## History of Mathematics & Applications

## THIS COURSE DOES NOT REQUIRE A FINAL EXAM

# SYLLABUS

### READ THESE INSTRUCTIONS NOW!

**1.) YOUR ASSIGNMENTS ARE ON YOUR SYLLABUS SO…**

**A.) Download & Save it**

**B.) Read it ALL NOW!**

**C.) For textual readings, use the Downloads on your class page. Any additional links will be on your syllabus.**

d.) Submit all work at once from your class page. Keep answers right on this document including images.

# Plagiarism Statement

**I understand that I must use research conventions to cite and clearly mark other people's ideas and words within my paper. I understand that plagiarism is an act of intellectual dishonesty. I understand it is academically unethical and unacceptable to do any of the following acts of which I will be immediately expelled without refund:**

- **To submit an essay written in whole or in part by another student as if it were my own.**
- **To download an essay from the internet, then quote or paraphrase from it, in whole or in part, without acknowledging the original source.**
- **To restate a clever phrase *verbatim* from another writer without acknowledging the source.**
- **To paraphrase part of another writer's work without acknowledging the source.**
- **To reproduce the substance of another writer's argument without acknowledging the source.**
- **To take work originally done for one instructor's assignment and re-submit it to another teacher.**
- **To cheat on tests or quizzes through the use of crib sheets, hidden notes, viewing another student's paper, revealing the answers on my own paper to another student through verbal or textual communication, sign language, or other means of storing and communicating information--including electronic devices, recording devices, cellular telephones, headsets, and portable computers.**
- **To copy another student's work and submit the work as if it were the product of my own labor.**

**Text: History of Mathematics, An Introduction, By David M. Burton**

**WEEKS ONE-TWO**

**Watch: https://www.youtube.com/watch?v=2WcbPcGrQZU**

**ASSIGNMENT: Discuss what you find interesting and intriguing in the documentary, History of Mathematics. List questions that you have that aren't answered in the video.**

**RESPONSE:**

Read Chapter One

A. Watch: History of Mathematics and Applications Overview

https://www.youtube.com/watch?v=2No_CMrxBe8

What did you learn in this video that you did not already know? Give a summary of each theory – concept discussed.

RESPONSE:

B. Watch: The Mathematics Map

https://www.youtube.com/watch?v=OmJ-4B-mS-Y

What did you learn in this video that you did not already know? What is the basic difference between pure mathematics and applied mathematics? Give a summary of ways in which mathematics is applied in the different professional fields?

RESPONSE:

C. Watch: Where do Math Symbols Come From?

https://www.youtube.com/watch?v=eVm063xmnow

What did you learn in this video that you did not already know? How did math symbols improve math?

RESPONSE:

D. Watch: How to Read Math

https://www.youtube.com/watch?v=Kp2bYWRQylk

What did you learn in this video that you did not already know?

RESPONSE:

After reading Chapter One….

1.1: Give a summary of how mathematics came to be

SUMMARY:

1.2 Problems: Give the answers only to the following problems.

#1

#4

#9

#12

1.3: What contribution did the early Babylonians make to mathematics?

RESPONSE:

1.3 Problems: Give the answers only to the following problems.

#1

#2

#4

#6

#12

#14

#15

WEEKS THREE-FOUR

Read Chapter Two

A. Watch: Egyptian Method of Multiplication – take notes

https://www.youtube.com/watch?v=RyuuYJ4iGKU&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=1

Share your notes: You can take a picture and place the image/s here.

NOTES:

B. Watch: Ancient Egyptian Division and Fractions – take notes

https://www.youtube.com/watch?v=Sij35nVm97U&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=2

Share your notes: You can take a picture and place the image/s here.

NOTES:

C. Watch: The Pythagoreans and Whole Numbers

https://www.youtube.com/watch?v=Cdcur9s3n-I&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=3

Share your notes: You can take a picture and place the image/s here.

NOTES:

D. Watch: Plimpton 322 Overview

https://www.youtube.com/watch?v=9o1FlKc_3aM

SUMMARY OF VIDEO:

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After reading Chapter Two….

Give a summary of how the Egyptians contributed to mathematics.

SUMMARY:

Give a summary of how the Rosetta Stone.

SUMMARY:

2.3 Problems: Give the answers only to the following problems.

#1

#2

#8

#14

#22

2.4 Egyptian Geometry: What speculations were made about the Great Pyramids?

RESPONSE:

2.4 Problems: Give the answers only to the following problems.

#1 (a)

#4

#10 (a)

2.5 Problems: Give the answers only to the following problems.

#1

#5

#7

#13 (c)

2.6 Problems: Give the answers only to the following problems.

#1

#2

#8 (a)

Watch: Watch each of the five videos on the mystery of the pyramid's construction.

https://www.youtube.com/watch?v=aAqZ44C0j5k

https://www.youtube.com/watch?v=gQSdNZGUgIU

https://www.youtube.com/watch?v=TJcp13hAO3U

https://www.youtube.com/watch?v=rxFXsoqbfrk

https://www.youtube.com/watch?v=rxFXsoqbfrk

PROVIDE A SUMMARY of the complexity of the building of ancient pyramids and your ideas on how the pyramids could have been built.

SUMMARY:

**WEEKS FIVE-SIX**

**Read Chapter Three**

A. Watch: Classical Greece. The Pythagorean Theorem – take notes

https://www.youtube.com/watch?v=YLGKwbfTQ0I&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=4

Share your notes: You can take a picture and place the image/s here

NOTES:

B. Watch: Classical Greece. Irrational Numbers – take notes

https://www.youtube.com/watch?v=rr0HQqTNzIE&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=5

Share your notes: You can take a picture and place the image/s here

NOTES:

C. Watch: Classical Greece. Approach to Arithmetic – take notes

https://www.youtube.com/watch?v=obxLj_iIZ2k&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=6

Share your notes: You can take a picture and place the image/s here

NOTES:

3.2 Problems: Give the answers only to the following problems

#3

#4

#9

#11 (d)

3.3 Problems: Give the answers only to the following problems

#1

#5

#15

3.4 Problems: Give the answers only to the following problems

#1

#2

#7

3.5 Problems: Give the answers only to the following problems

#1

#7

WEEKS SEVEN-EIGHT

Read Chapter 4 up to 4.4

A. Watch: Euclid Prime Numbers – take notes

https://www.youtube.com/watch?v=SNEVItgvJyg&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=7

Share your notes: You can take a picture and place the image/s here.

NOTES:

B. Watch: Euclid's Algorithm Part One – take notes

https://www.youtube.com/watch?v=zWvlvCjSNkI&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=8

Share your notes: You can take a picture and place the image/s here.

NOTES:

C. Watch: Euclid's Algorithm Part Two – take notes

https://www.youtube.com/watch?v=JetqKycDi5k&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=9

Share your notes: You can take a picture and place the image/s here.

NOTES:

D. Watch: Euclid's Algorithm and Continued Fractions – take notes

https://www.youtube.com/watch?v=LiKbReHyl3U&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=10

Share your notes: You can take a picture and place the image/s here.

NOTES:

4.1 – Summarize of Euclid and his mathematical contribution

SUMMARY:

4.2 Problems: Give the answers only to the following problems.

#1

#2

#5

#9

#12

4.3 Problems: Give the answers only to the following problems.

#1

#7

#9

#13

#26

WEEK NINE

Read Chapter 4.4 to end of Chapter 4

A. Watch: Archimedes Quadrature of the Parabola – take notes

https://www.youtube.com/watch?v=A1ZVrKa5B7E&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=11

Share your notes:  You can take a picture and place the image/s here.

NOTES:

B. Watch: Archimedes Method of Exhaustion – take notes

https://www.youtube.com/watch?v=5CcUYlDp6dI&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=12

Share your notes:  You can take a picture and place the image/s here.

NOTES:

C. Watch: Eratosthenes and the Circumference of Earth – take notes

https://www.youtube.com/watch?v=qNRMEtSqEQE&list=PLBevhpjdlMgnOIMqZwyNmQMi_5hzI3oQK&index=13

Share your notes:  You can take a picture and place the image/s here.

NOTES:

4.4 Problems: Give the answers only to the following problems.

#1

#3

#8

4.5 Problems: Give the answers only to the following problems.

#3

#5

#7

Watch: History of Banned Mathematics

https://www.youtube.com/watch?v=VmWVXOIQblM

PROVIDE A SUMMARY

SUMMARY:

WEEK TEN

Watch: How Imagenary Numbers Were Made

https://www.youtube.com/watch?v=cUzklzVXJwo

PROVIDE A SUMMARY

SUMMARY:

Watch: Measuring the Speed of Light

https://www.youtube.com/watch?v=pTn6Ewhb27k

PROVIDE A SUMMARY

SUMMARY:

Watch: Math Riddle

https://www.youtube.com/watch?v=iSNsgj1OCLA

PROVIDE A SUMMARY of the difficulty in solving this riddle.

SUMMARY:

Watch – Kepler; The Infinite Repeating Number

https://www.youtube.com/watch?v=48sCx-wBs34

PROVIDE A SUMMARY of the pattern.

SUMMARY:

Watch – Math's Fundamental Flaw

https://www.youtube.com/watch?v=48sCx-wBs34

PROVIDE A SUMMARY of the Flaw.

SUMMARY: