



DEMYSTIFYING THE BRAIN

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Department of Biotechnology
IIT Madras

PRE-REQUISITES : Only college level general science background is required

INTENDED AUDIENCE : Any level if the students are interested in an introduction to neuroscience.

COURSE OUTLINE :

The course presents the contemporary computational perspective of the brain function using few or no equations. Therefore, it is accessible to people coming from both biological sciences and engineering sciences. To the biologist or a medical expert it presents brain function from a computational point of view in simple terms without equations. To the engineer (or someone from the 'hard' sciences) it presents neuroscience in an engineering-style without using too much biology jargon.

ABOUT INSTRUCTOR :

Prof. Srinivas Chakravarthy is a professor at the Department of Biotechnology, IIT Madras. His research interests are in computational neuroscience.

COURSE PLAN :

Week 1: History of neuroscience, Brain through evolution

Week 2: Neurons and neural signaling Networks that learn

Week 3: Organization of the nervous system Maps in the brain

Week 4: Memories and holograms, Emotions in the brain, Theories of Consciousness