

IEEE-Eta Kappa Nu

INDUCTION RITUAL

Approved Version, September 2007
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(The room should be lighted at this point while the candidates are brought in. The Vice-President (VP) leads them into the room in single file and positions them in front of the President's desk, in as many rows as necessary.)

[Note, other than the President and Vice-President, all indicated officer titles are optional, and the Chapter may assign roles as deemed appropriate to other members of the induction panel. It is strongly encouraged that female officers or members of the Chapter present material associated with Drs. Hopper and Clarke.]

President: *(Raps gavel three times.)*

This meeting will please come to order. My name is <insert name>, President of the <Name of Chapter> Chapter of IEEE-Eta Kappa Nu. [Preferred, but Optional] I shall now introduce the officers of the <Name of Chapter> Chapter.

(The President introduces the chapter officers present and their officer positions. The President then introduces any honored IEEE-HKN members and other dignitaries who may be present.)

In honor of the great thinkers that built the foundation upon which the fields associated with IEEE-Eta Kappa Nu are based, our induction panel will speak as these pioneers might have spoken to you on the occasion of your initiation. While listing all of the great contributors to our fields would be impractical, we will today honor the following individuals: Charles Wheatstone, William Gilbert, John Bardeen, Grace Hopper, Michael Faraday, Charles Babbage, Nikola Tesla, James Clerk Maxwell, Edith Clarke, and Thomas Edison.

[Optional] The Chapter may choose to insert one or two notable alumni of their programs into the list for later inclusion in the ceremony for the purpose of discussing the history of the school and/or Chapter. In the example provided below, Beta Chapter incorporates Edward Mills Purcell and Reginald Aubrey Fessenden.

Members of IEEE-Eta Kappa Nu and guests, I am informed that there are present <insert number of candidates present> candidates for initiation.

Our Recording Secretary, <Name of Recording Secretary>, will now speak on behalf of Charles Wheatstone, whose invention serves as our organization's emblem. Are these candidates worthy and well-qualified?

Recording Secretary (as-on behalf of Wheatstone):

They are. Their qualifications have been reviewed and I can vouch that each possesses the three qualities that we seek to recognize – Scholarship, Character and Attitude.

Scholarship includes outstanding traditional academic abilities. However, these abilities must be complemented by a good supply of common sense to make the acquired knowledge, information, and ideas more useful.

Initiates must possess unimpeachable Character. They must exhibit sound judgment, and both capacity and willingness for hard work.

Finally, initiates must possess a positive Attitude. This includes a positive outlook on life, a congenial nature, and the ability to work in harmony with all people.

President:

These qualities are indeed what we wish to honor.

Vice-President:

Members of IEEE-Eta Kappa Nu, I now present the candidates for induction into the <Name of Chapter> Chapter of IEEE-Eta Kappa Nu. Candidates please stand.

(The Vice-President now gives the full names of each of the candidates.)

These candidates, having been elected by <Name of Chapter> Chapter, of IEEE-Eta Kappa Nu, have expressed their desire to be initiated into this organization.

President:

Candidates, your records have been examined and the members of this Chapter have observed your conduct. You have been found to possess the three qualities this organization seeks to recognize. We meet here together to inform you of these qualities and to instruct you in the purposes, objectives, and ideals of the IEEE-Eta Kappa Nu organization. In admitting you into IEEE-Eta Kappa Nu we are conferring upon you the highest honor that is within our power to bestow. Please be seated.

Our Corresponding Secretary, <Name of Corresponding Secretary>, will now speak on behalf of William Gilbert, who published "*On the Magnet and Magnetic Bodies, and on the Great Magnet the Earth*" in 1600. This book detailed his studies of static electricity using amber, and was the first to call its effect the electric force, leading historians to name him the first electrical engineer.

*(Candidates sit in front row (or rows) facing the President's desk. **At this point the room lights are turned OFF**, leaving only the lights on the desk of the inducting officers. Every one, at this point, should be seated.)*

Corresponding Secretary (as-on behalf of Gilbert):

The purpose of IEEE-Eta Kappa Nu is best stated by the first section of our Operations Manual:

"... to encourage excellence in education for the benefit of the public by recognizing individuals who have conferred honor upon engineering education by distinguished scholarship, activities, leadership and exemplary character as students in electrical or computer engineering, or by their attainments in the fields of electrical or computer engineering..."

It was for that reason that Maurice L. Carr, a student at the University of Illinois, together with nine others who shared his faith in such aims, founded the first chapter of Eta Kappa Nu at Urbana, Illinois, on October 28, 1904. The growth of Eta Kappa Nu over the past century demonstrates the value of these purposes. This development was strengthened by integration into IEEE, enabling the extension of the organization's goals around the world. IEEE-HKN now comprises more than 200 chapters and has inducted over 200,000 members. This growth is an extension of the efforts of the founders and succeeding officers and members of IEEE-Eta Kappa Nu in the important work of preserving this organization. This importance derives from the high ideals of which you are soon to hear, and which this organization honors and propagates. These qualities are both requisite for success in electrical and electronics-computer engineering and related areas, and for happiness in one's life as a whole. To propagate these values, IEEE-Eta Kappa Nu demands that its members possess and exercise all three qualities identified before.

President:

We will now discuss the three central ideals of IEEE-Eta Kappa Nu. Regarding the first quality, Scholarship, our Treasurer, <Name of Treasurer>, will speak on behalf of John Bardeen, an electrical engineer and the only individual to receive two Nobel Prizes in Physics.

Treasurer (as-on behalf of Bardeen):

The first step taken in ascertaining the eligibility of persons for membership in IEEE-Eta Kappa Nu is that of determining their scholastic record. You have proved yourselves to be more than ordinary students, ranking in the upper one-fourth of your [Sophomore or] Junior class, or in the upper one-third of your Senior class. However, grades are not the perfect test of a person.

Beyond this scholastic test, IEEE-Eta Kappa Nu searches even further into people for common sense. How do they conduct themselves in unfamiliar situations? How do they proceed to use their equipment and tools in performing their work? Do they have ingenuity? Are their ideas practical and feasible? Do they have the necessary imagination for visualizing the complex problems of their domain, and for seeing new solutions to those problems? Do they have the communication skills to articulate these solutions to their organizations?

You have been measured by questions such as these and we have concluded that in addition to your scholastic abilities, you have a good supply of this “common sense.”

Now, with your membership in IEEE-Eta Kappa Nu comes a further challenge to improve your methods of thinking, to improve your resourcefulness, to improve your scholastic record. IEEE-Eta Kappa Nu wishes to foster the growth of your scholastic achievements and your present good supply of common sense, allowing you to develop yourselves toward the objective of excellence in your future professional careers.

President:

As you have been informed, the scholastic requirements for a member of IEEE-Eta Kappa Nu are rigorous. They are meant not only as a test for membership, but as a guide for future conduct as well. Further emphasizing this aspect of membership in this organization, our Vice-President, <Name of Vice-President>, will now speak on behalf of Grace Hopper, a computer scientist and developer of the first software compiler and the first programming language, regarding the second quality we seek in our members – Character.

Vice-President (as-on behalf of Hopper):

To make a success of any project, whether it be a college education, or a professional career, requires one common quality – character, including honesty, ethical behavior, sound judgment, and the willingness to perform hard and occasionally disagreeable work.

Remember that no full, permanent success can be attained by taking the path of least resistance. You may temporarily achieve seemingly desirable results by slovenly methods; by taking credit not due you; or by refusing to assume responsibility for a task properly yours; but do not forget that slothfulness, deceit, and irresponsibility in your character are nearly always discovered.

One purpose of the duties you have performed as a part of the candidate process was to determine whether your character includes the capacity for hard work. As an IEEE-Eta Kappa Nu member, you have been marked as having superior talents and will ultimate receive extensive education and training. But given these advantages, do not make the false assumption that the world owes you a living. On the contrary,

the members of IEEE-Eta Kappa Nu believe it is your responsibility to society to aid and assist whenever the need for something exists that is within your power to give. Rather than complain about an uninteresting or routine job, you must make the most of the materials you have at hand, and strive always to produce as creditable a product as is possible.

In IEEE-Eta Kappa Nu you will be asked to share the work and responsibilities of running the organization. You will find this an opportunity to gain new experience and new confidence in yourself, an opportunity to improve your Chapter, your organization, your community, and yourself. Cultivate your character and your capacity and willingness for hard work!

President:

The second of the central ideals of membership in IEEE-Eta Kappa Nu has now been explained. Speaking on behalf of Michael Faraday, one of the greatest experimentalists in electromagnetics, our Faculty Advisor, <Name of Faculty Advisor>, will now explain the third quality – a positive Attitude.

Faculty Advisor (~~as~~ on behalf of Faraday):

You are, for the most part, as others see you. The attributes you present to others reflect your attitude on life, and reflect upon you, your education and your career. Successful professionals reflect positively on their Alma Maters and their profession, both in their manner and demeanor. They are congenial, modest, and dependable; they are tolerant of the ideas and practices of others; they are unselfish; they display tact in their dealings with their colleagues; and they are good listeners as well as skillful communicators. These attributes reflect your attitude on life.

All people have these attributes to some degree; but, unfortunately, many do not cultivate or choose to apply them. Your election to IEEE-Eta Kappa Nu reflects our hope and belief that you have them; that you possess a positive attitude with a congenial nature and the adaptability for working in harmony with others, whether as a leader or contributor. Your membership serves as a means for you to grow these attributes as you interact with others, setting a strong example and reflecting well on those who have contributed to your career.

(The room lights remain OFF at this point.)

President:

Now that we have explained the qualities that were required for you to be elected to membership in IEEE-HKN, our Recording Secretary will speak on behalf of Charles Babbage, the father of modern computing, to explain what we, in turn, expect of you.

Recording Secretary (as-on behalf of Babbage):

IEEE-Eta Kappa Nu expects nothing of you that you cannot, in honor, give to it.

In no manner does it seek to take the place or function of any other society or organization. You honor IEEE-Eta Kappa Nu by proving yourself worthy of the honors that other organizations have to bestow. You have been elected to membership with confidence that yours are safe hands into which we may commit the direction and leadership of this chapter when it is left to you.

We ask that by your influence and example, you lead other members of IEEE-Eta Kappa Nu. Display the emblem of this organization with modesty, as a sign that you have exhibited the three central ideals of membership and as a reminder to yourself and to other members of the responsibilities of each member of IEEE-Eta Kappa Nu.

This organization now provides another channel for effecting better cooperation between faculty and student leaders in the work of improving your departments, your school, your community, and also your professions. You now have an added opportunity to develop closer relations with outstanding members of your fields. Above all, you have now a new means by which to improve yourself.

Fulfill the obligations imposed upon you by your election into IEEE-Eta Kappa Nu, and by so doing you will make yourself a better professional and citizen.

President:

Having described to you the expectations placed on you by IEEE-Eta Kappa Nu, we will now explain the various elements of the organization's coat of arms, our emblem and their historical significance.

We will begin with <Name of Corresponding Secretary>, who will speak on behalf of Nikola Tesla, whose work forms the basis of AC electric power and wireless transmission. Then, <Name of Treasurer> will speak for James Clerk Maxwell, whose mathematical formulations of electromagnetic theory pervade the fields associated with IEEE-Eta Kappa Nu. <Name of Vice-President> will follow, on behalf of Edith Clarke, the first woman to be employed as an electrical engineer, and also the first to hold the position of Professor in that discipline. We will then close with <Name of Faculty Advisor>, speaking for Thomas Edison, prolific inventor and prominent businessman.

(The President shows the coat of arms, and points out parts as they are mentioned by the speakers.)

Corresponding Secretary (as-on behalf of Tesla):

Display the Caduceus

The Caduceus (pronounced ka-du'-se-us), wand of Mercury, who was the messenger of Jupiter, was preferred by our founder, Maurice Carr, as the symbol for IEEE-Eta Kappa Nu. But another and older profession already had selected this symbol.

Therefore, upon the honor point of the shield is placed the Caduceus as a memorial to him who founded this organization, in which so many now enjoy membership. Its field is scarlet, symbolizing the zeal with which Maurice Carr projected his idea.

Display Hand of Jupiter (lightning bolts)

The mighty hand of Jupiter was selected as being symbolic of the founding chapter with a blade of lightning for each of the ten founder members. The field is blue, typifying the loyalty with which they performed their task.

Treasurer (as-on behalf of Maxwell):

Display Silver Band

The band of silver has been charged with three cubes of magnetite to represent and thus remind you of our three central ideals.

Display Wheatstone bridge

The shield is crested with a Wheatstone bridge with the IEEE-Eta Kappa Nu colors of scarlet and navy blue entwined beneath.

At the center of the bridge is the galvanometer that senses when balance is achieved. It bears the early Greek form of the letters Eta, Kappa, Nu.

The Wheatstone bridge is our emblem. Though simple, the bridge is a precision electrical instrument capable of determining the value of an unknown element when knowing the values of the three other bridge elements.

The significant analogy drawn from it for IEEE-Eta Kappa Nu is the fact that only when the bridge is adjusted to be in perfect balance is the desired solution obtained. This is what we strive for as members of Eta Kappa Nu: to lead a balanced life, a life in which **SCHOLARSHIP**, **CHARACTER**, and **ATTITUDE** are jointly developed. When these three are properly balanced in the Wheatstone bridge, then the unknown, **SUCCESS**, is determined.

Remember then, when you look at the IEEE-Eta Kappa Nu emblem, that the Wheatstone bridge is symbolic of a balanced person.

Vice-President (as-on behalf of Clarke):

Display the Ribbon

In early Greece there was a philosopher, a “scientist” in our day, who discovered that if a piece of amber was rubbed with a cloth the philosopher experienced a phenomenon that could not be explained. We know this “phenomenon” as static electricity.

The Greek name for amber is “elektron.” Written using early forms of the Greek letters we obtain:

H Λ E K T P O N

Eta Lambda Epsilon Kappa Tau Rho Omicron Nu

From this word the English language derives the word “electricity.” From this name we have further derived the words electron and electronic. And from this name our organization derives its name. We use the first, the fourth, and the last letters, namely,

Eta Kappa Nu

H K N

Display Entire Coat of Arms

Faculty Advisor (as-on behalf of Edison):

Display the Key

The Emblem of Eta Kappa Nu is the Wheatstone bridge. The aspect ratio of the HKN Bridge symbol is 1.414, in recognition of the importance of the square root of two in your fields. The bridge is formed into a “Key” by adding a top loop and a bottom stem [as shown on this projected image]. The bridge may be displayed as a “Key”, and also displayed in a form without the top loop and bottom stem, as jewelry, or in print.

[BEGIN OPTIONAL TEXT

(Some Chapters may opt to include a brief discussion of the history of their School and/or Chapter here, using prominent local alumni/faculty as a means to further connect the new initiates to the history of IEEE-Eta Kappa Nu. An example follows, presented for Purdue University and Beta Chapter, using prominent faculty member Reginald Fessenden, and alumnus Edward Mills Purcell.)

President:

Having explained the purpose, central ideals and devices of IEEE-Eta Kappa Nu, you will shortly become full members of this organization, inducted into Beta Chapter here at Purdue University. Prior to this important occasion, the history of

this Chapter and School will be presented in the context of two scientific pioneers who were shaped in part by their time at Purdue University. First, a brief history of the field of electrical and computer engineering at Purdue University will be presented by our Recording Secretary on behalf of the first head of electrical engineering at Purdue University, Reginald Fessenden, the first person to transmit voice wirelessly.

Recording Secretary (as-on behalf of Fessenden):

The fields today associated with electrical and computer engineering were first taught at Purdue within Mechanical Engineering, beginning in the early 1880s. The growth of research in this area, motivated by the inventions and business aspirations of such prominent personalities as Tesla and Edison, led to the formation of a Department of Electrical Engineering, with associated faculty, in 1888. This Department, later School, was renamed the School of Electrical and Computer Engineering in 1995(?), and has over **X,000** alumni, who have graduated over the past century and a quarter.

President:

One of the alumni just referred to is Edward Mills Purcell, who was marked as the Outstanding Freshman in 1929 by Beta Chapter of Eta Kappa Nu, and who subsequently went on to win the Nobel Prize in Physics for his discoveries related to nuclear magnetic resonance, and is additionally recognized as having launched the field of radio astronomy. Our Corresponding Secretary will now speak for Dr. Purcell in providing a brief history of Beta Chapter.

Corresponding Secretary (as-on behalf of Purcell):

Beta Chapter was formed in 1906, the first extension of Maurice Carr's vision beyond its original campus. Due to prevailing attitudes on the Purdue campus about secret societies, Beta Chapter became inactive shortly thereafter, but was reinvigorated in 1911, and has remained a vital element of the electrical and computer engineering community at Purdue University ever since. <More goes here about size, success of chapter, prominence of national role, etc.>

END OPTIONAL TEXT]

President:

Candidates please stand and remain standing.

(The room lights are turned ON at this point.)

You have heard the three central ideals associated with a successful member of IEEE-Eta Kappa Nu. You have demonstrated all three of these qualities: **SCHOLARSHIP, CHARACTER, and ATTITUDE.**

I now ask you to promise that, to the best of your ability, you will:

- Continue to develop your intelligence and common sense in college and in your practice as a professional.
- Continue to develop your character in positive ways: always practice honesty and ethical behavior; develop good judgment; always work hard, and never take the path of least resistance.
- Continue to develop your positive attitude about life, always be congenial, tolerant, tactful, and respectful.

Do you <each candidate's full name> promise these things? If so, please raise your right hand and answer, "I do".

(Candidate answers, "I do", and President repeats question for each inductee.)

[Note: In a large induction this may be shortened, but with some loss of impressiveness by the following:

Do you candidates promise these things? If so, as individuals one after the other beginning with (first person from left in front row), please raise your right hand and answer, "I do".]

Now that you have signified your willingness to foster our three central ideals, I will administer the binding pledge that is required of every member of IEEE-Eta Kappa Nu. *(The candidates remain standing)*. Hold up your right hand, and repeat after me:

"I sincerely promise that I will live up to . . . in word and in deed . . . the principles for which IEEE-Eta Kappa Nu stands. . . To the members now and to those to come after . . . I bind myself to the faithful observance of these promises. . . I give my solemn word of honor."

Please be seated.

(Pause for audience to be seated.)

I now request that our Vice-President conduct the candidates so they may sign the membership book, and then bring them to me to receive the symbols of membership – [our emblem the Wheatstone bridge, and] the sealed certificate of membership. Also, I will officially extend to each of them the right hand of fellowship and declare them a fully inducted member of IEEE-Eta Kappa Nu.

The Vice-President conducts the candidates accordingly. The President stands nearby with the [keys and] certificates at hand. Upon signing the membership book the candidates go before the President, who hands them the [key and] certificate

*and shakes their hands. **As the candidates sign their names, the Recording Secretary should announce their names by way of introduction to the President.***

(After all keys [optional] and certificates are presented, the inductees return to their places but remain standing. The room is then darkened except for the lights on the desks of the installing officers.)

President:

By virtue of the authority vested in me as President of the <Name of Chapter> Chapter of IEEE-Eta Kappa Nu, I declare you duly inducted members of our organization. In token of your membership I have placed in your hand a certificate that bears the seal of IEEE-Eta Kappa Nu and the signatures of the proper officers testifying to your induction into this society.

Members of IEEE-Eta Kappa Nu remember well what has transpired here this <fill in as appropriate – morning, afternoon or evening> and see that it is faithfully transmitted to future generations of members at <Name of Chapter> Chapter.

*(The room **lights are again turned ON.**)*

We welcome you into IEEE-Eta Kappa Nu. This <Date Month Year> Induction meeting of <Name of Chapter> Chapter of IEEE-Eta Kappa Nu is now adjourned. I thank all of you for your participation in this ceremony. Will all members present please come forward and join me in welcoming our new members.

(The new members are directed to stand as a single file as old members pass in front of them for a handshake and a word of greeting.)

(Photographs of the initiates and the induction team may then be taken.)