

Okemos High School
Honors Science Research Seminar
Application for the 2020-2021 School Year

Write Very Neatly

Name: _____ e-mail address: _____

Phone: _____

Grade in school: _____ Gender: M F (circle) Guidance Counselor: _____

Current Science Class: _____ Current Science Teacher: _____

Current Science Grades: Q1: _____ Q2: _____ S1: _____

Current Math Class: _____ Current Math Teacher: _____

Current Math Grades: Q1: _____ Q2: _____ S1: _____

Current English Class: _____ Current English Teacher: _____

Current English Grades: Q1: _____ Q2: _____ S1: _____

Last Semester Grade Point Average: _____

TO APPLY, PLEASE DO EXACTLY THE FOLLOWING:

1. Read the attached description of this course (page 3) —if you are very interested in the course, proceed with 2-4.

2. Complete this application.

3. Type a short, grammatically correct, essay (1-2 pages) describing why you would like to join the Honors Science Research Seminar. If you have had any experience in science fairs, science programs, or if you have special interests in science, we would like to hear about it. Also, describe activities that demonstrate that you have these qualities identified as important by past students: inquisitive, independent, patient, organized, hardworking, and follow through on commitments you make.

4. Type answers to the following questions.

a. INITIATIVE: What have you done outside your school curriculum that shows initiative? How did you pursue these activities? What difficulties did you encounter, and how did you handle them? Specific examples must be provided to enable a proper evaluation of your promise as a student in this course.

b. WORK HABITS: Do you plan your work in advance? Are you more interested in the overall planning of a project, or in specific details? Do you complete your work on time? Do you allow sufficient time for your work, or do you try to do most of it at the last minute? Specific examples must be provided to enable a proper evaluation of your promise as a student in this course.

c. DISCIPLINED ATTITUDE: What have you done that demonstrates your self discipline? How do you use extra time in class? Have you been in situations in which you had to make a decision regarding how to spend your time because two or three or even more things were going on? How did you make that decision? Specific examples must be provided to enable a proper evaluation of your promise as a student in this course.

d. COMMUNICATION: What do you do when you have questions about a class, activity, etc? Do you reach out to the teacher, coach, etc., do you talk to other students or do you find another way to have your questions answered? If you see an opportunity that you are interested in, but do not know much about it, how do you go about finding out more? Specific examples must be provided to enable a proper evaluation of your promise as a student in this course.

Send the stapled application (this cover page on top) or **hand-deliver** it to the following address, so it is actually received by me (not postmarked) no later than Friday, February 7 at 3:30 pm:

*Ms. Denise Facione, Research Instructor
Okemos High School, Room C-221
2800 Jolly Road Okemos, MI 48864*

Late applications will most likely be rejected. Admission to the Research Project Seminar is competitive, and we regret that we cannot accept an unlimited number of students.

This is an intensive, two plus year program, through which you will be working on your own, often on some evenings and weekends and definitely many hours in the summer(s). Being able to meet deadlines is extremely important. One thing that you can do to increase your chances of being accepted, therefore, is to hand in a carefully prepared application ON TIME.

I would like to apply for admission to the Research Project Seminar:

Student Signature _____ Date _____

I have read the description of the program and support my son or daughter in this effort.

Parent Signature _____ Date _____

AN OVERVIEW OF THE SCIENCE RESEARCH PROGRAM

This program affords students the opportunity to participate in the community of scientific research and scholarship as part of their high school experience. It furthers excellence in performance and achievement while drawing from and developing scientific capabilities in a broad spectrum of the student body. Students taking the course accomplish the following:

- They choose and explore a topic of interest. It may come from mathematics, physical science, life sciences, social science, or psychology. They develop skills in using the Internet's electronic mail capabilities to conduct on-line bibliographic searches of international data bases.
- Students will develop inquiry and methodology techniques through three independent projects, as well as basic laboratory techniques.
- They find and study several journal articles, eventually choosing one that they will present to the class. Their presentation to the class emphasizes how research described in the article was conducted. Thus, the scientific method, which will be the whole essence of the research course, is made explicit for the student and the class. The elements of this method always include the following:
 - A review of the literature
 - A statement of the hypothesis or the problem
 - Methodology
 - A presentation and analysis of the results
 - A discussion of the data presented
 - Conclusions
 - Bibliographic work and footnotes
- Students prepare a statement of what they intend to study based on their bibliographic research.
- Students contact the author of the journal article they studied and ask for suggestions in the research that they are considering to undertake. At that time, the students ask the scientist to serve as a mentor or to help in finding an appropriate scientist to serve as a mentor to assist them in carrying out or help in carrying out a research project in their area of interest.
- Students then engage in an original piece of research under the supervision of their scientist mentor and of the classroom research class on a regular basis. The students communicate with mentors throughout the United States using electronic mail.
- Students conduct statistical analyses using appropriate statistical computer software.
- Students give presentations of their findings to their class, their school, and at regional and statewide symposia. Their presentations are based on the scientific protocol listed above and incorporate visual presentation techniques (e.g., PowerPoint and poster).

All steps in the students' progress are carefully and systematically monitored to assure that students engage in each phase of scientific research and have attained the desired capabilities.

The program is a two year in-class commitment and often includes the summer between junior and senior year and the month of September of senior year. Seniors are also expected to present at a research symposium (sometime in March-May) to showcase their work.