		First Academic year		Second Academic year	
Semester		1st term	2nd term	1st term	2nd term
Cmpulsory course		Special Topics (1) 1/2 Research Methodology 0/2	Special Topics (2) 1/2	Special Topics (3) 1/2	Special Topics (4) 1/2 Master Thesis 6/6
Elective course	Solid Mechanics and Dsign	Elasticity 3/3 Theory and design of mechanisms 3/3 Computer graphics 3/3 Finite Element Method 3/3 Computer aided engineering analysis 3/3 Design and analysis of robot mechanisms 3/3 Wave dynamics 3/3 Product Innovation & Special topics on R&D Management 3/3	Advanced Mechanism Design 3/3 Advanced Dynamics 3/3 Theory and design of gearing 3/3 Reliability Engineering 3/3 Taguchi quality design method 3/3 Computational dynamics 3/3 Computer Aided Geometric Design 3/3 Applied plasticity 3/3 Continuum mechanics 3/3	Mechanics of vibration 3/3	Optimal Design 3/3
	Precision Manufacturing	Manufacturing System Engineering 3/3 Theory of Engineering System 3/3 Remote networked manufacture 3/3 Image processing and machine vision 3/3 Patent Strategy and Practice 3/3 Algorithms for Clustering Data 3/3 Special Topics on Virtual Reality Technology Application 3/3 Graphics user interface design and application of machine tool 3/3	Case-Based Reasoning 3/3 Computer integrate Manufacture 3/3 Manufacturing System and Strategy 3/3 Design and analysis for nano-structure 3/3 Virtual Reality and Virtual Manufacturing 3/3 Comparative Study of Patent Dispute Cases 3/3	Product Design & manufacture 3/3	technological development 3/3
	Energy Engineering	Engineering analysis 3/3 Conductive Heat Transfer 3/3 Computational fluid dynamics 3/3 Solar Engineering 3/3 Quantum Mechanics 3/3 Polymer Processing Technology 3/3 Multiphase flow 3/3	Convection Heat Transfer 3/3 Turbulent Flow 3/3 Viscous Fluid Mechanics 3/3 Micro Turbulent Theory 3/3 Renewable Energy 3/3 Multiphysics 3/3 Flat panel display technology and manufacturing 3/3	Radial Heat Transfer 3/3 Micro Heat Transfer 3/3 Heat Transfer Enhancement 3/3	
	Cntrol system and Optoelectronics	Introduction to Photo-Electric Engineering 3/3 linear system 3/3 Optimal controls 3/3 Fuzzy System and Control 3/3 Principle of Mechatronics 3/3 Geometric optics 3/3 Special topics on Microsystems 3/3 Special topics on microsensors 3/3 Special Topics on Micro Machining 3/3 Optical Imaging Systems 3/3	Photo-electric inspection 3/3 Robust control 3/3 non-linear control 3/3 Electromagnetism 3/3 Dynamics of Mechatronic System 3/3 Artificial Neural Network 3/3 Vibration control 3/3 Digital Signal Process 3/3 Digital Ctrol 3/3 Advanced Electronics 3/3 Advanced geometrical optics 3/3 Optical Illumination Systems 3/3	Micro-Sensor 3/3 Variable Structure Control 3/3 Adaptive control 3/3 Special Topics on Laser Machining 3/3 Principle and Application of Piezoelectric Actuator 3/3 Servo Chip Design 3/3	
	Material and Nano Engineering	Manufacturing processes and equipments of semiconductor 3/3 Advanced physical Metallurgy 3/3 Nano-Materials 3/3 Microsystem engineering 3/3 Instrument and analysis 3/3 Diffusion Theory 3/3 SEM (1) 3/3 Analysis of SEM 3/3	Lubrication theory 3/3 Micro Mechanics 3/3 Micro Machining Technology 3/3 Electronics Ceramics 3/3 Material of MEMS 3/3 Thermodynamics of Solid State 3/3 SEM (2) 3/3 Nano-technology 3/3 Semiconductor Components & Materials 3/3 Design principle of Forming Equipment 3/3 Micro & Nano Fabrication and Measurement Technology 3/3	Machining Process of MEMS 3/3 System design of mems 3/3 Theory of Material Fracture 3/3 Materials for photo-electric applications 3/3 X-Ray Diffraction Analysis 3/3 X-Ray Crystallography 3/3	
	International	Computer aided design 3/3 Polymer Processing 3/3 Optimal Design 3/3 Manufacturing System Engineering 3/3 Product design and manufacture 3/3 Computer integrate Manufacture 3/3 Principle of Mechatronics 3/3 Reverse Engineering 3/3 Mold Design 3/3 Knowledge Management 3/3 Operation Management 3/3 Machine Learning 3/3 Pruduction System Design 3/3 Micro Machining Technology 3/3 Special topics on Materials 3/3 Theory and design of mechanisms 3/3 Machining Process of MEMS 3/3 Precision Metal Forming 3/3	Research Methodology 3/3 Advanced Mechatronics 3/3 Technology Management 3/3 Finite Element Method 3/3 Systematic Innovation Method 3/3 Quality management 3/3 Control system design & simulation 3/3	Electronic design 3/3 Circuit design 3/3 Photo-Electric element 3/3 Distribution Automation 3/3 Systematic Innovation Method 3/3 Robotics 3/3 Artificial Intelligence 3/3 Image Processing 3/3 Precision manufacturing 3/3	Photo-Electric Engineering 3/3 MEMS 3/3