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| **HIT Doctoral Degree Programs** | | |
| **School** | **Major** | **Research Field** |
| School of Instrumentation Science and Engineering | 0804  Instrument Science and Technology | 1. Ultra Precision Measurement Technology and Instruments  2. Laser Measurement and Detection Technology  3. Modern Microscopic Technology and Instruments  4. Visual and Photoelectric Measurement Technology  5. Precision Electromagnetic Measurement Technology and Instruments  6. Advanced Acousto-optic Materials and Instruments  7. Technology of Radiation Temperature Measurement and Thermo-physical Properties Measurement  8. Navigation Instruments and System Technology  9. Bioinformatics Detection and Medical Instruments  10.Ultra-Precision Control Technology and Instruments |
| School of Electrical Engineering and Automation | 0808  Electrical Engineering | 1. Motor and Electrical Appliances  2. Power Electronics and Power Transmission  3. Power System and Automation  4. Electrician Theory and New Technique |
| School of Energy Science and Engineering | 0807  Power Engineering and Engineering Thermo-physics | 1. Engineering Thermo-physics  2. Thermal Engineering  3. Power Machinery and Engineering  4. Fluid Machinery and Engineering  5. Refrigeration and Cryogenic Engineering |
| Faculty of Computing | 0812  Computer Science and Technology | 1. High Reliable High Performance Computer Architecture  2. Mobile Computing and Embedded Computing  3. Computer Network and Information Security  4. Computing Theory  5. Huge Amounts of Data Calculation  6. Service Computing  7. Biological Computing and Bioinformatics  8. Intelligent Human-Computer Interaction and Digital Media Technology  9. Artificial Intelligence and Pattern Recognition  10. Multiple Languages and Chinese Information Processing  11. Social Computing |
| 0835  Software Engineering | 1. Software Service Engineering  2. Software Engineering and Software Architecture  3. Software Trustworthiness and Reliability  4. Intelligent Software Theory and Machine Learning  5. Business Intelligence and Data Mining  6. Field of Software Engineering |
| School of Astronautics | 0811  Control Science and Engineering | 1. Navigation, Guidance and Control  2. Control Theory and Control Engineering  3. Detection Technology and Automatic Equipment  4. Robots and Intelligent Systems  5. Systems Engineering and Simulation |
| 0801  Mechanics | 1. Fatigue and Fracture Mechanics  2. Structural Optimization Design  3. Micromechanics  4. Solid Dynamics  5. Thermo/Mechanical/ Electrical/Chemical Multi-field Coupling Mechanics  6. Material and Structural Mechanics in Extreme Environment  7. Advanced Composites and its Structural Lightweight Theory  8. Composite Materials and its Structural Mechanics  9. Reliability Analysis and Design of Composite Structures  10. Intelligent Materials and Structural Mechanics  11. Aerospace Structural Mechanics  12. Material/ Structure/ Function Integrated Design  13. Structural Dynamics and Vibration Control  14. Nonlinear Dynamics  15. Hydrodynamics  16. Dynamics Inverse Problem and Fault Diagnosis |
| 0825  Aeronautical and Astronautical Science and Technology | 1. Aircraft System Design  2. Flight Dynamics and Control  3. Aircraft Intelligent Autonomous Navigation, Guidance and Control  4. Deep Space Flight and Landing Return  5. Integrated Design and Simulation of Aircraft  6. Dynamics and Control of Complex Spacecraft  7. Space Environmental Effects of Spacecraft and its Countermeasures  8. Structure and Protection of Aerospace Vehicles |
| 0803  Optical Engineering | 1. Space Optical Information Acquisition Technology and Processing  2. Optical Guidance and Simulation  3. Modern Photoelectric Testing Technology  4. Target Detection and Recognition  5. Optical Image Processing and Evaluation  6. Space Laser Communication  7. Laser Radar and Laser Remote Sensing  8. High Power Laser and Tunable Laser  9. Nonlinear Optical Technology  10. Photoelectric Device and Technology |
| 0809  Electronics Science and Technology | 1. Laser Spatial Information and Confrontation  2. Tunable Laser Short Wavelength Laser  3. Nonlinear Optics Quantum Optics Technology and Application  4. Photoelectric Device and Technology  5. Laser Spectrum and The Mechanism of Laser Medium  6. Micro-Nano Devices and Systems  7. Integrated Circuits Design and Application  8. Integrated Sensor Technology  9. Advanced SoC and Reliability Design of Integrated Circuits  10. Microwave Transmission Theory and Antenna System |
| School of Mechatronics Engineering | 0802  Mechanical Engineering | 1. Precision and Ultra-Precision Processing Technology  2. Micro-Nano Manufacturing Techniques  3. Special Processing and Special Material Processing Technology  4. Modern Design Theory and Method  5. Digital Design and Manufacturing Technology  6. Mechanical and Electrical System Control and Automation  7. Modern Sensor and Testing Technology  8. Fluid Flow Control and Automation  9. Robot Technology and System  10. Special Transmission Intelligent Design and Control  11. Tribology Basic Theory and Application Technology  12. Engineering Structure Design and Analysis  13. Vibration and Noise Control  14. Biomechanical Engineering  15. Production System Automation Technology  16. Manufacturing System Engineering Management  17. Vehicle Dynamics and Control  18. Vehicles Advanced Manufacturing Technology  19. Modern Design Theory and Method Of Vehicle  20. Vehicle Electronics and Control |
| 0825  Aeronautical and Astronautical Science and Technology | 1. Space Structure and Control  2. Aerospace High Precision Manufacturing Technology  3. Space Robot Technology  4. Space of Special Processing Technology  5. Aircraft Digital Manufacturing Technology  6. Aircraft Ground Simulation and Testing Technology |
| School of Materials Science and Engineering | 0805  Materials Science and Engineering | 1. Intelligent Materials and Devices  2. Space Material and its Environmental Effects  3. Photoelectric Information Science and Engineering  4. Advanced Metals and Ceramic Materials  5. Solidification Science and Engineering  6. Plastic Processing Science and Engineering  7. Material Connection Science and Engineering |
| School of Management | 1201  Management Science and Engineering | 1. Management Information Systems and Operation Management  2. E System Engineering and Optimization  3. Big Data and Business Analysis  4. Electronic Health |
| 1202  Business Administration | 1. Enterprise Strategic Management Theory and Method  2. Organization and Human Resource Theory and Method  3. Marketing Theory and Method  4. Accounting Policies and Accounting Information Disclosure  5. Innovation theory, method and policy  6. Investment and Financing Theory and Financial Engineering  7. Sustainable Development Theory, Method and Policy  8. Management Corporate Governance and Corporate Value |
| 1204  Public Management | 1. Public Policy Analysis and Behavior Simulation  2. Urban and Government Governance Innovation  3. Public Policy Impact Assessment  4. Infrastructure Economy and Management |
| School of Humanities, Social Science and Law | 0303  Sociology | 1. Industrial Sociology  2. Virtual Social Anthropology  3. Social Construction and The Underclass  4. Quantitative Social Research Methods  5. Research on Network Society  6. Tourism Sociology |
| School of Physics | 0702  Physics | 1. Nonlinear Optics and Laser Spectroscopy  2. Military Information Photonics Technology and Devices  3. Nano Photonics and Surface Plasmon Optics  4. Quantum Information and Quantum Dynamics  5. Cross The Extreme Conditions Of Condensed Matter Physics  6. Physics and High Energy Heavy-lon Collisions Hadron  Phenomenological Study  7.Physical Function of Modern Materials and Nano Device  8. Particulate Matter and Soft Matter Physics  9. Plasma Transport and Its Interaction with Light Field  10. Bioluminescence and Optical Imaging Technology |
| School of Mathematics | 0701  Mathematics | 1. Analysis and Partial Differential Equations  2. Algebra and Topology  3. Ordinary Differential Equation and Dynamical System  4. Science and Engineering Computation  5. Inverse Problem of Mathematical Physics  6. Operational Control and Optimization |
| 0714  Statistics | 1. Statistics and its Application in Engineering  2. Financial Statistics and Big Data Analysis  3. Biology and Quantum Statistics |
| School of Environment | 0814  Civil Engineering | 1. Urban Drinking Water Security  2. Theory and Technology of Pollution (Waste) Water Treatment and Resource Utilization  3. Prevention and Control of Water Pollution and Sustainable Utilization of Water Resources  4. Hydro-chemical Environment al Functional Materials  5. Safe Disposal and Resource Utilization of Municipal Solid Waste  6. Urban Water System Digitalization and Pipeline Network Optimization  7. Urban Water Circulation System |
| 0830  Environmental Science and Engineering | 1. Prevention and Control of Water Pollution and Sustainable Utilization of Water Resources  2. Hydro-chemical Environment al Functional Materials  3. Safe Disposal and Resource Utilization of Municipal Solid Waste  4. Formation Mechanism and Prevention and Control of Air Pollution  5. Regional Environmental Pollution Prevention and Control and Ecological Engineering  6. Environmental System Simulation Prediction and Planning Management |
| School of Life Science and Technology | 0831/0777  Biomedical Engineering | Engineering:  1. Biomedical Information Technology  2. Nano Biotechnology and Biological Sensors  3. Biomedical Detection Technology  4. Biological Electromechanical Integration Technology  5. Biomedical Image Processing  6. Tissue Engineering and Technology  Science:  1. Neurobiology  2. Microbial Biotechnology  3. Developmental Biology  4. Structural Molecular Biology  5. Tumor Cell Biology  6. Space Molecular Cell Biology  7. Genetics and Bioinformatics |
| School of Transportation Science and Engineering | 0823  Communication and Transportation Engineering | 1. Road Construction Materials  2. Composite Sub-grade Stability Technology  3. Pavement Dynamics and Design Method  4. Road Nondestructive Testing Technology  5. Road Transportation Safety  6. Transportation Planning  7. Traffic Economy  8. Intelligent Transportation System  9. Traffic Management and Control |
| 0814  Civil Engineering | 1. Bridge Structure and Durability  2. Bridge Monitoring. Monitoring and Safety Evaluation  3. Bridge Seismic and Axle Vibration  4. Both The Bridge Reinforcement  5. Advanced Composite Applications |
| School of Civil Engineering | 0814  Civil Engineering | 1. Steel, Wood and Composite Structures  2. Concrete Structure, Masonry Structure and New Structure  3. Bridges and Ocean Engineering Structures  4. Civil Engineering Materials  5. Disaster Prevention and Mitigation Works and Protection Works  6. Geotechnical and Underground Engineering  7. Civil Engineering Construction and Management |
| 0801  Mechanics | 1. Structural Vibration, Impact, Explosion and Control  2. Structural Damage, Reliability and Health Monitoring  3. Computational Structural Mechanics and Computational Fluid Dynamics  4. Civil Engineering Intelligent Materials and Structural System  5. Civil Engineering Structure and System Design Theory |
| School of Architecture | 0813  Architecture | 1. Architectural Design and Theory  2. Public Architecture Design and its Theory  3. Green Building and Energy Saving Technology  4. City and Building Physical Environment  5. Chinese and Foreign Architectural History and Heritage Protection  6. Urban Design and Interior Design |
| 0833  Urban and Rural Planning | 1. Urban and Rural Planning Theory and Methods  2. Urban Historical &Cultural Protection and Planning Design  3. Cold to Urban and Rural Living Environment Planning  4. Urban Form and Landscape Planning  5. Urban and Rural Security and Regional Planning |
| 0834  Landscape Architecture | 1. History and Theory of Western Landscape  2. Landscape Heritage Protection and Utilization  3. Landscape Planning and Design and Theory  4. Landscape Architecture Engineering and Technology  5. Ecology Landscape  6. Tourist Recreation and Planning and Design |
| 0814  Civil Engineering | 1. Heating Calculation Theory and Application Technology  2. Ventilation and Air Conditioning Theory and Application  3. Building Energy Efficiency and Energy Utilization  4. Gas Storage and Transportation and Urban Gas Application  5. HVAC Systems and Control Theory and Technology  6. Built Environment |
| School of Electronics and Information Engineering | 0810  Information and Communication Engineering | 1. Wireless Communication and Network  2. Theory and Technology of Space Communication  3. New System Radar Theory and Technology  4. Microwave Imaging and Target Recognition Technology  5. Remote Sensing Information Processing Technology  6. Electronic Countermeasure Theory and Technology  7. Measurement and Control Theory and Technology |
| School of Chemistry and Chemical Engineering | 0817  Chemical Engineering and Technology | 1. Surface and Interface Chemistry  2. Polymer Composite and Modification  3. Chemical Power Source and Electrochemical Power Engineering  4. Preparation and Performance of Functional Materials  5. Biological Synthesis and Separation Engineering  6. Bimolecular Engineering  7. New Energy Chemical Industry |

**HIT Master’s Degree Programs**

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| **School** | **Major** | **Research Field** |
| School of Astronautics | 0811 Control Science and Engineering | 1. Navigation Guidance and Control 2. Detection Technology and Automation Device 3. Control Theory and Control Engineering 4. System Engineering and Stimulation   5．Robots and Intelligent System |
| 0801 Mechanics | 1. Damage and Fracture Mechanics 2. Solid Dynamics 3. Structural Mechanics and Software Engineering 4. Composite Materials and Structural Mechanics 5. Characterization and Failure Analysis of Advanced Composite Materials 6. Integration of Structural Design, Analysis and Evaluation of Composite Materials 7. Reliability and Optimization of Complex Structure Engineering 8. Intelligent Materials and Multi-field Coupling Mechanics 9. Thermal Protection System and Structure Design 10. Structural Dynamics and Vibration Control 11. Spacecraft Dynamics and Control 12. Hydrodynamics and Control of Underwater Vehicles 13. Nonlinear Dynamics   14. Health Monitoring and Fault Diagnosis Technology of Engineering System |
| 0825 Aeronautical and Astronautical Science and Technology | Aircraft System Design  2. Flight Dynamics and Control  3. Aircraft Intelligent Autonomous Navigation, Guidance and Control  4. Deep Space Flight and Landing Return  5. Integrated Design and Simulation of Aircraft  6. Dynamics and Control of Complex Spacecraft  7. Space Environmental Effects of Spacecraft and its Countermeasures  8. Structure and Protection of Aerospace Vehicles |
| 0803 Optical Engineering | 1. Optical Image and Information Processing Technology 2. High Resolution Optical Remote Sensing Technology 3. Target Detection and Recognition Technology 4. Modern Photoelectric Detection Technology   5. Photoelectric Guidance and Simulation Technology |
| 0809 Electronics Science and Technology | 1. Laser Spatial Information and Confrontation 2. Tunable Lase and Short Wavelength Laser 3. Nonlinear Optics, Quantum Optics and its Application 4. Optoelectronic Devices and Technology 5. Study on Lase Medium Spectrum and Laser Mechanism 6. Micro-Nano Device and Micro-System 7. Design and Application of Integrated Circuits 8. Wireless Sensor Network Technology 9. Advanced SoC High Reliability IC Design Technology 10. Microwave and Millimeter Wave Circuit Theory and System 11. Wireless Theory and Technology   12.Microwave Intelligent Materials and Microwave Imaging Theory and Technology |
| School of Energy Science and Engineering | 0807 Power Engineering and Engineering Thermo-Physics | 1. Engineering Thermo-physics   1. Thermal Engineering 2. Power Machinery and Engineering 3. Fluid Machinery and Engineering 4. Refrigeration and Cryogenic Engineering   6. Chemical Process Machinery |
| Faculty of Computing | 0812 Computer Science and Technology | 1. High Reliability Computing and Fault Tolerant Computing 2. Mobile Computing 3. Computer Network and Information Technology 4. Massive Data Computation 5. Digital Media and Human-Computer Interaction 6. Natural Language Computing Technology 7. Enterprise Computing and Service Computing 8. Biocomputing and Bioinformatics Technology 9. Multi-agent Robot Technology 10. Artificial Intelligence and Pattern Recognition 11. Information Fusion Technology and Application 12. Computational Theory 13. Social Computing   14. Machine Learning |
| 0835 Software Enginee**ri**ng | 1. Software Service Engineering and Service Computing 2. Service Science and Engineering 3. Software Engineering Technology and Software Architecture 4. Software Reliability and Software Testing 5. Intelligent Software Theory and Machine Learning 6. Data Mining and Business Intelligence   7. Application of Software Engineering |
| School of Instrumentation Science and Engineering | 0804 Instrument Science and Technology | 1. Ultra Precision Measurement Technology and Instruments  2. Laser Measurement and Detection Technology  3. Modern Microscopic Technology and Instruments  4. Visual and Photoelectric Measurement Technology  5. Precision Electromagnetic Measurement Technology and Instruments  6. Advanced Acousto-optic Materials and Instruments  7. Technology of Radiation Temperature Measurement and Thermo-physical Properties Measurement  8. Navigation Instruments and System Technology  9. Bioinformatics Detection and Medical Instruments |
| School of Electrical Engineering and Automation | 0808 Electrical Engineering | 1. Motor and Electrical Appliances  2. Power Electronics and Power Transmission  3. Power System and Automation  4. Electrician Theory and New Technique |
| School of Mathematics | 0701 Mathematics | 1. Analysis and Partial Differential Equations  2. Algebra and Topology  3. Ordinary Differential Equation and Dynamical System  4. Science and Engineering Computation  5. Inverse Problem of Mathematical Physics  6. Operational Control and Optimization |
| School of Physics | 0702 Physics | 1. Nonlinear Optics and Photonic Devices 2. Military Photonics 3. Nano-photonics and Physics of Nano-materials 4. Optical Information Processing 5. Functional Materials Physics and Application 6. Cross-extreme Conditional Physics 7. Condensate Theory 8. Medium and High Energy Nuclear Physics 9. Hadron Physics 10. Atomic and Molecular Physics   11. Plasma Physics |
| School of Mechatronics Engineering | 0802 Mechanical Engineering | 1. Precision and Special Processing Technology 2. Modern Design Method and Intelligent Manufacturing Technology 3. Electromechanical System Control and Automation 4. Fluid Transmission and Control 5. Robot Technology and System 6. Basic Theory and Application of Mechanical Transmission 7. Engineering Machinery 8. Micro-nanotechnology and its Application   9.Industrial Engineering  10. Industrial Design |
| 0825 Aeronautical and Astronautical Science and Technology  (Discipline Direction: Manufacturing Engineering of Aerospace Vehicle) | 1. Space Structure and Control  2. Aerospace High Precision Manufacturing Technology  3. Space Robot Technology  4. Space of Special Processing Technology  5. Aircraft Digital Manufacturing Technology  6. Aircraft Ground Simulation and Testing Technology |
| School of Materials Science and Engineering | 0805 Materials Science and Engineering | 1. Functional Materials and Devices  2. Space Material and its Environmental Effects  3. Photoelectric Information Science and Engineering  4. Advanced Metals and Ceramic Materials  5. Solidification Science and Engineering  6. Plastic Processing Science and Engineering  7. Material Connection Science and Engineering |
| School of Management | 1201 Management Science and Engineering | 1. Management Information System and Decision Support System 2. Electronic Commerce and Business Intelligence 3. System Engineering and Operational Management 4. Electronic Health and Management   5. Knowledge Management and Knowledge Engineering |
| 1202 Business Administration | 1. Technological Innovation and Technology Management 2. Theory of Industry and Regional Development 3. Risk Analysis and Management 4. Modern Manufacturing System management Theory 5. Strategic Management and Modern Enterprise Operation 6. Marketing Theory 7. Accounting and Management Accounting Theory 8. Financial and Cost Management   9. Organizational Management and New Leadership |
| 0202 Applied Economics | 1. Financial Markets and Financial Stability  2. Financial Engineering and Financial Mathematics  3. Internet + and Financial Innovation  4. Urban Economy and Urban Governance  5. International Trade Theory and Practice  6. Behavioral Economics Theory and Experimental Methods |
| School of Humanities, Social Science and Law | 0201 Theoretical Economics | 1. Macroeconomic Theory and Policy  2. Economic Globalization and World Economy  3. Resource Environment and Economic Development  4. Study on Regional Economic Problems  5. International Trade Theory and Policy |
| 0202 Applied Economics | 1. International Trade Theory and Practice  2. International Finance Theory and Empirical Research  3. WTO and Economic Globalization |
| 0303 Sociology | 1. Research on Social Problems of Information and Network  2. Social Research Methods  3. Frontier of Psychodynamics  4. Industrial Sociology  5. Cultural Society and Social Theory  6. Urban Politics and Community Studies |
| 0301 Law | 1. Jurisprudence  2. Civil and Commercial Law  3. Criminal law  4. International Law |
| School of Civil Engineering | 0814 Civil Engineering | 1. Steel, Wood and Composite Structures  2. Concrete Structure, Masonry Structure and New Structure  3. Bridges and Ocean Engineering Structures  4. Civil Engineering Materials  5. Disaster Prevention and Mitigation Works and Protection Works  6. Geotechnical and Underground Engineering  7. Civil Engineering Construction and Management |
| 0801 Mechanics | 1. Structural Vibration, Impact, Explosion and Control  2. Structural Damage, Reliability and Health Monitoring  3. Computational Structural Mechanics and Computational Fluid Dynamics  4. Civil Engineering Intelligent Materials and Structural System  5. Civil Engineering Structure and System Design Theory |
| School of Environment | 0830 Environmental Science and Engineering | 1. Prevention and Control of Water Pollution and Sustainable Utilization of Water Resources  2. Hydro-chemical and Environmental Functional Materials  3. Safe Disposal and Resource Utilization of Municipal Solid Waste  4. Formation Mechanism and Prevention and Control of air Pollution  5. Regional Environmental Pollution Prevention and Control and Ecological Engineering  6. Environmental System Simulation, Prediction and Planning Management |
| 0710 Biology (Discipline Direction: Microbiology) | 1. Physiological Ecology of Environmental Microorganisms  2. Biotechnology and Molecular Biotechnology in Environmental Pollution Control  3. Biological Resources and Energy Development and Utilization |
| 0814 Civil Engineering(Discipline Direction: Municipal Engineering) | 1. Safety Control of Drinking Water Quality in Cities and Towns  2. Theory and Technology of Pollution (Waste) Water Treatment and Resource Utilization  3. Prevention and Control of Water Pollution and Sustainable Utilization of Water Resources  4. Hydro-chemical and Environmental Functional Materials  5. Safe Disposal and Resource Utilization of Municipal Solid Waste  6. Digitalization and Management Optimization of Urban Water System  7. Urban Water Circulation System |
| School of Architecture | 0813 Architecture | 1. Regional Architectural Design and Theory  2. Public Architectural Design and Its Theory  3. Green Building Theory and Energy Saving Technology  4. Urban and Architectural Physical Environment  5. Chinese and Foreign Architectural History and Heritage Protection  6. Urban Design Theory  7. Interior Design Theory  8. Architectural Planning and Its Theory |
| 0814 Civil Engineering (Discipline Direction: Heating, Gas Supply, Ventilating and Air Conditioning Engineering) | 1. Theory and Application Technology of Heating Calculation  2. Theory and Application of Ventilation and Air Conditioning  3. Building Energy Conservation and Energy Utilization  4. Gas Storage and Transportation and Urban Gas Application |
| 0833 Urban and Rural Planning | 1. Urban and Rural Planning Theory and Methods  2. Urban Historical &Cultural Protection and Planning Design  3. Cold to Urban and Rural Living Environment Planning  4. Urban Form and Landscape Planning  5. Urban and Rural Security and Regional Planning |
| 0834 Landscape Architecture | 1. Theory and Method of Landscape Architecture Planning and Design in Cold Regions  2. Landscape Ecology Theory and Method  3. Theory of Landscape Architecture and Landscape Heritage Protection  4. Landscape Architecture History and Theory |
| 0872 、1305 Design | 1. Environmental Art Design and Theoretical Research  2. Product Design and Theoretical Research  3. Visual Communication Design and Theoretical Research  4. Public Art Design and Theoretical Research  5. Research on Design Education and Management  6. Digital Media Design  7. Digital Media Art |
| School of Transportation Science and Engineering | 0823 Communication and Transportation Engineering | 1. Road Building Materials  2. Subgrade and Pavement Engineering  3. Road Alignment Design Theory  4. Traffic Planning and Management  5. Traffic Safety  6. Traffic Information and Control  7. Road Economy and Management  8. Logistics Engineering  9. Road Traffic Environment  10. Intelligent Transportation System |
| 0814 Civil Engineering (Discipline Direction: Bridge and Tunnel Engineering) | 1. Design Theory and Construction Technology of Bridge Structure  2. Coupled Vibration of Vehicle-Bridge System  3. Seismic Resistance of Bridges  4. State Assessment, Detection and Reinforcement of Existing Bridges  5. Composite Bridge Structures  6. Bridge Health Monitoring |
| School of Chemistry and Chemical Engineering | 0817 Chemical Engineering and Technology | 1. Chemical Power Supply  2. Electrochemical Surface Modification  3. Interfacial Chemistry and Engineering of Composite Polymers  4. Polymerization and Engineering  5. Green Chemical Technology  6. Preparation and Application of Inorganic Functional Materials  7. New Catalysts  8. Catalytic Reaction Engineering  9. Bioprocessing Technology  10. Biosynthesis and Separation Engineering |
| 0832 Food Science and Engineering | 1. Food Processing Engineering  2. Food Science  3. Chemistry of Natural Products  4. Extreme Environmental Nutrition |
| 0703 Chemistry | 1. Organic Synthesis and Structure Analysis  2. Energy Conversion Materials  3. Functional Nano-materials and Devices  4. Spectral Analysis  5. Polymer Synthesis and Modification  6. Bio-molecular Science  7. Computational Chemistry |
| 0703 Chemistry (Discipline Direction: Chemistry and Physics of Polymers) | 1. Interface modification and characterization of composite materials  2. Polymer Modification  3. Functional Polymers  4. High Performance Reinforcing Fibers  5. Molecular Simulation |
| School of Marxist | 0101 philosophy | 1. Marxist Philosophy  2. Philosophy of Science and Technology |
| 0305 Marxist theory | 1. Study on the Sinicization of Marxism  2. Ideological and Political Education  3. Research on the Basic Problems of Modern Chinese History |
| School of Electronics and Information Engineering | 0810 Information and Communication Engineering | 1. Wireless Communication and Network  2. Theory and Technology of Space Communication  3. New System Radar Theory and Technology  4. Microwave Imaging and Target Recognition Technology  5. Remote Sensing Information Processing Technology  6. Electronic Countermeasure Theory and Technology  7. Measurement and Control Theory and Technology |
| School of Life Science and Technology | 0710 Biology | 1. Cancer Biology  2. Microbial Genetic Engineering  3. Developmental Biology  4. Neurobiology  5. Space Biology/Space Medicine  6. Protein Structure and Function  7. Structural Molecular Biology |
| 0831 Biomedical Engineering (Master of Engineering) | 1. Nano-biotechnology  2. Medical Physics and Engineering  3. Bioinformatics Technology  4. Medical Image Processing  5. Bio-electromechanical Signal Processing  6. Tissue Engineering and Biomaterials |
| 0777 Biomedical Engineering (Master of Science) | 1. Nano-biotechnology  2. Medical Physics and Engineering  3. Bioinformatics Technology  4. Medical Image Processing  5. Bio-electromechanical Signal Processing  6. Tissue Engineering and Biomaterials |

**HIT Master’s Degree Programs Taught in English**

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| **Category** | **School** | **Major** | **Research Field** |
| Management | School of Management | 0202  Applied [Economics](app:ds:economics) | 1. International Industry and Technology Transfer 2. International Trade Theory 3. Industry Economic Theory and Method 4. The Financial Policy and Regulation 5. Financial Economics 6. Financial Engineering |
| 1201  [Management](app:ds:management) [Science](app:ds:science) [and](app:ds:and) [Engineering](app:ds:engineering) | 1. Management Information System, Decision Support System 2. E-commerce E-government Business Intelligence 3. Systems Engineering Theory and Application 4. Number Theory and the Statistical Analysis and Decision Optimization Model 5. Knowledge Management and Knowledge Engineering 6. [Project](app:ds:project) [Management](app:ds:management) 7. Construction Management Theory and Method 8. Real Estate Investment and Management 9. Housing and Housing System |
| 1202  [Business](app:ds:business) [Administration](app:ds:administration) | 1. Technology Innovation and Technology Management 2. Industry and Regional Development Theory 3. Risk Analysis and Management 4. Management Theory of Modern Manufacturing System 5. Strategic Management and Modern Organization Theory 6. Marketing Theory 7. Accounting Theory and Practice 8. Cost and Management Accounting Theory and Method 9. Financial Management Theory and Method |
| 1204  [Public](app:ds:public) [Management](app:ds:administration) | 1. The Theory and Practice of the Belt and Road Initiative 2. Application of Infrastructure Management 3. Research on Regional Economic Development 4. Research on Governance Theory and Practice 5. The Belt and Road Country Studies |
| Materials Science | School of Materials Science and Engineering | 0805  Materials Science and Engineering | 1. Metal and Ceramics Materials 2. Surface Engineering 3. Behavior of Materials under Space Environment and Test Technologies 4. Polymer Matrix Composite Materials 5. Micromechanics of Composite Materials 6. Information Function Material and Device 7. Biomedical Materials and Device 8. Science and Solidification of Liquid Forming Technology 9. Plastic Forming Theory and Technology 10. Science and Technology of Materials Joining |
| Mechanical Engineering | School of Mechatronics Engineering | 0802  Mechanical Engineering | 1. Mechanical Design and Theory 2. Mechanical Manufacture Automation 3. [Mechatronic](app:ds:mechatronic) [Engineering](app:ds:engineering) 4. Production Process Management |
| School of Energy Science and Engineering | 0807  Power Engineering and Engineering Thermo-Physics | 1. Combustion and Pollution Control 2. Dynamic Fluid and Chemical Machinery 3. Heat, Mass Transfer and Multiphase flow 4. The Utilization of Energy |
| Civil Engineering | School of Civil Engineering | 0814  Civil Engineering | 1. Steel, Wood and Composite Structures  2. Concrete Structure, Masonry Structure and New Structure  3. Bridges and Ocean Engineering Structures  4. Civil Engineering Materials  5. Disaster Prevention and Mitigation Works and Protection Works  6. Geotechnical and Underground Engineering  7. Civil Engineering Construction and Management |
| Electronics | Faculty of Computing | 0812  Computer Science and Technology | Computer Science and Technology |
| 0835  Software Enginee**ri**ng | Software Enginee**ri**ng |
| School of Astronautics | 0811  Control Science and [Engineering](app:ds:engineering) | [C](app:ds:control)ontrol [Science](app:ds:science) [and](app:ds:and) [Engineering](app:ds:engineering) |
| 0809  Electronics Science and Technology | 1. [Physical](app:ds:physical) [Electronics](app:ds:electronics) 2. [Microelectronics](app:ds:Microelectronics) [and](app:ds:and) [Solid-State](app:ds:Solid-State) [Electronics](app:ds:Electronics) |
| School of Electronics and Information Engineering | 0810  Information and Communication Engineering | [Information](app:ds:Information) [and](app:ds:and) [Communication](app:ds:Communication) [Engineering](app:ds:Engineering) |
| School of Instrumentation Science and Engineering | 0804  Instrument Science and Technology | Instrument Science and Technology |
| Chemical Engineering &  Life Science and Technology | School of Chemistry and Chemical Engineering | 0703  Chemistry | 1. Surface and Interface Chemistry of Materials 2. Energy Conversion Material Chemistry 3. Solar Cells and Devices 4. Spectrum Detection and Analysis 5. Synthesis and Preparation of Functional Nano-Materials |
| 0817  Chemical Engineering and Technology | 1. Polymer Composite and Modification 2. Chemical Power Source and Electrochemical Technology 3. Preparation and Performance of Functional Materials 4. Energy Chemical Engineering and Catalysis 5. Bimolecular Engineering |
| 0832  Food Science and Engineering | 1. Space Biochemistry and Protection 2. Natural Product Chemistry and Human Health 3. Food Safety and Process Control 4. Food Fermentation and Microbiology 5. New Resource Food Research and Development |
| School of Life Science and Technology | 0831/0777  Biomedical Engineering | 1. Nano Biotechnology 2. Tissue Engineering and Regenerative Medicine 3. Synthetic Biology 4. Cancer Biology 5. Neurobiology |