



Mile High Academy Summer Honors Program 11th Grade

Overview:

The Mile High Academy Summer Honors Program is designed to keep students' skills sharp over the summer and prepare them for their futures. Participation in the summer program is required for all honors students. Completing the honors requirements is a prerequisite to consideration for National Honors Society membership.

General Requirements:

The Summer Honors Program consists of two components – the experiential component and the academic component. The experiential component is designed to help students identify a future career path through internships or volunteer service. The academic component is designed to help students stay mentally engaged over the summer.

All assignments are due on the first day of the school year. Failure to turn in the assignment at that time may result in the student being asked to withdraw from the MHA honors program.

Contact Information:

Should you have any general questions regarding the summer honors program, please feel free to contact our registrar, Brenda Rodie (brodie@milehighacademy.org) or Jenni Eno (jeno@milehighacademy.org). Direct specific project questions to the appropriate teacher:

- **Bible:** Leandro Bizama; lbizama@milehighacademy.org
- **English:** Jenni Eno; jeno@milehighacademy.org
- **Math:** Brian Howard; bhoward@milehighacademy.org
- **Science/Algebra I:** Lisa Venteicher; lventeicher@milehighacademy.org
- **Economics:** Rebecca Berg; rberg@milehighacademy.org
- **Technology:** Tyler Rettler; trettler@milehighacademy.org

Summer Program Checklist

Directions:

Use this checklist to ensure that you complete all of the project requirements.

Experiential Component

- Complete internship/volunteer service
- Have your supervisor complete the "Work Evaluation Form"
- Complete the self-reflection essay

Academic Component

- Complete the English project
- Complete the Math project

Choose ONE additional project in an area of interest

- Bible
- Science
- Economics
- Technology

Academic Project Steps:

- Read the project descriptions
- Determine which optional project you will complete (Bible, Physical Education, Science, Social Studies, or Technology)
- Thoroughly understand the directions and requirements
- Contact teachers with any questions
- Obtain the necessary materials
- Complete the projects
- Double-check that you met the project requirements including formatting instructions
- Turn-in in the assignments to the department head on the first day of school

Experiential Component

Project Overview:

- Complete 15 hours of internship or volunteer service
- Have your supervisor complete the "Work Evaluation Form" (available on the MHA website: Academics → Honors Program → Honors Work Evaluation Form)
- Complete your personal reflection essay

Internship/Volunteer Requirements:

It is our desire to make the experiential track as applicable to our students' future careers as possible. Therefore, there are some stipulations regarding where and for whom our students can volunteer.

- Internships and volunteer service may take place at any organization large enough that it employs workers. For example, students can volunteer at an animal shelter, but cannot pull weeds for a neighbor to meet the Honors Program requirements (though we certainly encourage all forms of service in your personal life).
- The student's supervisor cannot be a relative, family friend, or personal friend as we want the student to have to take the initiative to apply for or otherwise arrange for the position. We also want the student to experience working under a supervisor as one would in a work environment.

Personal Reflection Requirements:

Each student must complete a well-crafted, typed personal reflection essay that answers the following questions:

- Where did you volunteer or complete your internship and why did you choose that location?
- What tasks were you asked to complete as part of your job?
- How did completing these tasks make you feel? Did you enjoy the work? Did you find it satisfying?
- What connection do you see between your work/volunteer service and school?
- In what ways did you personally grow through this experience?
- How do you believe that your personal growth will help you in your future career?

FAQ:

- It is okay to work/volunteer at multiple locations to reach the required 15 hours. Each supervisor will need to fill out the "Work Evaluation Form," and the personal reflection essay should represent all of the activities engaged in by the student.
- Students are required to secure their own internship or volunteer opportunity. (MHA staff will be happy to provide recommendation letters for our students upon request.)
- Honors volunteer hours also count towards the volunteer hours required for graduation.

Academic Component

Complete the English, Math, and one project in a subject area of your choosing to fulfill the academic component of the summer program.

English

Assignments are based on what mathematics class students will be entering in the school year following the summer math program. Assignment descriptions are as follows:

Students Entering AP Literature or English 11

Project Overview:

Choose ONE book (that you have not previously read) to read from the list below and complete the corresponding assignment. The books are available at your local library or for purchase from any major book retailer.

*Note that all essays should be typed, double-spaced, in Times New Roman 12 pt. font.

Title: *Jane Eyre*

Author: Charlotte Brontë

Description: This gothic novel centers on Jane Eyre, an orphan who endures many hardships throughout her childhood. Because of her early experiences, she craves two things: independence and love. Jane eventually gains some independence as a governess, but in a cruel twist of fate, she secretly falls in love with Rochester, her wealthy employer. Though Jane is Rochester's intellectual equal, she is very aware of her own lack of beauty, money, and social status. Can she maintain her identity, independence, and moral compass in a relationship with a powerful man like Rochester? It may not matter, for he is hiding a dark secret that threatens far more than Jane's longings.

Assignment: In a 3-4 page essay, address the following:

Explore the conflicting elements fire and ice within the work. With whom or what are the motifs associated? What do they represent? What message does Brontë express through them? Use a minimum of five short quotes associated with fire and five short quotes associated with ice within your essay.

Title: *The Scarlet Pimpernel*

Author: Baroness Emmuska Orczy

Description: This action-packed novel is set during the French Revolution in a period known as the Reign of Terror. The protagonist, the Scarlet Pimpernel, is known for using his wit, charisma, and swordsmanship to rescue French aristocrats condemned to die by the guillotine.

Assignment: While the Scarlet Pimpernel is clearly the hero of this story, he poses an ethical dilemma. Historically, the French Revolutionaries sought to overthrow what was essentially a feudal system in France prior to the late 1700's. Under that system, many poor starved to death, while the aristocrats lived in opulence. Although the revolutionaries' indiscriminate

murder of the aristocrats by guillotine was brutal, far more poor serfs died over the centuries serving cruel aristocratic families. This brings us to the Scarlet Pimpernel, a wealthy baron who thwarted the laws set in place by the revolutionaries in order to save the lives of the rich oppressors they sought to overthrow. In a 3-4 page essay, address the following:

Is one ever justified in breaking rules/laws? If yes, what criteria determine when such justification exists? Was the Scarlet Pimpernel justified in his behavior? Why or why not? Use at least 10 short quotes from the text to support your answer.

Title: *Pilgrim's Progress*

Author: John Bunyan

Description: Considered one of the greatest works of English literature, this allegory follows Christian on his journey out of the City of Destruction to the Celestial City. Along the way, Christian faces many obstacles such as the Valley of the Shadow of Death, the Giant Despair, and Vanity Fair. The book – an interesting read even at face value – becomes deeply thought provoking when viewed from the perspective of our own personal spiritual journeys.

Assignment: Write a 3-4 page essay discussing the obstacles from *Pilgrim's Progress* that you personally believe are the most difficult to overcome for Christians. First, briefly describe how Christian faces the obstacles you have chosen. Then, delve into the allegorical significance of each encounter. Finally, apply the message to your own life. Use a minimum of 10 short quotes in your essay.

Title: *Wuthering Heights*

Author: Emily Brontë

Description: Set on the dark, stormy moors of northern England, this Gothic novel explores the human psyche. When Mr. Earnshaw brings home the orphaned Heathcliff, he sets into motion a story of love, heartbreak, jealousy, and revenge. Heathcliff finds his soul mate in Mr. Earnshaw's daughter, Catherine. However, Catherine must make a choice between the poor, psychologically troubled Heathcliff and his foil, the rich, kind, handsome Edgar Linton. The choice she makes has the power to destroy them all.

Assignment: Heathcliff and Catherine's love story is known as one of the most complex in all of literature, and yet, one could fairly make the case that they did not love each other at all. In a 3-4 page essay, address the following questions:

- What is true love?
- Based on your definition, does Heathcliff love Catherine?
- Based on your definition, does Catherine love Heathcliff?
- Are there any other characters in the novel that exhibit true love? How so?

Use a minimum of 10 short quotes from the text to support your responses.

Students Entering AP Language or English 12

Project Overview:

Choose ONE non-fiction book (that you have not previously read) from the list below to read. Then, write a 3-4 page essay that answers the following questions:

- What is the central argument presented in the work?
- What evidence does the author present to support the central argument? Include specific details that are particularly persuasive.
- Is the argument successful? Why or Why not?
- As you analyze the argument, include the elements of SOAPStone (subject, occasion, author, speaker, and tone).

*Note that all essays should be typed, double-spaced, in Times New Roman 12 pt. font.

- **Title:** *Freakonomics*
Author: Steven D. Levitt and Stephen J. Dubner
Description: Ostensibly a book about economics, this entertaining read explores the power of incentives in everything from crime to sports.
- **Title:** *Outliers*
Author: Malcolm Gladwell
Description: This book tackles the simple question, “What makes highly successful people different?” If you want to be a millionaire or get a perfect score on the ACT, this book is for you.
- **Title:** *The Overachievers: The Secret Life of Driven Kids*
Author: Alexandra Robbins
Description: Author Alexandra Robbins follows a group of teens trying to survive in the cutthroat environment of a typical high school, making the argument that the high stakes nature of our academic system poses an escalating danger to our youth.
- **Title:** *Fermat’s Enigma*
Author: Simon Singh and John Lynch
Description: This national best seller is about the mathematicians who sought for 350 years to prove Fermat’s Last Theorem, the holy grail of mathematics. Author Simon Singh “tells the astonishingly entertaining story of the pursuit of that grail, and the lives that were devoted to, sacrificed for, and saved by it. Here is a mesmerizing tale of heartbreak and mastery that will forever change your feelings about mathematics.” It doesn’t matter whether you love or hate math, this really is a fascinating read.
- **Title:** *Profiles in Courage*
Author: John F. Kennedy
Description: Originally published in the 1950’s by JFK and winner of the Pulitzer Prize, this book profiles eight unsung heroes, senators who tried to stop the Civil War. Many say that this book should be required reading for all Americans as it shows how to accomplish great deeds during terrible times.
- **Title:** *I am Malala: The Girl Who Stood Up for Education and was Shot by the Taliban*
Author: Malala Yousafzai and Christina Lamb
Description: Malala Yousafzai is the youngest recipient of the Nobel Peace Prize. This memoir details the confrontation between Yousafzai, a Pakistani teenage girl, and members of the Taliban when she refused to stop attending school. After being shot in the head at point-blank range, Yousafzai not only survived but became a voice for the oppressed around the world.

Mathematics

Project Overview:

Assignments are based on what mathematics class students will be entering in the school year following the summer math program. Assignment descriptions are as follows:

Students Entering Algebra II – Problem Solving

Get your textbook ahead of time in order to complete these assignments. The book is:

Larson, Ron, et al. 2012. *Holt McDougal Larson Algebra 2*. Houghton Mifflin Harcourt Publishing Company. ISBN 9780547647159.

In the “Student Resources” portion of the textbook, there is a section called “Skills Review Handbook.” There are 27 topics covered. Each topic has examples and practice problems. You must do the following five sections:

1. “Binomial Products”
2. “LCDs of Rational Expressions”
3. “Writing Algebraic Expressions”
4. “Triangle Relationships”
5. “More Problem Solving Strategies”

In addition to these five sections, you are to choose five more sections, for a total of 10 assignments. Choose sections that you know from your own mathematical experience are areas that you need to improve. Be honest with yourself. Do not just choose a section because it looks easy or you know that it will be easy for you. Instead, choose sections that will help you improve your skills.

Each assignment must have either 20 problems or all of the problems completed, whichever occurs first. For example, the section “Calculating with Percents” has 31 practice problems. Do 20 of them to complete the assignment. However, the section “Perimeter and Area” has 8 problems. Do all of them to complete the assignment.

Calculator Use is Prohibited. Sure, it is impossible to verify whether you use your calculator or not, but take it as a challenge!

Students Entering PreCalculus – Problem Solving

Get your textbook ahead of time in order to complete these assignments. The book is:

Larson, Ron. 2014. *PreCalculus with Limits, 3rd Edition*. Cengage Learning. ISBN 9781133962885.

In Appendix A (p. A1) of the textbook, there are seven sections which are designed to be a review of the fundamental concepts of Algebra. You are to review each of the concepts for

sections A.1-A.7. There are many examples and good explanations of all of the concepts. Once you have reviewed each of the sections, you are to complete 25 problems from the exercises section. Choose any 25 problems, but make sure that you choose at least one from each type of problem that is presented. For example, in the A.1 Exercises, there are sections labeled “Classifying Real Numbers,” “Plotting Points on the Real Number Line,” “Plotting and Ordering Real Numbers,” etc. Choose at least 1 problem from each of these sections to complete.

Calculator Use is Prohibited. Sure, it is impossible to verify whether you use your calculator or not, but take it as a challenge!

Students Entering AP Calculus – Reading and Problem Solving

Get your textbook ahead of time in order to complete these assignments. The book is:

Larson, Ron and Edwards, Bruce. 2014. *Calculus of a Single Variable, 10th Edition, AP Edition*. Cengage Learning. ISBN 9781285060330.

You are first required to read about the AP Exam. On page xxi of the textbook there is a section called “Preparing for the AP Calculus Examination,” and on page xxiv there is a section called “Taking the AP Calculus AB Examination.” You are to read these sections in order to familiarize yourself with the AP Calculus AB Exam. Many of the questions that students have about the exam are addressed including: how the test is set up, how much time you will have to take it, etc.

For the second part of your assignment, you are to work through Chapter P – “Preparation for Calculus.” There are four sections. You should read the explanations and follow the examples for each section. Each section P.1 – P.4 has an exercises section. You should choose 20 exercises from sections P.1 – P.3 and 8 exercises from P.4 to complete. On p. 37 there are review exercises. You should choose 10 exercises to complete. Finally, on p. 39 there are Problem Solving Exercises. You should choose 7 exercises to complete from Problem Solving.

While choosing your problems, make sure that you choose exercises from each type of problem. For example in P.1 there are exercises on Matching, Sketching a Graph by Point Plotting, Approximating Solution Points, etc.

Students Entering AP Statistics – Reading and Problem Solving

Get your textbook ahead of time in order to complete these assignments. The book is:

Starnes, Tabor, Yates and Moore. *The Practice of Statistics, 5th Edition*. W.H. Freeman. 2014. ISBN: 978-1464108730. (look for the flamingoes!)

You are to read Chapter 1 of the textbook. The objectives are listed on the left and the assignments are listed on the right. You are to have all of the problems completed before the first day of class. On the first day of class we will review the syllabus, and then check the

problems together in class. If you do not have the assignment ready for class on the first day, it will be considered late and will therefore be subject to applicable “late assignment” penalties.

<p>1.1 - Data Analysis: Making Sense of Data Identify Individuals and variables in data sets. Classify variables as Categorical or Quantitative.</p>	<p>1.1 p20 #11, 15, 17, 25</p>
<p>1.2 - Displaying Quantitative Data with Graphs Make and interpret dot plots, stem plots and histograms of data. Describe shape, center and spread and identify outliers. Compare dot plots, stem plots and histograms.</p>	<p>1.2 p41 #39, 43, 53, 59</p>
<p>1.3 - Describing Quantitative Data with Numbers Calculate and interpret measures of center and spread. Choose the appropriate measure of center and spread in a given setting. Identify outliers using the 1.5* IOR rule. Make and interpret boxplots. Use appropriate graphs and numerical summaries to compare distributions of quantitative variables.</p>	<p>1.3 p69 #83, 88, 91, 93, 97, 99, 105</p>

Bible

Project Overview:

Choose one of the projects below. Each option requires about 100 pages of reading from an adaptation of the classic *Conflict of the Ages* series, by Ellen G. White. You can purchase them online from the Adventist Book Center website or visit the store on Downing – across from Porter Hospital – to pick up a copy from there.

Option 1 – Suggested for the summer before either 11th or 12th grade

Step 1:

Read *Beginning of the End*, chapters 1-4, pages 7-25; and *Love Under Fire*, Intro, pages 7-12, chapters 29-42, pages 203-273.

Description: This adaptation of the classic *Patriarchs and Prophets* and *The Great Controversy* gives a glimpse of the reality about the fierce struggle between good and evil.

Step 2:

Select seven quotes from the reading that in your opinion show how fierce and difficult the struggle between good and evil has been throughout history. In concise sentences, explain why you chose each quote to represent the fierceness of the war.

Step 3:

Choose one of the following:

Written assignment: Write a 10-paragraph essay outlining how the war between good and evil started and how it will end. Start by discussing why God allowed evil and how evil has affected human life. Share how you have experienced this same struggle in your life. Close the essay by explaining how God has overcome evil through self-sacrifice and why He has the right to bring justice to Satan and his kingdom of darkness.

***Small Group Study Guide:** Develop a one-hour small group study guide and use it to lead a group discussion/study in the setting of your choice. Design the study around the reading material. You can separate the discussion/study into two sessions if you want. Make sure to turn in the study guide and the recorded discussion.

***Sermon:** Make either an outline or a manuscript for a sermon based on one of the chapters or stories in the reading. Then, deliver the sermon in a setting of your choosing. The sermon can be anywhere from 15 minutes to 30 minutes long. Make sure to turn in your outline or manuscript and your recording of it.

*The video recording can be saved in any format that would allow a computer to play it.

Option 2 – Suggested for the Summer before either 11th or 12th grade

Step 1:

Read *Beginning of the End*, chapters 1-4, pages 7-25; and *Love Under Fire*, Intro, pages 7-12, and chapters 29-42, pages 203-273.

Description: This adaptation of the classic *Patriarchs and Prophets* and *The Great Controversy* gives a glimpse of the reality about the fierce struggle between good and evil.

Step 2:

Projects – choose one of the following:

***Creative media project:** Make a short mini-series with at least 3 episodes that are at least 10 minutes long in a format of your choosing. For example, you can do animation or conventional filming. The series must be a parable or allegory of the real Great Controversy. There have to be clear connections with the points in the reading. You may work with one or two partners as long as you discuss each individual's tasks with Mr. Bizama to ensure that each person participates equally. The more people acting, editing, or writing the storyboard the longer the mini-series must be.

***Documentary:** Film a documentary about some aspect of the history of the Christian church through the ages that demonstrates the conflict between good and evil in our world. The documentary must be at least 20 minutes long. You may include interviews, shots of various places, graphics, etc.

***Creative Writing:** Write a short novel or story that is an allegory or parable to the war between good and evil. The story has to be at least 6 pages long and have clear connections to points of the reading.

*All Option 2 projects require pre-approval from the Religion department to ensure a clear understanding of the project expectations.

Economics

Project Overview:

Read the first 4 chapters of the book below and complete the corresponding assignment. If you have any questions, please contact Mrs. Berg (rberg@milehighacademy.org). The book is available at your local library, or you may purchase it from any major book retailer.

Title: *Naked Economics*

Authors: Charles Wheelan

Description: Finally! A book about economics that won't put you to sleep. In fact, you won't be able to put this bestseller down. In our challenging economic climate, this perennial favorite of students and general readers is more than a good read, it's a necessary investment—with a blessedly sure rate of return. Demystifying buzzwords, laying bare the truths behind oft-quoted numbers, and answering the questions you were always too embarrassed to ask, the breezy *Naked Economics* gives readers the tools they need to engage with pleasure and confidence in the deeply relevant, *not* so dismal science.

Assignment: Read the first 4 chapters of *Naked Economics*. As you read, watch for the following economic concepts. Define them and give me at least 1 concrete and specific example from the book.

Chapter 1 - The Power of Markets

Market allocation

Assume rational utility-maximizers

Opportunity costs

Profit max

Prices allocate resources

Barriers to entry

Market price, pricing decision & price discrimination

Lessons of markets

Chapter 2 - Incentives Matter

Wrong incentives lead to undesirable outcomes

Principal-agent problem

Prisoners dilemma

Creative destruction

Tax and govt program disincentives

Chapter 3 – Government and the Economy

Externalities

Govt solutions to externalities

Govt makes market economy possible – rights, laws regulations

Public goods

Redistribution

Chapter 4 – Government and the Economy II

Govt inefficiency

Govt allocation vs. private allocation

Effects of regulation

Effects of taxation

*Note that the answers should be typed, double-spaced, and written in Times New Roman 12 pt. font.

Science

Conduct a fun and informative research project on any topic of your choosing in the either Anatomy & Physiology or Physics, and write a double-spaced research paper about five pages long.

You will need to find at least eight sources to develop further knowledge on the subject. Include the following in your essay:

- Science involved
- Alternative/similar research efforts

- Benefits to society
- Company development
- Popular demand
- Effects on society
- Negative impacts (if applicable)

Sources must be cited properly using APA format.

Technology

Step 1:

Choose one topic from the list below or submit a topic of your own before the end of the school year for approval:

- The Cloud – Pros and Cons
- Social Networking and how it has changed relationships and marketing
- Online safety (identity theft, digital footprints, etc.)
- IT Security – Research issues dealing with IT security (e.g. social engineering, the Target data theft, software vulnerabilities, the Heartbleed vulnerability, viruses and malware, etc.).
- Content filtering – Does it have a place at school or work?
- Software and/or music and movie piracy
- IT investment challenges – Some examples include trying to plan multi-year technology strategies in a quickly moving area, budget considerations and challenges, and causes and ramifications of over/under-buying.

Step 2:

Research the topic using at least 3 sources from at least 2 of the following categories: book, research database, website/blog, magazine, video, documentary, interview, or podcast. Please list the sources you use even if they are not quoted in the paper.

Step 3:

Write an executive summary of your findings on the topic. Then, answer the following questions in 1-3 paragraphs:

- What did you learn about your topic? Did anything surprise you?
- Do you think this topic is something relevant to students and/or the school? Why or why not?
- Do you think the issues involving your topic will get better or worse as time goes on? Why?
- How did you go about researching your topic and finding sources?

Potential Resources:

- www.pcmagazine.com
- www.pcworld.com
- www.us-cert.gov
- www.cnet.com
- <http://blog.opendns.com>
- <http://www.microsoft.com/en-us/piracy>
- <http://www.smbitjournal.com>
- <http://www.bsa.org>
- *Worm: The First Digital World War* by Mark Bowden
- *Glass Houses: Privacy, Secrecy, and Cyber Insecurity in a Transparent World* by Joel Brenner
- *The Art of Intrusion* and *The Art of Deception* by Kevin Mitnick

It is suggested that you use the library for some of your research – if your local library does not have a book you need, there is a good chance they can borrow it for you from another library that does.