



College of Business  
Fire and Emergency Services Administration Program  
FESA 4316 Developing Data Based Outcomes for Fire and Emergency Services  
Spring 2026, CRN: 600\_202620

**Course Syllabus**

**Instructor:** Jonathan McMahan

Tel: 979-820-0757; text will get quickest response.

**E-Mail:** [jmcmahan@tamusa.edu](mailto:jmcmahan@tamusa.edu)  
Student emails will receive a reply within 24 hours.

**Course Website:** <https://tamusa.blackboard.com/>

**Office Hours:** Text or email me and I will help you ASAP

Online Appt. can be scheduled as needed.

**Course Website:** <https://tamusa.blackboard.com/>

**Office Hours:** By appointment only. Send email or text

**Course Dates January 20 – May 12 2026**

**Catalog Course Description:**

This course will provide information and tools that fire service personnel and other public service managers can use to develop and prepare their agency to evaluate performance activities.

The course will introduce the student to the self-assessment and accreditation processes as developed by the Center for Public Safety Excellence (CPSE) and their accreditation programs administered by the Commission on Fire Accreditation International (CFAI) and the Commission on Professional Credentialing (CPC). The course will introduce students to basic analysis techniques using Microsoft Excel. Students will learn how to evaluate fire service data, develop recommendations, and identify needs and trends.

**Course Objectives:**

1. Discuss the uses of analytical approaches to rational decision making.
2. Differentiate techniques of analysis.
3. Select appropriate analytic tools to support critical thinking.
4. Discuss how the use of databases, histograms, inferential statistics and probabilities and

GIS are used in fire station location planning.

5. Explain the benefits of self-assessment and, ultimately, accreditation.

6. Define the planning requirements for self-assessment.

7. Explain a process that allows agencies to determine their level of service performance in a consistent manner.

8. Define methods agencies can use to determine the levels of service appropriate for its responsibilities and risks.

9. Define the purpose of developing a Standards of Response Coverage report.

10. Reviews the CFAI definition of the planning requirements to be considered in the self-assessment process.

**Prerequisites:**

None

**Student Learning Outcomes:**

After completion of the course, students will understand the importance of data-driven decision making based on principles derived from the CFAI accreditation model, ISO standards, and Texas Fire Chief's Association Best Practices program.

**Required Materials: Textbook:**

Quality Improvement for the Fire and Emergency Services

Order from CPSE bookstore

Link to Store:

<https://cpse.users.membersuite.com/shop/store/browse>

Link to actual book:

<https://cpse.users.membersuite.com/shop/store/b2a5c366-00ce-c304-d848-fa37699e3d7c/detail>

**Other Recommended / Reading Materials:** Additional reading materials provided weekly on the course website.

***Course Requirements every student must fulfill in order to succeed in course:***

1. Students should check the Course Calendar, Announcements, and Messages (e-mail) systems in Blackboard on a regular basis.
2. Students should keep current with all course assignments, quizzes, and examinations.
3. Students should ask questions and communicate with the instructor either in class, online, off-line or during office hours.
4. For all classwork, exams, quizzes etc., if a student is completing it off-campus, then they are responsible for availability of internet connectivity. Extensions will not be granted for lack of availability of internet connections.
5. Students should remember that hybrid and online courses assume greater responsibility and independent learning skills by the student for their own learning outcomes.
6. For online-asynchronous courses, students should keep current on class recordings. For online-synchronous courses, students are expected to attend virtually during the class meeting time.

**Grading Policy:** The final course grade will be based on your performance on the quizzes, exams, assignments and class participation.

The final letter grades will be assigned as follows: Above 90%  $\Rightarrow$  A; 80 – 89%  $\Rightarrow$  B; 70 – 79%  $\Rightarrow$  C; 60 – 69%  $\Rightarrow$  D; Below 60%  $\Rightarrow$  F.

This course has a requirement of a grade of C as a minimal grade for satisfactory completion of this course

**Assignments/ Research papers:** There will be several assignments and Projects during the course. Individual assignment statements and due dates will be posted through Blackboard. For all assignment and quiz problems, ALL intermediate work of the problem solution steps MUST be shown. This includes the use of the formula, the values substituted in the formulas for problem solution, as well the intermediate steps of the arithmetic computation. The units of measurement are extremely important and MUST be shown at each stage of the computation. Considerable points will be taken off for not following these requirements.

**Online individual / Group Activities:**

**Make up and Late Assignment/exam/quiz policy:**

As a general rule, make-ups or late submissions will NOT be offered or accepted for any missed assignments/exams/quizzes. Late submissions or make-ups may be accepted/administered only in extraordinary circumstances such as an excused official university activity, a severe illness, or a dire emergency. However, you must provide comprehensive documentation either before or within a few days of the missed assignment/quiz/exams.

## Class attendance and Participation:

### *Fall 2024 Class Schedule*

The provisions and information set forth in the schedule below are intended to be informational and not contractual in nature. The instructor reserves the right to amend, alter, change, delete or modify the provisions of the schedule.

Week	Date		Chapters
Week 1	1-20	1-25	Get textbook; Introductions in discussion question
Week 2	1-26	2-01	Read textbook each week; Complete survey
Week 3	2-02	2-08	Read weekly content; Discussion # 3
Week 4	2-09	2-15	Read, start mid-term assignment, Discussion # 4
Week 5	2-16	2-22	Read, discussion # 5
Week 6	2-23	3-01	Read book; work on mid-term assignment
Week 7	3-02	3-08	Mid-term test over book or a written paper; TBD
Week 8	3-09	3-15	Turn in mid-term project/Spring Break
Week 9	3-16	3-22	Review weekly course info; Discussion question
Week 10	3-23	3-29	Review weekly course info; Discussion question
Week 11	3-30	4-05	Review weekly course info; Discussion question
Week 12	4-06	4-12	Case Study on TFCA Best Practices
Week 13	4-13	4-19	Case study on ISO; Assign Final Project
Week 14	4-20	4-26	Start working on final project
Week 15	4-27	5-03	Turn in Rough Draft for Final Project
Week 16	5-04	5-10	Turn in final project by May 10th @ 23:59

### ***University Email Policy and Course Communications***

All correspondence between professors and students must occur via university email accounts. You must have your Jaguar email account ready and working. If it is not working, contact the help desk at [helpdesk@tamusa.edu](mailto:helpdesk@tamusa.edu) or at 210-784-HELP (4357). If you don't hear back within 48 hours, contact them again. They have many requests during the first part of the semester, so you may need to follow up with them.

### ***Academic Accommodations for Individuals with Disabilities***

Texas A&M University-San Antonio is committed to providing all students with reasonable access to learning opportunities and accommodations in accordance with The Americans with Disabilities Act, as amended, and Section 504 of the Rehabilitation Act. If you experience barriers to your education due to a disability or think you may have a disability, Disability Support Services is in the Central Academic Building, Suite 210. You can also contact us via phone at (210) 784-1335, visit us at the website or email us at [dss@tamusa.edu](mailto:dss@tamusa.edu). Disabilities may include, but are not limited to, attentional, learning, mental health, sensory, physical, or chronic health conditions. All students are encouraged to discuss their academic accommodation with Disability Support Services and their instructors as soon as possible.

### ***Academic Learning Center***

All currently enrolled students at Texas A&M University-San Antonio can utilize the Academic Learning Center for subject-area tutoring. The Academic Learning Center provides free course-based tutoring to all currently enrolled students at Texas A&M University-San Antonio. Students wishing to work with a tutor can make appointments through the Brainfuse online tutoring platform. Brainfuse can be accessed in the Tools section of Blackboard. You can contact the Academic Learning Center by emailing [tutoring@tamusa.edu](mailto:tutoring@tamusa.edu), calling (210) 784- 1307, or visiting the Central Academic Building, room 202. Online tutoring is also available for after hours and weekend assistance.

While tutoring hours may change based on tutor schedules and availability, the current tutoring hours for MATH in the ALC are as follows:

<b>Day of the Week</b>	<b>Appointments Available</b>	<b>Walk-in Tutoring (no appointment needed)</b>
Monday	8:00 AM – 6:00 PM	9:00 AM – 5:00 PM
Tuesday	8:00 AM – 6:00 PM	9:00 AM – 5:00 PM
Wednesday	8:00 AM – 6:00 PM	9:00 AM – 5:00 PM
Thursday	8:00 AM – 6:00 PM	9:00 AM – 5:00 PM
Friday	8:00 AM – 5:00 PM	11:00 AM – 4:00 PM

### ***Counseling/Mental Health Resources***

As a college student, there may be times when personal stressors interfere with your academic performance and negatively impact your daily functioning. If you are experiencing emotional difficulties or mental health concerns, support is available to you through the Student Counseling Center (SCC). To schedule an appointment, visit our website, call 210-784-1331 or visit Madla 120 between the hours of 8:00 AM and 5:00 PM.

All mental health services provided by the SCC are free and confidential (as the law allows). The Student Counseling Center provides brief individual and group therapy, crisis intervention, consultation, case management, and prevention services. Crisis support is available 24/7/365 by calling the SCC at 210-784-1331 or through the TELUS student support App.

The [TELUS Student Support App](#) provides a variety of mental health resources to include 24/7/365 support for in the moment distress, crisis support, an anonymous peer-to-peer support network, mental health screenings, podcasts, and articles to improve your mental wellbeing.

### ***Emergency Preparedness***

JagE Alert is Texas A&M University-San Antonio's mass notification system. In the event of an emergency, such as inclement weather, students, staff and faculty, who are registered, will have the option to receive a text message, email with instructions and updates. To register or update your information visit the [Jag E Alert System website](#). You can access more information about [Emergency Operations Plan and the Emergency Action Plan on our website](#). Download the [SafeZone App](#) for emergencies or call (210) 784-1911. Non-Emergency (210) 784-1900.

### ***Financial Aid and Verification of Attendance***

According to the following federal regulation, 34 CFR 668.21: U.S. Department of Education (DoE) Title IV regulation, a student can only receive Title IV funds based on Title IV eligibility criteria which include class attendance. If Title IV funds are disbursed to ineligible students (including students who fail to begin attendance), the institution must return these funds to the U.S. DoE within 30 days of becoming aware that the student will not or has not begun attendance. Faculty will provide the Office of Financial Aid with an electronic notification if a student has not attended by the published Census Date (the first week of class). Any student receiving federal financial aid who does not attend prior to the published Census Date (the first week of class) will have their aid terminated and returned to the DoE. Please note that any student who stops attending at any time during the semester may also need to return a portion of their federal aid.

### ***Jaguar Writing, Language, and Digital Composing Center (WLDCC)***

The Jaguar Writing Center provides writing support to graduate and undergraduate students in all three colleges as well as faculty and staff. Writing tutors work with students to develop reading skills, prepare oral presentations, plan, draft, and revise their written assignments. Our language tutors support students enrolled in Spanish courses and students composing in Spanish for any assignment. Our digital studio tutors support students working on digital projects such as e-portfolios, class presentations, or other digital multimedia projects.

The Writing Center offers face-to-face, synchronous online, and asynchronous digital appointments. Students can schedule appointments with the Writing Center in JagWire under the **Student Services** tab. Click on **Writing, Language, and Digital Composing Center** to make your appointment. Students wanting to work in real time with a tutor can schedule an **Online Appointment**. Students wishing to receive asynchronous, written feedback from a tutor can schedule an **e-Tutoring appointment**. More information about what services we offer, how to make an appointment, and how to access your appointment can be found on the [Writing Center's website](#). The Writing Center can also be reached by emailing: [writingcenter@tamusa.edu](mailto:writingcenter@tamusa.edu).

### ***Meeting Basic Needs***

Any student who has difficulty affording groceries or accessing sufficient food to eat every day or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to [submit a CARE report for support](#). Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to direct you to available resources. The [General's Store is a food pantry](#) that is available on campus as well.

### ***Military Affairs***

Veterans and active-duty military personnel are welcomed and encouraged to visit the Office of Military Affairs for any question involving federal or state VA Education Benefits. Visit the Patriots' Casa building, room 202, or to contact the Office of Military Affairs with any questions at [military.va@tamusa.edu](mailto:military.va@tamusa.edu) or (210)784-1397.

### ***Religious Observances***

Texas A&M University-San Antonio recognizes the wide variety of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided with an opportunity to make up any examination, study, or course work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes for regular session classes.

### ***The Six-Drop Rule***

Students are subject to the requirements of Senate Bill (SB) 1231 passed by the Texas Legislature in 2007. SB 1231 limits students to a maximum of six (6) non-punitive course drops (i.e., courses a student chooses to drop) during their undergraduate careers. A non-punitive drop does not affect the student's GPA. However, course drops that exceed the maximum allowed by SB 1231 will be treated as "F" grades and will impact the student's GPA.

### ***Statement of Harassment and Discrimination***

Texas A&M University-San Antonio is committed to the fundamental principles of academic freedom, equal opportunity, and human dignity. To fulfill its multiple missions as an institution of higher learning, A&M-San Antonio encourages a climate that values and nurtures collegiality and the uniqueness of the individual on our campus and within our state, nation, and world. All decisions and actions involving students and employees are to be based on applicable law and individual merit. Texas A&M University-San Antonio, in accordance with applicable federal and state law, prohibits discrimination, including harassment, based on race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, or pregnancy/parenting status. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the University's Civil

Rights Officer at 210-784-2061 or [titleix@tamusa.edu](mailto:titleix@tamusa.edu). Texas A&M University-San Antonio faculty are committed to providing a safe learning environment for all students and for the university. If you have experienced any form of sex discrimination or harassment, including sexual assault, sexual harassment, domestic or dating violence, or stalking based on sex, know that help and support are available. A&M-San Antonio's Title IX Coordinator can support those impacted by such conduct in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The university strongly encourages all students to report any such incidents to the Title IX Coordinator. Please be aware that all A&M-San Antonio employees (other than those designated as confidential resources such as counselors and trained victim advocates) are required to report information about such discrimination and harassment to the university. This means that if you tell a faculty member about a situation of sexual harassment, sexual violence, or other related sex-based misconduct, the faculty member must share that information with the university's Title IX Coordinator ([titleix@tamusa.edu](mailto:titleix@tamusa.edu), 210-784-2061, CAB 439K). If you wish to speak to a confidential employee who does not have this reporting requirement, you can contact the Student Counseling Center at (210) 784-1331 or visit them in Madla 120.

### ***Pregnant/Parenting Students***

Texas A&M-San Antonio does not require a pregnant or parenting student, solely because of that status or issues related to that status, to (1) take a leave of absence or withdraw from their degree or certificate program; (2) limit the student's studies; (3) participate in an alternative program; (4) change the student's major, degree, or certificate program; or (5) refrain from joining or cease participating in any course, activity, or program at the University. The university will provide reasonable accommodation for pregnant students as it would be provided to a student with a temporary medical condition that is related to the health and safety of the student and the student's unborn child. These could include maintaining a safe distance from substances, areas, and activities known to be hazardous to pregnant individuals and their unborn child; excused absences because of illness or medical appointments; modified due dates for assignments; rescheduled tests/exams; taking a leave of absence; and being provided access to instructional materials and video recordings of lectures for excused absences, if these would be provided to any other student with an excused absence. Pregnant/parenting students are encouraged to contact the Title IX Coordinator with any questions or concerns related to their status ([titleix@tamusa.edu](mailto:titleix@tamusa.edu); 210-784-2061; CAB 439K).

Texas A&M-San Antonio has also designated the Title IX Coordinator as the liaison officer for current or incoming students who are the parent or guardian of a child younger than 18 years of age. The Title IX Coordinator can provide students with information regarding support services and other resources. Young Jaguars can support parenting students with daycare if students meet this criteria: (1) must be enrolled in classes at Texas A&M-San Antonio in the current semester, (2) must be Pell eligible or a single parent, (3) child(ren) must be aged 3 to 12-years-old, and (4) child(ren) must be enrolled in Pre-K-3 through 6th grade. For more information, please contact Young Jaguars at [youngjaguars@tamusa.edu](mailto:youngjaguars@tamusa.edu) or call (210) 784-2636.

### ***Students' Rights and Responsibilities***

The following statement of students' rights and responsibilities is intended to reflect the philosophical base upon which University Student Rules are built. This philosophy acknowledges the existence of both rights and responsibilities, which is inherent to an individual not only as a student at Texas A&M University-San Antonio but also as a citizen of this country.

#### **Students' Rights**

1. A student shall have the right to participate in a free exchange of ideas, and there shall be no University rule or administrative rule that in any way abridges the rights of freedom of speech, expression, petition and peaceful assembly as set forth in the U.S. Constitution.
2. Each student shall have the right to participate in all areas and activities of the University, free from any form of discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, and pregnancy/parenting or veteran status in accordance with applicable federal and state laws.
3. A student has the right to personal privacy except as otherwise provided by law, and this will be observed by students and University authorities alike.
4. Each student subject to disciplinary action arising from violations of university students' rules shall be assured a fundamentally fair process.



### Students' Responsibilities

1. A student has the responsibility to respect the rights and property of others, including other students, the faculty, and administration.
2. A student has the responsibility to be fully acquainted with the published University Student Rules found in the Student Handbook, Student Code of Conduct, on our website, and University Catalog, and to comply with them, as well as with federal, state, and local laws.
3. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire University community.
4. A student has the responsibility to recognize the University's obligation to provide a safe environment for learning.
5. A student has the responsibility to check their university email for any updates or official university notifications.

Students are expected to exhibit a high level of honesty and integrity in their pursuit of higher education. Students engaging in an act that violates the standards of academic integrity will find themselves facing academic and/or disciplinary sanctions. Academic misconduct is any act, or attempt, which gives an unfair advantage to the student. Additionally, any behavior specifically prohibited by a faculty member in the course syllabus or class discussion may be considered as academic misconduct. For more information on academic misconduct policies and procedures please review the [Student Code of Conduct](#) or visit the resources available in the [OSRR website](#).

### ***Important Spring 2026 Dates***

Dates	Event
January 13	Tuition and Fee Payments deadline
January 19	Marting Luther King Jr. Day – No Classes
January 20	First Day of Class
February 4	Census Date
March 6-23	Midterm grading period
March 9-14	Spring Break
April 3	Study Day – No classes
April 17	Last day to drop with an automatic withdrawal
May 1	Last day to drop a course or withdraw from the university
May 4	Last Day of Classes
May 5	Study Day – No classes
May 6-12	Final Exams
May 19	Commencement

The complete [Academic Calendar](#) as available on our website.

### ***Artificial Intelligence Policy***

This assumes that all work submitted by students will be generated by the students themselves, working individually or in groups. Students should not have another person/entity do the writing of any portion of an assignment for them, which includes hiring a person or a company to write assignments and/or using artificial intelligence (AI) tools like ChatGPT. Use of any AI-generated content in this course qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

**Most Important Part of the Syllabus. If you have a problem with anything, send me a text and / or email. That is the fastest way to get a solution.**

**979-820-0757 phone**



[jmcmahan@tamusa.edu](mailto:jmcmahan@tamusa.edu) email.