



INTRODUCTION TO BASIC COGNITIVE PROCESSES

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INTENDED AUDIENCE : The course will be beneficial to both UG and PG students interested in Psychology. Also, Masters & PhD students studying Cognitive Psychology and/or with any of the basic mental processes as mentioned above. Professionals working with human factors, user – interface designs etc. will also find the insights from the course as useful.

INDUSTRIES APPLICABLE TO : All industries engaging with human resources, user – interface design & consumer oriented goods may benefit from this course.

COURSE OUTLINE :

Introduction to Basic Cognitive Processes is an introductory course in Cognitive Psychology. As opposed to the behaviorist tradition in psychology that concerns itself with only the observable behaviours of the individual, Cognitive Psychology focuses on the internal mental processes. The approach adopted in this course will look at human behaviour at large as made up of many component mental processes such as sensation, perception, attention, memory, language, imagery, decision making, problem solving, emotion and others.

In the current course, I will first introduce the students to the field of cognitive psychology. I will then move on to talking about the historical developments in Cognitive Psychology. I will spend some time elaborating the fundamental assumptions in cognitive psychology. Also, I will talk about sister disciplines like Cognitive Neuroscience, Cognitive Neuropsychology and how they help us to understand the mental processes in question. I will then spend some more time talking about methods used in Cognitive Psychology before moving on to talk about the basic mental processes such as sensation, perception, attention and memory. Other cognitive functions like language, imagery, decision making etc. will be taken up in the next part of the course named Introduction to Advanced Cognitive Processes.

ABOUT INSTRUCTOR :

Prof. Ark Verma has done his Bachelor's Degree in Psychology & English Literature from the University of Allahabad in 2007. After that he did my Master's Degree in Cognitive Science at the Centre of Behavioral & Cognitive Sciences, University of Allahabad in 2009. He joined the PhD program in the Department of Experimental Psychology at Ghent University, Belgium in January 2010 & was awarded his PhD in 2014. He joined IIT Kanpur as an Assistant Professor of Psychology in May 2015. he research lies in the field of Cognitive Psychology (Lateralisation, Symmetry Detection, Attention) & Psycholinguistics (Visual Word Recognition & Bilingualism).

COURSE PLAN :

Week 1: Introduction to Cognitive Psychology, History and Foundations of Cognitive Psychology.

Week 2: Approaches towards studying Cognitive Psychology and Cognitive Neuroscience.

Week 3: Research Methods in Cognitive Psychology. Sensation. Psychophysics and Signal Detection Theory.

Week 4: Physiology of Visual Perception, Representation in Perception and Approaches to Perception.

Week 5: Theories of Object Recognition, Perception and Action, Attention.

Week 6: Attention, Concept of Memory, Sensory Memory, Short Term Memory.

Week 7: Long Term Memory, Errors in Memory, Improving Memory.

Week 8: Memory and other topics.