PSYC3210 – Perceptual Systems

Unit of Study Code: PSYC3210

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Guest Lecturers: To be announced

Format of Unit:
2 x 1 hour lectures/week x 13 weeks
1 x 1 hour tutorial/week x 12 weeks
Tutorial sizes: maximum of 20 students per group

Credit Point Value: 4 Credit Points

Qualifying: 12 credit points of Second Year Psychology including PSYC 2111 and PSYC 2112

Assessment:
Classwork:
30% (Tutorial class quiz)
Week 13: 28 May – 31 May

Examination:
70%: Multiple choice questions and short answers

Evaluation of teaching and learning:
Date: Week 12 or 13 of semester
Type: Questionnaire

Unit of study general description:

The unit covers at an advanced level selected topics in perception from the psychophysical, physiological and neuropsychological perspectives, and from both the applied and theoretical levels of analyses. 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:

1. Awareness and understanding of the conceptual issues and problems associated with inferring the mechanisms underlying perceptual abilities on the basis of links between neurophysiological and psychophysical data.
2. Ability to describe, explain and discuss the major theoretical and experimental studies on selected issues in perception.
3. Ability to describe and critically evaluate the neuropsychological and behavioural studies relevant to our understanding of the relationship between visually guided actions and perception.
4. Critical understanding of the major theoretical approaches to perception.
5. Ability to describe and evaluate the relationship between perception and the physical stimulus.
6. Ability to describe and evaluate the neurophysiological basis of visual perception.

Evidence of learning:

Assessment will take the form of a quiz test in Week 13 covering work completed in tutorials. At the end of semester, a written examination will assess knowledge of the entire course including tutorial work, lecture material, recommended reading and all the stated teaching outcomes.

SYLLABUS

1. The relationship between perception and action: The functions of visual perception; behavioural and neuropsychological studies; the concept of dissociations; critique of current evidence and theory
2. Recent developments in space perception: Stereopsis, stereoscopic depth constancy, the inverse square-law; experimental evidence; Direct versus indirect theories of space perception; ecological versus the information-processing approaches
3. Visual search and spatial attention: Treisman’s feature integration theory; visual conjunction search; the spotlight metaphor of visual attention; object- versus space-based attention.
4. Functions of the dorsal and ventral visual processing streams including object constancy, mental rotation. Disorders of the dorsal stream including simultanagnosia, orientation agnosia.
5. Visual binocular anomalies; theoretical and applied aspects
6. Vestibular perception; how vestibular stimulation affects visual perception
7. Time perception: theories and evidence
8. Visual processing: Attentional effects on visual processing; psychophysical and neurophysiological studies
## DRAFT TIMETABLE

<table>
<thead>
<tr>
<th>WEEK</th>
<th>LECTURES</th>
<th>TUTORIALS</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Relationship between perception and action. 1</td>
<td>No tutorial</td>
</tr>
<tr>
<td>2</td>
<td>Relationship between perception and action. 2</td>
<td>Introduction</td>
</tr>
<tr>
<td></td>
<td>Recent developments in space perception. 1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Recent developments in space perception. 2</td>
<td>Binocular Demonstrations</td>
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<tr>
<td>4</td>
<td>Visual search and spatial attention</td>
<td>Binocular Demonstrations</td>
</tr>
<tr>
<td>5</td>
<td>Functions of dorsal and visual processing streams</td>
<td>Experiment</td>
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<tr>
<td>6</td>
<td>Visual binocular anomalies</td>
<td>Discussion of Experiment</td>
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<tr>
<td>7</td>
<td>Vestibular perception</td>
<td>Demonstrations</td>
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<tr>
<td>8</td>
<td>Vestibular perception</td>
<td>Experiment</td>
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<td>9</td>
<td>Time perception</td>
<td>Discussion</td>
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<tr>
<td>10</td>
<td>Visual processing: Attentional modulation</td>
<td>Psychophysics.1 Signal Detection</td>
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<tr>
<td>11</td>
<td>Visual processing: Eye-movements and perception</td>
<td>Psychophysics.2 Signal Detection</td>
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<tr>
<td>12</td>
<td>Visual processing: Stages of processing</td>
<td>To be announced; Course Evaluation</td>
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<tr>
<td>13</td>
<td>Face and object recognition: Are faces a unique class of objects?</td>
<td>Tutorial test</td>
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**NOTE:** The sequencing of lecture topics and tutorials may change.

**TEXT**

There is no set text. Readings are based on journal articles and chapters from selected books.