

## HIT Doctoral Degree Programs

School	Major	Research Field
School of Electrical Engineering and Automation	0804 Instrument Science and Technology	<ol style="list-style-type: none"> <li>1. Nanometer Measurement and Ultra Precision Instrument Technology</li> <li>2. Laser Measurement and Detection Technology</li> <li>3. Photoelectric Measurement Technology and Instruments</li> <li>4. Radiation Temperature Measurement and Testing Technology in Thermal and Physical Properties</li> <li>5. Image and Information Processing Technology</li> <li>6. Technology of Electronic Measurement and Instrument</li> <li>7. Sensor Technology and Light Mechanical and Electrical System</li> <li>8. Test Automation and Control Technology</li> <li>9. Quality Measurement Technology and Instruments</li> </ol>
	0808 Electrical Engineering	<ol style="list-style-type: none"> <li>1. Electrical Machinery and Appliance</li> <li>2. Power System and Automation</li> <li>3. High Voltage and Insulation Technology</li> <li>4. Power Electronics and Power Drives</li> <li>5. Electrician Theory and New Technique</li> </ol>
School of Energy Science and Engineering	0807 Power Engineering and Engineering Thermo-physics	<ol style="list-style-type: none"> <li>1. Comprehensive Utilization of Energy and Energy Saving Technology</li> <li>2. Multiphase Flow System Engineering</li> <li>3. Air Pollution Control Technology</li> <li>4. Convection Pneumatic Coupling Heat Transfer and Radiation</li> <li>5. Dynamic Mechanical Pneumatic Thermodynamics</li> <li>6. Optimization of Supernormal Parameter Steam Turbine</li> <li>7. Thermal System Dynamics and Control Machinery</li> <li>8. Flow Analysis of Fluid Power Components</li> <li>9. Automation in Petro-Chemical Industry</li> </ol>
School of Computer Science and Technology / School of Software	0812 Computer Science and Technology	<ol style="list-style-type: none"> <li>1. High Reliable High Performance Computer Architecture</li> <li>2. Mobile Computing and Embedded Computing</li> <li>3. Computer Network and Information Security</li> <li>4. Computing Theory</li> <li>5. Huge Amounts of Data Calculation</li> <li>6. Service Computing</li> <li>7. Biological Computing and Bioinformatics</li> <li>8. Intelligent Human-Computer Interaction and Digital Media Technology</li> </ol>

		<ul style="list-style-type: none"> <li>9. Artificial Intelligence and Pattern Recognition</li> <li>10. Multiple Languages and Chinese Information Processing</li> <li>11. Social Computing</li> </ul>
	0835 Software Engineering	<ul style="list-style-type: none"> <li>1. Software Service Engineering</li> <li>2. Software Engineering and Software Architecture</li> <li>3. Software Trustworthiness and Reliability</li> <li>4. Intelligent Software Theory and Machine Learning</li> <li>5. Business Intelligence and Data Mining</li> <li>6. Field of Software Engineering</li> </ul>
School of Astronautics	0811 Control Science and Engineering	<ul style="list-style-type: none"> <li>1. Navigation, Guidance and Control</li> <li>2. Control Theory and Control Engineering</li> <li>3. Detection Technology and Automatic Equipment</li> <li>4. Pattern Recognition and Intelligent System</li> <li>5. Systems Engineering</li> </ul>
	0801 Mechanics	<ul style="list-style-type: none"> <li>1. Structural Dynamics and Vibration Control</li> <li>2. Dynamics of Composite Materials</li> <li>3. Concept of Micro Dynamics</li> <li>4. Solid Dynamics</li> <li>5. Dynamic Inverse Problem and Fault Diagnosis</li> <li>6. Material Performance Characterization and Failure Analysis</li> <li>7. Nonlinear Kinetics</li> <li>8. Intelligent Material Systems and Structures</li> <li>9. Fluid Dynamics</li> <li>10. Optimum Structural Design</li> </ul>
	0825 Aeronautical And Astronautical Science And Technology	<ul style="list-style-type: none"> <li>1. Aircraft System Optimization Design and Simulation</li> <li>2. Aircraft System Optimization Design and Simulation</li> <li>3. Deep Space Probe Landing and Return</li> <li>4. Space Structure Dynamics and Control</li> <li>5. Effect of Space Environment and Protection</li> </ul>
	0803 Optical Engineering	<ul style="list-style-type: none"> <li>1. Space Optical Access to Information Technology and Processing</li> <li>2. Optical Guidance and Simulation</li> <li>3. Modern Photoelectric Testing Technology</li> <li>4. Target Detection and Recognition</li> <li>5. Optical Image Processing and Evaluation</li> <li>6. Space Laser Communication</li> <li>7. Laser Radar and Laser Remote Sensing</li> <li>8. High Power Laser and Tunable Laser</li> <li>9. Nonlinear Optics Technology and Application</li> </ul>

		10. Photoelectric Device and Technology
	0809 Electronics Science And Technology	<ol style="list-style-type: none"> <li>1. Laser Spatial Information and Confrontation</li> <li>2. Tunable Laser Short Wavelength Laser</li> <li>3. Nonlinear Optics Quantum Optics Technology and Application</li> <li>4. Photoelectric Device and Technology</li> <li>5. Laser Spectrum and The Mechanism of Laser Medium</li> <li>6. Micro-Nano Devices and Systems</li> <li>7. Mixed Signal and Rf IC/A</li> <li>8. Integrated Sensor Technology</li> <li>9. System-On-A-Chip Soc and IP Design Technology</li> <li>10. Microwave Transmission Theory and Antenna System</li> </ol>
School of Mechanical and Electrical Engineering	0802 Mechanical Engineering	<ol style="list-style-type: none"> <li>1. Precision and Ultra-Precision Processing Technology</li> <li>2. Micro-Nano Manufacturing Techniques</li> <li>3. Special Processing and Special Material Processing Technology</li> <li>4. Modern Design Theory and Method</li> <li>5. Digital Design and Manufacturing Technology</li> <li>6. Mechanical and Electrical System Control and Automation</li> <li>7. Modern Sensor and Testing Technology</li> <li>8. Fluid Flow Control and Automation</li> <li>9. Robot Technology and System</li> <li>10. Special Transmission Intelligent Design and Control</li> <li>11. Tribology Basic Theory and Application Technology</li> <li>12. Engineering Structure Design and Analysis</li> <li>13. Vibration and Noise Control</li> <li>14. Biomechanical Engineering</li> <li>15. Production System Automation Technology</li> <li>16. Manufacturing System Engineering Management</li> <li>17. Vehicle Dynamics and Control</li> <li>18. Vehicles Advanced Manufacturing Technology</li> <li>19. Modern Design Theory and Method Of Vehicle</li> <li>20. Vehicle Electronics and Control</li> </ol>
	082503 Aeronautical And Astronautical Science And Technology	<ol style="list-style-type: none"> <li>1. Space Structure and Control</li> <li>2. Aerospace High Precision Manufacturing Technology</li> <li>3. Space Robot Technology</li> <li>4. Space of Special Processing Technology</li> <li>5. Aircraft Digital Manufacturing Technology</li> <li>6. Aircraft Ground Simulation and Testing Technology</li> </ol>

School of Materials Science And Engineering	0805 Materials Science And Engineering	<ol style="list-style-type: none"> <li>1. Intelligent Materials and Devices</li> <li>2. Photoelectric Film Material with Quantum Devices</li> <li>3. Special Optical Fiber and Device</li> <li>4. Space Material and its Environmental Effects</li> <li>5. Metal and Composite Materials</li> <li>6. Inorganic Nonmetallic Materials</li> <li>7. Polymer and Composite Materials</li> <li>8. Thin Film Materials and Surface Engineering</li> <li>9. Solidification Science and Engineering</li> <li>10. Plastic Processing Science and Engineering</li> <li>11. Materials Science and Engineering Connection</li> </ol>
School of Economy And Management	1201 Management Science And Engineering	<ol style="list-style-type: none"> <li>1. Management Information Systems and Decision Support System</li> <li>2. Electronic Commerce and Business Intelligence</li> <li>3. Project Management Theory and Method</li> <li>4. Urban Management Theory and Method</li> <li>5. Systems Engineering Theory and Method</li> </ol>
	1202 Business Administration	<ol style="list-style-type: none"> <li>1. Enterprise Strategic Management Theory and Method</li> <li>2. Organization and Human Resource Theory and Method</li> <li>3. Marketing Theory and Method</li> <li>4. Accounting Policies and Accounting Information Disclosure</li> <li>5. Innovation theory, method and policy</li> <li>6. Investment and Financing Theory and Financial Engineering</li> <li>7. Sustainable Development Theory, Method and Policy</li> <li>8. Management Corporate Governance and Corporate Value</li> </ol>
	120401 Public Administration	<ol style="list-style-type: none"> <li>1. Public Policy Analysis and Simulation</li> <li>2. City Management and Government Management Innovation</li> <li>3. Influence of Public Policy Evaluation</li> <li>4. Infrastructure Economy and Management</li> </ol>
School of Humanities, Social Science and Law	0303 Sociology	<ol style="list-style-type: none"> <li>1. Theory and Practice</li> <li>2. Sociology Engineering Technology</li> <li>3. Social Development and The Underclass</li> <li>4. Social Development and The Underclass</li> <li>5. Network Society</li> </ol>
	0702 Physics	<ol style="list-style-type: none"> <li>1. Nonlinear Optics and Laser Spectroscopy</li> <li>2. Military Information Photonics Technology and Devices</li> <li>3. Nano Photonics and Surface from Excimer Optics, Etc</li> <li>4. Quantum Information and Quantum Dynamics</li> <li>5. Cross The Extreme Conditions Of Condensed Matter Physics</li> </ol>

School of Science		6. Physics and High Energy Heavy-Ion Collisions Hadron Phenomenological Study 1. 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. On Ultra-Weak Bioluminescence (Uwl) and Optical Imaging Technology
	0701 Mathematics	1. Calculus 2. Algebra 3. Topology 4. Differential Equation 5. Numerical Analysis of Differential Equations 6. Scientific Calculation 7. Probability and Statistics 8. Functional Differential Equation
	0714 Statistics	1. Stochastic Controls and Applications 2. Markov Processes and Applications 3. Quantum Statistics 4. Stochastic Differential Equations and Its Applications 5. Financial Statistics and Measurement 6. Spatial Statistics and Measurement 7. Biostatistics 8. Large Dimensional Random Matrices Theory and Method
School of Environment	081403 Civil Engineering	1. Urban Drinking Water Security 2. Sludge Wastewater Treatment and Reuse Theory And Technology 3. Urban Water System Digital and Network Optimization 4. Microbiology and Chemical Environment and Water Science 5. Optimal Allocation of Urban Water Resources Protection with Development and Utilization 6. Solid Waste Reduction Resource and Energy 7. Circular Economy and Low-Carbon Technologies
	0830 Environmental Science And Engineering	1. Sludge Wastewater Treatment and Reuse Theory and Technology 2. Microbiology and Chemical Environment and Water Science 3. Regional Watershed Pollution Control. Environmental Planning and Ecological Security 4. Environmental Science and Functional Materials with Water

		<ol style="list-style-type: none"> <li>5. Gaseous Pollutants Reduction and Prevention and Control Technology</li> <li>6. Solid Waste Reduction, Resource and Energy</li> <li>7. New Energy and Energy Conservation and Emissions Reduction Technology</li> <li>8. Circular Economy and Low-Carbon Technologies</li> </ol>
School of Life Science And Technology	0831 Biomedical Engineering	<ol style="list-style-type: none"> <li>1. Biomedical Information Technology</li> <li>2. Nano Biotechnology and Biological Sensors</li> <li>3. Biomedical Detection Technology</li> <li>4. Biological Electromechanical Integration Technology</li> <li>5. Biomedical Image Processing</li> <li>6. Tissue Engineering and Technology</li> </ol>
School of Transportation Science And Technology	0823 Communication And Transportation Engineering	<ol style="list-style-type: none"> <li>1. Road Construction Materials</li> <li>2. Composite Sub-grade Stability Technology</li> <li>3. Pavement Dynamics and Design Method</li> <li>4. Road Nondestructive Testing Technology</li> <li>5. Road Transportation Safety</li> <li>6. Transportation Planning</li> <li>7. Traffic Economy</li> <li>8. Intelligent Transportation System</li> <li>9. Traffic Management and Control</li> </ol>
	081406 Civil Engineering	<ol style="list-style-type: none"> <li>1. Bridge Structure and Durability</li> <li>2. Bridge Monitoring. Monitoring and Safety Evaluation</li> <li>3. Bridge Seismic and Axle Vibration</li> <li>4. Both The Bridge Reinforcement</li> <li>5. Advanced Composite Applications</li> </ol>
School of Civil Engineering	0814 Civil Engineering	<ol style="list-style-type: none"> <li>1. Geotechnical Engineering and Underground Structure</li> <li>2. Rock Geological Engineering to Environment</li> <li>3. Large-Span Space and High-Rise Structures</li> <li>4. Steel Structure&amp; Wood Structure and Composite Structure</li> <li>5. Reinforced Concrete Structure &amp; Masonry Structure with Pre-stressed Structure</li> <li>6. Bridge Structure and Offshore Platform</li> <li>7. Civil Engineering Construction and Structure Make A Diagnosis and Give Treatment &amp; Modification Technology</li> <li>8. Earthquake Engineering and Wind Engineering</li> <li>9. Major Projects Safety Protection and Urban Disaster Prevention and Mitigation</li> </ol>

		10. High Performance Concrete & Intelligent Materials and Structures
	080104 Mechanics	<ol style="list-style-type: none"> <li>1. Structural Vibration &amp; Impact and Control</li> <li>2. Reliability Of Structural Damage &amp;Health Monitoring</li> <li>3. Computational Structural Dynamics and Computational Fluid Dynamics</li> <li>4. Civil Engineering Intelligent Materials and Structures System</li> <li>5. Civil Engineering Structure and Theory of System Design</li> </ol>
School of Architecture	0813 Architecture	<ol style="list-style-type: none"> <li>1. Architectural Design and Theory</li> <li>2. Public Architecture Design and its Theory</li> <li>3. Green Building and Energy Saving Technology</li> <li>4. City and Building Physical Environment</li> <li>5. Chinese and Foreign Architectural History and Heritage Protection</li> <li>6. Urban Design and Interior Design</li> </ol>
	0833 Urban And Rural Planning	<ol style="list-style-type: none"> <li>1. Urban and Rural Planning Theory and Methods</li> <li>2. Urban Historical &amp;Cultural Protection and Planning Design</li> <li>3. Cold to Urban and Rural Living Environment Planning</li> <li>4. Urban Form and Landscape Planning</li> <li>5. Urban and Rural Security and Regional Planning</li> </ol>
	0834 Landscape Architecture	<ol style="list-style-type: none"> <li>1. History and Theory of Western Landscape</li> <li>2. Landscape Heritage Protection and Utilization</li> <li>3. Landscape Planning and Design and Theory</li> <li>4. Landscape Architecture Engineering and Technology</li> <li>5. Ecology Landscape</li> <li>6. Tourist Recreation and Planning and Design</li> </ol>
	081404 Heating, Gas Supply, Ventilating and Air Conditioning Engineering	<ol style="list-style-type: none"> <li>1. Heating Calculation Theory and Application Technology</li> <li>2. Ventilation and Air Conditioning Theory and Application</li> <li>3. Building Energy Efficiency and Energy Utilization</li> <li>4. Gas Storage and Transportation and Urban Gas Application</li> <li>5. HVAC Systems and Control Theory and Technology</li> <li>6. Built Environment</li> </ol>
School of Electronics and Information Technology	0810 Information and Communication Engineering	<ol style="list-style-type: none"> <li>1. Broadband Communication Theory and Signal Processing</li> <li>2. Wireless Mobile Communication and Network</li> <li>3. Deep Space Communication Theory and Satellite Communication Technology</li> <li>4. Modern Signal Processing Theory and Technology</li> <li>5. Microwave Imaging and Target Recognition Technology</li> </ol>

		<ul style="list-style-type: none"> <li>6. Advanced Image Processing Theory and Technology</li> <li>7. Remote Sensing Information Processing Technology</li> <li>8. Electronic Countermeasure Theory and Technology</li> <li>9. Electromagnetic Theory and Rf Technology</li> </ul>
School of Chemistry and Chemical Engineering	0817 Chemistry Engineering And Technology	<ul style="list-style-type: none"> <li>1. Surface and Interface Chemistry</li> <li>2. Polymer Composite and Modification</li> <li>3. Electrochemical Power Source</li> <li>4. Metal Electro-deposition and Chemical Deposition</li> <li>5. Preparation and Performance of Functional Materials</li> <li>6. Catalyst and Catalytic Reaction Engineering</li> <li>7. Biological Synthesis and Separation Engineering</li> <li>8. Bimolecular Engineering</li> <li>9. New Energy Chemical Industry</li> </ul>