

The Founding of Pi Mu Epsilon at Syracuse University in 1913-14

By Jack Graver

This paper and the presentation with the same title given at MathFest 2014, in Portland, Oregon, are based on the journals containing the minutes of the meetings of the Mathematical Club of Syracuse University. The Mathematical Club was founded in 1903 and, in the 1913-14 academic year, reformed itself as the mathematical honor society Pi Mu Epsilon.

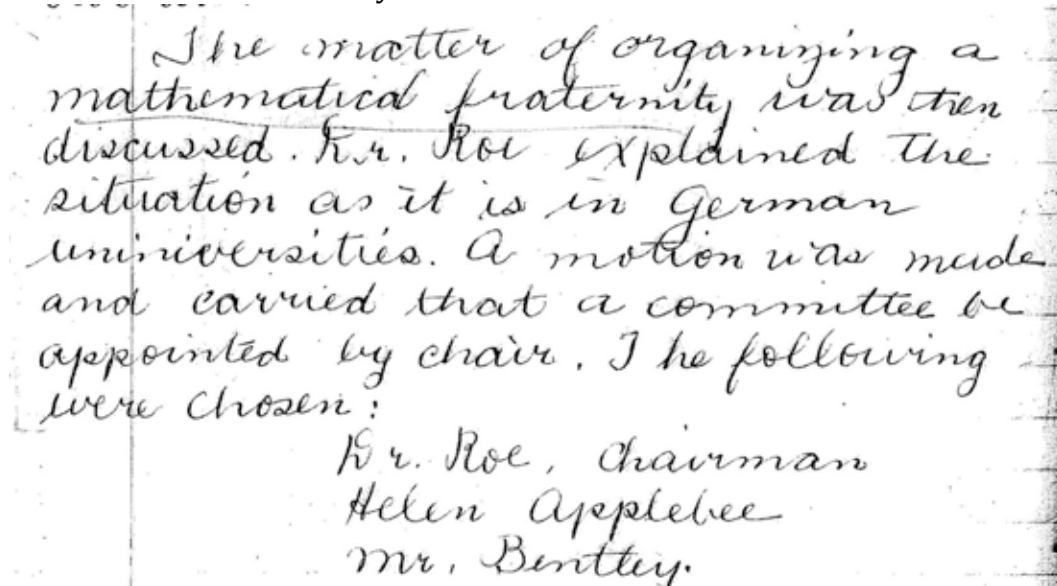
The regular meeting of the mathematical club was called to order by Prof. Bullard on Nov. 17, 1913 in Room 304 of the Hall of Languages. The minutes of the preceding meeting were read and approved as corrected.

This is the opening of the meeting in which the idea of a mathematical fraternity was first discussed. There are several things to note here. First this was a club for the math faculty and the math majors. The meetings were presided over by the **director** of the club who was usually a faculty member, elected to that position by the club members. The meetings frequently took place in the mathematics seminar room, room 304, in the Hall of Languages.



Syracuse University was founded in 1870. The Hall of Languages was the first building on the campus and it housed the mathematics department in 1913. In 1979 the interior of the building was entirely rebuilt; so the actual meeting room no longer exists.

Later in the minutes of this November 17, 1913, meeting we have the first reference to a mathematical fraternity:



The matter of organizing a mathematical fraternity was then discussed. Mr. Roe explained the situation as it is in German universities. A motion was made and carried that a committee be appointed by chair. The following were chosen:

Mr. Roe, Chairman
Helen Applebee
Mr. Bentley.

Edward Drake Roe Jr. is recognized as the founder of Pi Mu Epsilon and as a driving force behind its growth during its early, formative years.

He was born in 1859 in Elmira, New York. He attended Syracuse University receiving a bachelor's degree in 1880. He then went to Harvard, receiving a second bachelor's degree in 1885 and a master's degree in 1887.

He was an associate professor of mathematics at Oberlin College and, in 1897, took an extended sabbatical to study for his Ph.D. at the University of Erlangen in Bavaria. He earned that degree in 1898.



In 1900, he came to Syracuse University as the first John Raymond French Chair in Mathematics. He was instrumental in the 1903 founding of the mathematical club and in 1913 he had just returned from a sabbatical, again spent at the University of Erlangen. There is a biography of Dr. Roe on the PIME website:

[\[http://pme-math.org/pme-history\]](http://pme-math.org/pme-history)

The committee consisting of Dr. Roe, Helen Applebee and Purley Bently worked for three weeks. Then December 6, 1913, they called a special meeting of the faculty, the senior math majors and the executive committee of the mathematical club:

A special meeting of the Faculty, Seniors, Executive committee and committee on fraternity organization was called to order by Dr. Roe in the seminar room Dec. 6 at 3 o'clock. The special committee gave their report and the matter of changing the club into a fraternity was discussed at length. A straw vote was taken to determine whether the members present wanted anything further done by committee along this line. The majority voted that the committee should proceed.
Adjourned
Jean Morrison
Secy.

They decided to proceed and just two days later the mathematical club met:

The Mathematical Club met December the eight, 1913 at the S.K house. Dr. Bullard directed the meeting. The minutes of the preceding meeting were read and approved. Miss Florence Rickert presented the paper of the evening. Her subject was "The evaluation and Transcendence of π ." Discussion followed the reading of the paper.

Almost every meeting included one or more papers presented by the club members. Both faculty and student spoke. Once a paper was given, the presenter was expected to write it out in a ledger book. The journal containing the minutes of the

meetings and the ledger book containing these papers are housed in the archives of Syracuse University. The meeting continued with committee reports:

Dr. Roe gave the report of the committee appointed to consider changing the club into a mathematical Fraternity. He presented four methods, namely that: 1. The club organize into a Fraternity, which should have a definite standard of scholarship as a basis for membership.
2. The club organize into a Fraternity in which members should pledge themselves to keep up their scholarship.

The other two options involved keeping the mathematical club and creating a mathematical fraternity as a separate entity.

Motion made and carried that the committee draw up a skeleton constitution of the Fraternity based on the second method.

It was moved that a vote of thanks be extended to the Sigma Kappa members for their hospitality.

The committee on refreshment consisted of:

Nina Rowe

Hayd Steere

Philip Meacham.

On motion the meeting adjourned.

Han Morrison, Secy.

This December 8 meeting was the last meeting of the first semester. The first semester started in early September and continued into January. There was a Christmas – New Year's break. Students then returned for a week or so of classes and a week of exams. Then there was a short break before the second semester started - in late January or early February. Usually the first meeting of the club in the second semester was late February, but this year it was not until March.

The regular meeting of the Mathematics Club was held in Room 304 of the Hall of Languages, March 2, 1914.

The minutes of the preceding meeting were read and approved as read.

Miss Ruth Billard read a paper on "Why Students Should Elect Mathematics as a Major Subject?"

A motion was made and carried that after the business of the club had been attended to, the club be adjourned and that a convention be held to consider the fraternal business.

The next few pages of the minutes cover the remaining club business, its adjournment, the opening of the convention and the discussions of the various articles in the proposed constitution and by-laws. They appointed a separate committee to consider possible names for the fraternity. The convention then adjourned and the whole process was repeated on March 23: a meeting of the club followed a meeting of the convention with more discussions of the proposed constitution and by-laws. At that meeting, the committee on naming the fraternity presented these five options:

- Epsilon Pi**, to promote scholarship;
- Epsilon Pi Mu**, to promote scholarship and mathematics;
- Pi Phi Mu**, loving disciples of mathematics;
- Alpha Pi**, efficiency in all things;
- Mu Rho Beta**, mathematics – the foundation of mental power.

The second option was selected. The constitution, the by-laws and some details of these discussions can be found on the ΠME website.

[<http://pme-math.org/pme-history>]

The next meeting of the mathematical club was April 27, 1914. It was very short: the minutes of the previous meeting were read and approved, three new members were inducted and then:

A motion was made that the money in the Mathematical Club treasury be turned over to the treasury of the Fraternity and that the Fraternity be made custodian of any other property held by the club. Carried.

The Treasurer's report was given for year 1913-14. Total receipts. \$59.62
Disbursements \$ 19.36
Bank Balance April 25th 1914
\$ 40.26

Motion made and carried that the Treasurer's report be turned over to auditing committee, appointed by chair.

Miss Anna Meacham gave a very interesting paper on "Lightning Calculators".

There was a motion carried for the adjournment of the club.

Jean Morrison Secretary.

And with that the Syracuse University Mathematical Club ceased to exist!

The "other property held by the club" included a collection of books. I assume that these eventually were absorbed into the mathematics library.

At the end of each year, the Treasurer's Report was reviewed by an auditing committee. This practice was continued by the fraternity.

A convention of the mathematical Fraternity was held in Room 304 of the Hall of Languages, April 27, 1914, after the Club adjourned.

Dr. Roe recommended an interpolation of the constitution of the Fraternity for making the former members of the Mathematical Club non-active members of the Fraternity. A motion was made and carried that this recommendation be referred to a committee, which the chair should appoint. Committee { Dr. Mathews
Dr. Dasher
Mr. Coltrane

There are several things to note here. Being a member of an honor society is intended to be an "honor" and Dr. Roe felt that the previous club members, numbering over a hundred and fifty, deserved that honor. They were all invited to join and 46 choose to do so. Why did it take a committee of three to invite them? No email and no department secretary to type letters; it appears that the committee sent out well over a hundred and fifty hand written invitations.

A motion was made and carried that the officers of the Fraternity for the year 1914-1915 be elected.

Moved and carried that Dr. Roe be unanimously elected as Director of the Fraternity. The Secretary cast a unanimous ballot for this election.

Dr. Roe then took the Chair.

It is clear that Dr. Roe was recognized as the driving force behind the mathematical club, the fraternity and, in general, getting the students involved in mathematics beyond that taught in the classes and involved in mathematics departmental activities outside of the classroom.

Actually there was no department structure such as we have today: no department office, no department secretary and no department chairman. All personnel and

curricular matters were handled at the college level. It becomes clear as one reads these minutes that all other business of the mathematics department was transacted in the club/fraternity meetings. For example, at one of the meetings of TIME:

It was moved, seconded, and passed that Dr. Metzler have the use of one of the tables in the seminar room, for his office.

The April 27, 1914 meeting continued with the election of the remaining officers and standing committee members:

Director: Dr. Edward Drake Roe Jr.
Vice-Director: Dr. Floyd Fiske Decker
Secretary: Miss Helen Applebee
Treasurer: Mr. Purley Bentley
Librarian: Miss Olive Jones

The Executive Committee consisted of these officers plus Miss Florence Lane, Miss Helen Barnard, Mr. Edward Cottrell and Mr. Adolph Sussman.

The Scholarship Committee consisted of Dr. Warren Bullard, Dr. George Metzler, Mr. Purley Bentley, Miss Fanny Sherwood and Miss Helen Barnard.

Once these elections were completed the next order of business was to change the name. The committee on the name had consulted Dr. Bushnell, Professor of Classics.

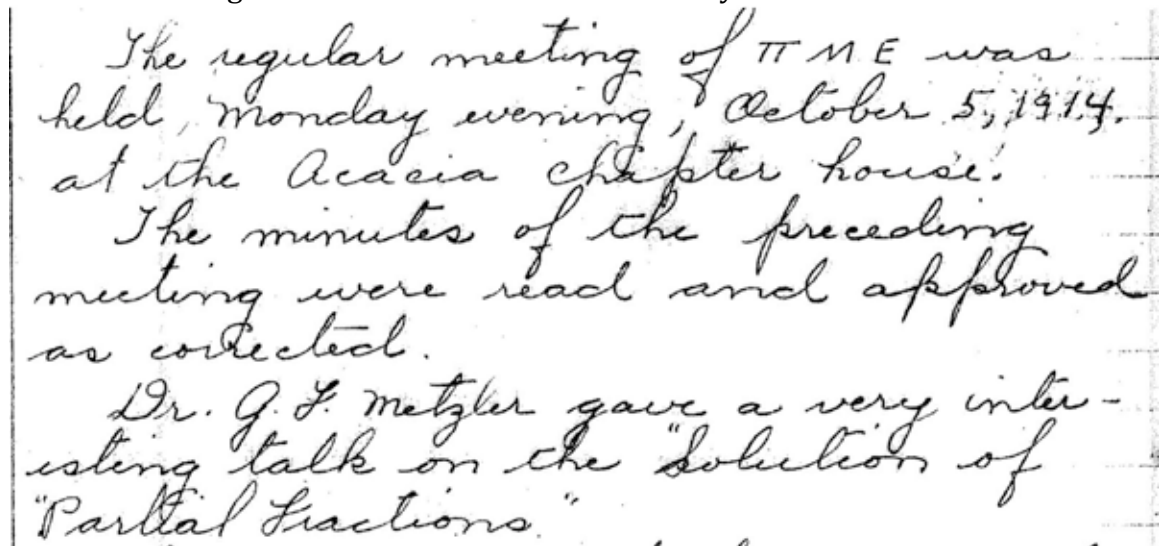
A motion was made and carried that the order of the letters in the name of the Fraternity be TIME instead of ETM. Dr. Bushnell was consulted regarding the change and he informed the committee that the meaning of the name was not altered. A motion was made and carried that the officers of ETM attend to securing the charter.

The officers did go through the process of securing the charter. Pi Mu Epsilon was incorporated in Albany, New York, in May of 1914.

The 50 charter members then signed the journal: all 8 mathematics faculty members, 2 graduate students and 40 undergraduates (15 seniors, 17 juniors, 8 sophomores). Both of the graduate students were women; of the undergraduate members, 25 were women and 15 were men. This roughly 2 to 1 ratio of women to men was repeated in the list of 46 club members who became inactive members of the fraternity and in those new members inducted over the next several years.

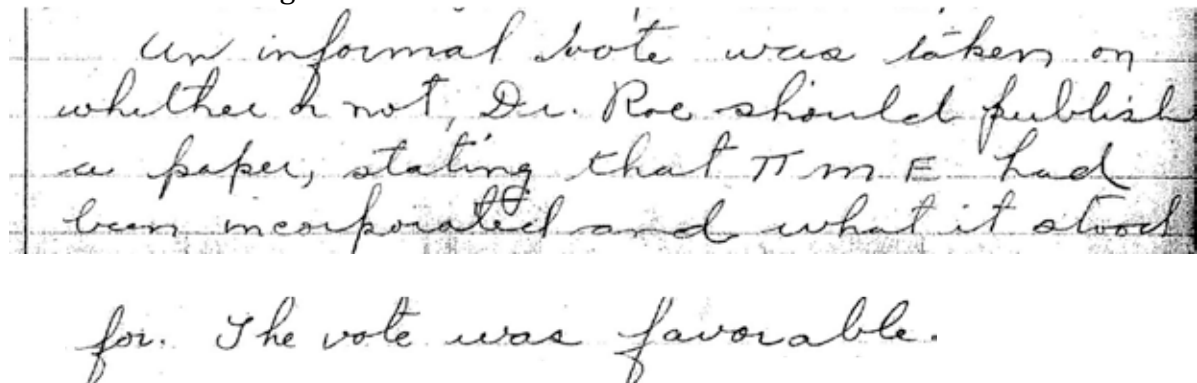
It is natural to ask: why was such a large fraction of the math majors were women at that time? It may be explained in part by the fact that mathematics was in the college of Liberal Arts and that preparing teachers was a significant part of their mission. Also we should note that the School of Applied Science, the engineering school, taught its own mathematics courses. Once $\Pi M E$ was established, they did invite students from the other schools and colleges of SU who "had an interest in mathematics and sufficient work in mathematics" to join $\Pi M E$.

The first meeting of $\Pi M E$ for the 1914-15 academic year:



The regular meeting of $\Pi M E$ was held, Monday evening, October 5, 1914, at the Acacia chapter house. The minutes of the preceding meeting were read and approved as corrected. Dr. G. J. Metzler gave a very interesting talk on the "solution of Partial Fractions".

Later in that meeting:



An informal vote was taken on whether or not, Dr. Roe should publish a paper, stating that $\Pi M E$ had been incorporated and what it stood for. The vote was favorable.

It would be very nice to hear how Dr. Roe described ΠΙΜΕ, but I have been unable to track down this paper, *if it exists*.

Next committee reports were given including a report of the scholarship committee.

It was suggested that we discuss the standard for scholarships.

Seven standards were suggested they were as follows.

Juniors	gen. aver.	75	70	65	60	72	72	72
	math "	80	75	70	65	78	75	80
Soph.	gen. aver.	80	75	70	65	75	75	75
	math. aver.	85	80	75	70	80	80	82

The right hand option was adopted. There are again several things to note.

First, if you remember, in forming ΠΙΜΕ they skipped over Option 1 with “definite standards of scholarship as a basis for membership” in favor of Option 2 “members should pledge themselves to keep up their scholarship.” But now it seems that Option 1 is being implemented.

Second, the requirements for juniors are lower than the requirements for sophomores. I’m sure that the junior level courses were harder than the sophomore courses and I assume that, without grade inflation, the grades in the junior courses were generally lower.

Third, there are no provisions for seniors to join. I guess this means that, if you want the honor, you should have participated for at least a full year.

Finally, these requirements can be applied only if student’s grades are public information. Indeed, the Scholarship Committee posted a list of all math majors satisfying these criteria. Members then “put their name opposite the names of any of their friends that they would like to invite to become members of ΠΙΜΕ. If after several days, there were any names not signed up for, the scholarship committee was to see that these people were invited.”

The next meeting was October 26, 1914. Dr. Roe talked on the “Generalized Definitions of Algebraic Invariants under Linear Transformations.” The committee reports dealt mainly with details of the designs for the seal, the pin, the letterhead and the “formal ritual for the initiation ceremony.” At November 16 meeting 22 new

members were initiated into TIME. As with the charter members, the ratio of women to men was 2 to 1.

The Scholarship Committee was clearly an important committee. From the beginning its membership was governed by:

Motion made, seconded and carried that the three student members of the Scholarship committee be the three senior majors in Pi Mu Epsilon, whose averages are highest, one of each sex ~~to~~ to have at least one representative. Carried.

This is a bit difficult to read with the cross-outs: "the three student members of the Scholarship committee be the three senior majors in Pi Mu Epsilon whose averages are highest, each sex to have at least one representative."

Make no mistake: this early form of "affirmative action" was to make sure that the men had a representative on the committee. But then at the 1917 elections, the following motion carried:

Scholarship Com. Dr. Decker & Lindsay.
The three Senior majors, without regard to sex, highest in scholarship will be on this committee.

As you probably have noticed, everything was done by committees. In addition to the standing committees there were at various times an auditing committee, a library committee, an entertainment committee, a banquet committee, ... and even:

Report of committee on Foreign Relations was read. Motion made and seconded that the committee's report be accepted with suggestions. Carried.

This one had me stumped for a while. Later in that meeting:

" Motion was made and seconded that the question of membership in the American Mathematical Society and in the Mathematical Association of America be left to the Committee on Foreign and Domestic Relations. Carried.

And at the next meeting:

Report of the Extension Committee was given. Motion made, seconded and carried that we apply for membership to the Mathematical Association at \$5.00 rate.

From then on it was referred to as the Extension committee and it became clear that the "foreign" duties were to deal with other organizations, primarily to encourage other colleges and universities to establish chapters of ΠME while its "domestic" duties involved recruiting student from the other schools and colleges of Syracuse University.

This last entry leads to another very interesting fact:

ΠME is a charter member of the MAA!

Dr. Bullard and Dr. Roe were the only Syracuse University faculty among the 1028 individual charter members of the MAA and Syracuse University was not one of the 52 charter institutional member.

As we noted earlier ΠME carried out much of the departments business. Perhaps the Dean had been approached for the \$5.00 institutional dues and was not willing to allot College funds for this. So membership in the MAA was in the hands of ΠME. \$5.00 was a lot of money then and they decided to join as an individual member at \$3.00. You can imagine the consternation of the MAA treasurer receiving a \$3.00 check from the treasurer of ΠME for an individual membership. There were and are no provisions for an organization other than a college or university to join the MAA. He solved his problem by entering

President, Pi Mu Epsilon Fraternity, Syracuse University

as an individual member. It is clear that "President" was added by the MAA since ΠME had a director not a president. In any case, ΠME is one of the 53 surviving charter members of the MAA (52 Colleges and Universities and ΠME). As such

TIME should turn out in force for the MAA's centennial celebration at MathFest 2015 next August in Washington D.C.

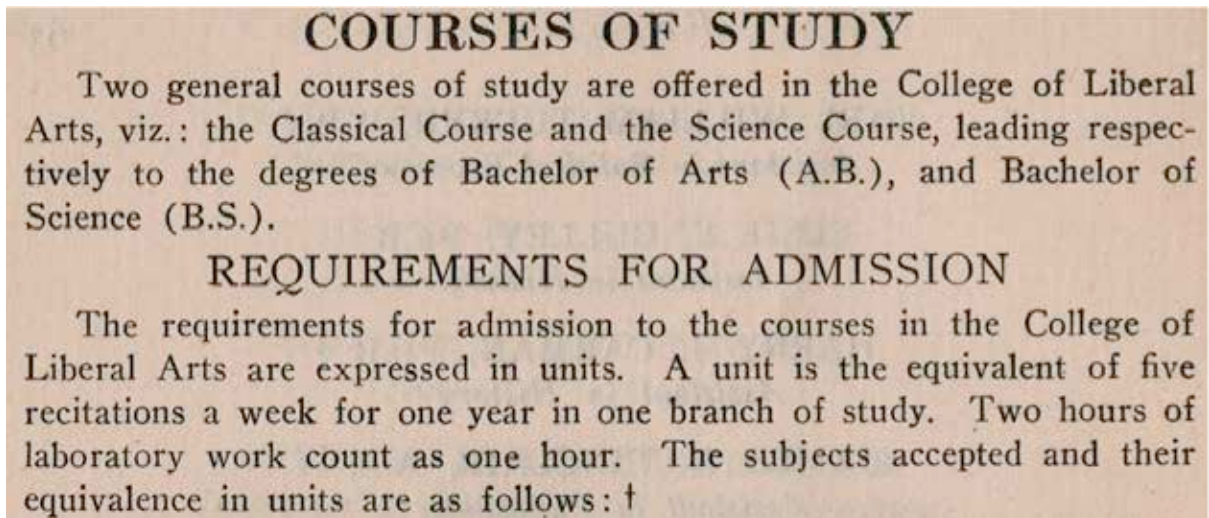
In anticipation of this centennial, Alan Tucker wrote an article for the October 2013 issue of the Monthly:

***The History of the Undergraduate Program
in Mathematics in the United States***

This might be a good time for us to stop and consider the state of mathematics in the US and at SU in 1914. **From Alan Tucker's paper:**

"A period of rethinking American education at all levels. The end of the 19th century and beginning of the 20th century was a time of dramatic change in U.S. education. The number of students going to college had started declining in 1840. In reaction to students' unhappiness with the classical curriculum, and seeking to have a more open 'democratic' college experience, Harvard president Charles Eliot changed his college to an all-elective curriculum in the mid-1880s. The model for this change was the all-elective curriculum in German universities. By the early 1900s, most U.S. institutions had changed to an elective curriculum."

These changes are reflected in Syracuse University's 1913-1914 Catalog.



This was what was expected of a high school student wishing to enroll in the College of Liberal Arts. Every student was required to have at least one year of algebra and one year of plane geometry. The catalog then listed the topics that these high school courses should have covered.

12. (a) ALGEBRA. Fundamental operations; equations of the first degree with problems leading to them; negative quantities and the interpretation of negative results; factoring; highest common factor; lowest common multiple; fractions; simultaneous equations of the first and second degrees involving two or more unknown quantities; involution; evolution; theory of indices; quadratic equations.

(b) ALGEBRA. Theory of quadratic equations; remainder theorem; factor theorem; radicals with equations involving them; imaginary and complex numbers; ratio and proportion; variation; arithmetic, geometric, and harmonic progression; graphs.

NOTE.—Regents pass cards of proper grade in elementary and intermediate algebra will be accepted as the equivalent of 12 (a) and 12 (b).

13. PLANE GEOMETRY. Including original exercises.

14. (a) SOLID AND SPHERICAL GEOMETRY. Including original exercises.

(b) ALGEBRA. Complex numbers with graphic representation of sums and differences; theory and applications of permutations and combinations; proof and application of the binomial theorem; determinants, including the use of minors and the solution of simple equations; theory of equations; solution of higher numerical equations.

NOTE.—Regents pass cards in advanced algebra will be accepted as the equivalent of 14 (b).

15. PLANE AND SPHERICAL TRIGONOMETRY.

No detailed descriptions seem to have been necessary for the Geometry courses or the Trig course. At that time, the geometry courses worked through a text based on a translation of Euclid's books on geometry; indeed this was still the case when I studied geometry in the 1950s. I assume that "Including original exercises" was meant to indicate that the course should have also included some geometric problem solving.

The catalog continued with a list of the mathematics faculty and a statement as to the goals of the mathematics program. "*For all students in mathematics mental discipline is considered of prime importance.*" However, the program will include the "practical knowledge" necessary for applications and will offer "pedagogical work" for those students preparing to become teachers.

In speculating on the high percentage of women in ΠME during these early years, it is natural to assume that many of them planned to become teachers. But, these were the years just before the women were finally given the vote and upstate New York was a center of suffragette movement. Could it be that some of these women were here to acquire the *mental discipline* need to be active and effective in the women's movement?

MATHEMATICS

PROFESSOR METZLER, PROFESSOR ROE, PROFESSOR BULLARD, ASSISTANT
PROFESSORS PRATT, METZLER, AND DECKER, INSTRUCTOR RICE,
MRS. HARWOOD

For graduate work courses III to VII and XXVII may count on a minor. Courses VIII to XXV may count on a major.

Instruction in this department, given partly by means of text-books with recitations and partly by means of lectures, aims at developing in the best way and to the highest possible extent the mind of the student. For all students in mathematics mental discipline is considered of prime importance, but for those students who make a specialty of applied mathematics the instruction is such as to give a thorough practical knowledge of the subjects required.

In arranging the undergraduate courses attention has been paid to the logical sequence of subjects as well as to the laying of a broad and thorough foundation for the graduate work. Attention is given to the classification of the different subjects and their relation to each other, giving the student an intelligent comprehension of the field already covered. Opportunity is afforded those students who expect to teach mathematics to take pedagogical work in the department.

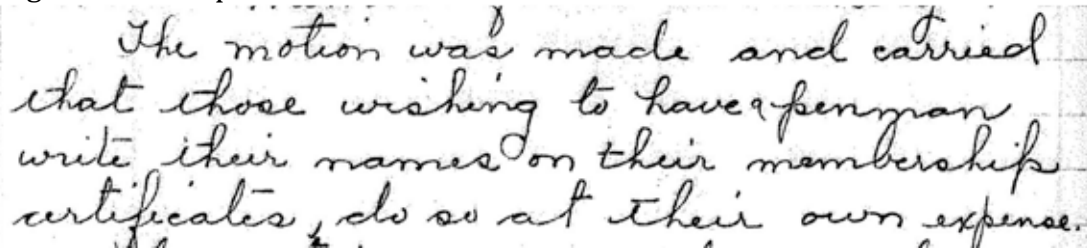
The next few pages of the catalog give a complete listing of the courses offered during the 1913 - 14 academic year. They were:

- | | |
|---|--|
| <p>I Trigonometry (Required of all students not having trigonometry.)</p> <p>II Algebra (Required of all students who did not having advanced algebra.)</p> <p>III Analytic Geometry</p> <p>IV Algebra</p> <p>V Calculus</p> <p>VIa Determinants</p> <p>VIb Analytic Trigonometry</p> <p>VII Theory of Equations</p> <p>VIII Advanced Calculus</p> <p>IX Differential Equations</p> <p>X Analytic Geometry of 2 & 3
 dimensions.</p> <p>XI Modern Geometry</p> <p>XII Analytical Mechanics</p> <p>XIII Newtonian Potential Functions</p> <p>XIV Spherical Harmonics</p> <p>XV Teachers Course</p> | <p>XVIa Projective Geometry</p> <p>XVIb Higher Plane Curves</p> <p>XVII General Theory of Surfaces</p> <p>XVIII Symmetric Functions</p> <p>XIX Elliptical Integrals & Functions</p> <p>XX Complex Variables</p> <p>XXI Weierstrass' Theory of
 Functions</p> <p>XXII Theory of Invariants</p> <p>XXIII Theory of Substitutions</p> <p>XXIV Differential Geometry</p> <p>XXV Seminar</p> <p>XXVI Spherical Trigonometry</p> <p>XXVIII Solid Geometry</p> |
|---|--|

Another trend in the early 1900s was the spread of discipline-oriented honor societies. In the 1913-14 SU yearbook there were 8 honor societies listed. In the 1913-14 SU yearbook there were 14 honor societies listed. Some of the new ones listed this year, like ΠΙΜΕ, were strictly local. Others were new chapters of honor societies founded at other universities. By 1924, 10 years after the founding of ΠΙΜΕ, there were 33 honor societies listed in the yearbook. In his article on the founding of ΠΙΜΕ, Floyd Decker commented on how exciting it was to be part of this national movement toward discipline oriented honor societies and how proud he was that ΠΙΜΕ played a leadership role in this movement.

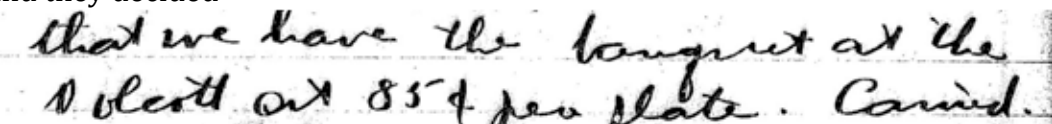
Another way to get a feeling of the times is to "track the money." Tuition in the College of Liberal Arts was \$37.50 per semester; children of the clergy were given a \$15 discount. (Syracuse University was affiliated with the Methodist Church.) There was an additional fee of \$16.50 for "incidentals." You could have room and board in a university dormitory for \$215 to \$250.

The annual dues for ΠΙΜΕ were \$1.00. With such a small annual income they were frugal. For example:



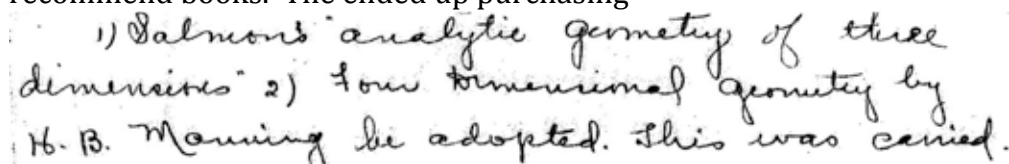
The motion was made and carried that those wishing to have a penman write their names on their membership certificates, do so at their own expense.

and they decided



that we have the banquet at the O'Leary at 85¢ per plate. Carried.

On the other hand they decided to spend \$3 for membership in the MAA. They set aside \$12 to spend on their library. They appointed a committee of 3 to review and recommend books. They ended up purchasing



1) Salmon's analytic geometry of three dimensions 2) four dimensional geometry by H. B. Manning be adopted. This was carried.

They also purchased *Ten British Mathematicians* by McFarland. And they subscribed to the *Mathematics Teacher* at \$1 a year.

They decided to spend another \$4 on a page in the Onondagian (the SU yearbook).

Pi Mu Epsilon

HONORARY MATHEMATICAL FRATERNITY

Founded at Syracuse University 1914

Alpha Chapter of Pi Mu Epsilon was incorporated under the laws of the State of New York, May 25, 1914. The fraternity dates its origin to the Mathematical Club founded at Syracuse University in November, 1903.

The purpose of Pi Mu Epsilon is for the advancement of Scholarship and Mathematics. Members of the Mathematical faculty, persons distinguished in Mathematical sciences, graduate major and minor mathematical students who attain a standard of scholarship set by the fraternity are eligible to membership. Meetings are held on Monday evenings, once in three weeks. The present officers now are:

Officers

<i>Director</i>	Dr. W. H. Metzler
<i>Vice-Director</i>	Dr. Louis Lindsey
<i>Secretary</i>	Louise Stewart, '16
<i>Treasurer</i>	Adolph Sussman, '16

Members 1914-15

Bibbens, Florence	Hopfield, John J.
Ecstham, Amy R.	Hunter, Mabel R.
Eisenbrey, Grace L.	Judd, Flora
Fanell, Marie E.	Lange, Grace
Foster, Leon	Lyon, Mildred E.
Gardner, Iva M.	Nassau, Jason
Goff, Smith A.	Rogers, Donald
Goldberg, Benjamin	Van Arsdale, Vira
Guthman, Harry	Whitford, Marian T.
Gilger, Florence W.	Williams, Bruce B.
Harwood, Edith	Winkelstein, A. H.

These are the officers that were elected at the end of the 1914-15 academic year to serve for the 1915-16 academic year. The only members listed are those initiated in the 1914-15 academic year. The charter members were not included and since there was no page purchased for the 1913-14 year, they were never listed in the yearbook.

At the February 1918 meeting, the outside world intruded:

It was moved that we proceed to the election of a treasurer in place of Mr. DoBell, who is in the navy.

The assassination that precipitated the first world war occurred within months of the founding of ΠΙΜΕ. The United States did not enter the war until June of 1917. But by then the war permeated all aspects of life. A student army corps was formed:



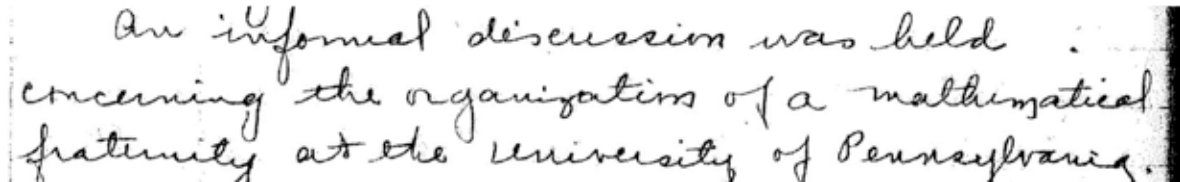
At the April meeting "It was voted to buy a War Savings Stamp for the fraternity." It cost \$4.15 and was redeemable for \$5 in January of 1923.

Howard DoBell was a graduate student very active in ΠΙΜΕ throughout the 1916-17 academic and elected to Treasurer at the end of that year (clearly planning to stay the entire 1917-18 academic year). I assume that once we entered the war, he was accelerated, getting his MA a semester early and joining the navy (such



acceleration was a common practice in the second world war). After the war he obtained a teaching position at Colgate while he pursued his Ph.D. at Cornell. He completed his Ph.D. in 1928, writing a thesis entitled *On the Geometry of the Triangle*. He went on to teach at the New York State Collage for Teachers in Albany.

From the very beginning, the Extension Committee was actively purseuing the expansion of ΠIME to other colleges and universities. The first mention in these minutes of a possible chapter at another university is in the minutes of April 16, 1917:



An informal discussion was held concerning the organization of a mathematical fraternity at the University of Pennsylvania.

As it turned out, it was Ohio State that made ΠIME a national organization in 1919; the University of Pennsylvania activated its chapter in 1920. The Universities of Alabama and Missouri chartered chapters in 1922 and in December of that year the first national officers were elected:

Director General:	Dr. E. D. Roe Jr. (Syracuse)
Vice-Director General:	Mr. W. V. Houston (Ohio State)
Secretary General:	Dr. W. G. Bullard (Syracuse)
Treasurer General:	Miss L. Lotz (Pennsylvania)
Librarian General:	Miss M. G. Kessler (Pennsylvania)

Dr. Roe continued as Director General of ΠIME until his death in 1929 at age 70. By that time ΠIME had grown to 18 Chapters.

All of the faculty in 1914 were charter members of ΠIME. They along with the two graduate students are the only charter about whom I have been able to find out very much.

Professor William Metzler was to most prominent mathematician on the SU faculty at that time according to Erik Hemmingsen's history of the SU mathematics department. [<http://math.syr.edu/DeptRecollections.htm>] Dr. Metzler along with Dr. Roe initiated the mathematical club in 1903. He was the Dean of the Graduate School at the time of the founding of ΠIME. He was also very interested in the teaching of mathematics and was the first editor of the *Mathematics Teacher*. First published in 1908, it became the journal of the National Council of Teachers of Mathematics when NCTM was formed in 1920. William Metzler eventually moved to Albany to become a dean at New York State Collage for Teachers. (Perhaps he was instrumental in hiring Mr. DoBell.) **Assistant Professor George Metzler** was 10 years older than William. I have been unable to find much information about him; but since they both came from the region of Canada around Toronto, they may well be brothers or cousins.

In addition to his primary role as a professor of mathematics **Edward Drake Roe** was an astronomer. He was director of the university's observatory, taught astronomy courses, published many paper on astronomy and was said to have had one of the finest private observatories in the country.

Three other faculty charter members continued to be closely involved with ΠME. **Professor Warren G. Bullard** was frequently elected to be the director of the mathematical club and ΠME. He became the first Secretary General of the national ΠME. **Mrs. May Harwood** graduated from SU with an AB degree in 1908, got married and started teaching in high school. She was widowed three years later and came back to SU as a graduate student and was one of the two graduate student charter members of ΠME. She got her masters degree in 1913 and continued to teach as a graduate assistant until 1915. At that point she became an instructor and in 1921 an assistant professor; retiring in 1948. She wrote a biography of Dr. Roe for the first issue of the ΠME journal. **Assistant Professor Floyd Fiske Decker** became a full professor in 1917; also retiring in 1948. He wrote his reminiscences of the founding of ΠME for the first issue of the ΠME journal. Reprints of these two articles can be found on the ΠME website. [<http://pme-math.org/pme-history>]

Someone not listed among the teaching staff in the 1913-14 catalog is **Josephine Robinson Roe**, the second wife of E. D. Roe Jr. She was the other charter graduate student member of ΠME. After graduating from high school in 1880, she held several teaching positions before enrolling at Oberlin College in 1890. She earned her BA at Oberlin in 1894. In 1897 she took a position at Berea College where she taught Latin, English literature and mathematics. During the summers of 1907-1910 she worked on an MA at Dartmouth receiving it in 1911. Dr. Roe's first wife had died in 1898; he and Josephine Robinson were married in 1911. She came to Syracuse and started working on her PhD. She was 60 when she earned her PhD. in 1918. She joined the SU faculty as an assistant professor but retired in 1920. She remained active in ΠME until she left Syracuse a few years after her husband's death. A biography of Josephine Robinson Roe can be found in *Pioneering Women in American Mathematics: The Pre-1940 PhD's*, Volume 34 in the AMS History of Mathematics series.

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