

# **COMP 20090: Introduction to Cognitive Science.**

## **Study Sheet: Vision**

We have more than 5 senses. what are they?

Does vision require an eye? Consider the jellyfish larva visual system discussed in lecture.

Where does visual information go after the retina?

What are the two major visual processing pathways?

What does the dorsal stream do?

What does the ventral stream do?

What do visual cells in inferior temporal cortex do? Note some properties of complex objects they may be responsive to (being a face, being a hand), and some they may not be sensitive to (rotation, scale...)

What is the mythical 'grandmother cell'?

What is the Thatcher effect, and what does it show us about high level vision?

What are mirror neurons and why are they considered important?

Why is the eye not like a camera? (active system, sampling intentionally from surroundings, seeking out information required to guide movement and behavior).

What can optical illusions tell us about the way vision works? We saw several examples in lecture.

What are change blindness and inattentional blindness? How might they be demonstrated? What do they tell us about vision?

Distinguish between top down and bottom up processes in visual processing.

What is bistable perception? Give an example.