I. COURSE INFORMATION
1. Meeting Time & Place: MTWR 2:00 – 3:55 PM in CCH 119
2. Professor: Dr. D. Palaniappan (Dr. Pal)
3. Office Phone: 825-2221
4. Office: EN 211
5. e-mail Address: devanayagam.palaniappan@tamucc.edu
6. Office Hours:
   MWR 10:00 – 11:00 AM
   Others by appointment
7. Class Hours: Three-hour course.

II. COURSE DESCRIPTION
Methods of linear algebra, vector analysis, and complex variables. Matlab knowledge is essential

III. PREREQUISITES FOR THE COURSE
Ask the instructor

IV. TEXT and OTHER SUPPLIES REQUIRED
The required textbooks for the course are
1. Jim Hefferon, Saint Michael’s College, Linear Algebra (online text), published via Open Textbooks Project.
2. George Cain and James Herod, Georgia Institute of Technology, Multivariable Calculus (online text), published via Open Textbooks Project.
3. Matthias Beck, Gerald Marchesi, and Dennis Pixton, A First Course in Complex Analysis (online text) published via Open Textbooks Project.
4. Instructor’s Notes

V. STUDENT LEARNING OUTCOMES
After completing this course students will
1. Understand the terminology, and applications of systems of equations, matrices, operations with matrices .
2. Be able to understand and interpret vector spaces, subspaces, basis and dimension and use them to solve problems in applied mathematics.
3. Know the basic terminology and results of linear transformations, least-squares, diagonalization and applications and use of technology.
4. Scalar and vector values functions, Green, Gauss, Stokes theorems.
5. Analytic functions  Cauchy-Riemann equations; examples: exponential, log, trig functions, etc., Cauchy’s Theorem, power series Residue Theorem, conformal maps, applications

VI. INSTRUCTIONAL METHODS AND ACTIVITIES
Methods and activities for instruction include: Lectures, computer demonstrations and group activities.

VII. EVALUATION AND GRADE ASSIGNMENT
The weights of the different parts of the course towards the final grade are:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Mid-term exam</td>
<td>25%</td>
</tr>
<tr>
<td>Homework and Quizzes</td>
<td>25%</td>
</tr>
<tr>
<td>Project and presentation</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
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</tbody>
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Homework will be assigned in class along with the due date. Late homework receives no credit. At the end of the semester the lowest homework grade gets dropped. No exam/project grades get dropped.

Grading Scale: Grades will be no stricter than

A = 90.00 – 100%
B = 80.00 – 89.99%
C = 70.00 – 79.99%
D = 60.00 – 69.99%
F = below 60%

VIII. TENTATIVE COURSE SCHEDULE

<table>
<thead>
<tr>
<th>Class</th>
<th>week</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3,4</td>
<td>06/02 - 06/05</td>
<td>Linear equations and matrix operations, vector spaces, subspaces</td>
</tr>
<tr>
<td>5,6,7,8</td>
<td>06/09 - 06/12</td>
<td>linear independence, linear dependence, basis, dimension, coordinates, change of coordinates inner products, bi-orthogonal and orthonormal sets, Gram-Schmidt, least squares, linear transformations, eigenvalues, eigenvectors</td>
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<tr>
<td>9,10,11, 12</td>
<td>06/16 - 06/19</td>
<td>diagonalization, applications, scalar and vector valued functions, surfaces limits, continuity, gradient, divergence, curl coordinate independent definitions (Mid-term Exam, Date TBA)</td>
</tr>
<tr>
<td>13,14,15, 16</td>
<td>06/23 - 06/26</td>
<td>integral calculus Green’s Theorem, Divergence Theorem, Stokes’s Theorem, Analytic functions Cauchy-Riemann equations; examples: exponential, log, trig functions, etc. Cauchy’s Theorem, power series</td>
</tr>
<tr>
<td>17,18,19</td>
<td>06/30 - 07/03</td>
<td>Residue Theorem, conformal maps, applications, projects presentations (Final Exam)</td>
</tr>
</tbody>
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The Final Exam is on Friday, July 03, 2014, 8:00 – 10:00 AM (Tentative).
IX. CLASS POLICIES

Attendance will be taken each class. For most students attending class is a faster way of learning the material than trying to catch up on missed material solely from the book.

Tardiness is often disruptive to the whole class and is not appreciated. If you are delayed and arrive late for class please do so quietly.

Cell phones and such must be turned off before class. Each time your phone rings during class, your course grade goes down by 1%.

If you have to miss an exam, it is your responsibility to contact me no later than the day of the exam. One make-up exam will be scheduled for each exam. Failure to contact me on or before the exam day results in a grade of zero points for the exam. Only extreme emergencies or official university business are acceptable reasons to miss exams and documentation will be required. If your reason to miss the exam is not a valid one, your exam score is 0 points. Be sure to check before missing an exam whether your reason is acceptable.

You are expected to conduct yourself in accordance with the highest standards of academic honesty. Copying homework from another student or have the tutors do it for you or copying homework from the solutions presented elsewhere is considered academic dishonesty - don’t do it! In turning in work for a grade you attest that the work is your own work. The policies about academic dishonesty outlined in the Undergraduate Catalog or Student Handbook apply: academic dishonesty results in zero points on the test or assignment and the incident will be reported to the appropriate authorities, which may impose further sanctions.

Additions or changes to this syllabus will be announced in class.

X. DISABILITY STATEMENT

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 contact the Disabilities Service Office at (361) 825-5816 or visit the office in Driftwood 101. The Disabilities Service Office will determine appropriate accommodations and outline them in a notification letter. You will then be asked to give this letter to your instructors. Without an accommodation plan, no student can be treated differently from the others.

XI. GRADE APPEALS PROCESS

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 http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage (http://sci.tamucc.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.