Lectures
MWF 1:10-2:00pm  Molecular Biology 1424

Instructors - Contact information
Heike Hofmann, Snedecor 122, 4-8948,  hofmann@iastate.edu.
Dianne Cook, Snedecor 325, 4-8865,  dicook@iastate.edu.
Charlie Kostelnick, 201 Ross, 4-4455,  chkostel@iastate.edu.

Course website
http://www.stat.iastate.edu/stat332, and WebCT

Objectives
This course will help prepare students to be active citizens in the information technology age. Students will develop critical thinking skills about how information is visually presented, and they will learn how to accurately and attractively communicate quantitative information using graphics. At the end of the course students will:
* know about important historical and contemporary examples,
* know about and how to implement the elements of graphical design,
* be able to evaluate visual presentations of information in the media, and
* be able to use the computer to generate graphics to communicate information effectively.

Tentative Schedule of Material

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Instructor</th>
<th>Lab period</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>What is this course about?</td>
<td>Heike</td>
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<tr>
<td></td>
<td>Contemporary Examples</td>
<td>Heike, Charlie</td>
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<tr>
<td>Week 2</td>
<td>Historical and famous examples</td>
<td>Heike</td>
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<td>Week 3</td>
<td>Communication purpose</td>
<td>Charlie</td>
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<td></td>
<td>Evaluating graphics</td>
<td>Di</td>
<td>Yes</td>
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<td></td>
<td>Types of quantitative information</td>
<td>Di</td>
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<td>Week 4</td>
<td>Basic data plots</td>
<td>Di</td>
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<td></td>
<td>Visual conventions</td>
<td>Charlie</td>
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<td>Week 5</td>
<td>Graphical elements: points, lines, color</td>
<td>Heike</td>
<td>Yes</td>
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<td></td>
<td>Graphical perception and misconceptions</td>
<td>Heike</td>
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<td>Week 6</td>
<td>Designing experiments</td>
<td>Di</td>
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<td>Week 7</td>
<td>Interacting with graphics</td>
<td>Heike</td>
<td>Yes</td>
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<td>Week 8</td>
<td>Ethics, privacy, public data</td>
<td>Charlie</td>
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<td>Week 9</td>
<td>Presenting tables</td>
<td>Di</td>
<td>Yes</td>
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<td>Week 10</td>
<td>Geographic visualization, cartography</td>
<td>Charlie</td>
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<td>Week 11</td>
<td>Text visualization</td>
<td>Heike</td>
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<td>Weeks 12,13</td>
<td>Project presentations</td>
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<tr>
<td>Week 14</td>
<td>Miscellaneous topics</td>
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The schedule of topics might change, and additional topics might be added.

Software
Excel or JMP will be used to make calculations on data. Photoshop, Canvas, InDesign, Illustrator some similar graphics program will be used to finish graphics.
Tentative Evaluation
Exam 2 (10pts) Short answers and analysis. About week 8.
Exam 3 (10pts) Short answers and analysis. About week 12.

Assignment 1 (5pts) An individual diagnostic of an instructor provided graphic. Due at the end of week 3.
Assignment 2 (10pts) An individual diagnostic of a student discovered graphic. Due at the end of week 4.
Assignment 3 (15pts) An individual evaluation and re-working of an instructor provided graphic. Due end of week 5.
Assignment 4 (10pts) An individual development of a graphic to describe given data. Due about week 6.

Group Project (30pts) This will involved working in a group to study a perceptual or interpretation problem.

  Week 8 Pose a graphical hypothesis (5pts)
  Week 9 Design an experiment to test the hypothesis (5pts)
  Week 10 Conduct the experiment
  Week 11 Project report due (10pts)
  Week 12-13 Poster presentation (10pts)

Assignments and project report need to be typed.

Graduate students will be required to read a research article and report on it.

Recommended Reading
Colin Ware (2000) Information Visualization Perception for Design Morgan Kaufmann
Allyn and Bacon, Needham Heights, MA.

Online Reference Material
Ben Schneiderman's Online Library of Interactive Visualization Environments http://www.otal.umd.edu/Olive/

Disability Policy
Iowa State University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact one of the instructors within the first two weeks of the semester. Retroactive requests for accommodations will not be honored. Before meeting with an instructor, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-6624.