1 Course

Texas A&M University at Qatar  Science Program / Mathematics Department  Math 311-501, Fall 2013

Topics in Applied Mathematics I (3-0), Credit 3. Systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors, diagonalization, inner product spaces, orthogonal functions; vector analysis, including gradient, divergence, curl, line and surface integrals, Gauss’, Green’s and Stokes’ theorems. Prerequisites: MATH 251; MATH 308 or concurrent enrollment; junior or senior classification or approval of instructor.

2 Classes

• Section 501: Sunday/Tuesday/Thursday, 8:00–8:50 am, QENG 209

3 Instructor

Lecturer  Art Belmonte (arthur.belmonte@qatar.tamu.edu)
Office  QENG 171
Phone  4423-0232
Class Page  http://calclab.math.tamu.edu/~belmonte/2013c_m311.html
Office Hours  Sunday/Tuesday/Thursday, 9:00–9:50 am, QENG 171, or by appointment.

4 Books

Authors  Steven Leon; Susan Colley
Coverage  Chapters 1–6, 10, 11; plus Section 8.4

5 Evaluations

Grading: A (90–100%), B (80–89.99%), C (70–79.99%), D (60–69.99%), F (0–59.99%)

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<thead>
<tr>
<th>Type</th>
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<tr>
<td>Exams</td>
<td>4</td>
<td>20% each</td>
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<tr>
<td>Final</td>
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<td>20%</td>
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6 Notes

1. This is a fifth engineering math course. It follows multivariable calculus and differential equations.

2. In addition to hand (paper-and-pencil) techniques, you may use a TI-Nspire CAS Handheld calculator, provided to you by TAMUQ IT. In this regard, stop by my QENG 171 office as soon as possible to obtain the latest version of the TNS-CAS operating system (3.2.3.1233 or later). Videos illustrating Math 311 problems are being produced.

3. Please be on time to class. Make sure that you have read the relevant sections in the textbook beforehand.

4. Make-ups for exams will be given only in the case of absences authorized under University Regulations.

5. All exams are in your classroom. You may use your TI-Nspire CAS Handheld in Press-To-Test mode. This allows you to use the built-in operating system commands only. It prevents you from accessing any files that you may have on your calculator.

   • Exam 1: Thursday, 12/Sep/2013; covers chapters 1–2; worth 20% of your grade.
   • Exam 2: Tuesday, 08/Oct/2013; covers chapters 3–4; worth 20% of your grade.
   • Exam 3: Sunday, 10/Nov/2013; covers chapters 5–6; worth 20% of your grade.
   • Exam 4: Thursday, 05/Dec/2013; covers vector calculus material; worth 20% of your grade.
   • Final Exam: Tuesday, 10/Dec/2013, 8–10 am; comprehensive; 20% of your grade.

6. Selected problems from your textbook will be assigned but not graded. See the web for details. It is imperative that you spend time working these problems. When you have questions, please ask for help.

7. Lectures for each section covered in the textbook are provided via the web. This material is copyrighted. I grant you permission to make ONE copy of each document for your personal use.

8. At all times, I expect you to be prepared and to work hard; you can expect the same from me. Each student will be judged on the individual merit of his or her own work.

9. Read the Hot Topics of the day on our class web page. This is the primary means of communication outside of lecture.

7 Miscellany

• The American 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 a reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services in Cain Hall on the Texas A&M College Station campus, Room B118, or call 1-979-845-1637 (or such other number as directed by QENG).

• “An Aggie does not lie, cheat, or steal or tolerate those who do.” You are referred to the Honor Council Rules and Procedures on the Web at http://www.tamu.edu/aggiehonor.

• At Texas A&M University at Qatar, the OASIS facilitates activities related to the learning of core course component concepts and applications within the common body of knowledge expected of engineering graduates. Focus areas within this definition are writing, math, and science. Ancillary skills, such as applied technology, college success strategies, multimedia applications, business and personal communication, computer-assisted language learning, career-building activities, and peer interaction are also part of the mission of the center as they are appropriate to the total professional development of engineering graduates. The department’s tutors work with students both on-site and online (writing only) and the offices are located in suite 310, near the library. Tutoring hours of operation are: weekdays 9:00 AM to 7:00 PM on-site, and 8:00 PM until 12 AM online, and Saturdays 3:00 to 6:00 PM. Please make appointments from the homepage: http://oasis.qatar.tamu.edu.