INSTRUCTOR:
Dr. Tanik
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TEXTBOOK:
Support: Guide to the SWEBOK (online)

COURSE DESCRIPTION:
Student will be trained for developing professional reports that involve Data Analysis and Visualization
using tools like Wolfram Framework (e.g. Mathematica).

Credit hours: 3.

STUDENT LEARNING OUTCOMES:
1. Student will learn 10-20 functions/week
2. Most functions will support data analysis and visualization
3. Ancillary technology will be learned, including other Wolfram applications
4. SDPS paper will be completed for mid-term
5. IEEE paper will be completed for final exam

TENTATIVE COURSE OUTLINE:
Following is the tentative schedule of the topics that will be covered in this course. This schedule is
subject to change so it’s students’ responsibility to watch for course announcements that will be posted on
course eCollege site. The student will review topics in textbook and explore and report on related
Wolfram Mathematica functions that can help with analysis and/or design work, especially for research or
corporate work (10-20 functions/week). Every week Wed you will send a progress report, which includes
in checklist format (1. What you did, and what you plan to do next) Other Wolfram applications will be
explored like Connected Devices and their relationship to IoT devices that utilize Big Data.

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<th>Week</th>
<th>Chapter</th>
<th>Topic</th>
<th>Data analysis/Visualization HW</th>
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<td>Introduction to Systems Analysis and Design</td>
<td>10-20 Wolfram Functions</td>
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<td>Analyzing the Business Case</td>
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<td>Managing Systems Projects</td>
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<td>Requirements Modeling</td>
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<td>Data and Process Modeling</td>
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<td>Midterm Review</td>
<td>SDPS paper due <a href="http://www.sdpsnet.org">www.sdpsnet.org</a></td>
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<td>Object Modeling</td>
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<td>Development Strategies</td>
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<td>User Interface Design</td>
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<td>System Architecture</td>
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<td>Managing Systems Implementation</td>
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<td>Systems Support and Security</td>
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<td>Final Exam</td>
<td>IEEE paper due</td>
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**EVALUATION**

Attendance (F2F), class-participation & quizzes 10%

Homework Assignments 20%

Project 20%

Midterm Exam 20%

Final Exam (Comprehensive of all the material covered) 30%

100%

Letter grades will be assigned according to the following scale:

A - at least 90% of the total points
B - at least 80% of the total points
C - at least 70% of the total points
D - at least 60% of the total points
F - less than 60% of the total points

**COURSE REQUIREMENTS:**

Assignments: Project work will include best industry practices. There will be regularly assigned homework problems (at least 10-20 Functions explored in Wolfram/week), which may require the application of various software packages. Assignments will be given and returned online via the online eCollege system (using the course Wix site developed by the student). It is the student’s responsibility to
login and check the course eCollege site daily for announcements, assignments and course-related content daily.

**Quizzes:** Quizzes may be given as needed.

**Exams:** Two exams will be given, one midterm exam (SDPS paper) and one final exam (IEEE paper). Midterm exam will primarily cover topics from Chapters 1-6 (e.g. Survey paper in SDPS format), and final exam will be comprehensive (Survey paper in IEEE format).

**Policy:** Follow all rules of ethics, e.g. you should do your own work on exams/projects and for assignments. Copying another student’s work is not acceptable. As stated in the “Academic Ethics” section, any indication of cheating and/or plagiarism on an assignment or exam will be an automatic 0 (zero) for all students involved, in addition to disciplinary action.

**ATTENDANCE:**

Student will attend office hours weekly (mainly Thursday), unless otherwise noted.

**COMMUNICATION:**

All announcements and updates about the course will be posted on course eCollege site (wix site). You will also find chapter presentations, quizzes, assignments and/or exams on this portal. For any questions you may have, you can contact me via email during weekdays and I will respond quickly. Each student is responsible for the content/instructions of email communications.

**ACADEMIC ETHICS:**

“All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” (See Student’s Guide Handbook, Policies and Procedures, Conduct). Ethics include the issue of plagiarism, and copying parts or whole of assignments, quizzes and exams is just as serious as any other type of plagiarism. Any indication of cheating and/or plagiarism on an exam/assignment/project will be an automatic 0 (zero) for the exam/assignment/project for all students involved. Yet, based on cheating and plagiarism activity in any section of the class, instructor holds the right to give F grade for the course to the identified student(s).

**STUDENTS WITH DISABILITIES**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services  
Texas A&M University-Commerce  
Gee Library, Room 132  
Phone (903) 886-5150 or (903) 886-5835  
Fax (903) 468-8148  
StudentDisabilityServices@tamu-commerce.edu

**DISCLAIMER:**

This syllabus is meant to provide general guidance of what to expect from this course. The instructor reserves the right to make changes as appropriate based on the progress of the class. All changes made to this syllabus during the semester will be announced. This document has been posted electronically. If you print a copy of it, please be sure to consult the last modified date of the online version to verify that your printed copy is current.

**Smoke, Vapor & Tobacco Free Environment:**
University Procedure 34.05.99.R1 now prohibits the use of vapor/electronic cigarettes, smokeless tobacco, snuff and chewing tobacco inside and adjacent to any building owned, leased, or operated by A&M – Commerce