

PSYC: 051
Fall 2013
Monday-Wednesday-Friday: 11:15 – 12:30
x-period: Tu 12:00-12:50
202 Moore Hall

Instructor: Maria Ida Gobbini
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(email is the best way to contact me)
Office Hours: Thursday 10am-12pm

Course description:

This course will focus on face perception, person perception and the mental processes we use to make sense of other people, including their thoughts, attitudes, personal traits, social connections, and personal history. The course will examine the role that person perception plays in face and voice recognition and social interactions. Particular relevance will be put on the neural systems for representation of person knowledge and the mental states of others focusing also on what happens when these systems are impaired.

Faces play a fundamental role in facilitating social exchanges. Therefore, particular emphasis will be put on different aspects of face perception from face perception in different animal species to recognition of identity and decoding of different type of social cues in humans. A brief overview of person perception through other modalities such as voice perception and body posture will be also discussed.

Course goals

- Provide a deeper understanding of the neural basis of face perception, person perception and detection of social cues
- Develop your ability to have a critical approach to the scientific literature, identify interesting research questions and to plan experiments to address these questions.

Grading

Written exam: 60%

Paper: 40%

Written exam: there will be written exam two weeks before the end of course. The written exam consists of questions on the topics covered during the lectures and short answers are required. Students will have to demonstrate that they acquired knowledge on the main issues covered in class and the answers should be clear and well-articulated.

Paper: you can choose a topic among the ones discussed during class that you would like to investigate. It should consist of an extended introduction and a methods section. The introduction should be a summary of the background literature and should present possible results and what those results would indicate. Although you will not conduct the experiments that you propose, write your method section

with the same amount of detail usually included in a typical journal article. If your experiments involve imaging, you don't need to specify the details of the scanning protocol and data analysis (Scanner details; TR; flip angle; etc), but you should be as precise as possible. Please email me your 8-12 page paper by 11pm on November 24th.

Attendance is mandatory

Creativity

The best scientific research depends on creativity, and many scientists owe their success more to creativity than intelligence. Creative ideas often arrive in an instant, but extended focus on a set of issues provides the raw materials that can lead to creative insights. Creativity will be central to your final project so I'd advise that you immerse yourself in the literature while trying to identify a research question and an experimental approach.

Lateness

The paper is due at the date and time specified. Late papers, without an official documented College excuse (health or family emergency), will be accepted but penalized. No extensions will be granted due to computer failure, roommate difficulties, printing problems, etc. Being late will affect your final grade. According to College policy, there are no excused absences from class for participation in College-sponsored extracurricular activities.

Disabilities

Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me by the end of the second week of the term (Sept 28th). All discussions will remain confidential, although the Academic Skills Center may be consulted to verify the documentation of the disability.

Below is the list of the topics that will be covered in class.

1st week -Presentation of the course and general introduction

- **Sept 16th** - Introduction. Cover syllabus. Brief review of the organization of the nervous system with particular attention to the anatomy of the visual system.
- **Sept 18th** - Brief overview of the methods used in cognitive neuroscience: the neuropsychological approach: videos with patients affected by agnosia, Balint's syndrome and Neglect. Two parallel visual pathways: the 'what' and 'where' visual pathway.
- **Sept 20th** -Methods: brief overview of neuroimaging techniques.

2nd week -Developmental Psychology

- **Sept 23rd** - What development of face perception can tell us about face processing. CONSPEC-COLEARN mechanisms. Development of face processing expertise. Perceptual narrowing.

- **Sept 25th** – The neurodevelopment of face perception
- **Sept 27th** – A comparative perspective: can honeybees recognize faces?

3rd week – Principles of organization in ventrotemporal cortex: modularity, expertise or something else?

- **Sept 30th** – Representation of categories in IT (neurophysiology and fMRI data in monkeys)
- **Oct 2nd** – Principles of organization in ventrotemporal cortex: fMRI data in humans
- **Oct 4th** – The core system for face perception: OFA (occipital face area), FFA (fusiform face area) and STS (superior temporal sulcus).

4th week - Reading faces

- **Oct 7th** – Cognitive and functional model for face perception in humans
- **Oct 9th** – Perception of social cues from faces: eye gaze and facial expressions
- **Oct 11th** – Contribution of the amygdala in perceiving expressions of emotion.

5th week – Understanding others: mirror neurons and theory of mind

- **Oct 14th** – Mirror neurons and the chameleon effect during social interactions
- **Oct 16th** – Theory of mind: a module for understanding other people's minds?
- **Oct 18th** – Recognizing personally familiar faces

6th week – Person knowledge and trait inferences

- **Oct 21st** – Personality impression from facial appearance
- **Oct 23rd** – Face space: the other race effect
- **Oct 25th** – More sophisticated data analysis for investigating the neural basis of face perception

7th week – Timeline in face perception

- **Oct 28th** – Face sensitive N170 component of the evoked potential and other neural signatures of face recognition.
- **Oct 30th** – Can facial cues be processed without awareness?
- **Nov 1st** – Written exam with short answers

8th week: Social perception through different modalities

- **Nov 4th** – Perceiving emotions through voices and body postures
- **Nov 6th** – Voice recognition
- **Nov 8th** – A supramodal substrate for social perception?

9th week: Disorders

- **Nov 11th** – Developmental prosopagnosia: a disorder limited to recognition of face identity?
- **Nov 13th** – Autism and Williams syndrome
- **Nov 15th** – Delusions and mood disorders
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10th week: Wrapping up

- **Nov 18th** – What can face processing tell us about the social brain