

7. Data Visualization

8. Statistical Methods for Big Data

9. Natural Language Processing (NLP)

10. Deep Learning for Big Data

11. Cloud Computing for Big Data

12. Data Mining

13. Time Series Analysis

14. Business Analytics

15. Big Data Ethics

16. Big Data Tools (Hadoop, Spark, Hive)

17. Big Data Project Management

18. Industry Applications of Big Data

19. Research Methods in Big Data

20. Capstone Project in Big Data

#### \*\*Program: B.Tech. Computer Science And Engineering with Specialization in Blockchain Technology\*\*

1. Introduction to Blockchain

2. Cryptography and Network Security

3. Smart Contracts

4. Decentralized Applications (DApps)

5. Blockchain Platforms (Ethereum, Hyperledger)

6. Blockchain Consensus Algorithms

7. Blockchain Security

8. Blockchain for Supply Chain

9. Blockchain for Finance

10. Blockchain for Healthcare

11. Blockchain for IoT

12. Blockchain for Government

13. Blockchain for Energy

14. Blockchain for Gaming

15. Blockchain Ethics

16. Blockchain Tools (Solidity, Truffle)

17. Blockchain Project Management

18. Industry Applications of Blockchain

19. Research Methods in Blockchain

20. Capstone Project in Blockchain

#### \*\*Program: B.Tech. Computer Science And Engineering with Specialization in Gaming Technology\*\*

1. Game Design and Development

2. Game Programming

3. Game Physics

4. Game AI

5. Game Graphics

6. Game Audio

7. Game Engines (Unity, Unreal)

8. Virtual Reality (VR) and Augmented Reality (AR)

9. Game Testing and Quality Assurance

10. Game Monetization

11. Game Marketing

12. Game Analytics

13. Game Ethics

14. Game Tools (Unity, Unreal, Blender)

15. Game Project Management

16. Industry Applications of Gaming

17. Research Methods in Gaming

18. Capstone Project in Gaming

19. Game Localization

20. Game Entrepreneurship

---

### \*\*12. Electronics & Communication Engineering\*\*

#### \*\*Program: B.Tech. Electronics and Communication Engineering\*\*

1. Analog Electronics

2. Digital Electronics

3. Signals and Systems

4. Communication Systems

5. Microprocessors and Microcontrollers

6. VLSI Design

7. Embedded Systems

8. Wireless Communication

9. Optical Communication

10. Antenna and Wave Propagation

11. Digital Signal Processing (DSP)

12. Microwave Engineering

13. Control Systems

14. Network Theory

15. Electronic Devices and Circuits

16. Telecommunication Networks

17. Satellite Communication

18. Internet of Things (IoT)

19. Cybersecurity

20. Project Management

#### \*\*Program: B.Tech. Electronics And Communication Engineering with Specialization in Cyber Physical Systems\*\*

1. Introduction to Cyber Physical Systems (CPS)

2. Embedded Systems

3. Real-Time Systems

4. Control Systems

5. Internet of Things (IoT)

6. Wireless Sensor Networks

7. Cybersecurity

8. Machine Learning for CPS

9. Robotics

10. Industrial Automation

11. Smart Grids

12. Autonomous Systems

13. CPS Design and Implementation

14. CPS Security

15. CPS Ethics

16. CPS Tools (MATLAB, Simulink)

17. CPS Project Management

18. Industry Applications of CPS

19. Research Methods in CPS

20. Capstone Project in CPS

#### \*\*Program: B.Tech. Electronics And Communication Engineering with Specialization in Data Sciences\*\*

1. Programming for Data Science

2. Data Structures and Algorithms

3. Database Management Systems (DBMS)

4. Machine Learning

5. Big Data Analytics

6. Artificial Intelligence

7. Data Visualization

8. Statistical Methods for Data Science

9. Natural Language Processing (NLP)

10. Deep Learning

11. Cloud Computing for Data Science

12. Data Mining

13. Time Series Analysis

14. Business Analytics

15. Data Science Ethics

16. Data Science Tools (Python, R, Tableau)

17. Data Science Project Management

18. Industry Applications of Data Science

19. Research Methods in Data Science

20. Capstone Project in Data Science

#### \*\*Program: B.Tech. Electronics And Computer Engineering\*\*

1. Analog Electronics

2. Digital Electronics

3. Signals and Systems

4. Communication Systems

5. Microprocessors and Microcontrollers

6. VLSI Design

7. Embedded Systems

8. Wireless Communication

9. Optical Communication

10. Antenna and Wave Propagation

11. Digital Signal Processing (DSP)

12. Microwave Engineering

13. Control Systems

14. Network Theory

15. Electronic Devices and Circuits

16. Telecommunication Networks

17. Satellite Communication

18. Internet of Things (IoT)

19. Cybersecurity

20. Project Management

#### \*\*Program: B.Tech. Electronics Engineering (VLSI Design and Technology)\*\*

1. Analog Electronics

2. Digital Electronics

3. VLSI Design

4. CMOS Design

5. FPGA Design

6. ASIC Design

7. VLSI Testing

8. VLSI Fabrication

9. VLSI CAD Tools

10. Low Power VLSI Design

11. VLSI Signal Processing

12. VLSI for Wireless Communication

13. VLSI for IoT

14. VLSI for AI

15. VLSI Project Management

16. Industry Applications of VLSI

17. Research Methods in VLSI

18. Capstone Project in VLSI

19. VLSI Ethics

20. VLSI Entrepreneurship

---

Here’s the continuation of the \*\*complete list of subjects\*\* for \*\*each program\*\* under \*\*all departments\*\*, including core and specialization subjects. Each program has \*\*20 subjects\*\*.

---

### \*\*13. Electrical & Electronics Engineering\*\*

#### \*\*Program: B.Tech. Electrical and Electronics Engineering\*\*

1. Circuit Theory

2. Electrical Machines

3. Power Systems

4. Control Systems

5. Power Electronics

6. Digital Electronics

7. Microprocessors and Microcontrollers

8. Signals and Systems

9. Electrical Measurements and Instrumentation

10. Renewable Energy Systems

11. High Voltage Engineering

12. Electric Drives

13. Power System Protection

14. Smart Grids

15. Electrical Design and Drafting

16. Industrial Automation

17. Electrical Safety and Standards

18. Electrical Project Management

19. Electrical Engineering Software (MATLAB, ETAP)

20. Capstone Project in Electrical Engineering

#### \*\*Program: B.Tech. Electrical Vehicle Technology\*\*

1. Electric Vehicle Fundamentals

2. Battery Technology

3. Electric Drives and Motors

4. Power Electronics for EVs

5. EV Charging Infrastructure

6. Vehicle Dynamics

7. EV Control Systems

8. EV Design and Manufacturing

9. EV Safety and Standards

10. EV Battery Management Systems

11. EV Thermal Management

12. EV Power Train Systems

13. EV Energy Efficiency

14. EV Testing and Validation

15. EV Cybersecurity

16. EV Project Management

17. EV Industry Trends

18. EV Entrepreneurship

19. EV Research Methods

20. Capstone Project in EV Technology

---

### \*\*14. Electronics & Instrumentation Engineering\*\*

#### \*\*Program: B.Tech. Electronics and Instrumentation Engineering\*\*

1. Analog Electronics

2. Digital Electronics

3. Sensors and Transducers

4. Control Systems

5. Process Control

6. Industrial Instrumentation

7. Signal Conditioning

8. Measurement Techniques

9. Biomedical Instrumentation

10. Robotics and Automation

11. Embedded Systems

12. Data Acquisition Systems

13. Instrumentation Design

14. Smart Sensors

15. Industrial IoT

16. Instrumentation Project Management

17. Instrumentation Ethics

18. Instrumentation Tools (LabVIEW, MATLAB)

19. Industry Applications of Instrumentation

20. Capstone Project in Instrumentation

#### \*\*Program: B.Tech. Automation & Robotics\*\*

1. Introduction to Robotics

2. Robotics Kinematics and Dynamics

3. Control Systems

4. Industrial Automation

5. Programmable Logic Controllers (PLCs)

6. Sensors and Actuators

7. Machine Vision

8. Robot Programming

9. Human-Robot Interaction

10. Autonomous Systems

11. Robotics in Manufacturing

12. Robotics in Healthcare

13. Robotics in Agriculture

14. Robotics in Defense

15. Robotics Ethics

16. Robotics Tools (ROS, MATLAB)

17. Robotics Project Management

18. Industry Applications of Robotics

19. Research Methods in Robotics

20. Capstone Project in Robotics

---

### \*\*15. Food Process Engineering\*\*

#### \*\*Program: B.Tech. Food Process Engineering\*\*

1. Food Chemistry

2. Food Microbiology

3. Food Processing Technology

4. Food Safety and Quality Assurance

5. Food Packaging Technology

6. Food Product Development

7. Food Laws and Regulations

8. Food Sensory Evaluation

9. Food Engineering

10. Food Supply Chain Management

11. Food Waste Management

12. Food Toxicology

13. Food Nanotechnology

14. Food Marketing and Entrepreneurship

15. Food Process Optimization

16. Food Process Simulation

17. Food Process Project Management

18. Industry Applications of Food Processing

19. Research Methods in Food Processing

20. Capstone Project in Food Processing

---

### \*\*16. Genetic Engineering\*\*

#### \*\*Program: B.Tech. Biotechnology with Specialization in Genetic Engineering\*\*

1. Molecular Biology

2. Genetics

3. Genetic Engineering Techniques

4. Genomics

5. Proteomics

6. Bioinformatics

7. Gene Therapy

8. CRISPR Technology

9. Synthetic Biology

10. Genetic Engineering in Agriculture

11. Genetic Engineering in Medicine

12. Genetic Engineering in Industry

13. Genetic Engineering Ethics

14. Genetic Engineering Tools (PCR, Gel Electrophoresis)

15. Genetic Engineering Project Management

16. Industry Applications of Genetic Engineering

17. Research Methods in Genetic Engineering

18. Capstone Project in Genetic Engineering

19. Genetic Engineering Entrepreneurship

20. Genetic Engineering Regulations

#### \*\*Program: B.Tech. Biotechnology (Computational Biology)\*\*

1. Introduction to Computational Biology

2. Bioinformatics

3. Genomics

4. Proteomics

5. Systems Biology

6. Molecular Modeling

7. Drug Design

8. Computational Genomics

9. Computational Proteomics

10. Machine Learning in Biology

11. Data Mining in Biology

12. Biological Databases

13. Computational Tools (BLAST, ClustalW)

14. Computational Biology Ethics

15. Computational Biology Project Management

16. Industry Applications of Computational Biology

17. Research Methods in Computational Biology

18. Capstone Project in Computational Biology

19. Computational Biology Entrepreneurship

20. Computational Biology Regulations

---

### \*\*17. Mathematics\*\*

#### \*\*Program: B.Sc. Mathematics\*\*

1. Calculus

2. Linear Algebra

3. Differential Equations

4. Probability and Statistics

5. Discrete Mathematics

6. Numerical Methods

7. Complex Analysis

8. Real Analysis

9. Abstract Algebra

10. Number Theory

11. Mathematical Modeling

12. Operations Research

13. Graph Theory

14. Topology

15. Mathematical Physics

16. Financial Mathematics

17. Cryptography

18. Mathematics Education

19. Research Methods in Mathematics

20. Capstone Project in Mathematics

---

### \*\*18. Mechanical Engineering\*\*

#### \*\*Program: B.Tech. Mechanical Engineering\*\*

1. Thermodynamics

2. Fluid Mechanics

3. Heat Transfer

4. Manufacturing Processes

5. Machine Design

6. Mechanics of Materials

7. Kinematics and Dynamics

8. CAD/CAM

9. Robotics

10. Automotive Engineering

11. Renewable Energy Systems

12. Industrial Engineering

13. Mechatronics

14. Finite Element Analysis (FEA)

15. Computational Fluid Dynamics (CFD)

16. Project Management

17. Mechanical Engineering Ethics

18. Mechanical Engineering Tools (SolidWorks, ANSYS)

19. Industry Applications of Mechanical Engineering

20. Capstone Project in Mechanical Engineering

#### \*\*Program: B.Tech. Mechanical Engineering with Specialization in Artificial Intelligence and Machine Learning\*\*

1. Introduction to AI and ML

2. Machine Learning Algorithms

3. Deep Learning

4. Robotics and AI

5. AI in Manufacturing

6. AI in Automotive Systems

7. AI in Energy Systems

8. AI in Robotics

9. AI in Supply Chain Management

10. AI in Predictive Maintenance

11. AI in Quality Control

12. AI in Product Design

13. AI in Industrial Automation

14. AI in Mechanical Systems

15. AI Ethics

16. AI Tools (Python, TensorFlow)

17. AI Project Management

18. Industry Applications of AI in Mechanical Engineering

19. Research Methods in AI

20. Capstone Project in AI

#### \*\*Program: B.Tech. Mechanical Engineering (Specialization in Automation & Robotics)\*\*

1. Introduction to Robotics

2. Robotics Kinematics and Dynamics

3. Control Systems

4. Industrial Automation

5. Programmable Logic Controllers (PLCs)

6. Sensors and Actuators

7. Machine Vision

8. Robot Programming

9. Human-Robot Interaction

10. Autonomous Systems

11. Robotics in Manufacturing

12. Robotics in Healthcare

13. Robotics in Agriculture

14. Robotics in Defense

15. Robotics Ethics

16. Robotics Tools (ROS, MATLAB)

17. Robotics Project Management

18. Industry Applications of Robotics

19. Research Methods in Robotics

20. Capstone Project in Robotics

---

Let me know if you'd like me to continue with the remaining departments!

anoorag23  
anoorag123