

# Marshall School

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## **MARSHALL SCHOOL STEM SCHOLARS PATHWAY PROGRAM**

*Inspiring lifelong learners to embrace challenge and create positive change.*

Marshall School aims to provide learning experiences for students that bring together opportunities for innovation, curiosity, and exploration and to empower students to be future leaders in the world of STEM. Marshall School's STEM Scholars Pathway Program places a strong emphasis on developing students' abilities to solve problems, communicate effectively, think curiously and creatively, become engaged and ethical citizens, and develop agency and resiliency. Through experiences that foster a passion for discovery, Marshall students will be equipped with the skills necessary to engage in an increasingly complex and interconnected world.

### **The Pathway Program allows participants to:**

- Demonstrate mastery of complex subject matter
- Apply knowledge and skills to challenging projects
- Learn how to find, investigate, and solve a new problem or answer a previously unsolved question
- Participate in school and community-based learning and events
- Share their learning with others

### **Eligible Candidates**

- Students will apply for the STEM Scholars Pathway Program in spring of their sophomore or junior years. Students will be accepted into the program annually.
- Students must be in good academic standing to be eligible.
- Students will individually select a teacher who agrees to be their STEM advisor to meet with each semester to refine their goals, projects, and activities.

### **Enhanced Curricular Requirements**

In addition to Marshall's course of study required of all students, students participating in the STEM Scholars Pathway Program:

1. Must complete at least
  - a. One elective credit in advanced (AP/CITS/PSEO) science;
  - b. One elective credit in advanced (AP/CITS/PSEO) math;
  - c. One elective that incorporates engineering, technology, or advanced computer science principles and applications. Elective courses require prior approval and can be taken at Marshall School; online through Global Online Academy (GOA); or through an approved PSEO, university, or college program; and
  - d. One additional STEM-focused iTerm or elective course.
2. Have a formative STEM experience within the junior or senior year that demonstrates mastery of complex subject matter and application of knowledge to a challenging project, which could include:
  - a. Participation in the Independent Research program
  - b. Participate in the MN Department of Education Scholars of Distinction Program

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- c. Provide mentorship in a STEM-focused activity in the FS or MS
  - d. Participate in an opportunity listed on the [Minnesota Academy of Science STEM Programs for Students webpage](#)
  - e. Propose and be approved to teach (with the help of a mentor/co-teacher) a STEM-related iTerm course
  - f. Complete an approved Senior Project that aligns with the STEM Scholars program experiences outlined above and with prior approval
  - g. Propose and be approved to complete an activity that is a formative STEM experience
3. Participate in at least 10 hours of community-based STEM learning, which could include:
- a. Attend a STEM-focused lecture at a local college or university
  - b. Visit a science museum (maximum of 2 hours)
  - c. Provide tutoring for STEM-based subjects at a local school
  - d. Participate in a STEM competition, league, challenge, or symposium
  - e. Complete an internship with a STEM-based organization
  - f. Volunteer at STARBASE
  - g. Advocate for legislative change for a STEM-focused issue
  - h. Participate in a STEM-focused co-curricular activity
  - i. Participation in/volunteering for a project, camp, or organization focused on STEM learning
  - j. Mentor a middle school STEM-related co-curricular program, such as Robotics, Math League, etc.
  - k. Demonstrate/host a STEM-based activity at an admissions event
  - l. Propose and be approved to complete a community-based STEM activity
4. Participate in a forum where graduating seniors share their learning in a discernible way, which could include:
- a. Presentation of research or special project
  - b. Host a forum on a STEM-related topic
  - c. Propose an original idea for sharing learning to an audience

## **Program Completion**

Upon successful completion of the enhanced curricular requirements, participants will earn special recognition as a STEM Scholar both at graduation and on their official Marshall School transcript. Students participating in the program will have it designated on their transcript upon admission to the program.

## **Opportunities and Benefits**

Students enrolled in the program will be given priority enrollment in STEM-related coursework at Marshall School. In addition to pursuing academic requirements, STEM Scholars will have opportunities to participate in special events, such as field trips, guest speakers, and other related activities. The cohort of students will be responsible for supporting and engaging each other in the process of earning the STEM Scholars designation.