PSYC 3015
Intelligence and Human Reasoning

Unit of Study Code: PSYC3015
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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
Prerequisites: Intermediate Psychology units including PSYC2013 (2113) and PSYC2014 (2114)

Assessment:
Classwork:
Top 3 out of 4 Tutorial quizzes, worth 5% each of the total marks for this unit of study – total of 15% (see tutorial outline).

In addition, as part of the course requirement, students will conduct an experiment and write a 2000 word report/essay (35%). The report is due week 10, Monday May 15th at 4pm.

Examination:
A 2 hours examination, consisting of short-answer and/or multiple choice questions, is worth 50% of the total marks for this unit of study.

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

Unit of study general description:
The aim of this unit of study is to provide an overview of different perspective on the construct of intelligence and to build a critical platform from which both empirical evidence and theoretical propositions can be evaluated. Two broad methodological approaches will be considered, compared, and contrasted. (a) The individual differences approach which serves as the basis of much of contemporary psychological assessment in clinical, educational and organizational settings and (b) the experimental approach to cognitive abilities which use experimental methods to study the information-processing components that underlie intellectual performance (e.g., working-memory theories).

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Teaching outcomes:

At the end of this course, students will be able to:

1) Understand basic features of contemporary theories of cognitive abilities and intelligence
2) Understand basic principles of assessment of intelligence and the interpretation of test scores
3) Understand the main findings in studies examining the cognitive correlates of intelligence
4) Understand the main findings in studies examining information-processing theories of intelligence
5) Understand the main findings in studies linking personality and new constructs (i.e., metacognition and emotional intelligence)
6) Critically evaluate contemporary research in human cognitive abilities and intelligence

Evidence of learning:

In accordance with the assessment procedures for Psychology 3, meritorious performance in this unit of study will involve:

1) Demonstrating a sound understanding of the conceptual aspects of theories about the structure of cognitive abilities, and
2) Reading the recommended references in order to further this understanding, and
3) Demonstrating an ability to question and critically evaluate the various theories and findings in the area of cognitive abilities by applying the knowledge acquired

Satisfactory performance in this unit will involve:

1) A broad understanding of each of the theories and approaches covered, and
2) Some reading of the recommended references in order to further this understanding

To assess this evidence, there will be 4 tutorial quizzes (based on the set readings for tutorials) in weeks 2, 6, 10, and 13, and a short-answer exam, of 90 minutes duration, covering the teaching outcomes listed above. The exam will be worth 50% and the tutorial quizzes 15% of the total marks for this unit. The report / essay, due 15 May (week 10) is worth 35% of the total marks for this unit.

SYLLABUS

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<tr>
<th>LECTURE</th>
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<tr>
<td>1</td>
<td>Introduction / Review</td>
<td>Beckmann</td>
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<td>2</td>
<td>Assessment of Intelligence</td>
<td>Beckmann</td>
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<td>3</td>
<td>Assessment – WAIS-III part 1</td>
<td>Beckmann</td>
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<tr>
<td>4</td>
<td>Assessment – WAIS-III part 2</td>
<td>Beckmann</td>
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<td>5</td>
<td>Cognitive styles</td>
<td>Beckmann</td>
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<td>6</td>
<td>Intelligence and Personality</td>
<td>Beckmann</td>
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<tr>
<td>7</td>
<td>Metacognition Part 1</td>
<td>Kleitman</td>
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<tr>
<td>8</td>
<td>Metacognition Part 2</td>
<td>Kleitman</td>
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<td>9</td>
<td>Emotional Intelligence</td>
<td>Beckmann</td>
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<td>10</td>
<td>Dynamic Assessment</td>
<td>Beckmann</td>
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<td>11</td>
<td>Intelligence in educational contexts</td>
<td>Kleitman</td>
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<td>12</td>
<td>Intelligence &amp; Gender</td>
<td>Kleitman</td>
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<td>BREAK</td>
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<td>13</td>
<td>Faceted Models of Intelligence – A synthesising framework</td>
<td>Beckmann</td>
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<td>14</td>
<td>Fluid Intelligence and Reasoning</td>
<td>Beckmann</td>
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<tr>
<td>15</td>
<td>Why cognitive process theories are important to ID theories 1</td>
<td>Birney</td>
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<tr>
<td>16</td>
<td>Why cognitive process theories are important to ID theories 2</td>
<td>Birney</td>
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<td>17</td>
<td>Foundations of Working Memory (WM) &amp; the Central Executive</td>
<td>Birney</td>
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<td>18</td>
<td>Introduction to cognitive theories of reasoning: Mental Models</td>
<td>Birney</td>
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<tr>
<td>19</td>
<td>Mental models, Deduction rules, or both. Alternatives Accounts</td>
<td>Birney</td>
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<tr>
<td>20</td>
<td>Relational Complexity: A theory of Processing Capacity and WM</td>
<td>Birney</td>
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<tr>
<td>21</td>
<td>Working Memory Theories and Intelligence 1</td>
<td>Birney</td>
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TIMETABLE

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TUTORIAL TOPIC *</th>
<th>Assessment</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>No tutorial</td>
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<tr>
<td>3</td>
<td>Administration of WAIS-III, video, hands-on experience, discussion of test administration issues</td>
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<td>4</td>
<td>Library Research – no meeting</td>
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<td>5</td>
<td>Metacognition – data collection for report</td>
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<tr>
<td>7</td>
<td>Intelligence &amp; Gender – data return</td>
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<tr>
<td>9</td>
<td>Library Research – no meeting</td>
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<tr>
<td>10</td>
<td>WM tasks and Central Executive paper</td>
<td>Quizz &amp; report due</td>
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<tr>
<td>11</td>
<td>Complexity and task Analyses</td>
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<tr>
<td>12</td>
<td>Review paper Ackerman (2005)</td>
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<tr>
<td>13</td>
<td>Simulation of complex problem solving and paper</td>
<td>Quizz</td>
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* Specific readings will be provided in the lectures; There may be slight changes to this outline based on how the course progresses and test availability

TEXT

There is no "set" text for this unit of study. Specific readings will be provided in lectures.

The following sources, listed in order of importance, are recommended reading for a more “in-depth” understanding of the subject matter of this unit:


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