Welcome to ISTA 352

Images: Past, Present, and Future
Instructor

Kobus Barnard:
kobus@sista.arizona.edu
http://kobus.ca
GS 927-A

Other office hours available by email.
Monday 9-10:30 GS 927
Wednesday 12:30-1:30

**Important:** Request for Office hours MUST occur by 6pm the day before.

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ISTA 352 on-line

Course page is now up: http://kobus.ca/teaching/ista352/fall12
(Linked from instructor’s home page http://kobus.ca)

Lectures and assignments will require either connecting from a UA machine (either physically OR virtually (e.g., VPN), OR a login credentials:

user: me
password images4fun

Significant communication for the course will happen using the class mail list ista352@list.arizona.edu.

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Teaching assistant

TA (part time): Kyle Simek  (ksimek@email.arizona.edu)

Office hours 1-2 (Tuesday and/or Thursday) in 927-C

Or via email appointment

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Grades, etc.

Attendance (10%), four quizzes (10% each), five assignments (average 10% each).

No (required) final.

Given N missed classes, the attendance grade out of 10 will be computed as:

\[ \text{attendance grade} = \min(10, \max(0,13-N)) \]

Note that this formula means that missing up to 3 classes is still perfect attendance, which means that most “life happens” events are covered, and you should only need to contact the instructor if you need to miss a significant number of classes.

The computation of the attendance grade does not consider the first lecture (if you registered late), any lecture designated as a tutorial session, any extra session outside of class time, and the day before thanksgiving which will be used as a demo time slot. Attending colloquia recommended in class will lead to bonus mark opportunities.

Testable material includes assignments, lectures designated as being part of the attendance grade (INCLUDING guest lectures), AND tutorials.

90% guarantees an A, 80% guarantees a B, 70% a C, and 60% a D.
Assignments

Assignments will be some combination of programming and other activities. You will typically submit code (if there was programming), and a PDF writeup, via email.

The first assignment uses Matlab.

Where it makes sense to do so, assignments will be graded about 1/3 on exposition.

Detailed information on preparing and submitting assignments is online.

Assignment one will be posted very soon and will be due Friday, Sept 07.

Due dates are on the course home page.

Assignment one will be posted very soon and will be due Friday, Sept 07.

- Welcome to ISTA 352
- What is an image?
- Linear algebra I (arrays, matrices, linearity)
- What is seeing?
- Images from light
- Linear algebra II (transformations)
- Color constancy demo in GS 906 at 1pm
- The world in perspective
- Where does the light land?
- Linear algebra clean up, assignment questions
- Stereo vision
- Temporal image sequences (movies)
- Seeing in humans and machines
- Mary Peterson on perception and/or the brain
- Luca del Pero on computer scene understanding
- Quiz One

Images and Seeing

- Welcome to ISTA 352
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Course schedule

Detailed (but under construction) information on the schedule is online.

http://kobus.ca/teaching/ista352/ua_only/schedule.pdf

Four sections.

- Images and seeing
- Visual communication
- Images in science and medicine
- Digital image technology

Visual communication

- Visual display of quantitative information
- What is a map?
- Yekaterina Kharitonova on the SLIC browsing system
- More on maps (or TBD---some schedule flexibility)
- Spatial mash-ups, Google Earth
- Sheila Butler on visual art
- Creating realism
- Art and perception
- Images in advertising

- Welcome to ISTA 352
- What is an image?
- Linear algebra I (arrays, matrices, linearity)
- What is seeing?
- Images from light
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<tbody>
<tr>
<td>W10</td>
<td>D27</td>
<td>Oct 22</td>
<td>L18</td>
<td>Images in astronomy</td>
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<td>D34</td>
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<td>W12</td>
<td>D35</td>
<td>Nov 09</td>
<td>L22, A4 due</td>
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