

Brain and Artificial Intelligence Program: RTP

Research training program (RTP) for the BAI program involves a minimum of 12 credits for students who come with ME/MTech qualifications, and a minimum of 24 credits for students who come with BE/BTech/MSc degrees (which is same as the requirements of other interdisciplinary PhD programmes). RTP should include at least 6 credits to be chosen from the list of SCC-approved soft core courses, given below.

Brain and Artificial Intelligence Program: Soft Core Courses

The 'soft core' courses are split into two pools: Pool A corresponds to neuroscience courses, and Pool B refers to machine learning and signal processing courses. A student is expected to take at least one course each from Pool A and Pool B as part of their RTP. The specific soft core courses and the other courses to complete credit requirements are to be chosen after consultation with their thesis advisors. The list of soft core courses is as follows:

Soft Core Pool A: Neuroscience courses

NS 201 (AUG) 2:0 Systems Neuroscience
NS 202 (AUG) 2:0 Molecular and Cellular Basis of Behaviour
NS 203 (AUG) 2:0 Cognitive Neuroscience
MB 214 (AUG) 3:0 Neuronal Physiology and Plasticity
EC 301 (AUG) 2:1 Animal Behaviour: Mechanisms and Evolution
MB 208 (JAN) 3:1 Theoretical and Computational Neuroscience
NS 212 (JAN) 2:1 Neural Signal Processing

Soft Core Pool B: Machine Learning and Signal Processing courses

E9 201 (AUG) 3:0 Digital Signal Processing
E1 222 (AUG) 3:0 Stochastic Models and Applications
E0 229 (AUG) 3:1 Foundations of Data Science
E0 299 (AUG) 3:1 Computational Linear Algebra
E9 205 (AUG) 3:1 Machine Learning for Signal Processing
E2 212 (AUG) 3:0 Matrix Theory
E2 202 (AUG) 3:0 Random Processes
DS 265 (JAN) 3:1 Deep Learning for Computer Vision
E0 270 (JAN) 3:1 Machine Learning
E0 304 (JAN) 3:1 Computational Cognitive Neuroscience
E1 213 (JAN) 3:1 Pattern Recognition and Neural Networks
E9 213 (JAN) 3:0 Time Frequency Analysis
E2 236 (JAN) 3:1 Foundations of Machine Learning