

Summer Assignment 2026

Honors Advanced Engineering Online research and Capstone Project Proposal

Again, please feel free to e-mail Ms. Kimberly Naucodie knaucodie@gmahs.org if you have any questions or concerns about this assignment.

We wish you a safe, happy summer and we look forward to seeing you again in the fall!

The Gwynedd Mercy Academy Mathematics Department

I think it's very important that you start to think over the summer about what you potentially want to do and draft up a proposal by the end of the summer. I will be available to zoom (or teams) or to discuss over email if you want to bounce ideas off me or whatever you need.

Do a search on writing capstone project proposals and find out what it entails. Think about your project and what you want to do. Is it a model out of balsa wood? Is it a design in Fusion 360 followed by 3D print? Is it something you'll need to build? The length of the proposal is less important than the focus and the leg work you do in the area you want to pursue. You will put together a presentation and present it to class on first day to gather feedback on the idea.

Be sure to include an MLA format references for any researching you conducted as part of your proposal.

Keep in mind...This is a draft because you will present it to a "academic board" for feedback and discussion when you return to school in September. This will be super helpful because then we can focus it on what you want to pursue and take out all the unnecessary work. The idea is the more defined we can get it during the summer the better.

Honors Advanced Engineering Most important discovery essay (1-2 pages)

Most IMPORTANT patent or aspect for your engineering type - In your opinion, for your field, what do you think is the important aspect of discovery for your field? In your opinion, why do you think it so important and why? Feel free to do some research for your field of engineering and read up on others opinions of what they feel is the most critical discovery and element that has been incorporated into designs for your field.

Rubric for grading: (see attached)

For example for a mechanical engineering, a catalytic converter in cars may be your choice and it's up to you to build your case as to why this is the most important invention. But think specifically about your field and what has had the biggest impact on the world based upon your field of choice.

Date for presentation and turning it in: First day of class (you will present what you found and what it means to you to your class)

All essays will be submitted through Turnitin.com on the specified deadline and needs to be in green or yellow upon review. This will be set up first week of returning. All essays should have sources listed in MLA reference format attached to essay.

RUBRIC for Journal Essay Research on Engineering

	3	2	1	0
INTRODUCTION Background/History Thesis Statement CONCLUSION	Well-developed introduction engages the reader and creates interest. Contains detailed background information. Thesis clearly states a significant and compelling position. Conclusion effectively wraps up and goes beyond restating the thesis.	Introduction creates interest. Thesis clearly states the position. Conclusion effectively summarizes topics.	Introduction adequately explains the background, but may lack detail. Thesis states the position. Conclusion is recognizable and ties up almost all loose ends.	Background details are a random collection of information, unclear, or not related to the topic. Thesis is vague or unclear. Conclusion does not summarize main points.
MAIN POINTS Body Paragraphs	Well developed main points directly related to the thesis. Supporting examples are concrete and detailed. The narrative is developed with a consistent and effective point-of-view, showing the story in detail.	Three or more main points are related to the thesis, but one may lack details. The narrative shows events from the author's point of view using some details.	Three or more main points are present. The narrative shows the events, but may lack details.	Less than three main points, and/or poor development of ideas. The narrative is undeveloped, and tells rather than shows, the story.
ORGANIZATION Structure Transitions	Logical progression of ideas with a clear structure that enhances the thesis. Transitions are mature and graceful.	Logical progression of ideas. Transitions are present equally throughout essay.	Organization is clear. Transitions are present.	No discernable organization. Transitions are not present.
STYLE Sentence flow, variety Diction	Writing is smooth, skillful, and coherent. Sentences are strong and expressive with varied structure. Diction is consistent and words well chosen.	Writing is clear and sentences have varied structure. Diction is consistent.	Writing is clear, but sentences may lack variety. Diction is appropriate.	Writing is confusing, hard to follow. Contains fragments and/or run-on sentences. Inappropriate diction.
MECHANICS Spelling, punctuation, capitalization	Punctuation, spelling, capitalization are correct. No errors.	Punctuation, spelling, capitalization are generally correct, with few errors. (1-2)	A few errors in punctuation, spelling, capitalization. (3-4)	Distracting errors in punctuation, spelling, capitalization.
Turn It In.com Amount of references to sites	<20%	20 – 30 %	40 – 50 %	> 50%
References used for Essay MLA Format	MLA Format accurate	MLA most aspects given	Only weblink given	No references included

- Please make sure MLA References are complete. Points will be deducted if you do not include all parts of MLA reference criteria.