INTRODUCTION TO COGNITIVE INFORMATION PROCESSING

SYLLABUS

- T**he Cognitive Revolution,** Part 1 (2 Lectures)
- **The Cognitive Revolution**, Part 2 (Philosophical issues, neuropsychological perspective) (2 Lectures)
- **Early Information Processing Models** (2 Lectures)
- **Recent trends in Information Processing** (3 Lectures)
- **Information theory –** Source and channel coding theorems. Mutual information and information processing principles (2 Lectures)
- **Attention and Perception, Part 1 (role of brain)** (Review of different approaches) (3 lectures)
- **Attention and Perception, Part 2** (Automaticity; Attention odds & ends) (3 lectures)

Mid sems

- **Cognitive approach to vision and pattern recognition:** Template matching theory, Feature detection theory, Computational theory of vision, Feature integration theory (4 lectures)
- **Working Memory & Consciousness - Memory models:** Episodic memory, Sensory memory, Short term memory, Long term memory (2 lectures)
- **"Unconscious Cognition"** (Cognition without Awareness): Explicit & Episodic Memory, Implicit Memory, Memory Accuracy, Nonverbal Memory, Semantic Memory knowledge) & Concepts (2 lectures)
- **Cognitive Load and its measurement** (2 lecture)

- **Cognition architecture of reasoning:** ACT* model, Spread of activation theory, General problem solver model, SOAR model (3 lectures)
- **Language and cognition:** language formation and the brain, Word recognition, Surface level structures, Word and sentence production, Cognitive linguistic issues (3 lectures)
- **Semantic cognition and semantic nets** (2 lectures)
- **Current trends in research:** Controversies and debates (1 lecture)

End Sems