



Material Advantage Chapter of Excellence Application

University of Illinois Urbana-Champaign



Prepared By: Joseph Kallal, President

Faculty Advisors: Dr. Jessica Krogstad, Dr. Marie Charpagne

2025-2026



Table of Contents

Executive Board

Chapter Overview

Events Calendar

Chapter Management

Technical Programming

Career Development

Service

Social Activities

EXECUTIVE BOARD



Top Row (Left to Right): Miriya Joseph (EOH Director), Jaymin Choi (Freshman Representative), Suhaani Singh (Freshman Representative), Srigeetika Cuttamanchi (Service Chair), Marlo DeCapo (Social Chair)

Bottom Row (Left to Right): Elise Tejeda (Women in MatSE Chair), Shruti Mukhopadhyay (Treasurer), Joseph Kallal (President), Jasmine Woo (Vice President), Gianna Mabulay (Secretary)



CHAPTER OVERVIEW

Material Advantage (MA) is a professional society for students in Materials Science and Engineering. The University of Illinois Chapter is a student organization for undergraduates in Materials Science and Engineering (MatSE) at the University of Illinois Urbana – Champaign. Our goals are three-fold:

- i. Keep the student body informed of the opportunities available within the field of Materials Science and develop students' skills to better prepare them for said opportunities.
- ii. Serve as liaisons between the student body and faculty to ensure student voices are being heard and to facilitate collaboration.
- iii. Build a supportive community that promotes the growth of friendships and connections within the MatSE program, between other student organizations, and within the larger community.

As a long-standing top 5 MatSE program in the country in both size and ranking, ensuring all students remain up-to-date on recent developments in the field and coordinating between students, faculty, and alumni requires the utmost dedication from our executive board officers. Our board is comprised of 10 committed and enthusiastic MatSE undergraduates in traditional MA roles (president, vice president, treasurer, secretary), chair roles (social, service), and specialized roles (EOH director, women in MatSE chair, and freshman representatives) aiming to host campus specific events. We work closely with our sister organization and honor society, Keramos, and our shared industry and academia professional chairs to provide the highest quality of hands-on activities and professional events. The diversity and size of our board allows us to undertake numerous events throughout the year and create an organization that effectively promotes the goals of our chapter. This document serves to summarize how the Illinois Material Advantage Chapter has satisfied and exceeded the Excellence Criteria and deserves to be considered for the 2025-2026 Material Advantage Chapter of Excellence Award.



EVENTS CALENDAR

September	October	November
- Engineers Night "How to Professional" - Pre-Mentorship Social - S'mores social - Prof Wang Lunch - Clorox recruiting event - Mentorship Kickoff - Intel Info Session/Recruitment - WiMatSE* TSITP Watch Party - Blood Drive - Capture the Flag "Intro to Research" - NSF info session - Prof Kriven lunch - MS&T - MSE 182 Review Session	- Argonne Info Session - Scavenger Hunt - Prof Evans Lunch - LaTea Fundraiser - Minute to Win It - Carnegie Mellon Info Session - MRS grad school application workshop - Curtis Apple Orchard Trip - Poster making for bake sale - Baking for bake sale - WiMatSE journal decorating - Bake sale for ASM Foundation "Studying Abroad as a MatSE" - Chevron Case Study - MSE 182 Review Session	- Pumpkin Painting - MRS Grad School Application Workshop - Destination Technology - Mario Kart Tournament - MSE 182 Review Session - Football Tailgate - Friendsgiving - Prof Moore Lunch [Thanksgiving Break]
December	January	February
- WiMatSE Friendship Bracelet Making - Holiday Party - Undergraduate Advisory Committee Feedback Session - Ice Skating [Winter Break]	[Winter Break] - Concentration Panel	- Valentines cards for staff and faculty - Alumni Mentorship Program Kickoff - Trivia Night - WiMatSE "Galentines" Party - MRS Visit Weekend Dos and Don'ts - Freshman Movie Night - Blood Drive - Prof Trinkle Lunch
March	April	May
- Prof Van der Zande Lunch - MSE 201 Review Session - Mia Za's Fundraiser - TMS - MRS Grad School Q&A - WiMatSE Tote Bag Painting - Engineering Council Barn Dance - Feed My Starving Children	- Dr. Goodman Lunch - MSE 201 Review Session - EOH Decorations Creation/Movie Night - WiMatSE Play with Clay - Engineering Open House - WiMatSE Coffee Chat - Admitted student Fair - Prof Krogstad Lunch - WiM Craft Night - MRS Game Night - Bake Sale for ASM - Executive Board Elections - Undergraduate Advisory Committee Feedback Session	- Exec. Board Transition Meetings - Pie-an-Exec Fundraiser

*WiMatSE = Women in MatSE



Recurring Event	Frequency
Happy Hour Socials	Weekly (21 total)
Executive Board Meetings	Biweekly (16 total)
General Meetings	Monthly (8 total)
Conference Planning Meetings	3 meetings/semester
Department Feedback Meetings	2 meetings/semester

CHAPTER MANAGEMENT

Executive Board Positions

Position	Responsibilities
President	Oversee all MA events; liaison between the MatSE department, student body, and alumni; lead all executive board and general meetings; work with VP and Treasurer to organize all conference logistics; chair the MatSE Undergraduate Advisory Committee; support the executive board.
Vice President	Work with the President to support chapter functions; organize and lead Mentorship Program during the fall semester; coordinate Cotton Candy booth for Engineering Open House; help plan conference trips; support executive board in performing their responsibilities.
Treasurer	Handle all chapter funds and purchases; collect membership dues; help plan conference trips; help write and pursue grant proposals; organize fundraisers; oversee reimbursements.
Secretary/ Webmaster	Send out monthly newsletter; maintain websites and social media accounts; reserve university rooms for chapter events; work with the department Communications Coordinator to publicize MatSE undergraduate life.
Professional Chair (Industry)*	Lead career development events focused on industry careers; nurture relations w/ industry representatives; serve as point of contact for recruiters. <i>*joint Keramos/Material Advantage Position</i>
Professional Chair (Academia)*	Lead career development events focused on research, academia, and graduate school. <i>*joint Keramos/Material Advantage Position</i>
EOH Director	Plan, organize, and lead Engineering Open House (EOH) MatSE activities; assist introductory MSE course teaching assistants; secure funding for EOH.
Social Chair	Lead and organize social events.
Service Chair	Lead service events; create and pursue opportunities to work closely with the local community.
WiMatSE** Chair	<i>*WiMatSE = Women in MatSE.</i> Organize social, professional, and outreach events for women in MatSE; cultivate a safe and welcoming community.
Freshman Representatives (2)	Interface with freshman class; organize introductory MSE course exam review sessions; assist in planning recruiting events.



Our chapter is proud to have hosted 96 events this year. Below are logistical details that allow our organization to manage and coordinate the large quantity of exceptional events.

Elections

Election Cycle. Our election cycle follows the academic year (August to May). Executive board members are elected in April and serve for the following fall and spring semesters. The election of two freshmen representatives takes place in October; this allows adequate time for recruiting first-year students, while also giving them a voice on the board early into the new academic year.

Election Logistics. All elections are carried out during a General Meeting, which is open to members and highly advertised. Candidates are allowed to run for up to three positions at once. Should they win one position, they are taken off the ballot for the remaining positions. The order of elections is: President, Vice President, Treasurer, Secretary, Professional Chair (Industry)*, Professional Chair (Academia)*, EOH Director, Social Chair, Service Chair, and Women in MatSE Chair. Each candidate submits a biography slide in advance and prepares a short speech. Candidates appear on the ballot in the order that their slides are submitted. April elections are moderated by a graduating executive board member. Freshmen Representative elections and any other special elections are moderated by the current president.

*These are joint positions between MA and Keramos, the MatSE Honor Society at Illinois.

Elections for each position are run as follows:

1. All candidates for a position are prompted to leave the meeting room, except for the first candidate on the ballot. Presidential candidates speak for two minutes, while non-presidential candidates speak for 1.5 minutes.
2. The candidate is given a two-minute Q&A session.
3. The candidate leaves the meeting room, and the next candidate is asked to enter. They give their speech and have their allotted Q&A time. This is repeated for the remaining candidates.
4. Once the last candidate for a position speaks, they leave the room. All the candidates remain outside the room at this time. A “vouching period” ensues, where the general audience is given the option to discuss the pros and cons of each candidate. For example, a member may speak to the strengths of a candidate that they know and provide personal anecdotes of their character or work as reason for their capability. For uncontested positions, this period is skipped.
5. After the vouching period, votes are collected using a Google Form. The form requires sign-in to restrict the form to one vote per Material Advantage member and ensure security in the election. No personal information is collected, however, ensuring anonymity. A ‘Vote of No Confidence’ option is included for each position.
6. The election moderator views the percentage of votes in real time on a private screen and closes the voting when the number of votes reaches the number of attendees. The candidate with the largest percentage of votes is elected.
7. The candidates are brought into the room and the results are announced.

This process is continued until all board member positions are filled.

Transitions

In May, current executive board members and future board members attend the final executive board meeting of the year. This allows the future board to understand the planning process of the organization. Each current board member prepares a transition document detailing their duties, the events they ran,



lessons learned, and suggestions for the following year. Transition documents are collected in an archive folder in our Google Drive for future board members.

Executive Board

The executive board meets biweekly to discuss upcoming events. These meetings serve as a chance for board members to seek advice, have their questions answered, and request assistance from other board members. Executive bonding events such as virtual icebreakers over the summer and dinners during the school year encourage friendships within the board and allow incoming board members to ease into their positions.

Finances

The Treasurer holds responsibility for all chapter finances. Our chapter holds a registered student organization account within our university's student organization management system. This account allows us to store university-provided finances and buy food, apparel, and other necessities. Our largest expenses are the trips to the MS&T and TMS conferences. We share our finances with our faculty advisor and department to allow for transparency between the chapter and department. Money collected from fundraisers is directly deposited into the account.

Chapter Record Keeping and Reporting

Our chapter has a shared Google Drive folder that everyone on the executive board can access. This Google Drive folder holds records from past years. Records are organized into folders by academic year, and further subfolders exist for each board position. The Google Drive stores meeting minutes, event ideas, photos from events, contact info, General Meeting slides, conference planning logistics, and transition documents to provide executive board members necessary information. Dedicated documentation throughout each school year also aids continuity of chapter functions and allows endeavors to persist over multiple years. Financial records are kept in a separate Google Drive shared only with the treasurer, president, and faculty advisor.

Recruitment

General Recruitment. There are a vast number of events aimed at increasing membership with the organization, including Engineer Night, Pizza with Freshmen, a visit to the introductory MatSE class, freshmen exam reviews, and more. These events are detailed further in the following sections of this report. Additionally, food and raffles provide more incentives to become paid members: after the initial wave of recruiting at the start of the academic year, all food at events and meetings becomes available only to paid members. (Note that the events themselves remain open to non-paying students to ensure accessibility.) At every monthly General Meeting, a raffle of MatSE merchandise is held for paid members.

Mentorship Program. The main portion of our recruitment is attributed to our Fall Mentorship Program. Our Mentorship Program pairs 2-3 freshmen with two sophomore, junior, and/or senior mentors. This introduces first-year MatSE students to Material Advantage during their first semester. A schedule of weekly events throughout the fall semester provides many opportunities for new students to engage with MA. Additionally, a variety of mentorship-specific social and professional events showcase the support and resources that MA provides.

Membership Tracking. A Google Sheets document is used to keep track of paid members and is updated by the treasurer when a new member pays and/or forwards their confirmation of payment to the treasurer.



Publicity

The Secretary is responsible for sending out monthly email updates to all members. Our chapter also informs members of upcoming events through our Instagram page and Slack. We find this is a great way to publicize information in the most organized way possible. Slack is an effective source of communication because groups and announcements are organized into purpose-specific channels. For example, a smaller channel containing only the executive board is used for planning-related messages, a '#professional' channel is used to announce upcoming professional events to all members, etc. Another advantage to using Slack for our chapter communications is that it is a prevalent software used in in the Illinois Grainger Engineering community, appearing in classes, other engineering clubs, and more. For instance, the Illinois MatSE department also has a Slack Workspace. This is especially useful for contacting members since the department can reach MatSE students who may not be on our email list, including graduate students. Additionally, our chapter works with the MatSE Communication Coordinator to spread awareness of Material Advantage and student experiences on the department website. We are also in the process of creating a new website.

Diversity

Our chapter focuses on diversity in many aspects, including race, gender, and age. We pride ourselves on assisting all MatSE students. Our members are split amongst freshmen, sophomores, juniors, and seniors.

This year, we have sustained our dedication on diversity, equity, and inclusion by continuing our Women in MatSE (WiMatSE) chair position. The role of our WiMatSE chair is to create events and help cultivate a supportive community for our members who identify as women (who make up around 50% of our chapter, and 40% of our undergraduate department). By continuing this position dedicated to women in MatSE, our chapter aims to increase our diversity efforts and instill long-lasting inclusive practices. Our WiMatSE chair, Elise Tejeda, has done a tremendous job this year in organizing events and collaborating with other women in engineering organizations on campus. Our WiMatSE events are detailed in this report in the following sections.



TECHNICAL PROGRAMMING

MS&T Conference 2025

This year, eleven students (three seniors, six juniors, and two sophomores) from our chapter traveled to Columbus, OH to attend MS&T 2025. We networked with fellow students, members of academia and industry representatives, and attended lectures on a variety of topics. Our chapter had students that competed in the following:

Ceramic Mug Drop Competition (2nd place): Isaac Pinkus, Elena Granzeier

Ceramic Disc Golf Competition: Elena Granzeier (Most Aesthetic Disk), Isaac Pinkus, Krisha Sampat



Our President, Vice President, Treasurer, and Secretary also attended the Chapter Officers Workshop. Here, we met leaders of other chapters, discussed best practices, and looked for ways to improve the Illinois Chapter, specifically for ways in which to start project teams for our organization. We also shared details and logistics about our fall Mentorship Program, as it is our main recruitment mechanism and a highlight of our chapter.

TMS Conference 2026

Two students (two juniors) from our chapter traveled to San Diego, CA to attend TMS 2026. The conference provided members with an opportunity to attend lectures, network, and compete in the Materials Bowl. The TMS Bladesmithing Competition was an especially important opportunity for student networking regarding establishing a forging and bladesmithing team and provided extremely valuable insight.

Fundraisers



This year, our chapter hosted four fundraisers. The first was a fundraiser at a local boba tea shop called LaTea. Students showed a flier at the register before paying and LaTea donated 20% of the proceeds from their purchases back to our organization. From this, we raised over \$100. Our second fundraiser was our annual “The Science of Cotton Candy” booth at Engineering Open House (EOH), the country’s largest student-run STEM fair. At this event, we present the science of how cotton candy is made and showcase its connection to fiber glass and materials science concepts. We spin and hand out cotton candy cones for free, with optional donations collected. In the span of two days, we raised over \$1,000 through Venmo and cash donations. This event is our



largest source of fundraising by far and used to sponsor most of our events. The next fundraiser was at a local pizza and pasta restaurant, raising nearly \$200. Our final fundraiser was a fun event to destress, where students could pay to pie their favorite MA executive board member.

Engineering Open House (EOH)

EOH is the largest student-run STEM fair in the country and is hosted at the University of Illinois by the Grainger College of Engineering. Student organizations and engineering departments from all over the college participate. Material Advantage gives MatSE as a whole a reputation of large buy-in and excellence in exhibits. Each year, our EOH Director works with the freshman class in the spring through MSE 183, where freshmen get course credit for constructing an exhibit demonstrating material science concepts. Students worked on their projects the entire school year to get ready for EOH.



Additionally, the EOH Director is responsible for choosing project leads to create their own booths in addition to the freshman exhibits, cotton candy exhibit and one Keramos exhibit. These projects are entirely student-led and rely on the knowledge and creativity of students to find engaging ways to communicate science topics to a general audience. This year's topics included recyclability, magnetorheological "smart" fluids, biopolymer yarn, and much more, totaling 14 exhibits under the purview of the EOH Director. The freshman exhibit "Bioplastics" won first place for "Most Outstanding Freshman Exhibit".



E-Night

Our first recruiting event of the year was E-Night, an event organized by the college to showcase all engineering student organizations available at Illinois. All incoming freshmen attend E-Night, so it is especially important for us to organize a booth to showcase our organization to increase membership. This year we updated our poster to highlight the professional, social, and service events our chapter organizes and the tight-knit community we foster. E-Night is a great opportunity to add interested students to our mailing list, encourage them to join our mentorship program, and let them know about our first general meeting of the year. Over 80 students expressed interest in our chapter at E-Night.

MSE 182 Pizza Day Visit

Two weeks into the school year, a few members of the executive board (President, VP, Social Chair) visited the "Pizza Day" for MSE 182, the introductory course required for all MatSE freshmen. This allowed us an opportunity to introduce what Material Advantage has to offer for first year students, including our peer mentorship program, freshman class exam review sessions, and an avenue to meet older students in MatSE. Additionally, we announced the details of the Freshman Representative elections so that all freshmen could ask questions about the role and decide if they are interested in running.

Chevron Case Study

During the Fall semester, our chapter hosted three Chevron recruiters on zoom for a failure analysis case study. During this workshop, Chevron Engineers walked students through a real life failure that happened at one of their plants. They then discussed their decision-making process and explained why some steps were



taken over others and in what order to connect class concepts to real scenarios in industry, providing valuable insight, especially for younger students without industry internship experience.

Department Feedback Sessions

At the end of each semester, Material Advantage hosts a feedback session for undergraduate students to voice any criticism, praise, or suggestions about classes in the MatSE department. We also use an online form so students who cannot attend the feedback session still have the chance to share their thoughts. This year, the MatSE Undergraduate Advisory Committee – chaired by the Material Advantage President – led the sessions and consolidated the feedback to present to the department heads and lead advisors. We are proud to say these insightful meetings bring change in the classes we take. For example, the senior design course has seen some dramatic improvements over the past few semesters in response to student feedback provided at these feedback sessions.

Dinner with the Deans

In the spring, our President, Vice President, and Treasurer attended Dinner with the Deans. The event is hosted by Illinois' Engineering Council to facilitate open and transparent communication between the student body and faculty. Our attendees spoke with a few prominent figures in the college, including Jonathan Makela, the Associate Dean of Undergraduate Programs.

General Meetings

Our chapter hosts monthly general meetings with our Keramos chapter, for a total of seven meetings throughout the academic year. During these meetings, each member of the board goes through announcements about membership, logistics, or upcoming events. Our general meetings get the most attendance out of all our events. Our first general meeting had around 150 attendees! After each general meeting, an activity is held. Our most popular activities included a MatSE focus area panel (i.e. metals, ceramics, etc.), career fair prep workshop (more information can be found under Career Development), and "How to Study Abroad" panel.

Introductory MSE Class Exam Reviews

Freshman in MSE 182 and MSE 201, the introductory MatSE classes (fall and spring respectively), prepared for their quizzes and final with practice questions and could ask questions about concepts to their Freshmen Representatives or upperclassmen. For each review session, we had around 40 people attend and actively participate. To put this in perspective, there are 72 students total in MSE 182. These events were primarily hosted by our Freshman Representatives and serve as an opportunity to build a community amongst the underclassmen.



CAREER DEVELOPMENT

Intel Networking Session

During the Fall semester, our chapter hosted Intel for discussions about the semiconductor field and more specifically Intel's pivots in the semiconductor industry. Discussions ranged widely, including the rise of AI, the future of computing, Intel's future plans and business strategies, and emerging technologies. After the lecture and discussion time, students had the opportunity to meet and talk with recruiters about career and internship opportunities at Intel.

Reverse Career Fair

The reverse career fair is an event hosted by the University of Illinois Engineering Council where student organizations network with companies interested in partnership. Our Industry Professional Chair and President put together a booth and presentation, speaking with company representatives about our chapter activities with hopes of establishing opportunities for career-building events for our students. Company representatives from Boeing and Brunswick (to name a few) were interested in our organization because we are one of two organizations on campus that work with material science students.

Another focus of ours during these two hours was to spread information about what the Materials Science and Engineering discipline is, and how MatSE students can apply their knowledge to a variety of fields. As this event took place ahead of the regular career fair, we hope that we convinced representatives to look for MatSE students when hiring at the regular career fair.

Internship Panel

In the Spring semester, our chapter hosted an information session on internships. Getting an internship is an invaluable experience for many undergraduate students, yet it can be difficult for MatSE undergraduates to know what companies will accept MatSEs, what kinds of positions are available, and how to obtain an internship. In order to make information about internships more accessible for our students, our chapter held an information session led by our senior students who had internships in various areas of material science including polymers, metals, and electronics. They detailed their experiences getting an internship, what kinds of work they did, and the connections between their MatSE background and their internship experiences.

Intro to Research

To introduce underclassmen students to research, different upperclassman students spoke about their different research areas while at various stations students can rotate through. Students learned about how to email professors about a position, what were the different research areas on campus for the different material science disciplines, and also what skills they could learn at different labs. This event intended to prepare students to reach out to professors in the upcoming break and semester for research opportunities and to give them the tools to do so successfully.

Argonne National Laboratory Talk

Our chapter collaborated with Argonne National Laboratory's (ANL) Student Ambassador Program to host a hybrid outreach event on campus. The information session was primarily organized by a student ambassador who was a previous intern at Argonne, as well as other previous interns who are active members of our Material Advantage chapter. The event was split into three sections: a quick overview of the



application process for summer internships given by the University Student Programs Coordinator at Argonne and the Student Ambassador, a scientific presentation from a research mentor at Argonne focusing on work done by interns the previous summer, and an open Q&A. Over 20 members attended and several members successfully completed an internship application.

Clorox Drop-In Hours

Our chapter hosted Clorox recruiters to have “drop-in” sessions in the fall. These events gave students the opportunity to interact with recruiters and prepare themselves for the career fair while exploring opportunities with Clorox. Illinois Material Advantage alumni Ian Flueck shared the work he’s completed since joining the company. Students enjoyed the opportunity to learn more about opportunities at Clorox as well as gaining interview experience conducted on the spot.

Post-General Meeting Workshops/Panels

After each general meeting, we host an activity/event. In the fall semester, we hosted a career fair prep workshop, study abroad info session, BAMF Info Session, and a concentration panel. In the spring semester we hosted an internship panel. The career fair preparation workshop was hosted one week before the fall career fair at the University of Illinois. Topics ranged from professional attire to conversing with recruiters to follow-up emails. These two workshops allowed our members to put their best selves forward during recruiting season. The study abroad info session had several panelists who were material science students who studied abroad or going through the study abroad process share about their experiences and answer questions. The concentration panel was aimed toward underclassmen. We understand that, while not required, identifying a concentration in material science is intimidating, so we hosted a six-student panel. Students talked about the concentrations of polymers, ceramics, computational materials, electronic materials, metals, and biomaterials. Panelists talked about classes they’d taken, why they’re interested in the concentration, and what they want to do with their concentration. Over 25 members attended and had plenty of great questions for our panelists. The internship panel was composed of four senior students who had internships in various areas of material science including polymers, metals, and electronics. They shared their experiences at their internships, how they got internships, and answered questions from the audience.

Professor Lunches

Professor lunches are a chance for students to get to know professors in a casual setting. During the event, food is catered in by the MatSE department and a dialogue begins between the attendees and professor. While the conversation typically begins with a description of their career trajectory, the conversation steers towards research related topics. As to not overwhelm the professor, we limited seats to 20 students, which we filled at each event. Professor lunches serve as an opportunity for our members to receive advice, build deep relationships with professors, and understand a little bit more about campus research.

MRS Collaboration Events

Over the course of the year, we hosted many events in collaboration with the Illinois Materials Research Society (MRS) chapter, which functions as the graduate student MatSE organization at Illinois. These events were mainly tailored around navigating grad school, research, and grant/fellowship applications. For example, former NSF GRFP applicants gave an introduction to the application process at the beginning of September. Later in the month, a workshop was hosted in which former applicants gave feedback to the students' written essays and application. Because the NSF GRFP is very competitive and the application requirements are quite strict, this helps students interested in grad school get valuable feedback on their application. This event was well received and attended by seniors. In the Spring semester, MRS hosted a



presentation giving advice on what to do after receiving an offer from a graduate program. The graduate students, who were all first years and could speak to their recent experiences, passed on advice on how to make the most of your visit weekend, what questions to ask PIs, and more. Attendance comprised of mostly seniors, but a few juniors also came to listen in!

Alumni Mentorship Program

In the Spring semester, our chapter collaborated with Keramos, our honor society, and with MatSEAA, the U of I Materials Science Alumni Association, to create our first ever alumni mentorship program. This student-organized and “mentee-driven” mentorship program gives students (and early career alumni) an experienced alumnus to learn from in whatever aspect they desire, with suggested topics being resumes, interviewing, and career development. This program has been a walk-on success, with very positive feedback coming from the midpoint survey, and nearly 70 participants.

Forging Team and Hands-on Opportunities

Over the course of the past few years, the current president, Joseph Kallal, has worked to create capabilities for forging and blacksmithing on the U of I campus. This year has led to some large successes, by securing workspace for projects, the purchase and installation of an induction forge, and receiving a grant from the Forging Industry and Educational Research Foundation (FIERF). This foundation has also paired us with a corporate partner (Clifford Jacobs Forging) for technical assistance and monetary support; this is a relationship we hope to build on next year with plant tours and possibly industry lectures. This upcoming year also looks to host a course taught by our Material Advantage chapter on forging techniques (MSE 199), the first time a club will run a course in the MatSE department. In addition, project teams will be established to participate in the 2027 FIERF Forging Competition and 2028 TMS Bladesmithing Competition.



SERVICE

Destination Technology

This year, we hosted two events with Destination Technology. Destination Technology organizes interactive events for students K-8 in the areas of STEM. The first event occurred in the fall when a group of Material Advantage members travelled to a middle school in Peoria, IL to teach science principles with a focus on physics. Our members used their physics knowledge to teach students concepts such as friction. One demo involved using geopolymer filters to clean dirty water. The second event occurred in the spring when our Service Chair led a field trip with 30 students from Mahomet Elementary School at Engineering Open House. The students were shown over 100 booths throughout the day demonstrating materials science and engineering phenomena. Our members guided them through the event and shared their insight. Because of this experience, we built strong relationships with teachers and faculty at local middle schools, and inspired young students to consider engineering at the University of Illinois when they start thinking about college.



Blood Drive

Material Advantage teamed up with the American Red Cross to host two blood drives, one in each semester. Over both events, blood donated could have the opportunity to save nearly 150 lives. MA members volunteered to run the event, which included checking the donors in, taking their temperatures, and ensuring they met requirements to donate blood. The event helped local hospitals as they received a supply of blood used for blood transfusions and surgeries.

STEM Night

This was a fun community outreach event at Middletown Prairie Elementary in Mahomet. Members volunteered to teach elementary students MatSE concepts through fun activities such as a hydrophobicity demonstration. The demo involved “smart fabrics”, with UV-printing and sew-able circuits being two possible variations. Over 50 elementary students were in attendance and it was a great way to engage younger students in science!

Cat & Dog Toy Making

Our organization worked with Moore's rescue ranch to provide 50 cat & dog toys made out of old T-shirts. We collected old t-shirts from the department for several weeks and then members cut them into strips and tied them into pet toys. This was a fun way to give back to the community and engaged the department as a whole in collecting donations.

Valentine's Day Card Making Event

After an executive board meeting, the board (and a few other MA members) made valentines with heartfelt and/or pun-filled messages for every MatSE staff and faculty member on campus. These were very well received by the department and students thoroughly enjoyed making them, so this will be an event we will continue with moving forward.

Bake Sale for ASM Foundation for Materials Education

Our chapter hosted two bake sales (one in each semester) to raise money for the ASM Foundation for Materials Education. This provided an opportunity to socialize and bond while baking and selling. Along with educating fellow U of I students about the importance of Materials Science Education, we raised around \$300 for the ASM Foundation. They use that money to support outreach activities and summer camps that show young students and their teachers fundamental materials science concepts.



Feed My Starving Children

Our chapter participated in a Feed My Starving Children meal-packing event for the first time. Ten members worked hard for hours, packing over 500 meals over the course of the day to be consumed by children in need all around the world.





SOCIAL ACTIVITIES

Peer Mentorship Program

Our mentorship program grows every year, with this year setting a record of over 100 students registering. Incoming students were placed in pods of approximately two upperclassmen and two freshmen to give them contacts in MatSE and to provide a resource to help them navigate the transition into life at the University of Illinois. This program is one of our most effective methods to get freshmen interested and involved in our organization. It provides weekly activities to appeal to all kinds of students' interests and allows underclassmen to meet upperclassmen. Newly, this year we hosted a pre-kickoff social to help introduce underclassmen to upperclassmen before picking their mentors. This social was a fun game day outdoors where people played frisbee, spikeball and Throw Throw Burrito. Regular mentorship events included trivia, capture the flag, a scavenger hunt, coffee dates, apple picking, laser tag, board games, study sessions, Friendsgiving, and a holiday party. Members were encouraged to participate with gift card prizes for the three groups that met with most.

Happy Hours

Every Friday at 5 pm, Material Advantage hosts an event at Murphy's Pub during happy hour and buys half-priced Irish Nachos for all attendees! We make sure that as many board members as possible attend so that we are easily accessible to our chapter members and the MatSE students in general. It's a great opportunity for students to relax at the end of the week and meet other friends in the major. We usually have 15+ students attend and sometimes upwards of 25! This is a way to bring members together and promote friendship within the organization. This brought students together and allowed for younger students to make friends and gain insight from the older students. We would consider happy hours our most beloved and longest tradition.

Executive Board Bonding

We believe it is important for our board to know each other well to work cohesively together. This year, we emphasized executive board bonding with dinners, board games, and fun during meetings. We also have a shared office space for board members to study and hang out in anytime of day; this space is almost always occupied with at least 2-4 people!

Engineers-Week

E-week is a week-long competition between teams of engineering students at Illinois to celebrate National Engineers Week. This year the theme of the week was Outer Space and seven of our members participated. We competed in a total of 23 events, including tug of war, a mile run, eating competition, obstacle courses, murder mystery, water pong, bags, karaoke, and a three-legged race. Students enjoyed competing against teams from other student organizations, and at the end of the week, they were invited to a formal. Our team was committed and won first place in the competition! E-week was a grueling, yet rewarding experience for everyone involved, and provided yet another opportunity to show off MatSE excellence.

S'mores Night

One of our early events was a S'mores night where members made a fire, built s'mores, and shared stories with each other. This event allowed underclassmen to meet upperclassmen in a cozy, outdoor environment. With over 40 attendees, this event was a hit!



Bingo

One new social event we hosted was trivia. We had around 20 members play trivia in a competition to see who had the most useless knowledge in all of MA.

Football Tailgate

This year, we collaborated with WECE the Women in Electrical and Computer Engineering Organization on Campus to host a football game tailgate! This event was well attended as we had over 20 people come to the tailgate. We had games such as cornhole and spikeball, and had food such as pizza, chicken and dessert. By collaborating with another organization, we were able to split resources (WECE brought the tent, we brought the games) and also the split costs. Members also enjoyed getting to know people outside of the MatSE community!

Curtis Apple Orchard Trip

Every fall, our chapter makes a trip to the nearby apple orchard. Here, we pick apples, gallivant through pumpkin patches, eat apple cider donuts, and have fun outside! As this event takes place during the fall, it is also a great opportunity for Mentorship groups to get together.



Women in MatSE Social Events

Our chapter held a variety of social events geared towards women in MatSE. These included a “The Summer I Turned Pretty” finale watch party, journal decorating, tote bag making, professor coffee chats, ceramics making, and much more! These events really serve to foster a solid community between women in MatSE and across the college of engineering at large when collaborating with other organizations like the National Society of Black Engineers or Women In Nuclear.

Ice Skating Event

We hosted one ice skating event this year at the university skating rink. The university hosts open skate hours which our chapter utilized to bring a different type of social event to our members.

Friendsgiving

Like Thanksgiving, but with friends! This event was a potluck and just an opportunity to chat, play games, and decompress after a hard week of midterms.

Holiday Party

Every year we host a holiday party for our members to take a break from studying, hang out with friends, get some gifts, and make cookies. We hosted a spin on the Christmas activity white elephant – trash white elephant. Everyone attending found a cheap gift lying around their apartment/dorm, wrapped it up, and brought it to the party. Then everyone went around in a circle, randomly picking from the gift pile to show the gift they chose. The point of trash white elephant is ease and convenience. The event was a great success with over 35 members participating!



“Galentine’s Day” Party

For Valentine’s Day, we threw a party filled with candy, secret notes, and fun. Members were provided with crafting supplies so they could make their own mailbox for Valentine’s notes. Students also passed around fun notes to other students and were given candy. Members had a great time with each other and enjoyed getting to be creative with their crafting.

Freshman Socials

Our Freshman Representatives hosted a variety of social events for first-year MatSE students. Among these were movie nights, game nights, and study get-togethers. Additionally, they held an easter egg hunt in the spring. 11 members attended and had a blast. It is essential to foster relationships in freshman year because the underclassmen share the same classes, so events like these bring them together to find their commonalities.

30 May 2026

To the MA Chapter of Excellence Award Selection Committee:

As faculty co-advisors for the University of Illinois Material Advantage chapter, we have had the opportunity to observe firsthand the remarkable impact this organization has on our undergraduate community. While the preceding report documents an impressive number of activities, what stands out most is not the quantity of events, but the culture of leadership, engagement, and service that these students have built. This year's success is unprecedented in terms of engagement, variety of activities, initiatives, and drive from the students.

This year, the chapter demonstrated an exceptional ability to connect students with the broader materials science profession. Through participation in conferences such as MS&T and TMS, industry information sessions, graduate school preparation workshops, and interactions with faculty, alumni, and national laboratory researchers, students gained exposure to career pathways that extend far beyond the classroom. These activities help students develop professional confidence, establish networks, and better understand how their education translates into real-world impact. This year, the student have taken the initiative to start a forging club, a huge undertaking in terms of infrastructure, fund raising, leadership, and coordination within the group, with faculty, staff, and safety services. We very much look forward to the next year as the forge was just installed a couple months ago.

Equally impressive is the chapter's commitment to community building. The new mentorship program reached exceptionally high participation levels and will definitely serve as one of the most effective mechanisms for welcoming new students into the department and creating a sense of belonging. By connecting freshmen with upperclassmen, the program promotes academic success and a strong sense of durable community. The numerous social activities organized throughout the year further reinforce an inclusive and supportive environment that benefits students at every stage of their academic journey. The chapter also plays an important role in strengthening communication between students and the department. Through advisory meetings, feedback sessions, and regular interactions with faculty and administrators, Material Advantage serves as an effective voice for undergraduate students. The organization not only identifies opportunities for improvement but actively works to implement solutions that enhance the student experience.

Finally, we are particularly impressed by the professionalism and organizational maturity of the executive board. Managing nearly one hundred events, maintaining strong financial stewardship, coordinating volunteers, and sustaining partnerships with industry, alumni, and other student organizations require a level of commitment that far exceeds typical student involvement. The chapter operates with a degree of continuity and institutional memory that ensures long-term success while continuously introducing new ideas and initiatives.

Material Advantage remains cornerstone of the undergraduate Materials Science and Engineering experience at Illinois. The chapter's impact extends beyond professional development and outreach; it creates a community in which students are empowered to lead, serve, and support one another. We are proud to serve as co-advisors to this organization and strongly commend the chapter for its outstanding accomplishments during the 2025–2026 academic year.

Jessica A. Krogstad
Associate Professor & Materials Advantage Faculty Advisor

Marie Charpagne
Assistant Professor & Materials Advantage
Faculty Advisor

