Research Supervisor and Research Subject

[Master Course・Doctor Course]

Information Science and Manufacturing Engineering

Supervisor		Research Subject	Main research themes	Master	Doctor	Remarks
Professor	Yasutaka Ando	①Surface Engineering ②Energy Conversion Materials ③Metallic Materials	Oxide semiconductor film deposition by solution precursor plasma spray, High rate diamond synthesis by thermal plasma CVD	A(B)	I	
Professor	Yuichi Nakajo	①Inelastic Behavior of Materials and Structures ②Structure Stability ③Small-scale Solar Thermal Applications (Solar Cooker etc.)	Design of Panel Type Solar Cookers Employing the Ray Tracing Software.	A(B)	I	
Professor	Yasuyuki Nemoto	①Renewable Energy ②Energy and Environmental Engineering ③Fluid and Thermal Engineering	Performance Improvement of Renewable Energy Systems (Wind, Hydro and Biomass systems), Sustainability Assessment of Renewable Energy Systems	A	J	
Professor	Yasuo Sakurai	①Oil-hydraulics and Pneumatics ②Fluid Mechanics ③Functional Fluid	Development of Component to Reduce Pressure Pulsation for Oil-hydraulic System, Evergy Saving on Electro-pneumatic Hybrid System, Development of Immersion Cooling System for CPU by Electro-conjugate Fluid	B	I	
Professor	Shigeaki Kobayashi	①Structural and Functional Materials ②Grain Boundary Engineering ③Nanocrystalline Materials	Grain Boundary Engineering for Development of High Performance and Multifunctional Materials, Development of High Strength Nanocrystalline Materials by Electrodeposition	B	I	
Professor	Ding Dayu	①Pyrotechnic Engineering ②Combustion and Explosion Engineering ③Applied Technology of Energetic Materials	Measurement and analysis for clolored flame of pyrotechnics Measurement and analysis for acoustic characteristics of pyrotechnics Measurement and analysis for combustion explosion phenomena of energetic materials	B		
Professor	Masahiro Mtsushita	①Hert transfer ②Hydrogen energy ③Compressible fluid	Establishment of calculation method of effective thermal conductivity of Metal Hydride Development of high performance cooling technology for high pressure turbine	B		
Professor	Yutaka Doshida	①Electronic Ceramics and their Applications ②Material Design・Synthesis・Process ③Material and Electrical Properties Characterization	Environment-friendly Piezoelectric Ceramics and their Applications	C		
Professor	Tatsuya Doi	①Power Magnetics ②Electromagnetic Field Analysis ③Quantum Computation Theory	Development of Novel Self-organizing Power Magnetic device	C		
Professor	Kazuya Yokoyama	①Applied Superconductivity ②Magnet Technology ③Power System	Improvement of magnetizing method of superconducting bulk magnet and its application	C	J	
Professor	Akinori Kimura	①Particle Physics Simulation ②Computer Visualization ③3D Computer Graphics	Development on Monte Carlo radiation simulation and computer visualization	D		
Professor	Hironori Hiraishi	①AI Application ②Cognitive Computing ③User Interface Design	Cognitive analysis and modeling from biological sensor data. Design of new user interfaces which can consider user's situations. Development of artificial intelligence applications by using machine learning techniques.	D		

・Master Course

A Renewable Energy and Environmental Engineering
B Mechanical System Engineering
C Electrical and Electronic Engineering
D Systems and Information Engineering

・Doctor Course

G Information Systems Engineering
H Electronics Information Engineering
I Manufacturing Systems Engineering
J Energy Conversion Engineering