

INTRODUCTION

The Institute of Navigation (ION) is sponsoring a monetary grant to eligible college students in the Dayton Section. Scholarship awards come with required apprenticeship activities, intended to familiarize the award recipient with navigation technologies or enhance his/her existing knowledge of navigation methods.

The ION is a national organization with international membership, dedicated to promoting the art and science of navigation. It does this through annual national technical conferences, publications and awards, as well as through the activities of its regional sections and student programs. The Dayton Section is based in Dayton, OH and serves west-central Ohio. The Dayton section will administer this scholarship program, while the national office of the ION sponsors the monetary award.

DAYTON SECTION SCHOLARSHIP AWARD DETAILS

Awards totaling \$2,500 will be granted annually by the ION through the Dayton Section. This scholarship money will be distributed in one or two apprenticeship awards, with the amount of each award and the corresponding level of apprenticeship requirements adjusted by the number of scholarships awarded with the minimum award set at \$1250. Eligible candidates must have completed one year of college in a bachelor's degree or higher program at the time of the award. For consideration for an award, applications must be turned in and received by the Dayton steering committee by April 1st of the award year. The winner of the award will then be announced by June 1st. The monetary award is paid to the college or university in equal payments according to the number of terms in the school year. The student must provide all necessary contact information for the school's financial aid office and dates by which tuition is due.

Although a scholarship through this program is not guaranteed to be renewable, a previous recipient still in college is eligible to reapply for future scholarships. Both the number of awards given in the year and the award amount are subject to approval by the national ION and the Eastern Regional Vice-President, and are subject to funds availability. The total number of awards and the amounts will be announced no later than June 1st of the year the award will be granted. The awards and amounts will be posted on the Dayton Section website at <http://www.ion.org/sections/dayton.cfm> . This website will also include current contact information about the section scholarship program, and the address to which applications shall be submitted. Information about the awards will also be distributed to academic departments and financial aid offices of colleges in the Dayton Section.

QUALIFICATIONS FOR THE AWARD

To qualify to receive a scholarship award, an applicant must be a current college student in a bachelor's or higher level degree program, and must have successfully completed at least one semester's classes (or the equivalent at a school not on a semester system). The purpose of this restriction is to limit the applicants to those students who have some experience in college, and

are thus more likely to have a better concept of their field of study. The student must have a minimum GPA in college work of 3.0 on a 4.0 grading scale, or the equivalent in a different grading system.

The awards are nominally limited to students attending colleges in the Dayton Section. Exceptions to this limitation for students attending college outside of the Dayton Section but whose hometown is in Dayton Section will be considered on a case-by-case basis by the steering committee. Approval of such exceptions will be made based upon the strength of the student's academic goals and focus towards navigation, and upon the availability of suitable apprenticeship activities in the geographic area of the applicant's college or the Dayton Section.

Application for the scholarship is made through an application form, accompanied with college transcripts, letters of reference from the academic advisor, professors or professionals in the field of navigation, and an essay, cover letter, resume, or other suitable medium to convey to the Dayton Scholarship committee the qualifications of the applicant for this program. If the student has less than two years of college experience, then high school transcripts must be submitted. The principal qualifications to be examined by this committee are the academic and post-academic plans of the student, and how the field of navigation could be advanced by these plans. Other supporting qualifications that may be considered are past and current experience, skills and achievements in navigation, and navigational activities in which the applicant has been involved. It is recognized that navigation in itself is not a common academic field of study. It is also acknowledged that many fields of endeavor may further the art and science of navigation, including education, history, geography, science and engineering. The award is therefore not limited to students of a particular academic field.

In evaluating a scholarship application, content is more important than form. The applicant's essay, cover letter or other supporting material should be customized to most suitably convey the applicant's plans and experience in navigation. A clever or wonderfully written essay will not by itself carry as much weight as a more straightforward statement of plans, backed up with other supporting material that helps to verify that the applicant intends to follow through with his/her plans. That said, poorly written submissions may not adequately communicate the applicant's experience and goals, and may reflect poorly upon the applicant. The ION Dayton Section reserves the right to adjust the number and amount of awards based on applications. A maximum total award of \$2500 annually will only be exceeded with approval by the ION Executive Committee.

APPRENTICESHIP REQUIREMENTS

Apprenticeship activities will be selected to enhance the student's exposure to modern or classical navigation methods, with a minimal time commitment. The Dayton Section Scholarship steering committee will present a list of candidate activities from which the student may choose, and work with the student to customize activities suitable with the student's interests and skills. The student will be given a minimum number of activities to participate in to qualify for the complete grant. The student will then select activities to undertake, along with alternate activities, in case schedule conflicts preclude participation in a primary activity. Example activities are

research activities or projects within the field of navigation related to the student's interests, tours of local facilities connected to the field of navigation, and attendance at ION technical meetings including Dayton Section meetings. If the student is already involved in activities involving navigation, a presentation about these activities to local ION members or as a community education project may satisfy apprenticeship requirements.

Students who fail to participate in apprenticeship activities and who show insufficient willingness to rectifying deficiencies may be denied the second half of the scholarship award and may be disqualified from consideration in future years.

STEERING COMMITTEE

The Dayton Section chair, with the consent of the Dayton Section Executive Committee, will appoint members of the Dayton Section Scholarship steering committee, consisting of no fewer than two people. The term is one year. Relatives or employees of the Steering Committee members are not eligible for the award. However, relatives and employees of other Dayton Section members will be encouraged to apply.

The Institute of Navigation

Navigation Apprenticeship/Scholarship

Attention College Students:

The Navigation Apprenticeship/Scholarship is an opportunity for outstanding college students to work with a "Navigation Mentor" to build their science and engineering knowledge while developing problem-solving skills in a real-life working environment. We hope you will apply for the 2004-2005 Navigation Apprenticeship/Scholarship.

Think about it! You can receive a college scholarship up to \$2500 and exercise your inventive and innovative skills by working side-by-side with a professional inventor, scientist, technologist, engineer, and/or entrepreneur on a variety of navigation related projects, from a product design or research project to a brainstorming session for a business plan. The Apprenticeship is a great way for you to experience how science and engineering can be used to solve navigation related problems.

Administered by the Institute of Navigation (ION), the Navigation Apprenticeship/Scholarship is an experiential and up to \$2,500 scholarship award presented to one or two college student inventor(s)-innovator(s) each year per local ION Section. Should you be selected as the Navigation Apprentice, you will be matched with a Navigation Mentor to learn about navigation system research and development first-hand. The Apprenticeship will be tailored to your interests and experience. Apprenticeships are individually scheduled to meet the winner's schedule and goals. It will take place over the summer prior to the scholarship award and/or during the fall semester of the scholarship award. The annual recipient is announced in May of the application year. *The scholarship will be awarded once the student has been enrolled in the college or university of his/her choice for the award year.* The scholarship will be awarded directly to the college or university in equal amounts for each grading period during the award year.

The deadline for applications for the 2004-2005 ION Navigation Apprenticeship/Scholarship is June 15, 2004. All students who have completed at least 1 semester of college, in a bachelor's or higher degree program, at the time of application, are eligible for the award.

See our website at <http://www.ion.org/sections/dayton/apprenticeship.pdf> for an application. You can also call me at (937) 259-1865 or email me at ken.weis@honeywell.com to request an application.

We look forward to seeing your application!

With best wishes,

Ken Weis
Program Officer

The Institute of Navigation (ION) Navigation Apprenticeship/Scholarship is an experiential and financial award launched in 2002 and granted to outstanding college students showing special achievement and promise in navigation related inventions and/or innovations. Winners will work with professional "Navigation Mentors" to increase their understanding of the navigation sciences.

The Institute of Navigation High School Navigation Apprenticeship Frequently Asked Questions

What is the college Navigation Apprenticeship/Scholarship?

The Navigation Apprenticeship/Scholarship is an annual experiential and up to \$2500 scholarship award presented to students who have completed at least 1 semester (or equivalent for quarter system) of college for remarkable navigation related inventiveness and/or innovativeness. Depending on the student's interests, he or she will be paired with a leading scientist, technologist, engineer and/or entrepreneur "Navigation Mentor" in order to learn about the process of developing and inventing navigation related technology first-hand. The Navigation Mentor will work with the winner to tailor an apprenticeship to the student's interests and schedule. *The scholarship will be awarded once the student has enrolled in the college or university of his/her choice.* The scholarship will be paid directly to the college or university in equal payments over the 2004-2005 school year.

What is its purpose?

The Apprenticeship/Scholarship is designed both to reward and encourage inventiveness and innovativeness by providing hands-on experience, as well as exposure to a professional scientific/technological environment. In addition, the Navigation Apprentice will serve as an inspirational role model for other students.

How many Navigation Apprenticeships/Scholarships are there?

Up to two Apprenticeship/Scholarships will be awarded each year in the Dayton ION section.

What does "up to \$2500 scholarship" mean?

The maximum total scholarship award each year is \$2500. If two scholarships are awarded, each scholarship amount will be \$1250. If only one scholarship is awarded, the amount will be \$2500. Number of scholarships awarded each year will be decided by the local ION section based on the number of qualified applicants. The local ION section and the National ION office reserve the right to change the number of scholarships awarded at any time prior to announcing the Apprenticeship/Scholarship winner(s).

Who chooses the recipient of the Apprenticeship/Scholarship?

A small panel selected from each local ION Section selects the winner of the Navigation Apprenticeship/Scholarship for their area.

What type of work is involved in the Apprenticeship?

As each Apprenticeship is specially tailored to the student recipient's interests and experience, the Apprentice may work with the Navigation Mentor on a variety of projects. An Apprenticeship may include, but is not limited to: assisting on the design and development of a new product or technology, conducting research, meeting other professionals in the Mentor's field, and attending technical meetings including monthly ION luncheons.

Who are the mentors?

Mentors are identified from national leaders in science, technology, and engineering, working in the local area of each ION Section. If desired, students may request a specific mentor from their college/university or a navigation related company. Such requests will be evaluated and approved on a case by case basis.

Can the Apprentice work on his or her own project or must the Apprentice work on an existing project?

Because each Apprenticeship is unique, the Apprentice may choose to work on his or her own project or a current project in development at the Mentor's organization. The apprentice may also choose to attend tours of local navigation research and development organizations. Attendance at local ION meetings will also be offered as an option to the apprentice.

Where does the Apprenticeship take place?

The Apprenticeship will normally take place in a Mentor's organization located in each local ION Section. For Dayton area applicants, the apprenticeship will take place with a Dayton ION Section member. Requests to hold the apprenticeship at other locations (such as at or near the apprentice's college/university) will be evaluated and approved on a case by case basis.

How long is the Apprenticeship?

The apprenticeship will take a minimal amount of time. It will be tailor to meet the student's schedule and needs. It can be expected to take a total of 40-80 hours, and will be spread over a period up to 6 months including the summer before the award and first semester of the award period. It is not intended to create hardships for students with summer jobs or classes, though it may be necessary to take a few hours off occasionally. Every effort will be made to be flexible and support the student's needs for scheduling the apprenticeship.

Is the Apprenticeship mandatory?

Yes, the Apprenticeship is a mandatory element of the award. Winners who do not make a concerted effort to complete the Apprenticeship prior to the end of the first semester (or equivalent) of the award period may lose the scholarship for the second semester (or equivalent). Every effort will be made by the local ION section to help the winner complete the Apprenticeship in a flexible yet timely manner.

Where does the student stay during the Apprenticeship?

It is highly recommended that the student live at home during the Apprenticeship. Room and board are not provided as part of the Apprenticeship program. A concerted effort will be made to develop an appropriate Apprenticeship which does not require expensive travel by the student.

When do the Apprentice and Mentor first meet?

Normally, the ION Apprentice Program arranges for the Apprentice and Mentor to meet prior to the Apprenticeship. Traditionally, this will occur at the Dayton ION end of year dinner in June.

Who is eligible?

All college students in a bachelor's or higher degree program with at least 1 term of college experience at the time of application are eligible for the Apprenticeship. Applicants may be of any age but must be American citizens or permanent residents.

Will winning the Apprenticeship/Scholarship affect the student's college financial aid package during the award year?

Since there is a cash award, the Apprenticeship/Scholarship may have a bearing on the student's financial aid package for college. However, as each college or university has its own financial aid policies, the student should confirm this directly with his or her college of choice.

How do I apply?

Students interested in applying for the Navigation Apprenticeship should email or call Mr. Ken Weis, program officer, at ken.weis@honeywell.com (937) 259-1865 for application materials. You can also download an application at <http://www.ion.org/sections/dayton/apprenticeship.pdf>.

The 2004-2005 Institute of Navigation Navigation Apprenticeship/Scholarship Application Form

I. Please type or print the following information:

Applicant Name: _____

Number of College Terms Completed: _____

College: _____

College Address: _____

College Department Telephone & Fax: _____

Home Address: _____

Home Telephone & Fax: _____

Email: _____

II. Applicant Signature: _____

III. Please submit the following with this application form.

A. **Personal Statement.** In 750 words or less, describe your interest in navigation technology, creative problem-solving, relevant experience, why you want the apprenticeship/scholarship, and what you hope to gain from the experience.

B. **Two (2) letters of recommendation** from college faculty members and/or others who are qualified to comment on your invention-related accomplishments, ability to work independently, and how the experience may influence you. Recommenders must state their professional affiliation and the nature of their relationship with you. Recommenders cannot be family members.

C. Official copy of college transcript. This may be a copy released to the student, but it must originate from the registrars office. If you have less than 2 years college experience, a high school transcript must also be provided along with the college transcript.

D. **(OPTIONAL) Up to two (2) 8.5" x 11" pages of photos/diagrams of your work**, if applicable, and a recent photograph of yourself. Articles on your accomplishments are also acceptable. Please note that we may use these materials for public education activities, such as a feature on the Program's *ION* Web site.

IV. Send **ONE (1) UNBOUND ORIGINAL and SIX (6) STAPLED COPIES** of the Application Form, Personal Statement, letters of recommendation, and other materials to:

Kenneth W. Weis (ION Apprenticeship)

Honeywell

5100 Springfield Street Suite 419

Dayton, OH 45431

All materials must be received on or before June 15, 2004. If you have questions, please contact Ken Weis, Program Officer, at (937) 259-1865.