

KME Chapter Handbook

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www.kappamuepsilon.org

I. History and purpose of KME

A. Description and purpose of KME

Kappa Mu Epsilon is a national mathematics honor society, promoting interest in mathematics among undergraduate students. Its chapters are located in colleges and universities of recognized standing which offer a strong mathematics major. The chapters' members are selected from students of mathematics and other closely related fields who have maintained standards of scholarship, have professional merit, and have attained academic distinction.

The primary purposes of Kappa Mu Epsilon include the following:

- to further the interests of mathematics among undergraduate students;
- to help undergraduate students realize the important role that mathematics has played in the development of civilization;
- to develop an appreciation of the power and beauty possessed by mathematics, due, mainly, to its demand for logical and rigorous modes of thought;
- to provide a society for the recognition of outstanding achievement in the study of mathematics at the undergraduate level;
- to disseminate the knowledge of mathematics and familiarize its members with the current progress in this important area of human interest.
- to provide opportunities for undergraduate students to present and publish their original work in the field of mathematics and closely related fields where they apply mathematics.

B. A brief history

The rapid growth of colleges and universities in the United States during the latter part of the 19th Century led to the development of professional societies in many fields. Local clubs were formed in educational institutions to promote the rising professionalism, and the desire for affiliation with other groups of similar interest led to the organization of these local clubs into state and national organizations. Kappa Mu Epsilon was organized by Dr. Emily Kathryn Wyant in 1931 to fill the need for a national society for encouraging and honoring serious students of undergraduate mathematics.

Dr. Wyant joined the faculty of Northeastern Oklahoma State Teachers College, as a Professor of Mathematics, in 1930, and her irrepressible enthusiasm helped to transform the local mathematics club, which had been in existence since 1927, into the first chapter of Kappa Mu Epsilon. Professor L. P. Woods, who was head of the Department of Mathematics and Dean of Men at the time, became a valuable coworker, who was concerned with many details that pertained to the project, including the first rituals used for the initiation of members and the installation of officers. Together Dr. Wyant and Professor Woods along with twenty-two other faculty and students became charter members of Oklahoma Alpha, Northeastern Oklahoma State Teachers College at Tahlequah, April 18, 1931.

The second chapter of Kappa Mu Epsilon, Iowa Alpha, was installed at Iowa State Teachers College, Cedar Falls, May 27, 1931, and Kansas Alpha, the third chapter, was installed January 30, 1932, at Kansas State Teachers College, Pittsburg. Missouri Alpha, at Southwest Missouri State

College in Springfield, was installed on May 20, 1932, becoming the organization's fourth chapter. Mississippi Alpha, at Mississippi State College for Women, was installed in Columbus on May 30, 1932, and Mississippi Beta, at Mississippi State College, was installed on December 14, 1932, bringing the membership to six chapters in five states. Dr. J. A. G. Shirk of the Kansas State Teachers College at Pittsburg, who succeeded Dr. Wyant as the Second President of Kappa Mu Epsilon, observed, "The growth and the influence of Kappa Mu Epsilon in a little over a decade give a portent of its greater contributions in the decades yet to come."

Today Kappa Mu Epsilon has become a specialized honor society with about 150 active chapters in thirty-six states. The chapters' members are selected from students of mathematics or closely related fields who attain academic distinction. Over eighty thousand students have been initiated so far, and Kappa Mu Epsilon has become much more than a group of isolated chapters devoted solely to the recognition of honor students. Indeed, each chapter is encouraged to be a functional organization with extra-curricular activities that add interest to student life and departmental offerings throughout the academic year. And, with regional and national conventions, students and faculty from many different chapters have the chance to meet, share in professional activities in mathematics and social activities, and develop friendships.

C. Association of College Honor Societies

KME is a member of the Association of College Honor Societies (ACHS). ACHS, founded in 1925, is the nation's only certifying agency for college and university honor societies. ACHS sets standards for organizational excellence and for scholastic eligibility. (www.achsnatl.org)

II. KME organizational structure

A. National Council

The national officers of KME are the president, president-elect, secretary, treasurer, historian, and webmaster. Each officer serves a four-year term. National officers are faculty members and are elected at national conventions. The president-elect and historian are elected in years whose last two digits have the form $4n+1$, where n is natural number (2009 for example), while the secretary and treasurer are elected in years whose last two digits have the form $4n+3$ (2011 for example). Nominees for these positions are presented by a Nominating Committee, appointed by the president, although additional names may be added to the ballot by nomination at the convention. The president-elect succeeds to the presidency. Names of the current national officers can be found at the following link:

<http://www.kappamuepsilon.org/pages/a/contact.php>.

The above officers constitute the National Council. The National Council generally meets during the national convention and at least one other time between biennial national conventions. In addition, they often hold virtual meetings by email or conference call.

B. Regional Directors

The chapters of KME are organized geographically into six regions: New England, Great Lakes, Southeast, North Central, South Central and West. A map showing the boundaries of the regions can be found at the following link:

<http://www.kappamuepsilon.org/pages/a/chapters.php>. Each region has a regional director, appointed by the National Council, whose primary responsibility is to attempt to organize a regional convention in those years between national conventions. Names of the current regional directors can also be found on the KME website.

C. Local Chapters

1. Chapter Names.

KME has about 150 active chapters at accredited four-year colleges and universities in 36 states. Chapters are designated by state and Greek letter. The Greek letter assigned to each chapter corresponds to the Greek alphabetical order in which the chapter was granted, i.e. Kansas Alpha, Kansas Beta, and Kansas Gamma are the first, second, and third chapters in the state of Kansas.

2. Chapter Officers

Each chapter has student officers: president, vice-president, recording secretary and treasurer. In addition, each chapter has a corresponding secretary, who must be a faculty member, and a faculty sponsor. In some chapters, the corresponding secretary and faculty sponsor is the same person. Ideally, having two faculty involved spreads the responsibility and workload, and helps should there be a transition in faculty leadership. The corresponding secretary has the responsibility of official correspondence with the National Council, including a report of each initiation. These faculty officers are crucial to the continued success of a chapter. All chapter officers must be KME members.

3. Chapter Bylaws

Local chapters should have chapter bylaws, which should not be at variance with the national constitution. The national criteria for membership in KME are minimum requirements, and local chapters are allowed to increase membership standards. Each chapter's bylaws should be filed with the national secretary.

III. How to start a new chapter of KME

A. Submit a petition

The basic information you need to start a KME chapter is found at <http://www.kappamuepsilon.org/pages/a/join.php>. Any of the national officers are willing to guide you along the process.

- Complete a petition.
- Send the form to the President of KME. You can send it electronically if you wish.
- Send a check, made out to Kappa Mu Epsilon Inc., for \$200 to cover the cost of your chapter's charter and crest, and installing officer travel expenses. The check should be mailed to the KME Treasurer.

B. Review of petition

Your petition will be reviewed by the National Council, and if approved by the Council, a ballot will be sent to all current chapters of KME for approval by majority vote. Please allow at least 5 weeks for this process from the time the petition has been sent to the KME President.

C. Installation Ceremony and related matters

Once your chapter is approved, you will set a time with the KME President for one of the national officers or a regional director to come to your chapter to officially install your chapter. Details of the installation ceremony are found at <http://www.kappamuepsilon.org/pages/a/Documents/InstallationCeremony.pdf>.

During the ceremony three things are actually accomplished. First, the chapter is installed. Second, the charter members are initiated. And third, the new officers are installed. (See section II.C.2 above for information about chapter officers.) There are roles for the chapter officers to fulfill in the ceremony. All of this is described in detail in the installation document cited above.

It is important to set the date and time of the ceremony as soon as possible, coordinating the schedule with the installing officer. This guarantees availability of the officer, but as important is the fact that the chapter crest and charter documents will be ordered immediately once the date of the installation ceremony is set. These documents will be presented to the chapter at the installation ceremony.

The installing officer is usually willing to give a mathematics talk before or after the installation ceremony. If your chapter is interested in that, please speak to your installing officer (again, that is usually the KME President) as soon as possible.

There is a one-time initiation fee, currently \$20, for each new initiate. Membership in KME is for life, and there are no annual dues. One check, made out to Kappa Mu Epsilon Inc., for the total initiation amount should be sent to the National KME Secretary along with an initiation report listing the names, addresses, and dates of initiation for each person. When that report is received, certificates are produced and sent to the local corresponding secretary for the new members. Pins of the KME badge are also provided for each initiate. Normally, chapters send in the initiation report after the initiation ceremony. However, in the case of new chapters, if you can get the initiation report and the check to the ational Secretary at least two weeks before the ceremony, certificates can usually be provided in time to be distributed at the ceremony. All the forms and "how to" information for this are also available on our website at <http://www.kappamuepsilon.org/pages/a/documents.php>.

IV. Initiating new members

A. Membership requirements and dues

Undergraduates: The corresponding secretary for each chapter will validate membership requirements of potential new undergraduate student chapter members before initiation. To meet the requirements of a qualified undergraduate KME member, a student must

- a. be a regularly enrolled student at an institution where a Kappa Mu Epsilon chapter is installed;
- b. have completed at least three semesters (or five quarters) of the college course and rank in the upper 35% of his/her class;
- c. have completed at least three college courses in mathematics including at least one semester (or two quarters) of calculus and attained an average of B or better in all mathematics courses;
- d. have completed at least one semester (one quarter) at the institution, if having transferred from another institution, and have completed at least one mathematics course with a B or better at the institution prior to initiation into membership.

Faculty and Graduates: At an institution where a Kappa Mu Epsilon chapter is installed, the following qualify for membership:

- a. any mathematical sciences* faculty member;
- b. any mathematics graduate student in good academic standing.

*Given the variety of institutions involved in KME and the varied academic structures for mathematics departments (some including computer science, for example), the local chapter will decide which faculty are eligible for membership.

For each new KME member, there is a one-time initiation fee, currently \$20. Membership in KME is for life, and there are no annual dues. Additional details of KME membership can be found in Article II of *The Constitution of Kappa Mu Epsilon*, which is available on the KME website.

B. Invitations

After membership qualifications are verified, an invitation letter, sent by the faculty corresponding secretary and the chapter student president, provides a nice way to formally invite the student to become a nationally recognized KME member. Although there is not a standard invitation letter provided by KME, recommended content to consider in your invitation letter include:

- A congratulatory statement of their verified eligibility for national recognition as a KME member.
- Basic information about KME and its purpose. This may include your local chapter activities along with mentioning the regional and national KME conventions.
- Information on the chapter's scheduled initiation date and a form which indicates their acceptance to join and attend the initiation ceremony. This form should specify their required one-time national initiation fee, currently \$20.
- One-time national fee entitles them to lifetime membership in KME, a national KME certificate of membership, KME pin, and a KME membership card.
- At graduation, KME members may wear KME honor cords. (See section VIII. D. for more information on honor cords.)

C. Initiation ceremony

A chapter may have multiple initiation ceremonies in an academic year. Typically a KME chapter will have one initiation ceremony in any given semester and many times, one initiation ceremony in an academic year. An initiation ceremony of new KME members is conducted by the student chapter officers with support from the faculty corresponding secretary. Detailed instructions on the student initiation ceremony can be found at our National KME website.

D. Submitting the initiation report

One of the main duties of the corresponding secretary involves submitting an initiation report of the new KME members, which is typically sent in after the chapter's initiation ceremony. The initiation report form is an Excel spreadsheet that can be downloaded from the National KME website. The initiation report form can also be obtained by emailing the National KME Secretary and requesting a copy of the initiation report form. After filling out the initiation report form, an electronic copy of the form will need to be emailed to the National Secretary. The National

Secretary's email is provided in the initiation report form. Then one check, made out to Kappa Mu Epsilon Inc., for the total initiation amount, along with a hard copy of the completed initiation report needs to be sent to the national secretary at the address provided in the initiation report form. Once the National Secretary receives both the check and the initiation report form, the chapter's initiation report can be processed. Once the initiation report is processed, the corresponding secretary will be mailed the national KME membership certificates along with the appropriate number of KME pins.

Some chapters present the certificates and pins at the initiation ceremony. For that to happen, the initiation report with names and the payment must be sent to the National Secretary at least six weeks in advance, so that the materials can be prepared and mailed in advance of the ceremony.

Some chapters also purchase extra pins to use at the initiation ceremony, and then replace their stock once the new pins arrive after the initiation report is submitted with dues.

V. Conventions

A. National

KME holds national conventions every two years, in odd numbered years. The place and date of the convention are decided by the National Council. Conventions are generally held in the spring and are usually hosted by and held on or near the campus of one of the chapters. National conventions usually begin on Thursday evening and end around noon on Saturday. Registration fees are set to cover the cost of the convention, but the national organization will contribute up to \$600 to the host chapter for expenses related to the convention.

Business meetings are held during the national convention. Each chapter chooses two delegates who will vote on motions to amend the constitution or bylaws, election of national officers, and motions relating to the establishment of new chapters. The names and chapter membership of these two delegates must be certified in writing by the corresponding secretary or faculty sponsor of the chapter. On matters other than those just mentioned, any attending KME member may vote. Each of the national officers provides a biennial report at the convention business meeting. Chapters may also indicate a willingness to host a regional or national convention during the business meeting.

Talks by student members of Kappa Mu Epsilon make up a significant part of the national convention. Any undergraduate student member of KME may submit an abstract for a talk to be considered for the national convention. Several months before the national convention, the national president-elect sends a call for talks to all chapters. This call includes specific instructions regarding the submission of abstracts for talks. Student talks for the convention are chosen prior to the convention by a Selection Committee. At the convention, an Awards Committee judges the selected talks on both content and presentation, and awards are given for the top presentations.

The KME national organization pays per-mile travel expenses for one delegate from each chapter on the basis of an amount set by the National Council. The current (2018) amount is 54.5¢ cents per mile. A chapter's reimbursement must not exceed three-fifths of the amount paid by the chapter during the current biennium as initiation fees for new members.

B. Regional

In even numbered years, regional directors work with the national president-elect and the chapters in their region to organize regional conventions. These conventions are hosted by and held on the campus of one of the chapters in the region. The convention usually begins on Friday evening and ends on Saturday afternoon. As with national conventions, student talks make up a significant part of regional conventions. Registration fees are set to cover the cost of the convention, but the national organization will contribute up to \$500 to the host chapter for expenses related to the convention.

VI. The Pentagon

The official journal of Kappa Mu Epsilon is *The Pentagon*, which is published semiannually and features papers on mathematical topics written for mathematics undergraduates. Anyone may submit an article, although those from students, and in particular those from undergraduate KME members, are given priority. The papers are often those presented at national or regional conventions, while some are also submitted directly for consideration. *The Pentagon* also publishes news and announcements of interest to the organization.

Two notable sections of the magazine are the *Chapter News* and *Problem Corner*. *Chapter News* lists reports of local chapter activities and gives the names of all new initiates to KME. The *Problem Corner* provides math problems and solicits solutions from KME members.

The Pentagon is available free for viewing and downloading in pdf format at:
<http://www.kappamuepsilon.org/pages/a/pentagon.php>.

VII. Chapter Activities and Finances

A. Programs for Initiation of New Members

Select candidates worthy of membership early in the semester. Some chapters announce a call for members to the student body while some do a more focused call perhaps by identifying students who completed upper level mathematics courses in the recent semesters. Arrange dates and details of the meeting well in advance. Select an appropriate speaker.

Some chapters personalize the event even more. Some have a dinner or reception before or after the initiation ceremony; invite parents and/or guests of the initiates; invite dignitaries on campus like a president, vice president, dean, or department chair; invite alumni; precede the initiation ceremony with an optional religious ceremony; take pictures and/or video for the chapter archives, newsletter, or home page; bring the chapter charter and crest to the ceremony, etc.

B. Regular Chapter Meetings

Chapters should schedule regular meetings to conduct the business of the chapter, to appoint appropriate committees, approve yearly programs, select qualified new members, elect and install chapter officers, and present mathematical programs. Members should be encouraged to participate by presenting mathematical topics, games, items from *The Pentagon*, etc. Department faculty, alumni, and outside speakers can also be invited to present mathematical programs. Outside speakers might come from other department faculty, mathematical professional speaker's bureaus, and/or regional or national officers. Chapters should also have

discussions about upcoming national and regional conventions, and about the possibility of hosting a convention.

C. Contact with Secondary Schools

Many chapters establish and maintain close contact with the local secondary mathematics student organizations, or encourage the establishment of such groups. Their main purpose is to promote the field of mathematics to school-aged students to develop interest in the study of mathematics.

D. Adequate Publicity for Chapter Activities

Activities of the chapter should be publicized by the appropriate use of school publications, newsletters, bulletin boards, home pages, local newspapers, etc.

Kappa Mu Epsilon should be represented in all college publications, such as the college yearbook, student handbook and college catalogue, and should be included on all lists as an honor society. Any annual awards made by the society are certainly newsworthy. The institutional Public Relations Office is often able to take a news release about the organization and distribute it to the appropriate audiences, perhaps even to the home-town newspaper of each initiate.

E. Other Chapter Activities

Ideas for chapter activities can often be found by reading the Chapter News section in each edition of the Pentagon. Some chapters have social events including, but not limited to any of these: pizza party, reception at a faculty member's home, coffee and tea, ice cream social, outdoor picnic, a volleyball or softball game, holiday parties, or bowling night. Other common chapter activities include participation in the Homecoming parade, printing chapter t-shirts, watching mathematics videos, playing board or card games, hosting Pi Day on campus, and/or leading Mathematics Awareness Month activities. Chapters can also choose service projects to support charities through activities such as toy or food drives, etc.

F. Publish a Chapter Newsletter

Many chapters maintain contact with their KME alumni by publishing a newsletter containing student news items, abstracts to student papers, and alumni news. To establish or maintain a data base of alumni members, your institutional alumni office or the mathematics department might be willing to share alumni information. You can stay in contact with alumni and distribute the newsletter by e-mail, social networks, or regular mail. A strong alumni connection might be able to provide funding for chapter projects and convention travel through donations.

G. Convention Papers

Chapter meetings provide an excellent opportunity for members to practice presenting papers in preparation for convention presentation.

H. Chapter Service Projects

Many chapters combine their expertise in mathematics with a goal to serve the community, and raise funds at the same time. Some opportunities that chapters use are operating a Tutoring Service for college and/or high school students studying mathematics; writing books for lower level mathematics courses with worked solutions to sample departmental examinations and

selling them through the campus bookstore; sponsoring or hosting Mathematics contests like the Mathematics Olympiad; hosting an annual Math Day for local high school students; visiting local schools to give mathematics career talks or to hold mathematics quiz bowls; hosting a public performance like "Calculus: The Musical!" performed by a group from Cincinnati, Ohio; raising the visibility of mathematics on campus by constructing a Tensegrity (a structure made of rods and strings all acting in tension) structure on campus and even decorating it for holidays with mathematical ornaments; having fun with manipulatives like "Small Ball of Fire," a foam polyhedral sculpture that comes in 12 parts and forms a vibrant ball; having a donut coloring contest that is similar to the four-color map problem except that coloring a donut torus requires seven colors and students enjoy eating the donuts, if applicable, and coloring them, etc.

I. Chapter Finances

Most chapters find it helpful to have their own checking account at a local bank or credit union. In this way, the chapter can collect initiation fees from students, deposit them in the checking account and write a single check (to Kappa Mu Epsilon, Inc.) for initiation fees. Contact the National KME Treasurer with questions or for assistance in obtaining a tax identification number (EIN).

Chapters use a variety of funding sources to support chapter activities and convention travel. Having an institutional budget through the department, school, or dean is one source; establishing an endowment in the name of a retired or retiring mathematics faculty member; soliciting alumni donations (though be sure to clear that with the mathematics department and institutional advancement office); requesting funding from the campus events center or student activities office (if your campus has one); establishing your chapter as a fully-funded student organization on campus through your student government; making a special request to the institution administration like a provost, vice president, or president who often will want to support worthy student activities; sharing expenses and activities with the campus or department mathematics club; seeking external grant funding; or seeking private funding, external grants, or gifts to use as prizes.

VIII. Other information for Corresponding Secretaries

A. Chapter News

Kappa Mu Epsilon News is a section of the journal of KME, *The Pentagon*, which is published twice each year. KME News provides a documented history for each active chapter and examples of activities and events at other chapters for KME members to consider for their own chapters.

After the fall and spring semesters of every academic year, the corresponding secretaries receive a "KME Call for Chapter News" message sent by electronic mail from the National Historian. The report form for the Chapter News requests the names of the Faculty Sponsor, Corresponding Secretary, and Chapter Officers (President, Vice President, Secretary, and Treasurer), and a report of chapter activities (programs, meetings, activities and special news), all for the current semester.

The Chapter News report for each chapter is included in *The Pentagon*, along with the names of the New Initiates into the chapter. The names of new initiates come from the Initiation Report

form submitted by the corresponding secretary to the National Secretary after each chapter initiation.

Questions about the Chapter News should be directed to the National Historian.

B. Inactive chapters

The National President will notify chapters that have not reported an initiation during two successive biennia. If no members are initiated by that chapter during the next biennium, the chapter shall again be notified by the National President. This notification will specify a date on which the chapter's active membership status will be changed to inactive unless the chapter formally requests an extension in time. An inactive chapter may be reinstated by approval of the National Council and payment of a reinstatement fee equal to the current national membership fee.

A chapter that is inactive is not permitted to have membership cards or pins, nor allowed to participate in any of the benefits of the Society such as defraying of expenses of a delegate to the biennial convention or any other expenditures of money.

C. Chapter Supplies

In the fall of each year the National Secretary sends supplies to each chapter. These supplies include membership cards and KME brochures. The National Secretary attempts to send enough supplies for the entire year. However, if a chapter finds that they need more membership cards or brochures, they may email the national secretary to ask that more be sent.

D. Honor Cords

KME members may wear KME honor cords at their graduation. The national KME organization does not provide nor sell honor cords, however there are many suppliers from whom the cords may be purchased. The cords should be rose pink and silver, the colors of KME.

E. George Mach Distinguished Service Award

The Mach Award is KME's most important award, and is given biennially to recognize an individual who has served the society with distinction. The award was established in honor of Dr. George Mach, who served as National Vice-President from 1966 to 1969, National President from 1969 to 1973, National Past President from 1973 to 1977, and National Secretary from 1977 to 1987. Nominations are solicited from the chapters. The National Council determines the recipient.

IX. KME Constitution and Bylaws

<http://www.kappamuepsilon.org/pages/a/Documents/Constitution.pdf> is the ultimate source for fundamental information about Kappa Mu Epsilon.