

## **MTHK 5380-110 TOPICS IN COMPUTATIONAL MATHEMATICS**

Summer 2018 rev. 05.28.2018

Texas A&M University - Central Texas

### **INSTRUCTOR AND CONTACT INFORMATION**

Instructor: Chris Thron

Office: Warrior Hall 420C

*This course is online, so all contact with the instructor will be via online means:*

Email: [thron@tamuct.edu](mailto:thron@tamuct.edu)

Google Hangout: [chris.thron@gmail.com](mailto:chris.thron@gmail.com)

Skype: christopher.thron

### **Mode of instruction and course access:**

The students will conduct guided investigations. The instructor will provide individual guidance and feedback. Materials will be made available

### **911 Cellular:**

Emergency Warning System for Texas A&M University – Central Texas

911Cellular is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in 911Cellular through their myCT email account.

Connect at [911Cellular](https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management) [https://portal.publicsafetycloud.net/Texas-AM-Central/alert-management] to change where you receive your alerts or to opt out. By staying enrolled in 911Cellular, university officials can quickly pass on safety-related information, regardless of your location.

### **COURSE INFORMATION**

**Course Overview and description:** This course is designed to provide hands-on experience with computational mathematics. Students will gain competency in programming for mathematical applications.

### **Student Learning Outcomes:**

Upon successful completion of MATH 5380, students will be able to:

- Gain basic fluency in the Python computer language
- Write computer codes in Python that perform mathematical computations
- Be able read computer codes and determine their function
- Have ability to debug and optimize existing mathematical computer codes
- Gain expertise in a particular application of computational mathematics

**Competency Goals Statements (certification or standards):** N/A

**Required Reading and Textbook(s):**

All materials are online:

- Python tutorial: will be made available through Dropbox. Instructor will create a Dropbox account for each student.
- Student projects: Students will

**COURSE REQUIREMENTS**

- The student is expected to dedicate a total of 115 hours (average of 11.5 hours per week for 10 weeks) to the class.
- The student will maintain a spreadsheet with the following columns: Date, Hours worked, Description of activity, Accomplishments.
- The student will maintain regular email contact with the instructor, on a weekly or more frequent basis.
- Students who have little background in the Python language will complete a tutorial in Python to ensure proficiency.
- Students will complete projects in mathematical computation. Some projects will be individual, and some will be collaborative as determined by discussions between students and the instructor.
- The student is expected to show some degree of initiative and mathematical maturity. Specifically, once the purpose and outcomes of a particular task is described, they are expected to find their own way to achieve these purpose and outcomes without specific step-by-step instructions from the instructor.

**Grading Criteria Rubric and Conversion**

The student will be evaluated based on time spent and the quality of the material produced. If the student's puts in the requisite hours and produces working output that correctly performs computations, then the student will receive an A grade. If the student consistently produces carelessly-written, unusable material, then the student may receive a C grade or lower.

**COURSE OUTLINE AND CALENDAR**

**Complete Course Calendar**

Week 1: Student and instructor will work together to develop an action plan.

Weeks 2-10: Student and instructor will pursue action plan.

## **INSTRUCTOR GRADING POLICIES**

Instructor will inform the student of current grade status upon request.

*The following material is generic for all TAMUCT courses, and does not contain specific information for this course.*

### **Important University Dates:**

#### **January 2018**

January 2, (Tuesday) Winter Break Ends

January 2, (Tuesday) Priority Deadline for Admissions applications

January 5, (Friday) VA Certification Request Priority Deadline

January 11, (Thursday) Convocation

January 12, (Friday) Tuition and Fee payment deadline (16 week & 1st 8 week)

January 15, (Monday) Martin L. King Jr. Day

January 16, (Tuesday) ADD/DROP/LATE REGISTRATION BEGINS (\$25 fee assessed for late registrants) (16 week & 1st 8 week)

January 16, (Tuesday) Classes Begins

January 18, (Thursday) ADD/DROP/LATE REGISTRATION ENDS (16 week & 1st 8 week)

January 23, (Tuesday) Last day to drop 1st 8-week classes with no record

January 31, (Wednesday) Last day to drop 16 week classes with no record

#### **February 2018**

February 2, (Friday) Priority Deadline to Submit Graduation Application

February 9, (Friday) Last day to drop a 1st 8-week class with a Q or withdraw with a W

February 15, (Thursday) Last day to apply for Clinical Teaching

February 23, (Friday) Student End of Course Survey Opens (1st 8-Week Classes)

#### **March 2018**

March 1, (Thursday) Deadline to submit application to Teacher Education Program

March 2, (Thursday) Deadline to Submit Graduation Application for Ceremony Participation

March 9, (Friday) 1st 8 week classes end

March 9, (Friday) Deadline for Admissions applications

March 11, (Sunday) Student End of Course Survey Closes (1st 8-Week Classes)

March 12, (Monday) Spring Break Begins

March 12, (Monday) 1st 8-week grades from faculty due by 3pm

March 15, (Thursday) Tuition and Fee Payment Deadline (2nd 8-week classes)

March 16, (Friday) Spring Break Ends

March 19, (Monday) 2nd 8 week begins

March 19, (Monday) Summer Advising Starts

March 19, (Monday) Class Schedule Published

March 19, (Monday) ADD/DROP/LATE REGISTRATION BEGINS (\$25 fee assessed for late registrants) (2nd 8-week classes)

March 21, (Wednesday) ADD/DROP/LATE REGISTRATION ENDS (2nd 8-week classes)

March 27, (Tuesday) Last day to drop 2nd 8-week classes with no record

March 30, (Friday) Last day to drop a 16-week course with a Q or withdraw with a W

### **April 2018**

April 1, (Sunday) GRE/GMAT scores due to Office of Graduate Studies

April 2, (Monday) Scholarship Deadline

April 2, (Monday) Registration begins

April 5, (Thursday) Priority Deadline for International Student Admission Applications

April 13, (Friday) Last day to drop a 2nd 8-week class with a Q or withdraw with a W\*

April 13, (Friday) Deadline for submission of final committee-edited theses with committee approval signatures to Office of Graduate Studies

April 27, (Friday) Student End of Course Survey Opens (16 Week and 2nd 8-Week Classes)

### **May 2018**

May 7-11, Finals Week

May 11, (Friday) Last day to file for Degree Conferral (Registrar's Office)(\$20 Late Application Fee applies)

May 11, (Friday) Spring Term Ends

May 11, (Friday) Last day to withdraw from the university (16 week and 2nd 8 week classes)

May 11, (Friday) Last day to apply for \$1000 Tuition Rebate for Spring graduation (5pm)

May 12, (Saturday) Commencement Ceremony Bell County Expo Center 7:00 p.m.

May 13, (Sunday) Student End of Course Survey Closes (16 Week and 2nd 8-Week Classes)

May 14, (Monday) Minimester begins

May 15, (Tuesday) Last Day to clear Thesis Office

May 5, (Tuesday) Final grades due from faculty by 3pm (16 week & 2nd 8 week)

May 21, (Monday) Priority Deadline for Admissions applications

May 25, (Friday) VA Certification Request Priority Deadline

May 28, (Monday) Memorial Day

## **TECHNOLOGY REQUIREMENTS AND SUPPORT**

### **Technology Requirements**

This course will use the A&M-Central Texas Instructure Canvas learning management system. Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com>].

Username: Your MyCT username (xx123 or everything before the "@" in your MyCT e-mail address)

Password: Your MyCT password

### **Canvas Support**

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select "Chat with Canvas Support," submit a support request through "Report a Problem," or call the Canvas support line: 1-844-757-0953.

For issues related to course content and requirements, contact your instructor.

### **Other Technology Support**

For log-in problems, students should contact Help Desk Central.

24 hours a day, 7 days a week:

Email: [helpdesk@tamu.edu](mailto:helpdesk@tamu.edu)

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [http://hdc.tamu.edu]

*Please let the support technician know you are an A&M-Central Texas student.*

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## **UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES**

### **Drop Policy.**

If you discover that you need to drop this class, you must complete a [Drop Request Form](https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf) [https://www.tamuct.edu/registrar/docs/Drop\_Request\_Form.pdf].

Professors cannot drop students; this is always the responsibility of the student. The Registrar's Office will provide a deadline on the Academic Calendar for which the form must be completed, signed and returned. Once you return the signed form to the Registrar's Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar's Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

### **Academic Integrity.**

Texas A&M University -Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Academic integrity is defined as a commitment to honesty, trust, fairness, respect, and responsibility. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. Academic misconduct is any act that improperly affects a true and honest evaluation of a student's academic performance and includes, but is not limited to, cheating on an examination or other academic work, plagiarism and improper citation of sources, using another student's work, collusion, and the abuse of resource materials. All academic misconduct concerns will be reported to the university's Office of Student Conduct. Ignorance of the university's standards and expectations is never an excuse to act with a lack of integrity. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

### **Academic Accommodations.**

At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier free education. The Department of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the University's programs, services and activities. If you believe you have a disability requiring reasonable accommodations please contact the Department of Access and Inclusion at (254) 501-5831. Any information you provide is private and confidential and will be treated as such.

For more information please visit our [Access & Inclusion](https://www.tamuct.edu/student-affairs/access-inclusion.html) webpage [https://www.tamuct.edu/student-affairs/access-inclusion.html].

Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and guidance from US Department of Education's Office of Civil Rights, the Dean of Student Affairs' Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. For more information, please visit <https://www.tamuct.departments/index.php>. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines online](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf), please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf].

Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender – including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Division of Student Affairs at 254-501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

### **Tutoring.**

Tutoring is available to all A&M-Central Texas students, both on-campus and online. On-campus subjects tutored include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Tutors are available at the Tutoring Center in Warrior Hall, Suite 111. If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, or any other question, contact Academic Support Programs at 254-519-5796, or by emailing Dr. DeEadra Albert-Green at [deeadra.albertgreen@tamuct.edu](mailto:deeadra.albertgreen@tamuct.edu).

Chat live with a tutor 24/7 for almost any subject on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log-in and receive FREE online tutoring and writing support. This tool provides tutoring in over forty subject areas. Access Tutor.com through Canvas.

**University Writing Center:** Located in 416 Warrior Hall, the University Writing Center (UWC) at Texas A&M University-Central Texas is a free workspace open to all TAMUCT students from 10am-5pm Monday-Thursday with satellite hours in the University Library Monday-Thursday from 6:00-9:00pm. Students may arrange a one-on-one session with a trained and experienced writing tutor by visiting the UWC during normal operating hours (both half-hour and hour sessions are available) or by making an appointment via [WOnline](https://tamuct.mywconline.com/) at [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu) to schedule an online tutoring session. Tutors are prepared to help writers of all levels and abilities at any stage of the writing process.

While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WIFI, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the University Writing Center is here to help!

If you have any questions about the University Writing Center, please do not hesitate to contact Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu).

### **University Library.**

The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 250,000 eBooks and 82,000 journals, in addition to the 72,000 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On-campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available twenty-four hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place on Skype or in-person at the library. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](https://tamuct.libguides.com/) [https://tamuct.libguides.com/].

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### **OPTIONAL POLICY STATEMENTS:**

#### **A Note about Sexual Violence at A&M-Central Texas**

Sexual violence is a serious safety, social justice, and public health issue. The university offers support for anyone struggling with these issues. University faculty are mandated reporters, so if someone discloses that they were sexually assaulted (or a victim of Domestic/Dating Violence or Stalking) while a student at TAMUCT, faculty members are required to inform the Title IX Office. If you want to discuss any of these issues confidentially, you can do so through Student Counseling (254-501-5955) located on the second floor of Warrior Hall (207L).

Sexual violence can occur on our campus because predators often feel emboldened, and victims often feel silenced or shamed. It is incumbent on ALL of us to find ways to actively create environments that tell predators we don't agree with their behaviors and tell survivors we will support them. Your actions matter. Don't be a bystander; be an agent of change. For additional information on campus policy and resources visit the [Title IX webpage](https://www.tamuct.edu/departments/compliance/titleix.php) [https://www.tamuct.edu/departments/compliance/titleix.php].