

MICHIGAN SAFETY CONFERENCE MEMORIAL SCHOLARSHIP and MINORITY STUDENT EDUCATIONAL GRANT PROGRAM

I. NAME, MISSION, AND PURPOSE

- A. NAME:** The Michigan Safety Conference (MSC) Memorial Scholarship and Educational Grant Program.
- B. MISSION:** To inspire and promote academic excellence; to develop leadership qualities in students; and to encourage the diversity of students pursuing studies in the fields of occupational health and safety as exemplified by professionals who have worked in these fields throughout Michigan.
- C. PURPOSE:** To assist university and college students in obtaining a graduate or undergraduate degree in the occupational health and safety field from a properly accredited institution with defined programs in occupational health and / or safety.

II. SCHOLARSHIP and EDUCATIONAL GRANT COMMITTEE

- A.** A Committee, composed of members of the Michigan Safety Conference, shall administer the Scholarship and Educational Grant Fund, including coordination with staff from the accredited institutions. The Committee will coordinate publicity, applications, and perform screening and evaluation of all applicants.
- B.** The President of the Michigan Safety Conference shall appoint the Chairperson and members of the Committee from the Executive Officers, Board of Directors and/or the Board Council. Selection is subject to approval by the Board of Directors.
- C.** There shall be a minimum of five (5) members, including the Chairperson, serving on the Scholarship and Educational Grant Committee.

III. FUNDING

- A.** The dollar amount for the academic scholarships and educational grants is to be approved each year by the General Committee, and this amount is to be designated for the Scholarship and Educational Grant Fund. The amount for each Educational Grant will be fixed and will be separate from the Academic Scholarship Fund.
- B.** The Awards shall be applied only to: laboratory fees, tuition, textbooks and other related fees associated with the student's educational expenses. These expenses will be reviewed, approved, and paid by the accredited institution and may be monitored by the Michigan Safety Conference Scholarship Committee. Accepting the funding implies accepting these conditions.
- C.** The Awards shall be made payable to the accredited institution and shall be placed in an escrow account in the student's or department's name and is to be applied to approved educational expenses as outlined above.

- D. The Committee will submit an annual request, usually in October, regarding the dollar amount for the scholarships and grants for approval by the Michigan Safety Conference Executive Committee. Ultimately the number and amounts of the awards shall be competitively based and on the availability of funding from MSC.

IV. CRITERIA FOR SELECTION OF SCHOLARSHIP CANDIDATES

- A. The candidate must be a US citizen or legal resident alien, a Michigan resident that is paying “in state” tuition, and have at least one semester of study remaining before completion of their health and safety studies program.
- B. The candidate must have at least sophomore academic standing (30 or more semester credit hours) with a 3.0/4.0 or higher overall GPA or a graduate student with an appropriate undergraduate degree, at least 10 graduate credits and grade point of 3.5/4.0 or higher in their graduate occupational health and safety coursework. The undergraduate grade point average must include all grades. Full OFFICIAL transcripts from all institutions attended shall be included with the submission. A letter from the candidate’s advisor on university letterhead must confirm the students overall grade point average for all college credits.
- C. The candidate must be a student accepted into an occupational health or safety curriculum at an accredited institution of higher learning in Michigan. A full-time undergraduate student must carry at least 12 credit hours per semester or 24 credit hours per year; a graduate student must carry at least 6 credit hours per semester or 12 credit hours per year. Priority will be given to full time students; however, scholarships may be available for part time students studying occupational health and safety. Part time undergraduate and graduate students must carry 6 and 3 credit per semester hours respectively and indicate the health and safety courses they are currently pursuing.
- D. Students that have received prior MSC Scholarships may reapply if they have at least one more semester of study remaining.

V. CRITERIA FOR SELECTION OF EDUCATIONAL GRANT CANDIDATES

- A. The candidate must be a US citizen or legal resident alien, a Michigan resident that is paying “in state” tuition, and have at least one semester of study remaining before completion of their health and safety studies program **AND** be a person having origins in one of the minority groups recognized and defined by the US Department of Education. It is the candidate’s responsibility to provide to the Committee sufficient evidence and support of the candidate’s claimed minority status. Minority Groups recognized by the US Department of Education are listed below:

1. American Indian or Alaskan Native. A person having origins in any of the original peoples of North America, **AND** who maintains cultural identification through tribal affiliation or community recognition.
2. Asian or Pacific Islander. A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.

3. Black (Not of Hispanic Origin). A person having origins in any of the black racial groups of Africa.
 4. Hispanic. A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- B.** The candidate must have at least sophomore academic standing (30 or more semester credit hours) with a 2.0/4.0 or higher overall GPA or a graduate student with an appropriate undergraduate degree, at least 10 graduate credits and grade point of 3.0/4.0 or higher in their graduate occupational health and safety coursework. The undergraduate grade point average must include all grades. Full OFFICIAL transcripts from all institutions attended should be included with the submission. A letter from the candidate's advisor on university letterhead must confirm the students overall grade point average for all college credits.
- C.** The candidate must be a student accepted into an occupational health or safety curriculum at an accredited institution of higher learning in Michigan. A full-time undergraduate student must carry at least 12 credit hours per semester or 24 credit hours per year; a graduate student must carry at least 6 credit hours per semester or 12 credit hours per year. Priority will be given to full time students; however, grants may be available for part time students studying occupational health and safety. Part time undergraduate and graduate students must carry 6 and 3 credit per semester hours respectively and indicate the health and safety courses they are currently pursuing.
- D.** Students that have received prior MSC Educational Grants may reapply if they have at least one more semester of study remaining before graduation.

VI. SELECTION OF RECIPIENTS

- A.** Applicants that meet the minimum requirements and submit a complete application by the appropriate deadline will be considered by the Committee. Applications or supporting documentation received after the December 31 deadline will not be considered.
- B.** Submission of an application by the student does not assure or guarantee an award.
- C.** The Committee will consider and weigh all aspects of the applicant's submission.

VII. RECIPIENT'S OBLIGATIONS

- A.** If requested by the student, the recipient may be assigned a mentor appointed by the MSC Scholarship and Educational Grant Committee.
- B.** The recipient should be reasonably available to the mentor. The mentor should contact the student(s) at least three times during the academic year to assess the student's status in the occupational health and/or safety program and to offer guidance and assistance.
- C.** During the funding period, the student should attempt to attend at least one meeting of the Michigan Safety Conference General Committee.
- D.** Each recipient should be prepared to attend the MSC June business meeting to be recognized and to briefly address the MSC General Committee.

VIII. PUBLICITY

Announcement of the Scholarship and Educational Grant Program will be communicated through various means. Examples include appropriate newsletters and journals, bulletins, news releases, direct contact with the educational institutions and through the MSC Conference web site.

IX. SCHOLARSHIP and EDUCATIONAL GRANT TIMELINE

September – Educational institutions notified that scholarship and grant applications are available from the Michigan Safety Conference website.

September through December – Application acceptance period. Electronic "online" submissions are preferred.

December 31 – Deadline (dated by the delivery method) for the submission of fully completed application packages to the Michigan Safety Conference Scholarship and Educational Grant Committee. Applications, materials, or supporting documentation received beyond the above stated deadline will not be considered.

January – MSC Scholarship Committee reviews scholarship and grant candidates.

March – Scholarship recipients notified, and checks forwarded to the institutions with instructions for disbursement as soon as practicable following notification.

April – Scholarship and Grant certificates presented at MSC President's Reception of the Michigan Safety Conference.

X. LIABILITY

The Michigan Safety Conference shall be held harmless for any accident, illness or injury incurred while the student is under the limited scholarship or grant funding.

MICHIGAN SAFETY CONFERENCE (MSC)
MEMORIAL SCHOLARSHIP and MINORITY STUDENT EDUCATIONAL GRANT PROGRAM
APPLICATION

Date _____

Please indicate (check appropriate line) if you are applying for an Educational Grant or a Scholarship.

1. Educational Grant _____. I am claiming minority status as a _____(fill in the blank) student.
Be sure to provide appropriate proof of minority status with your application in a timely manner.
Documentation received after the submission deadline will not be considered and may jeopardize your application.

2. Academic Scholarship _____.

Overall Grade Point Average (GPA) for all college courses: _____.

(include **ALL** colleges and universities attended) *See IV. B and V. B* . Transfer students must provide all transcripts from all institutions attended. Transfer credit hours without grades and honor points is insufficient.
Documentation received after the submission deadline will not be considered and may jeopardize your application.

3. This is my first application for a Scholarship or Educational Grant to the MS Conference: _____;
I have previously applied for a Scholarship or Educational Grant in: _____(state year).

4. I have been a student volunteer at The Michigan Safety Conference: _____(state years).

Name _____

Your current address _____ City _____ Zip _____

*Home (**Parent's**) address _____ City _____ Zip _____

Phone (Parent's home) _____ (Your mobile) _____ E-mail _____

**Please use an address that is viable through next June.*

Institution now attending: _____

Major and minor: _____

Other colleges and universities attended and dates of attendance: _____

Major and minor: _____

Anticipated date of graduation from current institution: _____

Please provide three letters of recommendation: One must be from a university/college professor or advisor.

Examples of others are as follows:

1. Individuals or leaders from health, safety or environmental organizations, i.e. ASSP, AIHA or CHMM;
2. Internship supervisors;
3. Leaders of community or civic organizations.

Letters of recommendation are needed to assist the Committee in determining scholarship and grant recipients. Please list contact information for your selected references below and attach original and signed letters with your package or have the individual send the letters directly to MSC. Be sure to request these letters well in advance so that they are received by the Michigan Safety Conference the December 31 deadline. Letters received after December 31 will not be considered.

Name: _____ Position: _____

Address: _____ Zip: _____

Telephone: _____ E-mail: _____

Name: _____ Position: _____

Address: _____ Zip: _____

Telephone: _____ E-mail: _____

Name: _____ Position: _____

Address: _____ Zip: _____

Telephone: _____ E-mail: _____

Include, with your application, an official college or university transcript from ALL colleges and universities attended. (See IV and V) A personal interview may be requested. Applications and transcripts are due to the MSC by the close of business on December 31. Request transcripts from each institution early. Applications, supporting materials and/or transcripts received after December 31st will not be considered.

APPLICANT'S SUBMISSIONS

If you are an undergraduate and this is your first application for a scholarship or an educational grant, please answer question 1 and select four more questions from Group 1 for your submission.

Please attach all question responses to your submission package. Your response to each question must be at least 300 words.

Group 1 Questions:

1. Please fully describe an example(s) of volunteer service that you have provided to your community, your school, your church, or other institution or organization. Please be sure to describe and identify the primary benefactors from this type of service?
2. Hierarchy of Controls Question (Group 1)
Controlling exposures to occupational hazards is the fundamental method of protecting workers. Traditionally, a hierarchy of controls has been used as a means of determining feasible and effective control solutions. Beginning with the most effective and finishing with the least effective, please describe and

discuss, in broad terms, all of the major ways occupational hazards can be controlled. Please provide examples of each of the controls.

3. Noise Question (Group 1)

Please list and briefly discuss the various types of hearing protective devices (HPD) that are commonly available and used in the industrial or occupational environment in order to limit worker exposure to excessive noise. Also please discuss the extent of the effectiveness or efficiency of these devices in limiting worker exposure to noise.

4. Confined Space Question (Group 1)

A work order has been submitted to the Plant's Maintenance Department to repair a leak in a steel storage tank. This storage tank is used to store a non-hazardous and non-flammable liquid. It is six feet high with a diameter of five feet. Access to the inside of the tank is through a hatch opening located on the side and near the bottom of the tank. The hatch opening is two feet in diameter. Maintenance has determined that the tank must be entered in order to weld inside of the tank to make repairs to the area of the leak.

Is this considered a "confined space" according to OSHA? Please elaborate to support your response.

As the Plant's Health and Safety Professional, outline the procedure required to complete this maintenance task.

5. Working at Heights Question (Group 1)

You are a recent university graduate with approximately 3 months of occupational health and safety (OSH) experience at XYZ Company. You replaced the Company's last OESH professional following their retirement. While walking through the plant you observe a 30-year veteran skilled trade's millwright working at the 5-foot level of a power press performing an imminently needed maintenance task while not utilizing fall protection. Is there a hazard and if so, describe what you would do to eliminate the hazard in this situation.

6. Incident Command System Question (Group 1)

How does "All Hazard" emergency response structure fit into the Incident Command System (ICS)? Please provide some history and background to the Incident Command System and where and how the Safety and Health Professional fits into the system.

7. Chemical, Biological and Physical Hazard Question (Group 1)

Use the entire scope of your knowledge of industrial processes, industrial safety, industrial health, industrial hygiene, toxicology, hazard control, engineering control, environmental control, personal protection devices, hazards, management, economics, essentially the entire gamut of your knowledge base and select a workplace hazard of your choice for a comprehensive discussion.

Use the following categories (they do not have to be in order and your response may overlap several categories simultaneously) to focus for your response:

a. Identify and describe an industrial occupational hazard or industrial process.

b. Establish if it is chemical, physical, or biological hazard.

c. Are there simultaneous or coincidental hazards produced from the main process or hazard? For example, a power press operation has the obvious risk of injury from moving press parts, but it also is a major source of noise exposure.

- d. Describe and discuss how the process that produces the main hazard is used in the occupational environment and why it is a hazard to workers.
- e. Describe and discuss the risks or adverse effects of the hazard to the worker.
- f. Describe and discuss the control methods that you would, or could, use to limit and/or reduce the risk to the worker. If there are multiple control methods, list and describe them in order of feasible effectiveness.
8. Construction Safety Question (Group 1)
- Describe the effects, on the human body, of being suspended in a harness following an arrested fall. Discuss the steps that can be taken for prevention of these effects.
9. General Safety Question (Group 1)
- Consider the following scenario: What should the OESH professional do in this situation? Please explain your response.
- Joe is a junior safety professional at a manufacturing facility. One of Joe's major job responsibilities is conducting risk assessments and recommending controls on new equipment. One of Joe's closest childhood friends, Kevin, is a lead project engineer. Kevin always requests Joe to be his safety professional assisting him on his projects. However, Joe is coming to realize that Kevin may be using his friendship with him in order for Joe to be more lenient when reviewing Kevin's new or modified projects during these mandatory risk analyses. For instance, Kevin would tell Joe things like: "Hey bro, let's be reasonable here with all of these additional controls" or "Buddy, they're really excessive and will add weeks to the schedule. They'll exceed my budgeted costs too. My boss isn't going to be happy with a blown schedule and budget. I was really hoping for that bonus this year to take Jill and the kids to Aruba. You know you and your family are welcome to stay at the condo too when we go."
10. General Safety (Group 1)
- What are the essential elements of a Company's occupational safety and health program and why are they important to a successful overall safety program?
11. Ergonomics Question (Group 1)
- Despite extensive efforts in the 1990s to implement Ergonomics Standards, OSHA does not currently have any ergonomics standards in place. Briefly explain the employer's legal responsibility, under OSHA, when it comes to ergonomics in the workplace.

If you are an undergraduate and this is your second or third application for a scholarship or educational grant, or if you are a graduate student, please answer question 1 from group 1 and then select four additional questions from Group 2 for your submission.

1. Ergonomics Question (Group 2)
- Calculate the Lifting Index for the task shown below using the NIOSH Lifting Equation. Secondly, determine the level of risk posed to the worker by this task. If needed provide three or more possible recommendations that would reduce the Lifting Index for the task. Prioritize your recommendations and explain your rationale as to which is the preferred solution, which would be your second choice, and which you would implement last. Explain your thought process for each recommendation.

The task:

	Weight	Horizontal	Vertical Start	Vertical Distance	Frequency	Asymmetry	Coupling
Measure	94 lbs	0 in	5 in	35 in	Every 5 mins for 1.5 hours	30°	Poor
Constant/ Multiplier	51	1	0.81	0.87	0.95	0.9	0.9

2. Respiratory Protection Question (Group 2)

As an industrial hygiene consultant, you are asked to make recommendations for an operation in a chemical manufacturing facility. What things should you consider in making a specific recommendation? Be as comprehensive as possible.

3. Industrial Hygiene Question (Group 2)

As your Company's new Industrial Hygienist you have been asked to evaluate an employee's exposure to an airborne chemical hazard. The allowable time weighted average occupational exposure limit (OEL) for the chemical hazard is 50 ppm. You collected eight (8) equal length (1 hour each) breathing zone air samples comprising the full daily shift of this worker. The results of your sampling are as follows: 30ppm, 43ppm, 48ppm, 45ppm, 48ppm, 48ppm, 55ppm, and 60ppm, in that order. Calculate the employee's exposure for this work shift. Briefly mention all of the references you would consult for personal guidance and describe and explain your conclusions and the recommendations you would make to Company management regarding this exposure. Use OSHA sampling strategies and guidelines and requirements where applicable.

4. Work in Hot Environments Question (Heat Illness) Group 2

Workers are frequently required to work in hot environments. When the human body is unable to maintain a normal body temperature, heat illness can occur and may result in death. Please describe and discuss the various types of heat induced illness and provide the essential elements of a program and/or process to protect workers from the effects of heat induced illness.

5. OSHA Statistics Question (Group 2)

You are the health and safety professional for a 500-bed hospital. The hospital's CFO indicates to you that the hospital's workers compensation costs have dramatically increased recently and asks you to investigate the causes and recommend measures to bring these costs to be more in-line with other similar hospitals. You begin by reviewing the hospital's previous year's OSHA 300 log.

Given the following data:

National incidence rate for the hospital industry: 7.3

Hospital employees: 500

Total hours worked: 1,000,000

Total number of injuries: 88

Total sprains and strains: 21
PT Dept.: 30 employees; 60,000 hours worked; 6 sprains/strains
ER Dept.: 100 employees; 200,000 hours worked; 10 sprains/strains
OR Dept.: 60 employees; 120,000 hours worked; 8 sprains/strains

Total “needlestick” injuries: 38
ER Dept.: 100 employees; 200,000 hours worked; 24 needlesticks
ICU Dept.: 25 employees; 50,000 hours worked; 9 needlesticks
OR Dept.: 60 employees; 120,000 hours worked; 5 needlesticks

What can you tell your CFO regarding the hospital’s performance (incidence rate) in comparison to the industry’s incidence rate?

Where would you concentrate your control efforts to control injuries? Why?

What actions or recommendations would you provide to reduce the hospital’s workers compensation cost?

6. Construction Safety Question (Group 2)

The concept of safety through design in an appealing and proven method to reduce risk, improve safety performance, and in many cases, reduce project costs. However, there are systemic barriers that exist, especially in the United States, that may limit implementation. List the barriers to construction safety through design. Next, discuss each of the barriers and provide key points for each. Finally, what are benefits of the “Design for Construction Safety (DFCS)” concept?

Please attach all question responses to your submission package. Your response to each question must be at least 300 words.

Scholarship and grant recipients will usually be notified in March. Presentation of certificates will be made at the MSC President’s Reception in April. Scholarship and Grant recipients should make every effort to attend the scholarship and grant presentation ceremony.

**SEND COMPLETED FORM TO: MICHIGAN SAFETY CONFERENCE
SCHOLARSHIP and EDUCATIONAL GRANT COMMITTEE
PO Box 1098, Okemos, MI 48805, or electronically to
denise@michsafetyconference.org**

With the exception of official transcripts, the applicant may make all submission electronically (on line). Official electronic transcripts will be accepted only from academic institutions. “Hard copy” applications may continue to be made as a single package or individually by the institution.