STA261S  DAY SECTION  Spring '08

STATISTICS
AN INTRODUCTION TO THE ANALYSIS OF DATA:
INFERENTIAL & INDUCTIVE REASONING

Instructors:

Prof David Brenner
Sid Smith 6019
978-6368
brenner@utstat.toronto.edu
office: Mon. 2-3

Dr Hadas Moshonov
Sid Smith 6008
946-7587
hadas@utstat.toronto.edu
office: Wed. 5-6

Lectures:

Monday 3:00 - 5:00
Wednesday 3:00 - 4:00

Tutorials:

Wednesday 4:00 - 5:00

Ref./Text:

WACKERLY D., MENDENHALL W., SCHEAFFER R.:
MATHEMATICAL STATISTICS WITH APPLICATIONS  6th ed.,

basically chapters 1, (2-7), 8, 9 & 10 with selected topics from chapters 11-14;
provisional emphasis as follows:
• fundamentals: the structure & function of data [1, (4,7)]
  – expectation: four interpretations
  – samples & the law of large numbers (LLN) - function
  – samples & the empirical distribution - structure
  – normality & the central limit theorem (CLT)
  – examples & review of distribution theory: binomial, poisson, exponential, gamma, normal ...
  – the general statistical model, parametric & otherwise

• estimation & confidence [(7), 8, 9]
  – consistency, unbiasedness & minimum variance
  – sufficiency & the rao-blackwell theorem
  – maximum likelihood

• hypothesis testing [10]
  – testing means, variances: differences & ratios
  – neymann-pearson theory

• linear models [11]
  – correlation, covariance & the linear relation
  – simple linear regression
STA261   DAY SECTION

Grading (G):

final (F) = 50
term (T) = 50
  - test 1 ($T_1$) = 20  - Wed. Feb. 13
  - test 2 ($T_2$) = 20  - Wed. Mar. 26
  - assignments = 10  - one assignment handed out
                      (A = $A_1 + A_2$)  immediately after each test; due
                      in tutorial of the following week.

$T = T_1 + T_2 + A$,  \hspace{1em} G = T + F

(Note: both term tests $T_1$ & $T_2$ will be held during class time)

illness:

If either $T_1$ or $T_2$ is missed due to illness, an official University of Toronto
'Student Medical Certificate' (available at the office of your college registrar)
is required. This must be filled out by a qualified licenced physician
and submitted before any of the following:

If $T_1$ missed due to illness, 'make-up' test, $T_1^*$, will be scheduled.

If $T_2$ missed due to illness, there will be no 'make-up'. In this case
grades will be assessed as follows:

$F = 60$

$T = 40$
  - $T_1^* = 30$
  - $T_2 = $ gone
  - $A = 10$ as above

$T = T_1^* + A$,  \hspace{1em} G = T + F
<table>
<thead>
<tr>
<th>STA 261-Day</th>
<th>Spring 2008</th>
<th>General Calendar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>9 deadline to drop</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>16 1st tutorial</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>28</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26 T₂</td>
</tr>
<tr>
<td></td>
<td></td>
<td>❣</td>
</tr>
<tr>
<td>5</td>
<td>Feb 4</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apr 2 A₂ due</td>
</tr>
<tr>
<td>6</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>13 T₁</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>[reading week #1: 18-22]</td>
<td>[reading week #2: 14-18]</td>
</tr>
<tr>
<td>7</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>27 A₁ due</td>
<td>FINALS: Apr.21-May 9</td>
</tr>
</tbody>
</table>