**Mechatronics Engineering Ph.D. Program**

**(English)**

**Course Program**

**Compulsory Courses**

Ph.D. Thesis

MATH501 Fundamentals of Engineering Mathematics (3+0)

MCHT613 Seminar (0+2+0)

**Elective Courses**

AUTO502 Automotive Mechatronics (3+0)

MCHT611 Advanced Vehicle Dynamics (3+0)

AUTO503 Automotive Electrics and Electronics (3+0)

MCHT509 Advanced Internal Combustion Engines (3+0)

EEE602 DSP-Based Electromechanical Motion Control (2+2)

AUTO504 Autonomous Vehicles (3+0)

MCHT510 Control of Advanced Powertrain Systems (3+0)

MCHT612 Vehicle Dynamics Control (3+0)

EEE607 Advanced Power Electronics (3+0)

EEE609 Advanced Electric Drives (3+0)

ECE501 Advanced Electronic Design Techniques (3+0)

ECE511 Electromagnetic Compatibility (3+0)

MCHT603 Mechatronic Systems Design (3+0)

MCHT605 Advanced Modeling and Simulation of Dynamic Systems (3+0)

MCHT606 Theory and Design of Advanced Control Systems (3+0)

MATH502 Harmonic Analysis and Partial Differential Equations (3+0)

EEE503 Clean Energy Technology and Energy Storage Systems (3+0)

EEE504 Electric and Hybrid Electric Vehicles (3+0)

ECE506 Embedded System Design (3+0)

ECE504 Digital System Design (3+0)

EEE508 Analog Filters (3+0)

ECE513 Microwave Engineering (3+0)

ECE515 Game Theory (3+0)

ECE514 Standards and Regulations in Engineering (3+0)

**Examples of Some Scientific Preparation Courses**

Engineering Mechanics

Control Systems

Dynamics

Electronic Circuits I

Signals and Systems