EEL6825 Pattern Recognition

1. **Catalog Description**: This class will cover most of the basic topics of pattern recognition mentioned in the textbook, Bayesian classification, clustering, non-parametric, linear, HMMs, Neural Nets, along with topics that have come out more recently in the literature. Credit hours: Three 50 minute classes per week

2. **Pre-requisites and Co-requisites**: Prerequisite of undergraduate Signals and Systems (EEL3112 and EEL3135)

3. **Course Objectives**:
   - Learning what classification is and how to implement it
   - Classification system training
   - Understanding how to tell what classification system is best for a given situation

4. **Instructor**
   a. Office location: NEB459
   b. Telephone: 724-472-8732 (352-392-9469 if you need a local number)
   c. E-mail address: mcnese@ece.ufl.edu
   d. Web site: http://www.mcneill.ece.ufl.edu/eel6825SP2012/
   e. Office hours: Tuesdays 1 PM to 2 PM, Thursdays 1 PM to 3 PM, other times by appointment, if my office is open, feel free to come in.

5. **Meeting Times**: Tuesday: Periods 8-9 (3:00 PM to 4:55 PM), Thursday: Period 9 (4:05 PM to 4:55 PM)

6. **Meeting Location**: CSE E118

7. **Textbooks and Software Required**
   a. Pattern Classification
   b. Richard O. Duda, Peter E. Hart and David G. Stork
   d. ISBN 0-471-05669-3

8. **Topics Covered**:
   - Bayesian classification
   - Clustering
   - Non-parametric classification
   - Hidden Markov Models
   - Neural Networks
   - Others as requested or of interest

9. **Attendance and Expectations**: Attendance is expected. Cellphone use is prohibited during class. There is a class email list and a Sakai site for the class. Important information (announcements, course information, documents, assignments, etc.) will be distributed through both of these. Please check them regularly. Sakai can be accessed through: [https://lss.at.ufl.edu/](https://lss.at.ufl.edu/) and clicking the e-Learning in Sakai button in the Login field.

10. **Grading**: This course has one in-class exam based on the homework, lectures, and reading, worth 20% of your grade. There will be a paper worth 20%, presentations worth 20%, projects worth 20%, and the last 20% will be based on participation which includes homework, responses to other presentations, and general participation in class and online. Late assignments are not accepted.
The following table shows the percentages representing the harshest grading. Grades will be curved as necessary.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Cutoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>92%</td>
</tr>
<tr>
<td>A-</td>
<td>90%</td>
</tr>
<tr>
<td>B+</td>
<td>88%</td>
</tr>
<tr>
<td>B</td>
<td>82%</td>
</tr>
<tr>
<td>B-</td>
<td>80%</td>
</tr>
<tr>
<td>C+</td>
<td>78%</td>
</tr>
<tr>
<td>C</td>
<td>72%</td>
</tr>
<tr>
<td>C-</td>
<td>70%</td>
</tr>
<tr>
<td>D+</td>
<td>68%</td>
</tr>
<tr>
<td>D</td>
<td>62%</td>
</tr>
<tr>
<td>D-</td>
<td>60%</td>
</tr>
<tr>
<td>E</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>

A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html

11. **Make-up Exam Policy:** Consequences for excused absences will be determined on a case-by-case basis. Generally, I do not give make-up exams. If a make-up exam is given, it will be harder due to the unfair time advantage. If no make-up exam is given, weight may be added to the other grade areas or distributed across the other grade areas.

12. **Honesty Policy** – All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.
13. **Accommodation for Students with Disabilities** – Students Requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

UF Counseling Services – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- UF Counseling & Wellness Center, 3190 Radio Rd, 392-1575, psychological and psychiatric services.
- Career Resource Center, Reitz Union, 392-1601, career and job search services.

14. **Software Use** – All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.