# Course Title:
**Structural Systems I**

**Course Prefix:** ARCH  
**Course No.:** 3293  
**Section No.:** Y02

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### “Ut tensio, sic vis.” -Robert Hooke *(meaning “As the extension, so the force.”)*

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### School of Architecture

- **Department:**
  - ☑ Architecture  
  - ☑ Construction Science  
  - ☑ Art  
  - ☑ Digital Media Art  
  - ☑ Community Development

### Class Meeting Days & Times:
- Tuesdays and Thursdays; 10:10-11:30 AM

### Catalog Description:
- (3-0) Credit 3 semester hours. A study of theory of various structural concepts. Emphasis placed on statics and strength of materials.

### Prerequisites:
- MATH 1123

### Co-requisites:
- None

### Mode of Instruction:
- ☑ Face-to-face  
- ☑ On-line  
- ☑ Hybrid

### Instructor:
- Steve Wilkerson, PhD, PE  
- Associate Professor of the Practice

### Office Location:
- School of Architecture, Room 229B

### Office Telephone:
- 832.969.8641

### Email Address:
- smwilkerson@pvamu.edu

### U.S. Postal Service Address:
- Prairie View A&M University  
- P.O. Box 519  
- Mail Stop 2100  
- Prairie View, TX 77446

### Office Hours:
- Tuesday and Thursday 1:30-3:30 PM. OTHER HOURS BY APPOINTMENT  
- Students are advised to make appointments with the instructor ahead of time and be specific with the subject matter to be discussed. Students must prepare for their appointment by having all applicable materials and information submitted to the instructor prior to the meeting.

### Virtual Office Hours:
- Monday 4:00-5:30 PM via Zoom

### Required Text:
  - Authors: Barry Onouye with Kevin Kane; Publisher: Prentice Hall; ISBN: 978-0-13-507925-6

### Optional Text:
- Why Buildings Stand Up; Author: Mario Salvadori; Publisher: W. W. Norton & Co, Inc.;  
  - ISBN: 0-393-30673-3

### Recommended Text/Readings:
- Reading material in addition to items listed above will be suggested or provided in class, prior to class discussions. Materials in addition to items listed above may be required and will be discussed in class, prior to exams and/or individual project submissions.
Course Goals and Overview:
The goal of this course is to understand the theory and behavior of structural mechanics as it pertains to the fields of architectural design and building construction.

Course Outcomes/Learning Objectives:
At the end of this course, the students will be able to:

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3293.1</td>
<td>Recognize and understand the behavior of basic structural systems.</td>
</tr>
<tr>
<td>3293.2</td>
<td>Analyze basic structural components and systems.</td>
</tr>
<tr>
<td>3293.3</td>
<td>Demonstrate the use of applied mechanics for building design.</td>
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<tr>
<td>3293.4</td>
<td>Define fundamental design criteria related to structural systems.</td>
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<tr>
<td>3293.5</td>
<td>Identify design processes and explain how the structure informs and influences design concepts.</td>
</tr>
<tr>
<td>3293.6</td>
<td>Recognize the strengths and weaknesses of engineering materials.</td>
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</tbody>
</table>

Course Requirements & Evaluation Methods
This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

- **Assignments/Online Discussions**: Written assignments designed to supplement and reinforce course material
- **Exams**: Written tests designed to measure knowledge of presented course material
- **Projects**: Assignments designed to measure ability to apply presented course material
- **Class Attendance/Participation**: Daily attendance and participation in class discussions

Grading Matrix

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Value (points or percentages)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawings</td>
<td>10 drawings at 1 point each</td>
<td>10</td>
</tr>
<tr>
<td>Course Notebook</td>
<td>1 notebook at 1 point</td>
<td>1</td>
</tr>
<tr>
<td>Discussions</td>
<td>3 online discussions at 3 points each</td>
<td>9</td>
</tr>
<tr>
<td>Case Study and Presentation</td>
<td>1 presentation at 5 points</td>
<td>5</td>
</tr>
<tr>
<td>Exams</td>
<td>3 written exams at 20 points each</td>
<td>60</td>
</tr>
<tr>
<td>Class Attendance/Participation</td>
<td>15 weeks at 1 point each</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

**Grade Determination:**
- A = 90-100 points
- B = 80–89 points
- C = 70–79 points
- D = 60–69 points
- F = 59 points or below

Course Procedures:

Class Attendance Policy (See Catalog for Full Attendance Policy)
Prairie View A&M University requires regular class attendance. Attending all classes supports full academic development of each learner whether classes are taught with the instructor physically present or via distance learning technologies such as interactive video and/or internet. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class during regular semesters and summer terms. Each faculty member will include the University’s attendance policy in each course syllabus.

Instructor’s Attendance and Participation Policy
Prairie View A&M University requires regular class attendance. Attending all classes supports full academic development of each learner whether classes are taught with the instructor physically present or via distance learning technologies such as interactive video and/or internet. Absences are accumulated beginning with the first day of class during regular semesters and summer terms. If you fail to submit the weekly tasks when due, you will be marked absent for that week.

Participation and absences are accumulated beginning with the first day of class. If you do not come to class, you may assume that you have received zero (0)
points for the class period unless you have a university approved excuse in one of the following classifications:

1. Participation in an activity appearing on the University authorized activity list.
2. Death or major illness in a student’s immediate family.
3. Illness of a dependent family member.
4. Participation in legal proceedings that requires a student’s presence.
5. Religious holy day.
6. Confinement because of illness.
7. Required participation in military duties.

If you miss class for one of these reasons, you must provide a memorandum plus supporting documentation to clear the absence from your record. These documents will be accepted for ONE WEEK AFTER THE ABSENCE HAS OCCURRED. There will be NO exceptions to this rule. This includes student-athletes who are to provide university forms for reporting absences to participate in approved competitions. Emails will not be accepted to clear these absences.

If you have another reason other than these seven for being absent, you may submit a memorandum with supporting documentation requesting that the absence be removed from your record for ONE WEEK AFTER THE ABSENCE HAS OCCURRED. There will be NO exceptions to this rule. All requests will be reviewed and approved or disapproved based upon the justification that you provide in your memorandum. While other reasons for being absent are rarely approved; it is understood that you might feel that there is a higher priority that requires you to miss class. In accepting your decision to miss class, you must also be willing to accept the instructor’s decision to not award you involvement points for the class or classes that are missed.

Personal Conduct

Students and faculty are expected to conduct themselves in ways that support individual learning and the learning of others. To that end members of the classroom community will conduct themselves in a professional and ethical manner to achieve these objectives. Any conduct construed to interfere with the learning opportunities of members of the class may result in the removal of the student from the class for that day. Repeated inappropriate conduct will result in permanent removal from the class.

Based upon the fact that you are preparing for professional employment, you are expected to adhere to the following specific guidelines:

1. During regular class periods all students are expected to dress appropriately in accordance with university regulations so that no disruptions in the learning experience will occur.
2. No hats or caps will be allowed to be worn in the classroom during class sessions. If you elect to wear a hat or cap during the lectures or class discussion, your decision will be respected. However, you should also respect the instructor’s decision to not award you daily participation points based upon that decision.
3. Dress Code for Presentations: Professional dress is expected for all design and technical presentations in class. Failure to adhere to the guidelines posted by the instructor will result in a deduction of ten percent (10%) from your final presentation score.
4. Students should not be eating food or consuming drinks during the discussion sessions. No food or drink is allowed in the classroom at any time.
5. Cellular telephones are to be turned off or put on silent ring tone during the class period. Texting is strictly prohibited during the class period. No “ear phone” units will be allowed. If your cell phone rings during the lecture or you are texting, you are subject to losing all participation point for that class period.
6. Laptops must emit no noise. Make sure your laptop is warmed up and your battery charged before class starts. A laptop is allowed only for taking notes or accessing relevant course material during the class. Checking email, playing a game, messaging and other non-class related activities are not allowed at any time.
7. Harassment of your fellow students of any kind will not be tolerated.
**Conduct of the Class**

Please note the following rules for the conduct of the class.

1. **Class will begin at the appointed time.**
2. **Class is dismissed when so indicated by the instructor.** Students are expected to be on time and stay throughout the entire class period. Leaving the classroom presentation or discussion board before the class is dismissed without prior approval from the instructor will result in a loss of participation for that class.

Lecture Notes and Handouts will be posted on Canvas or sent to your official university email. Handouts distributed during a class period will not be distributed at any other time. It is the student’s responsibility to get a copy from another student or source.

**Formatting Documents:**

Microsoft Word is the standard word processing tool used at PVAMU. If you are using other word processors, be sure to save the document in either the Microsoft Word, Rich-Text, or plain text format.

**Exam Policy:**

Exams and quizzes will be announced online via Canvas as scheduled. Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook).

**COVID-19 Campus Safety Measures**

To promote public safety and protect students, faculty, and staff during the COVID-19 pandemic, Prairie View A&M University has adopted policies and practices for the Fall 2020 academic term to limit virus transmission. Students must observe the following practices while participating in face-to-face courses and course-related activities (office hours, help sessions, transitioning to and between classes, study spaces, academic services, etc.):

- **Self-monitoring** - Students should follow CDC recommendations for self-monitoring. Students who have a fever or exhibit symptoms of COVID-19 should participate in class remotely and should not participate in face-to-face instruction.
- **Face Coverings** - Face coverings (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain.
- **Physical Distancing** - Physical distancing must be maintained between students, instructors, and others in course and course-related activities.
- **Classroom Ingress/Egress** - Students must follow marked pathways for entering and exiting classrooms and other teaching spaces. Students should leave classrooms promptly after course activities have concluded, should not congregate in hallways and should maintain 6-foot physical distancing when waiting to enter classrooms and other instructional spaces.
- **Face-to-face Class** - To attend a face-to-face class, students must wear a face covering (or a face shield if they have an exemption letter). If a student refuses to wear a face covering, the instructor should ask the student to leave and join the class remotely. If the student does not leave the class, the faculty member should report that student to the Office for Student Conduct for adjudication. Additionally, the faculty member may choose to teach that day’s class remotely for all students.
- **COVID-19 Guidelines for Student Conduct Adjudication** - The mandatory COVID-19 Training/Certification taken by all students serves as the 1st Warning for violation of COVID-19 Guidelines.
  - 1st incident: upon review of Incident Report and finding of responsibility — Conduct Probation
  - 2nd incident: upon review of Incident Report and finding of responsibility — Suspension
  - Consult the Code of Student Conduct in the Student Planner or Student Conduct website for additional information on Conduct Probation and Suspension.

3. **Personal Illness and Quarantine** - Students required to quarantine must participate in courses and course-related activities remotely and must not attend face-to-face course activities. Students should notify their instructors of the quarantine requirement. Students under quarantine are expected to participate in courses and complete graded work unless they have symptoms that are too severe to participate in course activities. Students experiencing personal injury or illness that is too severe for the student to attend class qualify for an excused absence. To receive an excused absence, students...
must provide appropriate documentation to the Office for Student Conduct, studentconduct@pvamu.edu.

## University Rules and Procedures:

### Disability Statement (See Student Handbook):

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator. Students should also inform the instructor of their need for accommodations immediately at the outset of the course so that a solution designed to being successful in class can be produced.

### Academic Misconduct (See Student Planner):

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Planner, especially the section on academic misconduct (see *University Administrative Guidelines on Academic Integrity*). Students who engage in academic misconduct are subject to university disciplinary procedures. As listed in the PVAMU Undergraduate Catalog, Graduate Catalog, and the Student Planner, the following are examples of prohibited conduct. This list is not designed to be all-inclusive or exhaustive. In addition to academic sanctions, any student found to have committed or to have attempted to commit the following academic misconduct may also be subject to disciplinary review and action as outlined in the PVAMU Student Planner.

#### Forms Of Academic Dishonesty:

1. **Cheating**: Deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not learned, giving or receiving aid unauthorized by the instructor on assignments or examinations. Examples: unauthorized use of notes for a test; using a “cheat sheet” on a quiz or exam; any alteration made on a graded test or exam which is then resubmitted to the teacher.

2. **Plagiarism**: Careless or deliberate use of the work or the ideas of another; representation of another’s work, words, ideas, or data as your own without permission or appropriate acknowledgment. Examples: copying another’s paper or answers, failure to identify information or essays from the Internet and submitting or representing it as your own; submitting an assignment which has been partially or wholly done by another and claiming it as yours; not properly acknowledging a source which has been summarized or paraphrased in your work; failure to acknowledge the use of another’s words with quotation marks.

3. **Multiple Submission**: Submission of work from one course to satisfy a requirement in another course without explicit permission. Example: using a paper prepared and graded for credit in one course to fulfill a requirement and receive credit in a different course.

4. **Conspiracy**: Agreeing with one or more persons to commit an act of academic/scholastic dishonesty.

**Fabrication of Information/Forgery**: Use or submission of contrived, invented, forged, or altered information in any assignment, laboratory exercise, or test; tampering with or production of a counterfeit document, particularly documents which make up the student’s academic record. Examples: making up a source or citing nonexistent publication or article; representing made up data as real for an experiment in a science laboratory class; forging a change of grade or student withdrawal record; falsifying any document related to a student academic exercise.

### Nonacademic Misconduct (See Student Planner):

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either: (1) the instructor’s ability to conduct the class; (2) the inability of other students to profit from the instructional program; or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

### Sexual Misconduct

Sexual harassment of students and employees at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating the university’s sexual harassment policy will be subject to disciplinary action. In accordance
Pregnancy, Pregnancy-related, and Parenting Accommodations

Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Disability Services or the Dean of Students’ Office for additional information and to request accommodations. More information can be found at this webpage.

Non-Discrimination Statement

Prairie View A&M University does not discriminate on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation or gender identity in its programs and activities. The University is committed to supporting students and complying with the Texas A&M University System non-discrimination policy. It seeks to establish an environment that is free of bias, discrimination, and harassment. If you experience an incident of discrimination or harassment, we encourage you to report it. If you would like to speak with someone who may be able to afford you privacy or confidentiality, there are individuals who can meet with you. The Director of Equal Opportunity & Diversity has been designated to handle inquiries regarding the non-discrimination policies, and can be reached at Harrington Science Building, Suite 109 or by phone 936-261-1744 or 1792.

Student Academic Appeals Process

Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the University Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint. Students can file Academic Complaints and/or Grade Appeals at this webpage.

Student Support and Success:

John B. Coleman Library

The library and its partners have as their mission to provide resources and instructional material in support of the evolving curriculum, as a partner in Prairie View A&M University's mission of teaching, research, and service and to support the University's core values of access and quality, diversity, leadership, relevance, and social responsibility through emphasis on ten key areas of service. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty. Phone: 936-261-1500; Website: J. B. Coleman Library.

Academic Advising Services

Academic Advising Services offers students a variety of services that contributes to student success and leads towards graduation. We assist students with understanding university policies and procedures that affect academic progress. We support the early alert program to help students get connected to success early in the semester. We help refer students to the appropriate academic support services when the student is unsure of the best resource for their needs. Some students are supported by faculty advisors in their respective colleges. Your faculty advisor can be identified in PantherTracks. Advisors with Academic Advising Services are available to all students. We are located across campus. You can find your advisor’s location by academic major at the Academic Advising Website. Phone: 936-261-5911.

The University Tutoring Center

The University Tutoring Center (UTC) offers free tutoring and academic support to all registered PVAMU students. The mission of the UTC is to help provide a solid academic foundation that enables students to become confident, capable, independent learners. Competent and caring staff and peer tutors guide students in identifying, acquiring, and enhancing the knowledge, skills, and attitudes needed to reach their desired goals.
Tutoring and academic support is offered face-to-face in the UTC, in virtual face-to-face sessions, and through online sessions at PVPlace. Other support services available for students include Supplemental Instruction, Study Break, Academic Success Workshops, and Algebra Study Jam. Location: J. B. Coleman Library, Rm. 307; Phone: 936-261-1561; Email: pvtutoring@pvamu.edu; Website: University Tutoring Center.

### Academic Early Alert

Academic Early Alert is a proactive system of communication and collaboration between faculty, academic advisors, and PVAMU students that is designed to support student success by promptly identifying issues and allowing for intervention. Academic Early Alert helps students by providing a central location to schedule advising appointments, view advisor contact information, and request assistance. Students who recognize that they have a problem that is negatively affecting their academic performance or ability to continue school may self-refer an Academic Early Alert. To do so, students will log in to PVPlace and click on Academic Early Alert on the left sidebar. Phone: 936-261-5902; Website: [Academic Early Alert](#).

### Student Counseling Services

The Student Counseling Services unit offers a range of services and programs to assist students in maximizing their potential for success: short-term individual, couples, and group counseling, as well as crisis intervention, outreach, consultation, and referral services. The staff is licensed by the State of Texas and provides assistance to students who are dealing with academic skills concerns, situational crises, adjustment problems, and emotional difficulties. Information shared with the staff is treated confidentially and in accordance with Texas State Law. Location: Hobart Taylor, 2nd floor; Phone: 936-261-3564; Website: [Student Counseling Services](#).

### Office of Testing Services

Testing Services serves to create opportunities by offering suite of exams that aid in the students' academic and professional success. Currently we administer entrance (HESI A2), college readiness (TSI assessment), Prior Learning (CLEP, DSST), and proctored exams. Location: Wilhelmmina Delco, 3rd Floor, Rm. 305; Phone: 936-261-3627; Email: aetesting@pvamu.edu; Website: Testing Services.

### Office of Diagnostic Testing and 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, contact the Office of Disability Services. As a federally-mandated educational support unit, the Office of Disability Services serves as the repository for confidential disability files for faculty, staff, and students. For persons with a disability, the Office develops individualized ADA letters of request for accommodations. Other services include: learning style inventories, awareness workshops, accessibility pathways, webinars, computer laboratory with adapted hardware and software, adapted furniture, proctoring of non-standardized test administrations, ASL interpreters, ALDs, digital recorders, livescribe, and a comprehensive referral network across campus and the broader community. Location: Hobart Taylor, Rm. 1D128; Phone: 936-261-3583; Website: [Disability Services](#).

### Center for Instructional Innovation and Technology Services (CIITS)

Distance Learning, also referred to as Distance Education, is the employment of alternative instructional delivery methods to extend programs and services to persons unable to attend college in the traditional manner. The Center for Instructional Innovation and Technology Services (CIITS) supports student learning through online, hybrid, web-assisted and 2-way video course delivery. For more details and contact information, visit: [CIITS Student Webpage](#); Phone: 936-261-3283.

### Veteran Affairs

Veteran Services works with student veterans, current military and military dependents to support their transition to the college environment and continued persistence to graduation. The Office coordinates and certifies benefits for both the G.I. Bill and the Texas Hazlewood Act. Location: Evans Hall, Rm. 102; Phone: 936-261-3563; Website: [Veteran Affairs](#).

### Office for Student Engagement

The Office for Student Engagement delivers comprehensive programs and services designed to meet the co-curricular needs of students. The Office implements inclusive and accessible programs and services that enhance student development through exposure to and participation in diverse and relevant social, cultural, intellectual, recreational, community service, leadership development and campus governance. Location: Memorial Student Center, Rm. 221; Phone: 936-261-1340; Website: [Office for Student Engagement](#).
### Career Services

Career Services supports students through professional development, career readiness, and placement and employment assistance. The Office provides one-on-one career coaching, interview preparation, resume and letter writing, and career exploration workshops and seminars. Services are provided for students at the Northwest Houston Center and College of Nursing in the Medical Center twice a month or on a requested basis. Distance Learning students are encouraged to visit the Career Services website for information regarding services provided. Location: Anderson Hall, 2nd floor; Phone: 936-261-3570; Website: Career Services.

### Technical Considerations for Online and Web-Assist Courses:

<table>
<thead>
<tr>
<th>Minimum Hardware and Software Requirements</th>
<th>Minimum Recommended Hardware and Software:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Intel PC or Laptop with Windows 10 or later version; Mac with OS High Sierra*</td>
</tr>
<tr>
<td></td>
<td>• Smartphone or iPad/Tablet with Wi-Fi*</td>
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<tr>
<td></td>
<td>• High speed Internet access</td>
</tr>
<tr>
<td></td>
<td>• 8 GB Memory</td>
</tr>
<tr>
<td></td>
<td>• Hard drive with 320 GB storage space</td>
</tr>
<tr>
<td></td>
<td>• 15&quot; monitor, 800x600, color or 16 bit</td>
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<tr>
<td></td>
<td>• Sound card w/speakers</td>
</tr>
<tr>
<td></td>
<td>• Microphone and recording software</td>
</tr>
<tr>
<td></td>
<td>• Keyboard &amp; mouse</td>
</tr>
<tr>
<td></td>
<td>• Most current version of Google Chrome, Safari or Firefox</td>
</tr>
</tbody>
</table>

*Smartphone, Google Chrome books and Android tablets may not be supported. iPads are the only tablets supported.

**Note:** Be sure to enable Java & pop-ups in the Web browser preferences

**Participants should have a basic proficiency of the following computer skills:**

- Sending and receiving emails
- A working knowledge of the Internet
- Microsoft Word (or a program convertible to Word)
- Acrobat PDF Reader
- Windows or Mac OS
- Video conferencing software

**Netiquette (online etiquette):**

Students are expected to participate in all discussions and virtual classroom chats as directed. Students are to be respectful and courteous to others on discussions boards. Foul or abusive language will not be tolerated. Do not use ALL CAPS for communicating to others AS IT CAN BE INTERPRETED AS YELLING. Avoid slang terms such as “wassup?” and texting abbreviations such as “u” instead of “you.” Limit and possibly avoid the use of emoticons. Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and the message might be taken seriously or sound offensive.

**Video Conferencing Etiquette**

When using Zoom, WebEx or other video conferencing tools, confirm the visible area is tidy, clear of background clutter, inappropriate or offensive posters, and other distractions. Ensure you dress appropriately and avoid using high traffic or noisy areas. Stay muted when you are not speaking and avoid eating/drinking during session. Before class session begins, test audio, video and lighting to alleviate technology issues.

Students are expected to participate in all discussions and virtual classroom chats when directed to do so. Students are to be respectful and courteous to others in the discussions. Foul or abusive language will not be tolerated. When referring to information from books, websites or articles, please use APA standards to reference sources.

During the first week of class each student will be required to acknowledge by replying to a Posting stating that you have reviewed and understand the following Online Netiquette Policies for the course:

1. Discussion/Zoom/Webcam Behavior
When in a Zoom meeting and utilizing your webcam, be sure to act and dress as professionally as you can. You should look the same as you would if we were meeting face-to-face in the instructor’s office or in class. You should be sitting up in a chair and not laying down. If you feel as though your behavior or appearance would reflect negatively on you during that situation you are advised against it. You may choose to use a “Virtual Background” in Zoom for privacy. You should try to keep your physical environment where you are sitting during Zoom meetings to be as quiet as possible. If there is an outside conversation or activity such as television or loud music playing in the background try to limit it, as it can inhibit your ability to be easily heard and understood. Also:

• Be punctual. The instructor may choose to use the Zoom meeting participant logs to record attendance. If you are late to a meeting or left early the instructor may deduct points from your score according to the course Attendance policy.
• Be kind and respectful to the instructor and other students.
• Students are encouraged to ask questions. But please mute microphones when lecture is in session and unmute when you have a question or a comment.
• You may also use the “chat option” in Zoom if you have a question or comment. Chat is encouraged in some cases when the speaker has asked to hold questions until the end of a presentation.

2. When posting discussions or e-mailing one another, please be respectful of what you write. Inappropriate language will not be tolerated, and the instructor has the right to determine what is inappropriate. Disrespectful students are subject to discipline or dismissal from the online learning platform for this course. All activities in the classroom will follow standards set in the Student Handbook.

3. When creating/posting images do NOT use graphics that have sexual, political or religious implications. If you are unsure if a certain graphic is appropriate, email your instructor privately.

4. Address your peer or instructor with their names for each post or email.

5. Do not use ALL CAPS for postings or unnecessary exclamation marks, and not use text messaging-style for official assignment postings & email to the instructor. Caps where appropriate, example proper nouns and at the beginning of each sentence.

6. When posting critiques, try to be positive with your remarks, and make comments on how your peers can improve their work. An honest critique is important to feedback so make your point but be constructive.

7. This course requires that you give support and feedback to your classmate’s comments and ideas. If you see that someone has not already received feedback, please review that classmate’s work.

8. Aim at getting your discussion assignments & projects in early so that they can still be on-time when unexpected circumstances arise. Late assignments or discussions can slow the class down and will not benefit you as the learner.

9. Cite your references with your answers when some of it is not your original work. Do not post copyrighted material.

10. Respect examples of past students’ work if posted online. They are posted as a guide and should not be wholly or partially represented as your own work in this class or another class.

Technical Support:
Students should go to the Password Reset Tool if they have password issues. The page will provide instructions for resetting passwords and contact information if login issues persist. For other technical questions regarding eCourses, call the Center for Instructional Innovation and Technology Services (CIITS) at 936-261-3283 or email ciits@pvamu.edu.

Submission of Assignments-On Line Courses:
Assignments, Papers, Exercises, and Projects will be distributed and submitted through your online course. Directions for accessing your online course will be provided. Additional assistance can be obtained from the Office of Distance Learning.

Grade and Evaluation
Assignments will be graded regularly but grades will not be posted weekly. Instructor will be cognizant of withdrawal deadlines and make current grades available prior to these deadlines. Midterm and final grades will be made available as soon as possible once
determined. Instructor will make an effort to notify students that are likely to receive an unsatisfactory grade in the course in time for the student to attempt to raise their grade. Any student that wants to know their current course average can make a request to the instructor. Course averages can be tracked accurately in your online course so please do not request your average unless you have a specific concern or need it for completing an application or something similar.

All emails will receive a response from the instructor, usually within 48 hours. Urgent emails should be marked as such. Check regularly for responses. You can send email anytime that is convenient to you, but the instructor will check their email messages throughout the work-week (Monday through Friday) during normal office hours and may only read emails outside of these hours under special circumstances. Instructor will make an effort to respond to email messages during the work-week by the close of business (5:00 pm) on the day following their receipt of them. Emails received on Friday will be responded to by the close of business on the following Monday.

Group emails will be sent through your online course. Group emails may be sent out to selected students to notify them of missing work or other concerns that the instructor may have. All group emails will be sent as blind-copy so that student confidentiality is upheld.

Students are required to log-on to the course website regularly to participate in group discussions and read announcements. Usually a weekly announcement will be posted to remind students of any upcoming deadlines and notify students of anything that is important that may not be addressed in online content. It is strongly advised that you check the “Announcement” area daily to keep abreast of important information.

When you are required to participate in the “Discussion” Forum, reply with your comments and respond to at least one of your classmates. All comments must be posted by the deadlines to receive credit. You will not receive any credit if you copy comments from readily available resources word for word (ex: online text, lectures, textbook, etc.). Last-minute posts that do not provide time for other students to respond will not be counted as “substantial” replies. Your substantive replies should be posted in time for others to respond. Due dates for initial student post and follow-up response will be stated clearly in each discussion. It is encouraged that students respond to a post that does not already have other responses so that all or most students receive feedback from their peers.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their computer, a removable drive, cloud storage, email, etc. before posting to the discussion forum. This is important for two reasons: 1) If for some reason your
discussion responses are lost in your online course, you will have another copy; and 2) grammatical errors can be greatly minimized using the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.
This course is structured to assist the student meet the following criteria shown in Table No. 1 as established by the National Architectural Accreditation Board (NAAB). To view the entire list, go to the NAAB website, www.naab.org and access “2014 NAAB Conditions for Accreditation.”

<table>
<thead>
<tr>
<th>Performance Criteria:</th>
<th>Ability</th>
<th>Understanding</th>
<th>Course Learning Outcomes Competencies (T, R, I)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>T Taught</td>
</tr>
</tbody>
</table>

### REALM A: Critical Thinking and Representation

- A.1. Professional Communication Skills (Ability)
- A.2. Design Thinking Skills (Ability)
- A.3. Investigative Skills (Ability)
- A.5. Ordering Systems (Ability)
- A.6. Use of Precedents (Ability)
- A.7. History and Global Culture (Understanding)
- A.8. Cultural Diversity and Social Equity (Understanding)

### REALM B: Building Practices, Technical Skills, and Knowledge

- B.1. Pre-Design (Ability)
- B.2. Site Design (Ability)
- B.3. Codes and Regulations (Ability)
- B.4. Technical Documentation (Ability)
- B.5. Structural Systems (Ability)
- B.6. Environmental Systems (Ability)
- B.7. Building Envelope Systems and Assemblies (Understanding)
- B.8. Building Materials and Assemblies (Understanding)
- B.9. Building Service Systems (Understanding)
- B.10. Financial Considerations (Understanding)

### REALM C: Integrated Architectural Solutions

- C.1. Research (Understanding)
- C.2. Integrated Evaluations and Decision-Making Design Process (Ability)
- C.3. Integrative Design (Ability)

### REALM D: Professional Practice

- D.1. Stakeholder Roles in Architecture (Understanding)
- D.2. Project Management (Understanding)
- D.4. Legal Responsibilities (Understanding)
- D.5. Professional Conduct (Understanding)
## ACCREDITATION/ASSESSMENT CRITERIA TABLE 2: ACCE CRITERIA

This course is structured to assist the student meet the following criteria shown in Table No. 1 as established by the American Council for Construction Education (ACCE) Standards and Criteria for Accreditation. To view the entire list, go to the ACCE website, [www.acce-hq.org](http://www.acce-hq.org) and view the “Accreditation Procedures.”

<table>
<thead>
<tr>
<th>Course Learning Outcomes:</th>
<th>Competencies (T, R, I)</th>
<th>ACCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T Taught</td>
<td>R Reinforced</td>
</tr>
<tr>
<td>1. Create <strong>written communications</strong> appropriate to the construction discipline.</td>
<td>T</td>
<td></td>
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<tr>
<td>2. Create <strong>oral presentations</strong> appropriate to the construction discipline</td>
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<tr>
<td>3. Create a construction <strong>project safety plan</strong></td>
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<tr>
<td>4. Create construction <strong>project cost estimates</strong></td>
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<tr>
<td>5. Create construction <strong>project schedules</strong></td>
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<tr>
<td>6. Analyze professional decisions based on <strong>ethical principles</strong>.</td>
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<tr>
<td>7. Analyze construction documents for <strong>planning and management</strong> of construction processes.</td>
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<tr>
<td>8. Analyze <strong>methods, materials, and equipment</strong> used to construct projects.</td>
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<tr>
<td>9. Apply construction management skills as a member of a <strong>multidisciplinary team</strong>.</td>
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<tr>
<td>10. Apply <strong>electronic-based technology</strong> to manage the construction process.</td>
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<tr>
<td>11. Apply basic <strong>surveying techniques</strong> for construction layout and control.</td>
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<tr>
<td>12. Understand different <strong>methods of project delivery</strong> and the roles and responsibilities of all constituencies involved in the design and construction process.</td>
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<tr>
<td>13. Understand <strong>construction risk management</strong>.</td>
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<tr>
<td>14. Understand <strong>construction accounting and cost control</strong></td>
<td></td>
<td></td>
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<tr>
<td>15. Understand <strong>construction quality assurance and control</strong>.</td>
<td></td>
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<tr>
<td>16. Understand <strong>construction project control</strong> processes.</td>
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<tr>
<td>17. Understand the <strong>legal implications</strong> of contract, common, and regulatory law to manage a construction project.</td>
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<tr>
<td>18. Understand the basic principles of <strong>sustainable construction</strong>.</td>
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<tr>
<td>19. Understand the basic principles of <strong>structural behavior</strong>.</td>
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<td></td>
</tr>
<tr>
<td>20. Understand the basic principles of <strong>mechanical, electrical and piping systems</strong>.</td>
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</tr>
</tbody>
</table>

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ARCH 3293                               STRUCTURAL SYSTEMS I                COURSE SYLLABUS
PRAIRIE VIEW A&M UNIVERSITY           SCHOOL OF ARCHITECTURE

13
## COURSE OUTLINE: EVENT AND LECTURE SCHEDULE

This schedule is subject to change as the semester proceeds in order to cover the most important material in the time allotted. Any revisions will be duly noted and announced in class. All referenced readings are taken from the required text.

<table>
<thead>
<tr>
<th>Registration/Assembly Dates</th>
<th>Key Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduation Applications</td>
<td>Holidays</td>
</tr>
<tr>
<td>Proctored Exams</td>
<td>Class Sessions using ZOOM or teleconference technology</td>
</tr>
</tbody>
</table>

### 16 WEEK CALENDAR

#### Week One: Topic August 24-28, 2020

**Introduction to Structures**

- **Reading:** Sections 1.1-6
- **Assigned:** Drawing 1, Discussion 1, Course Notebook
- **Key Dates:**
  - **August 24, 2020:** TUITION AND FEES PAYMENT DUE DATE
  - **August 24-26, 2020:** LATE REGISTRATION BEGINS AUGUST 24TH; ENDS AUGUST 26TH (FEE: $50.00)

#### Week Two: Topic August 31-September 4, 2020

**Forces in Equilibrium (Theory)**

- **Reading:** Sections 2.1-6
- **Due:** Drawing 1, Discussion 1
- **Assigned:** Drawing 2, Presentation (Case Study)

#### Week Three: Topic September 7-11, 2020

**Forces in Equilibrium (Application)**

- **Reading:** Sections 3.1-2
- **Due:** Drawing 3
- **Assigned:** Drawing 4

#### University Events:

- **September 7, 2020 [Monday]:** LABOR DAY (University Closed)
- **September 9, 2020 [Wednesday]:** CENSUS DATE (12TH CLASS DAY)
- **September 10, 2020 [Thursday]:** FINAL DAY TO DROP/WITHDRAW FROM COURSE WITHOUT ACADEMIC RECORD.
- **September 10, 2020 [Thursday]:** WITHDRAWAL FROM COURSES “WITH ACADEMIC RECORD” (W) BEGINS. ENDS NOVEMBER 2, 2020.

#### Week Four: Topic September 14-18, 2020

**STUDENT PRESENTATIONS**

- **Due:** Drawing 3, Presentation (Case Study)
- **Assigned:** Drawing 4

#### University Events:

- **September 15, 2020 [Tuesday]:** DROP FOR NON-PAYMENT OF TUITION AND FEES @ 5:00 PM.
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading</th>
<th>Due</th>
<th>Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five</td>
<td>REVIEW (NO NEW MATERIAL)</td>
<td></td>
<td>Drawing 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FIRST EXAM</td>
<td>Internal Forces, Stress, Strength (Theory)</td>
<td>Drawing 5</td>
<td>Drawing 6</td>
</tr>
<tr>
<td></td>
<td>Properties of Engineering Materials</td>
<td>Section 5.3, MS-Chapter 4</td>
<td>Drawing 6</td>
<td>Drawing 7</td>
</tr>
<tr>
<td>Nine</td>
<td>Section Properties &amp; Thermal Effects</td>
<td>Sections 5.4, 6.1-4</td>
<td>Drawing 7</td>
<td>Drawing 8</td>
</tr>
<tr>
<td>Ten</td>
<td>Principles of Column Behavior</td>
<td>Sections 9.1-4, MS-Chapter 5</td>
<td>Drawing 8</td>
<td></td>
</tr>
<tr>
<td>Eleven</td>
<td>Principles of Beam Behavior</td>
<td>Sections 7.1-5</td>
<td>Drawing 9</td>
<td></td>
</tr>
<tr>
<td>Twelve</td>
<td>Structural Systems (Trusses)</td>
<td>Section 3.3</td>
<td>Drawing 9</td>
<td>Drawing 10, Discussion 2</td>
</tr>
</tbody>
</table>
**University Events:**

**Week Thirteen:** Topic November 16-20, 2020  
Structural Systems (Cables & Arches)
- Reading: Sections 3.4-5, MS-Chapter 9
- Due: Drawing 10, Discussion 2
- Assigned: Discussion 3

**University Events:**
- November 13, 2020-January 20, 2021 [Friday-Wednesday]  
Registration for all other students for Spring Semester 2021.

**Week Fourteen:** Topic November 23-27, 2020  
REVIEW (NO NEW MATERIAL)
- Due: Discussion 3

**University Events:**
- November 25-27, 2020 [Thursday-Saturday]  
THANKSGIVING (UNIVERSITY CLOSED)

**Week Fifteen** Topic November 30-December 4, 20120  
- THIRD EXAM (ONLINE)
- Due: Course Notebook

**University Events:**
- December 2, 2020 [Wednesday]  
Last day of class for Fall Semester 2020!
- December 2, 2020 [Wednesday]  
FALL 2020 GRADUATION: Final date to apply for degree conferral. (No ceremony participation or name listed in program.)
- December 2, 2020 [Wednesday]  
Last Day to Withdraw from the University (ALL courses)

**Week Sixteen**

- December 3-9, 2020 [Thursday-Wednesday]  
FINAL EXAMINATION PERIOD
- December 9, 2020 [Wednesday]  
FINAL GRADES FOR GRADUATION CANDIDATES DUE BY 12:00 PM!
- December 12, 2020 [Saturday]  
COMMENCEMENT
- December 14, 2020 [Tuesday]  
FINAL GRADES DUE FOR ALL STUDENTS BY 11:59 PM!
- December 24, 2020-January 1, 2021 [Thursday-Friday]  
WINTER BREAK (UNIVERSITY CLOSED)

In order to assure that you have read over this entire document you are required to sign the Statement of Agreement on the final page of the syllabus and return it at the start of second class period. This will be our contract that you have read over the entire syllabus and that you understand what is expected of you in this class.
STATEMENT OF AGREEMENT

I have read the Course Syllabus for **ARCH 3293-Y02 Fall Semester 2020**, including the Class Lecture and Event Schedule, and agree to abide by the conditions for the class as spelled out in this document. My signature indicates my personal commitment to meeting the course objectives and succeeding in this educational endeavor.

______________________________
Signature-Student

______________________________  ____________  ____________/2020
Student name (Please print neatly)  Student ID #  Date

______________________________
Signature-Instructor

______________________________  ____________  ____________/2020
Instructors name  Date

RETURN THIS PAGE FROM THE SYLLABUS TO THE INSTRUCTOR TO COMPLETE YOUR ENROLLMENT IN THIS COURSE.

☞ RECEIVED WITH STUDENT’S SIGNATURE: _______________________
☑ ENTERED INTO GRADE BOOK: ________________________________