|  |  |  |
| --- | --- | --- |
| **School** | **Major** | **Research Field** |
| School of Instrumentation Science and Engineering | Instrument Science and Technology | 1. Ultra Precision MeasurementTechnology and Instruments2. Laser Measurement andDetection Technology3. Modern MicroscopicTechnology and Instruments4. Visual andPhotoelectric Measurement Technology5. PrecisionElectromagnetic Measurement Technology and Instruments6. Advanced Acousto-opticMaterials and Instruments7. Technology of RadiationTemperature Measurement and Thermo-physical Properties Measurement8. Navigation Instrumentsand System Technology9. BioinformaticsDetection and Medical Instruments10.Ultra-Precision ControlTechnology and Instruments |
| School of Electrical Engineering and Automation | Electrical Engineering | 1. Motor and ElectricalAppliances2. Power Electronics andPower Transmission3. Power System andAutomation4. Electrician Theory andNew Technique |
| School of Energy Science and Engineering | Power Engineering and Engineering Thermo-physics | 1. EngineeringThermo-physics2. Thermal Engineering3. Power Machinery andEngineering4. Fluid Machinery andEngineering5. Refrigeration andCryogenic Engineering |
| Faculty of Computing | Computer Science and Technology | 1. High Reliable HighPerformance Computer Architecture2. Mobile Computing andEmbedded Computing3. Computer Network andInformation Security4. Computing Theory5. Huge Amounts of DataCalculation6. Service Computing7. Biological Computingand Bioinformatics8. IntelligentHuman-Computer Interaction and Digital Media Technology9. Artificial Intelligenceand Pattern Recognition10. Multiple Languages andChinese Information Processing11. Social Computing |
| Software Engineering | 1. Software ServiceEngineering2. Software Engineeringand Software Architecture3. SoftwareTrustworthiness and Reliability4. Intelligent SoftwareTheory and Machine Learning5. Business Intelligenceand Data Mining6. Field of SoftwareEngineering |
| School of Astronautics | Control Science and Engineering | 1. Navigation, Guidanceand Control2. Control Theory andControl Engineering3. Detection Technologyand Automatic Equipment4. Robots and IntelligentSystems5. Systems Engineering andSimulation |
| Mechanics | 1. Fatigue and FractureMechanics2. Structural OptimizationDesign3. Micromechanics4. Solid Dynamics5. Thermo/Mechanical/Electrical/Chemical Multi-field Coupling Mechanics6. Material and StructuralMechanics in Extreme Environment7. Advanced Composites andits Structural Lightweight Theory8. Composite Materials andits Structural Mechanics9. Reliability Analysisand Design of Composite Structures10. Intelligent Materialsand Structural Mechanics11. Aerospace StructuralMechanics12. Material/ Structure/Function Integrated Design13. Structural Dynamicsand Vibration Control14. Nonlinear Dynamics15. Hydrodynamics16. Dynamics InverseProblem and Fault Diagnosis |
| Aeronautical and Astronautical Science and Technology | 1. Aircraft System Design2. Flight Dynamics andControl3. Aircraft IntelligentAutonomous Navigation, Guidance and Control4. Deep Space Flight andLanding Return5. Integrated Design andSimulation of Aircraft6. Dynamics and Control ofComplex Spacecraft7. Space EnvironmentalEffects of Spacecraft and its Countermeasures8. Structure andProtection of Aerospace Vehicles |
| Optical Engineering | 1. Space OpticalInformation Acquisition Technology and Processing2. Optical Guidance andSimulation3. Modern PhotoelectricTesting Technology4. Target Detection andRecognition5. Optical ImageProcessing and Evaluation6. Space LaserCommunication7. Laser Radar and LaserRemote Sensing8. High Power Laser andTunable Laser9. Nonlinear OpticalTechnology10. Photoelectric Deviceand Technology |
|  Electronics Science and Technology | 1. Laser SpatialInformation and Confrontation2. Tunable Laser ShortWavelength Laser3. Nonlinear OpticsQuantum Optics Technology and Application4. Photoelectric Deviceand Technology5. Laser Spectrum and TheMechanism of Laser Medium6. Micro-Nano Devices andSystems7. Integrated CircuitsDesign and Application8. Integrated SensorTechnology9. Advanced SoC andReliability Design of Integrated Circuits10. Microwave TransmissionTheory and Antenna System |
| School of Mechatronics Engineering | Mechanical Engineering | 1. Precision andUltra-Precision Processing Technology2. Micro-NanoManufacturing Techniques3. Special Processing andSpecial Material Processing Technology4. Modern Design Theoryand Method5. Digital Design andManufacturing Technology6. Mechanical andElectrical System Control and Automation7. Modern Sensor andTesting Technology8. Fluid Flow Control andAutomation9. Robot Technology andSystem10. Special TransmissionIntelligent Design and Control11. Tribology Basic Theoryand Application Technology12. Engineering StructureDesign and Analysis13. Vibration and NoiseControl14. BiomechanicalEngineering15. Production SystemAutomation Technology16. Manufacturing SystemEngineering Management17. Vehicle Dynamics andControl18. Vehicles AdvancedManufacturing Technology19. Modern Design Theoryand Method Of Vehicle20. Vehicle Electronicsand Control |
| Aeronautical and Astronautical Science and Technology | 1. Space Structure andControl2. Aerospace HighPrecision Manufacturing Technology3. Space Robot Technology4. Space of SpecialProcessing Technology5. Aircraft DigitalManufacturing Technology6. Aircraft GroundSimulation and Testing Technology |
| School of  Materials Science andEngineering | Materials Science and Engineering | 1. Intelligent Materials and Devices2. Advanced Space Materials and Environmental Effects3. Optoelectronic Information Science and Engineering4. Advanced Metal and Ceramic Materials5. Solidification Science and Engineering6. Plastic Processing7. Material Joining Science and Engineering |
| School of Management | Management Science and Engineering | 1. Management InformationSystems and Operation Management 2. E System Engineeringand Optimization3. Big Data and BusinessAnalysis4. Electronic Health |
| Business Administration | 1. Enterprise StrategicManagement Theory and Method2. Organization and HumanResource Theory and Method3. Marketing Theory andMethod4. Accounting Policies andAccounting Information Disclosure5. Innovation theory,method and policy6. Investment andFinancing Theory and Financial Engineering7. Sustainable DevelopmentTheory, Method and Policy8. Management CorporateGovernance and Corporate Value |
| Public Management | 1. Public Policy Analysisand Behavior Simulation2. Urban and Government GovernanceInnovation3. Public Policy ImpactAssessment4. Infrastructure Economyand Management |
| School of Physics | Physics | 1. Nonlinear Optics andLaser Spectroscopy2. Military InformationPhotonics Technology and Devices3. Nano Photonics andSurface Plasmon Optics4. Quantum Information andQuantum Dynamics5. Cross The ExtremeConditions Of Condensed Matter Physics6. Physics and High EnergyHeavy-lon Collisions HadronPhenomenological Study7.Physical Function ofModern Materials and Nano Device8. Particulate Matter andSoft Matter Physics9. Plasma Transport andIts Interaction with Light Field10. Bioluminescence andOptical Imaging Technology |
| School of Mathematics | Mathematics | 1. Analysis and Partial DifferentialEquations2. Algebra and Topology3. Ordinary DifferentialEquation and Dynamical System4. Science and EngineeringComputation5. Inverse Problem ofMathematical Physics6. Operational Control andOptimization |
| Statistics | 1. Statistics and itsApplication in Engineering2. Financial Statisticsand Big Data Analysis3. Biology and QuantumStatistics |
| School of Environment | Civil Engineering | 1. Urban Drinking WaterSecurity2. Theory and Technology of Pollution (Waste) Water Treatment andResource Utilization3. Prevention and Control of Water Pollution and SustainableUtilization of Water Resources4. Hydro-chemicalEnvironment al Functional Materials5. Safe Disposal andResource Utilization of Municipal Solid Waste6. Urban Water SystemDigitalization and Pipeline Network Optimization7. Urban Water CirculationSystem |
| Environmental Science and Engineering | 1. Prevention and Control ofWater Pollution and Sustainable Utilization of Water Resources2. Hydro-chemicalEnvironment al Functional Materials3. Safe Disposal andResource Utilization of Municipal Solid Waste4. Formation Mechanism andPrevention and Control of Air Pollution5. Regional EnvironmentalPollution Prevention and Control and Ecological Engineering6. Environmental SystemSimulation Prediction and Planning Management |
| School of Life Science and Technology | Biomedical Engineering | Engineering:1. Biomedical InformationTechnology2. Nano Biotechnology andBiological Sensors3. Biomedical DetectionTechnology4. BiologicalElectromechanical Integration Technology5. Biomedical ImageProcessing6. Tissue Engineering andTechnologyScience:1. Neurobiology2. Microbial Biotechnology3. Developmental Biology4. Structural MolecularBiology5. Tumor Cell Biology6. Space Molecular CellBiology7. Genetics andBioinformatics |
| Biology | 1. Contains protein structure and function
2. Tumor cell biology
3. Development and epigenetic regulation
4. Biomass reuse and microbial control
5. Cognitive neurobiology
 |
| School of Transportation Science and Engineering | Communication and Transportation Engineering | 1. Road ConstructionMaterials2. Composite Sub-gradeStability Technology3. Pavement Dynamics andDesign Method4. Road NondestructiveTesting Technology5. Road TransportationSafety6. Transportation Planning7. Traffic Economy8. IntelligentTransportation System9. Traffic Management and Control |
| Civil Engineering | 1. Bridge Structure andDurability2. Bridge Monitoring.Monitoring and Safety Evaluation3. Bridge Seismic and AxleVibration4. Both The BridgeReinforcement5. Advanced CompositeApplications |
| School of Civil Engineering | Civil Engineering | 1. Steel, Wood andComposite Structures2. Concrete Structure,Masonry Structure and New Structure3. Bridges and OceanEngineering Structures4. Civil EngineeringMaterials5. Disaster Prevention andMitigation Works and Protection Works6. Geotechnical andUnderground Engineering7. Civil EngineeringConstruction and Management |
| Mechanics | 1. Structural Vibration,Impact, Explosion and Control2. Structural Damage, Reliabilityand Health Monitoring3. ComputationalStructural Mechanics and Computational Fluid Dynamics4. Civil EngineeringIntelligent Materials and Structural System5. Civil EngineeringStructure and System Design Theory |
| School of Architecture | Architecture | 1. Architectural Designand Theory2. Public ArchitectureDesign and its Theory3. Green Building andEnergy Saving Technology4. City and BuildingPhysical Environment5. Chinese and ForeignArchitectural History and Heritage Protection6. Urban Design andInterior Design |
| Urban and Rural Planning | 1. Urban and RuralPlanning Theory and Methods2. Urban Historical&Cultural Protection and Planning Design3. Cold to Urban and RuralLiving Environment Planning4. Urban Form andLandscape Planning5. Urban and RuralSecurity and Regional Planning |
| Landscape Architecture | 1. History and Theory ofWestern Landscape2. Landscape HeritageProtection and Utilization3. Landscape Planning andDesign and Theory4. Landscape ArchitectureEngineering and Technology5. Ecology Landscape6. Tourist Recreation andPlanning and Design |
| Civil Engineering | 1. Heating CalculationTheory and Application Technology2. Ventilation and AirConditioning Theory and Application3. Building EnergyEfficiency and Energy Utilization4. Gas Storage and Transportationand Urban Gas Application5. HVAC Systems andControl Theory and Technology6. Built Environment |
| School of Electronics and Information Engineering | Information and Communication Engineering | 1. Wireless Communicationand Network2. Theory and Technologyof Space Communication3. New System Radar Theoryand Technology4. Microwave Imaging andTarget Recognition Technology5. Remote SensingInformation Processing Technology6. ElectronicCountermeasure Theory and Technology7. Measurement and ControlTheory and Technology |
| School of Chemistry and Chemical Engineering | Chemical Engineering andTechnology | 1. Surface and InterfaceChemistry2. Polymer Composite andModification3. Chemical Power Sourceand Electrochemical Power Engineering4. Preparation andPerformance of Functional Materials5. Biological Synthesisand Separation Engineering6.  Bimolecular Engineering7. New Energy ChemicalIndustry |