PSYC3013 – Perceptual Systems

Unit of Study Code: PSYC3013

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Format of Unit:
2 x 1 hour lectures/week x 13 weeks
1 x 2 hour tutorial/week x 10 weeks

Credit Point Value: 6 Credit Points

Prerequisite: Intermediate Year Psychology units including PSYC (2011 or 2111) and at least one other Intermediate Psychology Unit from PSYC (2012 or 2112), PSYC (2013 or 2113), PSYC (2014 or 2114).

Assessment:
Class work:
Class Report, 1,500 words (20% of the total mark of the unit)
Week 11 Friday 13 October.

Group presentation (10% of the total mark of the unit)
Weeks 6, throughout tutorial time

Tutorial Quiz Test (20%)
Week 13, 23 October – 27 October

Examination:
50%: Multiple choice questions and short answers
Unit of study general description:

The unit covers at an advanced level selected topics in perception from the psychophysical, physiological and neuropsychological perspectives. Students are expected to gain an understanding of some of the major theoretical issues motivating current perceptual research, to appreciate the significance of basic perceptual research for understanding normal perceptual functioning, and to be able to evaluate the empirical and conceptual worth of research contributions.

Teaching outcomes:

- Knowledge of the structural and functional properties of perceptual modalities with emphasis on vision, audition and somatic senses
- Appreciation of the basic processing principles common to various perceptual modalities (optimization, plasticity, redundancy, interactions, etc)
- Understanding of the processes by which combined input from various senses contribute to normal perceptual experience and action
- Understanding of the major theoretical approaches to perception and current issues guiding research
- Basic knowledge of the methods and measures commonly used in perception research
- Ability to understand and evaluate empirical studies in perception

Evidence of learning:

Assessment of work completed in tutorials will take the form a quiz. Group class presentation and the 1500 words report will assess understanding of the topics of selected readings and the ability to design and critically evaluate research. At the end of semester, an examination (short answer and multiple choice) will assess knowledge of the entire course including tutorial work, lecture material, recommended reading and all the stated teaching outcomes.

Lecture Program

Tatjana Seizova-Cajic (Lectures 1-9):

- Touch
- Perceptual plasticity
- Proprioception
- Multisensory processes
- Seeing a three-dimensional world 1
- Seeing a three-dimensional world 2
- Perception and action
- Perceptual disorders
- Revision
Colin Clifford (Lectures 10-14):
- Visual cortex: structure & function
- Modularity & binding
- Computational approaches to vision
- Motion processing
- Colour and lightness

Alex Holcombe (Lectures 15-21):
- Filling-in
- Visual search
- Multiple object tracking
- Inattentional blindness and change blindness
- Perception and action in real-world, sport contexts

David Alais (Lectures 22-25):
- Combining audition and vision: neural structures & functions
- Audiovisual perceptual interactions
- Dealing with audiovisual discrepancy
- Auditory localisation and Virtual Auditory Space.

NOTE: minor variations of lecture program are possible.

Tutorial Program:

The program consists of a mixture of tutorials in which students participate in class demonstrations and discussions and self-directed computer-based tutorials followed by discussion.

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<tr>
<th>Week</th>
<th>Tutorials</th>
<th>Lectures</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>24th July</td>
<td>No tutorials</td>
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<tr>
<td>Week 2</td>
<td>31st July</td>
<td>Seizova-Cajic</td>
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<td>Week 3</td>
<td>7th Aug.</td>
<td>Touch</td>
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<td>Week 4</td>
<td>14th Aug.</td>
<td>Proprioception</td>
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<td>Week 5</td>
<td>21st Aug.</td>
<td>Binocular vision</td>
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<td>Week 6</td>
<td>28th Aug.</td>
<td>No tutorials (prepare presentations)</td>
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<td>Week 7</td>
<td>4th Sept.</td>
<td>S-C / Clifford</td>
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<td>Week 8</td>
<td>11th Sept.</td>
<td>Perceptual disorders (presentations)</td>
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<td>Week 9</td>
<td>18th Sept.</td>
<td>Clifford</td>
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<td>Week 10</td>
<td>2nd Oct.</td>
<td>Mechanisms of motion detection</td>
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<td>Week 11</td>
<td>9th Oct.</td>
<td>(To be announced)</td>
</tr>
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<td>Week 12</td>
<td>16th Oct.</td>
<td>Holcombe</td>
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<tr>
<td>Week 13</td>
<td>23rd Oct.</td>
<td>Blind spot and filling-in</td>
</tr>
</tbody>
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TEXT

   (see also: http://www.psy.vanderbilt.edu/faculty/blake/214_F2005/BlakeSekuler.html)
2. Journal articles and chapters from selected books (to be announced in lectures).

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