

## **Degree Programme Table: PhD with integrated study in Robotics and Autonomous Systems**

### **Compulsory Courses**

Autonomous Systems Research (HWU) [30 Credits]

### **Course Options**

Group A: Select between 15 and 20 credits (one of the following) from this group

Software Engineering Foundations (HWU) [15 credits]

Robotics Science and Systems [20 credits]

Probabilistic Modelling and Reasoning [20 credits]

Group B: Select at least 20 credits from this group

Software Engineering Foundations (HWU)

Robotics Science and Systems (UoE)

Probabilistic Modelling and Reasoning (UoE)

Intelligent Robotics (HWU)

Robotic Mechanical Systems (HWU)

Robot Learning & Sensorimotor Control (UoE)

Image processing (HWU)

Advanced Vision (UoE)

Robotics Systems (HWU)

Biosensors (UoE),

Conversational Agents and Spoken Language Processing (HWU)

Advanced Interaction Design (HWU)

Human Computer Interaction (UoE)

Computer Games Programming (HWU)

Computer Animation and Visualisation (UoE)

Decision Making in Robotics and Autonomous Agents (UoE)

(Advanced) Network Security (HWU)

Information Theory (UoE)

Data Mining & Machine Learning (HWU)

Machine Learning & Pattern Recognition (UoE)

Reinforcement Learning (UoE)

Data Visualisation and Analytics (HWU)

Biologically Inspired Computing (HWU)

Neural Computation (UoE)

Parallel Architectures (UoE)

Distributed Systems (HWU & UoE)

Advanced Packaging and Integration (HWU)

Fundamentals of Photonics and Micromechanics (HWU)

Digital Signal Processing (HWU)

Bioinformatics 2 (UoE)

Advanced Software Engineering (HWU)

Algorithmic Game Theory and its Applications (UoE)

Agent Based Systems (UoE)

Neural Information Processing (UoE)

Statistical Methodology (UoE)

Theory of Statistical Inference (UoE)

Generalised Linear Models (UoE)

Combinatorial Optimization (UoE)

Stochastic Optimization (UoE)

Nonlinear Optimization (UoE)

Bayesian Theory (UoE)

Fundamentals of Optimisation (UoE)

Bioinformatics 2 (UoE)

Rigorous Methods for Software Engineering (HWU)