A. COURSE INFORMATION

Course number/section: MEEN 4320.001, MEEN 4320.201, MEEN 4320.202, MEEN 4320.202
Class meeting time: Lec. T 11-1:30 pm; Lab.201 R 11-1:30 PM, Lab.202 W 3-5:25 pm, Lab.203 F 10:30-12:50 pm
Class location: TBD
Lab location: TBD
Course Website: Blackboard

B. INSTRUCTOR INFORMATION

Instructor: Andrew P Conkey, Ph.D.
Office location: EN 210
Office hours: TENTATIVE: M 11am:-12:00pm, W: 10am-12:00pm, F: 1-3:00 pm
Telephone: (361) 825-2559
e-mail: andrew.conkey@tamucc.edu
Appointments: correspond using ISLANDER EMAIL, or via BlackBoard Messaging

C. COURSE DESCRIPTION

Catalog Course Description: Experimentation and analysis of thermal/fluid systems, energy balances, performance measurements of devices and systems, data analysis, elements of experimental design.

Extended Course Description: A number of laboratory experiments will be performed for this class.

D. PREREQUISITES AND COREQUISITES

Prerequisites: MEEN 3330 - Solid Mechanics for Mechanical Engineering, MEEN 3345 - Heat Transfer, ENGR 2460 - Circuit Analysis

Corequisites: None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES


Optional Textbook(s) or Other References: Handouts supplied by the instructor. Text books from afore mentioned pre-requisite courses.

Supplies: HB or H pencil or 0.7 mm mechanical pencil, eraser, drawing tools (ruler, triangles, protractor and compass), pocket calculator and flash memory drive.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective
learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

1. design and conduct experiments, as well as to analyze and interpret data
2. function on multidisciplinary teams
3. communicate effectively
4. use the techniques, skills, and modern engineering tools necessary for engineering practice.

G. INSTRUCTIONAL METHODS AND ACTIVITIES
Lecture and labs

H. MAJOR COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term Exams (two: Feb 28, Apr 18)</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes (10 to 15, lec and lab)</td>
<td>15%</td>
</tr>
<tr>
<td>Homework assignments/Attendance</td>
<td>5%</td>
</tr>
<tr>
<td>Lab Reports(individual 20% Team 15%)</td>
<td>35%</td>
</tr>
<tr>
<td>Final Exam (May 09, 11-1:30pm)</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

I. COURSE CONTENT/SCHEDULE

Tentative schedule covering mixture of lecture and lab material.

<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>CHAP</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic concepts of measurement methods &amp; experiments</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Static and dynamic characterization of signals – experiment #1</td>
<td>Quiz</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Static and dynamic characterization of signals</td>
<td>Quiz, HW</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Measurement system behavior – experiment #2</td>
<td>Quiz, HW</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Measurement system behavior</td>
<td>Quiz, HW</td>
<td></td>
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<tr>
<td>6</td>
<td>Exam 1(Feb 28) – experiment #3</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Probability and statistics</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Uncertainty analysis – experiment #4</td>
<td>Quiz, HW</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Uncertainty analysis</td>
<td>Quiz, HW</td>
<td></td>
</tr>
</tbody>
</table>
Analog electrical devices and measurement – experiment #5

Sampling, digital devices and data acquisition

Exam 2 (Apr 18) experiment #6

Temperature, pressure

velocity measurements – experiment #7

Flow and strain measurements –

Final exam (May 09, 11:00-1:30 pm)

Note: Portion of lecture time will be devoted to covering experiment and labs. If space and time permits, some labs will be conducted in computer labs. Number of experiments may vary. Quizzes will be given in lecture and alternating labs.

Drop Date: April 7th, Withdrawal date: May 1st

NOTE: Changes in this course schedule may be necessary and will be announced to the class by the Instructor via BlackBoard Announcements. The assignments and exams shown are directly related to the Student Learning Outcomes in Section F.

J. COURSE POLICIES

Attendance/Tardiness: Attendance counts towards professionalism. Roll be taken on a daily basis and will be used to at end of semester.

Late Work and Make-up Exams. Make up exams will only be allowed with a valid (university approved) excuse. NOTE: Job interviews do not fall under automatic exemption. If missing due to job interview, notice must be given a minimum of two days. Exams need to be made up with one week from when exam was first administered

Make up quizzes will be at the discretion of the instructor if missed quiz does not fall under university approved absence. However, each student will be granted one missed quiz for the term. Make up quizzes will not be the same as what was given in class and need to be made up within one week from missed time.

Missed laboratories will need to be arranged to be made up. Or, alternate lab exercise will be assigned.

Extra Credit: None planned.

Cell Phone Use: Use of the phone during class can only be for emergency purposes only. If you have a possible need, alert instructor ahead of time and put device on vibrate. Family medical emergency could fall under this category. Research or job interview calls do not. Also, no recording of the lectures is allowed without express written consent of the instructor or expressed authorization by disability services

Laptop Use: As long as it is relevant to the class activity, namely labs, except for exams and quizzes.

Food/drink in Class: No food during class time. No food or drink during laboratory.

Missed Exam: See Late Work and Make-up Exams

Participation: Students are expected to play an active role in class in asking questions, answering questions. In addition, professional conduct is expected too. This is particular so in regards to use of smart devices. A brief lapse in attention might result in the missing of important content for a quiz or exam. Safety in labs is paramount and points will be deducted, or grade of zero, if conduct merits it.
K. COLLEGE AND UNIVERSITY POLICIES

- **Academic Integrity (University):** University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior:** Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- **Statement of Civility:** Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University):** The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar (www.tamu.edu/academics/calendar) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering):** As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at www.tamu.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamu.edu/Students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services:** 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 believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on
campus, please contact the Disability Services office http://disabilityservices.tamucc.edu/ or call (361) 825-5816

- **Statement of Academic Continuity**: In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

## L. OTHER INFORMATION

- **Academic Advising**: The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College's Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.