Instructor: Dr. Veronica J. Dark  
Office: Science I Room 374  
Email: vjdark@iastate.edu  
Phone: 294-1688  
Office Hours: T&R 10-10:50, W 11-11:50
No appointment needed during office hours. Drop by at other times. If I'm busy, we'll set up an appointment.

TA: Jason Geller  
Office: Science I Room 54  
Email: jgeller1@iastate.edu  
Text: 515-520-3464  
Office Hours: W & R 2:10-3

Textbooks
There are two required texts: *Thinking and Reasoning* by Ken Manktelow and *Thinking, Fast and Slow* by Daniel Kahneman. We will read most of the Manktelow text and all of the Kahneman book.

Primary Instructional Goal
Psychology is a very complex and abstract science--There is no one accepted theory of behavior because it is so complexly determined. My goal is to help students to learn the many different ways that psychologists have conceptualized the topics of thinking and decision making. We will consider some older approaches and some newer approaches. We will look at how "people" (including us) think, examining typical errors and biases and why they might occur. During this class, you should develop the tools that you need to think critically about you own thinking and the thinking of others.

Psychology Undergraduate Curriculum Outcomes
The undergraduate curriculum in psychology is organized around 5 goals, each with subgoals. Psych 318 contributes to the following departmental learning outcomes:

- **Goal 1**: Develop a detailed knowledge of psychology
  - **2.1** Use scientific reasoning to interpret psychological phenomena
  - **2.2** Demonstrate psychology information literacy

- **Goal 2**: Develop an understanding of scientific inquiry and demonstrate critical thinking
  - **2.1** Use scientific reasoning to interpret psychological phenomena

- **Goal 4**: Be able to communicate effectively in the discourse of psychology
  - **4.2** Demonstrate skill in visual and oral presentation of information

- **Goal 5**: Develop skills supporting employment or graduate/professional education
  - **5.3** Demonstrate the ability to work in a team

Course Format and Prerequisites
This is a 300-level class and psychology 101 is a prerequisite, so *I will assume some background in psychology and in research methodology*. In addition, either Stat 101 or Math 104 is a prerequisite, so *I will assume a basic understanding of probability*.

In-class time will be a mixture of lecture, discussion, and group activities. Group presentations will occur during the last two weeks.

The textbooks and in-class material will overlap somewhat, more so on some topics than others. Both sources of information are important and will be tested. **Please ask questions** when the lecture is not clear. Please feel free to bring up text questions during class when the question relates to the topic being covered. I plan to give you opportunities during class to ask other questions about the text material. (Remind me if I forget!)
Blackboard
I will use blackboard to communicate with you, to post lecture material, and to post any additional reading material. Homework assignments will be posted as they are announced in class. They may be due the next class or I may ask you to complete a short activity prior to class. You should check Blackboard after each class, especially if you miss a class.

Class Attendance
Attendance is required on exam days (Feb 5, Mar 12, Apr 16) and the group organization day (Feb 24). Attendance is strongly encouraged on other days. Attendance will indirectly affect course grades because much of the material for each exam will come from material covered in lecture and in-class discussion and activities. If you aren't in class, you won't benefit from the discussion and activities. Attendance will directly affect course grades when in-class activities earn points. Only those people who attend the class when an in-class activity is done will be eligible to earn the associated points. There also will be several short homework assignments that will be made in class on one day and due the next. These assignments are not on the course calendar. They will be announced in class and posted on Blackboard when they are assigned. You will not get an extension because you missed class the day they were assigned or the day they were due.

You are responsible for the material and announcements presented during any class, even those classes you miss. If you miss class, please do not email me asking what we covered--That is like asking me to give you the lecture in an email response!! 😊 Rather, you should check Blackboard for announcements and the PowerPoint slides, ask to read the notes of another student in the class, and seek clarification from me about questions that you might have. I am available for questions either before or after class and during office hours. As already noted, if my office hours do not fit your schedule, then we will find another time.

Readings
Tentative reading assignments for each week are indicated on the course calendar. As the semester develops, I will refine the reading assignments and announce them in class and post them on Blackboard. Additional short readings will be posted on Blackboard if they are needed.

Exams (140 points)
There are four scheduled exams as shown on the course calendar. There are 140 points possible for the four exams; this is half the total points possible in the class. Attendance on exam days is mandatory, that is, you are expected to take all exams at their scheduled times. You will need to bring a #2 pencil with eraser and a picture ID to each exam. Makeup exams will be given for "excused" absences, but I am the one who determines if the absence warrants being "excused". Makeup exams are likely to be essay exams.

Non-comprehensive exams. There will be three non-comprehensive exams, as indicated on the class calendar. Each exam will consist of 30 points (a mixture of short-answer questions and some multiple-choice questions) and will cover only the material since the last exam.

Comprehensive final exam. There will be a 50-point comprehensive final exam. It will consist of a few multiple choice questions, several short-answer questions, and a longer essay question. The final exam will be given during our final exam period in finals week; the scheduled time is Friday, May 8, 7:30-9:30a.m. Please do NOT plan to leave for summer break prior to the exam.

Cheating on exams is completely unacceptable. It will result in a score of 0 and I will refer you to the Dean of Students.
Homework and In-Class Activities (75 points)
Although this is a relatively large class we will often have group discussion and in-class activities, including group presentations. Some points can be earned only if you are in class, but sometimes homework will be assigned to complement the in-class activities or it may be assigned to be completed prior to the class in which it will be discussed. I will also use homework to help you to assess whether you have mastered some material. The number of points for each activity or homework assignment will reflect the amount of work/time involved. The total points available from homework and in-class activity may exceed the maximum 75 points that will count towards your grade.

Group Presentation (35 points total)
Each member of the class will work with 3 other members of the class to design and deliver a group presentation describing an empirical paper. The first step in the group work is to find an article.

Find an article. Each student must find an empirical article on thinking, reasoning, problem solving, decision making, or choice from one of the following library journals: Thinking & Reasoning; Judgment & Decision Making; Organizational Behavior and Human Decision Processes. You may also look in these two more general cognitive psychology journals: Memory & Cognition and Psychonomic Bulletin & Review. (If you find an article from another psychology journal, I will consider it, but it will need to be relevant to the class.) An empirical article is one that reports an experiment (or experiments). Not all articles in the selected journals will be relevant to the class and not all will be empirical; you should choose something that interests you and that you think others in class would like to hear about. You need to get the article approved no later than Tuesday, Feb 17. You will need to provide a paper copy of the first page of the article when you ask for it to be approved. This page will include the abstract.

This is a mandatory assignment, meaning you cannot skip it and still do well in the class; it is only worth 5 points directly, but if you do not do it, you cannot participate in the group presentation, which is worth 35 points in total.

Group work day. Group work will begin on Tues, Feb 24, a required attendance day that is worth 5 points towards your group score. On that day, we will form the class into preliminary groups on the basis of their approved articles and each group will determine which of the articles it will present to the class. There will be 4 people in each group.

Presentation. The presentation itself is worth 25 points. It should be about 12 minutes long with 3 minutes for questions from the class. Each member of the group will need to speak during the presentation. More information on the presentations, and how they will be graded, will be presented when the groups are formed. The presentations are scheduled for the last two weeks of the semester.

Short Papers (30 points)
I am a firm believer in the idea that students benefit from expressing their ideas in writing, however, the class is too large for efficient grading of multiple longer papers. So, there will be six short papers, three examples and three reaction papers.

1. Examples. Much of what is found in the media (e.g., news, cartoons, advertisements) is directly related to thinking and decision making. For example, the media contains many political ads and arguments designed to convince you to buy something. Some of these ads may illustrate "errors" or "biases" that we have identified in class. Cartoons also routinely illustrate reasoning and decisions (especially reasoning errors). During the semester, I would like you to turn in three examples of such news articles, advertisements, or cartoons. You
need to find three examples and turn them in to me along with a paragraph or two (about ½-1 page typed, double-spaced, with a reasonable font) explaining how the article/advertisement/cartoon relates to the material in the class. The news examples should be contemporary (i.e., they need to be from the last few years). Each example is worth up to 5 points. The score will depend on how well you relate it to the class, the creativity/insight displayed, and the general quality of the writing. Just saying "This illustrates X" will not earn full points. You may turn in the examples at any time, but the first example is due by the end of week 5 (Feb 12), the second is due by the end of week 10 (March 26), and the final example is due last day of class (April 30). A sample cartoon example is posted in Blackboard.

2. Reaction papers. Thinking and decision making are fascinating topics to think and write about (at least in my opinion)! As noted on the tentative calendar, a reaction paper is due the Thursday prior to each regular exam. The paper should be 1-2 pages long, double spaced, with a reasonable font. Each paper should describe your reaction to some aspect of thinking or decision making (i.e., a concept or finding or principle) that was presented during the lectures or that was in the readings for the material associated with the upcoming exam. The content is up to you (e.g., you could describe an example of a concept in your personal life, you could critique the logic of an experiment that is described, you could challenge the usefulness of an explanation, you could relate aspects of something we discussed to something from another course). Each reaction paper is worth up to 5 points. The score will depend on relevance, insight, coherence and the quality of the writing. I am not providing a sample because there is no one way to accomplish this assignment. Be creative.

All short papers are to be written by you in your own words. If you decide to include a short quotation from some other source, it must be properly attributed. You may, of course, describe in your own words concepts or ideas from another source (e.g., your text), but when you do that, you should include a citation to that source. All forms of copying or taking credit for the ideas of others are plagiarism and are completely unacceptable. Plagiarism will result in a score of 0 and will result in referral to the Dean of Students. So, please don't do it.

Course Grades
Course letter grades will be determined by performance on the homework & in-class activities, the exams, the writing assignments, and the group presentation.

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Number</th>
<th>Max Points Each</th>
<th>Total Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noncomprehensive Exams</td>
<td>3</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td>Comprehensive Final exam</td>
<td>1</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Short Papers- Examples</td>
<td>3</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Short Papers- Reflections</td>
<td>3</td>
<td>5</td>
<td>15</td>
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<tr>
<td>Group Presentation</td>
<td>1</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Find an article</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Attendance Feb 24</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Other homework &amp; in-class work</td>
<td>varies</td>
<td>varies</td>
<td>75</td>
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<tr>
<td>TOTAL POINTS</td>
<td></td>
<td></td>
<td>280</td>
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</table>

There are 280 possible points, but I will use the highest number of points earned by a student in the class as 100%. Your percentage score will be the total number of points earned by you divided by the highest total. The percentage range for each letter grade is listed below.
Note that this grading scheme is a form of MASTERY grading in that no curve is imposed -- There is no upper limit on the number of As or Bs and there do not HAVE to be any Ds or Fs. It is theoretically possible for everyone to make an A. But, making an A requires commitment and quite a bit of work. The material to be learned is complex and abstract. In addition, the structure of the course requires constant participation. I am willing to help you, but you have to ask me questions when you don't understand something.

General Academic Policies and Issues

Academic Dishonesty The class will follow Iowa State University's policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office. [link]

Disability Accommodations. Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. If you have a disability and require accommodations, please contact me early in the semester so that your learning needs may be appropriately met. You will need to contact the Disability Resources (DR) office, located on the main floor of the Student Services Building, Room 1076, 515-294-7220 or email disabilityresources@iastate.edu to obtain a Student Academic Accommodation Request (SAAR) that describes the needed accommodations.

Dead Week. This class follows the Iowa State University Dead Week policy as noted in section 10.6.4 of the Faculty Handbook [link].

Harassment and Discrimination. Iowa State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon race, ethnicity, sex (including sexual assault), pregnancy, color, religion, national origin, physical or mental disability, age, marital status, sexual orientation, gender identity, genetic information, or status as a U.S. veteran. Any student who has concerns about such behavior should contact me or Student Assistance at 515-294-1020 or email dso-sas@iastate.edu.

Religious Accommodation. If an academic or work requirement conflicts with your religious practices and/or observances, please let me know and we will find a reasonable accommodation.

If you are experiencing, or have experienced, a problem with any of the above issues in any class, email academicissues@iastate.edu.
# Tentative Class Calendar

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Tentative Topic</th>
<th>Tentative Reading Assignment*</th>
<th>Select assignment due dates and EXAM DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 13, 15</td>
<td><strong>What is thinking? Deduction: Categorical Syllogisms</strong></td>
<td><em>T&amp;R Ch 2 pp. 34-43; T&amp;R Ch 6 pp.142-144</em></td>
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<tr>
<td>2</td>
<td>Jan 20, 22</td>
<td><strong>More Categorical Syllogisms &amp; Conditional Syllogisms</strong></td>
<td><em>T&amp;R Ch 3 pp. 58-65; T&amp;R Ch 4 pp.74-88; T&amp;R Ch 6 pp. 140-141</em></td>
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<td>3</td>
<td>Jan 27,29</td>
<td><strong>More Conditional Syllogisms &amp; Disjunctions &amp; Theory of Mental Models</strong></td>
<td><em>T&amp;R Ch 2 pp. 46-51; T&amp;R Ch 3 pp. 65-70; T&amp;R Ch 5 pp. 110-117</em></td>
<td>1st reflection paper due Jan 29</td>
</tr>
<tr>
<td>4</td>
<td>Feb 3, 5</td>
<td><strong>Induction &amp; Hypothesis Testing</strong></td>
<td><em>T&amp;R Ch 7 pp 155-158;173-186</em></td>
<td><strong>Exam 1 on Thurs Feb 5</strong></td>
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<td>5</td>
<td>Feb 10, 12</td>
<td><strong>Problem Solving &amp; Probability</strong></td>
<td><em>T&amp;R Ch 1</em></td>
<td>1st example due by Thurs Feb 12</td>
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<tr>
<td>6</td>
<td>Feb 17, 19</td>
<td><strong>The Human Information Processing System &amp; the Two Selves</strong></td>
<td>*T&amp;R Ch 6 pp 144-152; <em>TF&amp;S Part I</em></td>
<td><strong>Article &quot;approved&quot; by Thurs Feb 19</strong></td>
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<tr>
<td>7</td>
<td>Feb 24, 26</td>
<td><strong>Heuristics &amp; Biases</strong></td>
<td><em>TF&amp;S Part II</em></td>
<td>Required attendance, Tues Feb 24</td>
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<td>8</td>
<td>Mar 3, 5</td>
<td><strong>Overconfidence</strong></td>
<td><em>TF&amp;S Part III</em></td>
<td>2nd reflection paper due Mar 5</td>
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<td>9</td>
<td>Mar 10, 12</td>
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<td><strong>Exam 2 on Thurs, Mar 12</strong></td>
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<td>10</td>
<td>Mar 24, 26</td>
<td><strong>Decision Making</strong></td>
<td><em>T&amp;R Ch 8; TF&amp;S Part IV</em></td>
<td>2nd example due by Thurs Mar 26</td>
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<td>11</td>
<td>Mar 31, Apr 2</td>
<td><strong>Choices</strong></td>
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<td>12</td>
<td>Apr 7,9</td>
<td><strong>Dilemmas; Broader Contexts</strong></td>
<td><em>T&amp;R Ch 9 &amp; 10; TF&amp;S Part V</em></td>
<td>3rd reflection paper due Apr 9</td>
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<tr>
<td>13</td>
<td>Apr 14, 16</td>
<td><strong>Game Theory</strong></td>
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<td><strong>Exam 3 on Thurs Apr 16</strong></td>
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<td>14</td>
<td>Apr 21, 23</td>
<td><strong>Group Presentations</strong></td>
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<tr>
<td>15</td>
<td>Apr 28, 30</td>
<td><strong>Group Presentations; Review for Final</strong></td>
<td><em>Course evals this week</em></td>
<td>3rd example due by Thurs Apr 30</td>
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<tr>
<td>16</td>
<td>final exam week</td>
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*Comprehensive Final Exam is Friday, May 8, 7:30-9:30am*
Do NOT make plans to leave for break before the exam!

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* *T&R = Thinking & Reasoning textbook; TF&S = Thinking, Fast and Slow textbook*

The topic schedule and reading assignments are **very tentative**, so check Blackboard regularly for actual assignments. Baring unforeseen circumstances, **exam dates will not change**.

The **fine print**—I intend to conduct the class as described in the syllabus, but I reserve the right to change the assignments and their due dates if I determine it is necessary in order to reach my instructional goals.