Teacher: Mehdi Molkaraie

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Teaching Assistants:

LEC 5101 & L9101: Dong, Yixing; Guo, Yang; Liu, Miaoshiqi; Zhang, Kevin
LEC 5201 & L9201: Guo, Yang; Khan, Mohammad; Liu, Peng; Yu, Lu

Delivery:

We will use a mixture of synchronous and asynchronous learning. The slides of the lectures and prerecorded videos will be uploaded on Quercus. Online class meetings on BB colab are scheduled as follows:

LEC 5101 & L9101: Tuesdays, 19:00 – 20:00
LEC 5201 & L9201: Wednesdays, 19:00 – 20:00

Evaluation for undergraduate students:

<table>
<thead>
<tr>
<th>Item</th>
<th>Credit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests</td>
<td>$5 \times 16%$</td>
<td>5 Tests: total credit 80%</td>
</tr>
<tr>
<td>Assignments</td>
<td>No credit</td>
<td>Will be posted on Quercus</td>
</tr>
<tr>
<td>The final exam</td>
<td>20%</td>
<td>Date/Time will be announced by the department</td>
</tr>
</tbody>
</table>

The assignment will not be graded; but we will discuss them during online class meetings. There will be 2 tests before the reading week (Monday Nov 9), and 3 tests after the reading week. The Final Exam will cover all of the material in the course.

Evaluation for graduate students:

<table>
<thead>
<tr>
<th>Item</th>
<th>Credit</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Tests</td>
<td>$5 \times 14%$</td>
<td>5 Tests: total credit 70%</td>
</tr>
<tr>
<td>Assignments</td>
<td>No credit</td>
<td>Will be posted on Quercus</td>
</tr>
<tr>
<td>Two research projects</td>
<td>$2 \times 5%$</td>
<td>Two projects: total credit 10%</td>
</tr>
<tr>
<td>The final exam</td>
<td>20%</td>
<td>Date/Time will be announced by the department</td>
</tr>
</tbody>
</table>

The assignment will not be graded; but we will discuss them during online class meetings. There will be 2 tests before the reading week (Monday Nov 9), and 3 tests after the reading week. The Final Exam will cover all of the material in the course.

Graduate students are required to do two research projects.
• **Prerequisite:**
  STA302H1/STA352Y1/STAC67H3/STA302H5 (MAT224H1/MAT247H1 recommended)

• **Course Reference:**

• **Tentative Schedule:**
  – (Brief) Introduction to matrix algebra and random vectors,
  – Sample geometry and random sampling,
  – Multivariate normal distribution,
  – Regression analysis,
  – Principle component analysis, and if time permits,
  – Factor analysis and Classification.

• **Notice:**
  Course materials provided on Quercus are for the use of students currently enrolled in this course only. Providing course materials to anyone outside of the course is unauthorized use.