2019-2020
Southern Illinois University Edwardsville Alpha Chi

A. Initiations

In September the officers (Leanne Montgomery, president; Julie Bruns, vice president; Zach Wesselman, secretary; and Austin Walton, treasurer) began setting the Fall initiation process for the Alpha Chi chapter into motion. Our advisor, Dr. Molki, provided us with an anonymous list of students and the officers decided which students met the appropriate academic standing. All students in the upper quartile of their class were maintaining a GPA of well above 3.25, so this secondary measure was not needed. The officers met and prepared a list of nominees to Dr. Molki, who sent the invitations. The afternoon of November 8, 2019, everyone came together for the induction ceremony. In a campus classroom, the lights were dimmed and the Pi Tau Sigma crest and insignia were projected at the front. At the last minute the Vice-President was unable to attend our initiation so the secretary and treasurer fulfilled her duties recounting the history of the Pi Tau Sigma and meaning of our symbols. Four new members of Pi Tau Sigma were inducted. (See Fig. 1) After the ceremony, officer elections were held to replace our graduating vice president. Ethan Wilson was elected to serve in this position for Spring 2020 (See Fig. 2) After business was resolved the officers, initiates, and our advisor socialized over hot pizza and soda.

Preparations for the Spring initiation began much the same as the previous semester, though they would end quite differently. We began in February when officers gathered to prepare a list of nominees, following the same criteria as before. Dr. Molki invited nominees to be inducted. The initiation date was scheduled for mid-April, but by early March it became clear

Fig. 1 Fall 2019 Initiates into the Alpha Chi chapter of Pi Tau Sigma

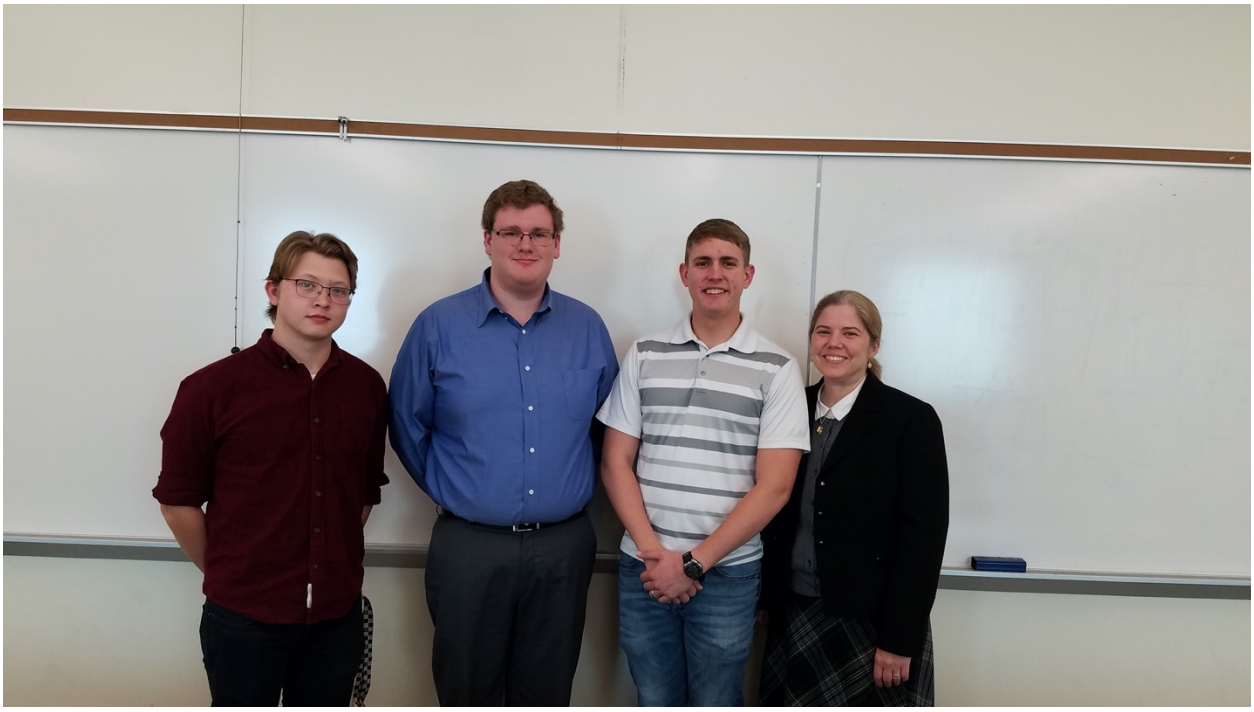


Fig. 2 New officers for Spring 2020, Alpha Chi Chapter of Pi Tau Sigma

that our initiation could not proceed as planned. Due to the rapid spread of Covid-19, the state of Illinois first banned gatherings of more than 10 people and eventually issued a shelter-in-place order. Our entire university moved operations entirely online and it became clear that the Alpha Chi chapter would need to do the same. The president contacted Dr. Molki in the second week of March about the feasibility of having an initiation online, and with guidance from Dr. Moutsoglou we decided to move forward with a "Zoom" initiation. The afternoon of April 10, 2020, officers and members of our chapter joined the initiate and Dr. Molki in a Zoom meeting. The crest and insignia were broadcast as the main image, but all members of the meeting were also visible via video feeds. (See Fig. 3) We proceeded with the initiation as we normally would have in person, and one new member of Pi Tau Sigma was inducted. Officer elections were then held for Fall 2020. Officers for the coming semester include Nicholas Roberts as president, Ethan Wilson as vice president, Leanne Montgomery as secretary, and David Gipson as treasurer. (See Fig. 4) Unfortunately, the celebration had to be postponed until we are able to be on campus together again, but given the circumstances the initiation was deemed by all to be a success.

Fig. 3 Screenshot of the Spring 2020 initiation, held remotely due to Covid-19.

Fig 4 Screenshot "group photo" from the Spring 2020 initiation, including the new member, current and newly elected officers.

B. Chapter Activities

All efforts for the Alpha Chi Chapter in the 2019-2020 year were directed toward accomplishing a single goal: hosting a review series for students and alumni preparing to take the Fundamentals of Engineering exam for Mechanical Engineering. Members of the Chi Epsilon honor society at our school hold a similar series for civil engineering students, but we wanted to provide a review series that would focus specifically on the subjects over which Mechanical Engineering students are tested in the FE exam. We began by meeting with the Chi Epsilon advisor to get details on how to approach and organize such a series. For our series, we decided to hold sessions on Fluid Mechanics, the Mechanics of Materials, Statics, Ethics and Professional Practice, Materials Properties and Processes, Measurements Instrumentation and Controls, Computational Tools, Dynamics Kinematics and Vibrations, Mechanical Design and Analysis, Heat Transfer, Engineering Economics, Thermodynamics, and Electricity and Magnetism. The most arduous part of the process was finding 13 faculty members with the time and expertise to hold review sessions. Once this was accomplished, campus rooms were reserved and we began posting schedules advertising the review sessions, open to SIUE students and other members of the community. (See Fig. 5) Because some of the sessions covered material germane to Civil Engineering students preparing for their own FE exam, we also advertised through the CE department. We also offered to help students purchase FE exam review manuals through Amazon.com. By February our review series had a schedule, speakers, room reservations, and attendees.

On the day of each session, a member of Pi Tau Sigma arrived in the classroom early to make sure the facilities were unlocked, all necessary technology was working, and the speaker had everything they needed. The first four review sessions went well, with 7-8 students in attendance at each event. Then Spring Break came and our university shut down all in-person activities to help slow the spread of Covid-19. The president of our chapter spoke with our advisor and they quickly determined that the sessions could continue with some changes. We began working with faculty members to help them transition their review sessions online. Due to the fairly immediate nature of the transition and the general chaos of the shutdown, some sessions had to be rescheduled and re-advertised. Although attendance was lower, only one of our review sessions had to be canceled, and all professors were very generous with their time and materials to help students prepare for this important exam.

The other important event for the Alpha Chi chapter this year was attendance at the national convention in Rochester, NY, at the end of January. Because of the cost involved in traveling to New York, only the president attended the convention. She was present for the entire convention and found it especially useful to brainstorm with officers from other chapters about solutions to the challenges of running a chapter at a small school.

Following page:

Fig. 5 A flyer used to advertise the Mechanical Engineering FE exam review series hosted by the Alpha Chi Chapter of Pi Tau Sigma.

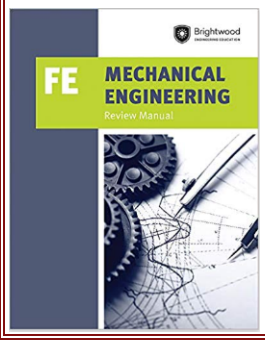
Pi Tau Sigma

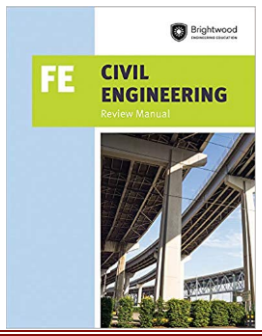
Honorary Mechanical Engineering Fraternity

SIUE SPRING 2020 FE REVIEW SESSIONS

Date	Subject	Instructor	Time	Place
Mon. 2/24	Fluid Mechanics	Dr. Denn	4:30-5:50	EB2160
Wed. 2/26	Mechanics of Materials	Dr. Panahshahi	4:00-5:30	EB0160
Mon. 3/2	Statics	Dr. Fries	4:30-5:50	EB2160
Wed. 3/4	Ethics and Prof. Practice	Dr. Larkin	4:30-5:50	EB2160
Tue. 3/17	Material Properties and Processing	Dr. Yan	4:30-5:50	EB0050
Mon. 3/23	Measurements, Instrumentation, and Controls	Dr. Zhang	4:30-5:50	EB2160
Tue. 3/24	Computational Tools	Prof. Vaughn	4:30-5:50	EB1150
Mon. 3/30	Dynamics, Kinematics, and Vibrations	Dr. Shavezipur	4:30-5:50	EB2160
Wed. 4/8	Mechanical Design and Analysis	Dr. Gu	4:30-5:50	EB2160
Mon. 4/13	Heat Transfer	Dr. Molki	4:30-5:50	EB2160
Tue. 4/14	Engineering Economics	Dr. Eneyo	4:30-5:50	EB1150
Mon. 4/20	Thermodynamics	Dr. Molki	4:30-5:50	EB2160
Tue. 4/21	Electricity and Magnetism	Prof. Muren	4:30-5:50	EB1150

All sessions are free to current SIUE students and cost $10 (checks payable to the Alpha Chi chapter of Pi Tau Sigma) for others.





Brightwood FE Review Manuals can be purchased on Amazon.com or by contacting Leanne Montgomery at leamont@siue.edu by February 17.