



# *Mathematics 2023 Summer Advising*

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# Quick Notes



- Check your VT email!
- Transfer credit (including AP/IB/CLEP/Cambridge/DE)
- Review all information on right-hand side of [math.vt.edu/summeradvising](https://math.vt.edu/summeradvising)
  - Computer Requirements
  - Progress to Degree Rules
  - Sample 4-Year Course Plans, Checksheets, Handbook
  - First-Year Pathways Courses

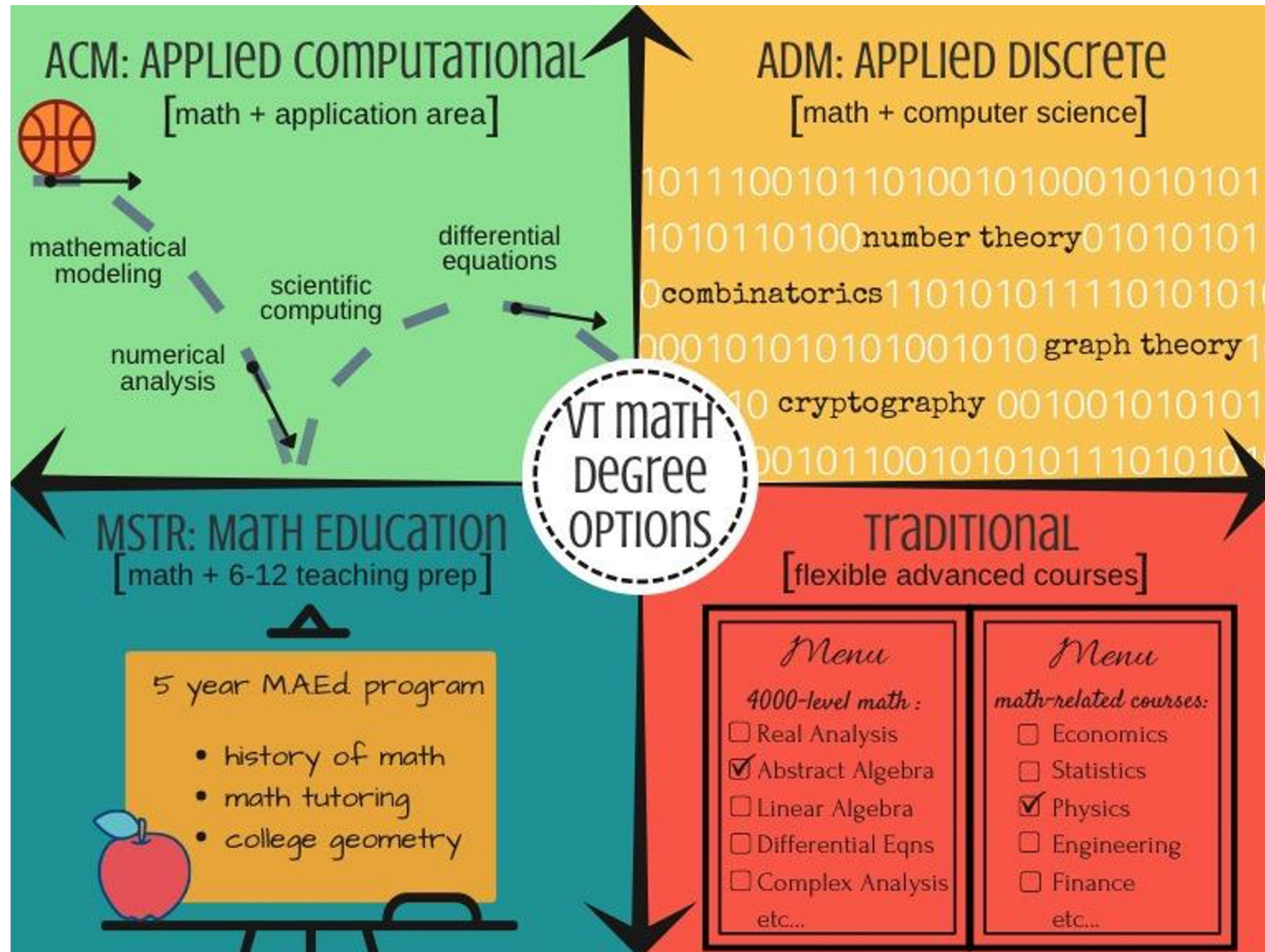
# *Basic Competency Requirement Foreign Language*

- **Requirement:** At least 2 years of a single foreign, classical, or sign language in high school
- **If not met:** Complete 6 credits of a single foreign, classical, or sign language at the college level
  - courses taken to meet this requirement **do not** count toward the hours required for graduation

ARABIC  
CHINESE  
FRENCH  
GERMAN  
GREEK

ITALIAN  
JAPANESE  
LATIN  
RUSSIAN  
SPANISH

# Degree Options for B.S. Mathematics



# Completing a Mathematics B.S.

<b>General Education (Pathways)</b>	45 credits
<b>Math Major Requirements</b>	approx. 60-75* credits
<b>Free Electives</b>	9-21 credits
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<b>Total</b>	120 credits

- ✓ More free elective credits could be possible by satisfying multiple requirements with a single course.
- ✓ Some major requirements satisfy Pathways requirements, and those credits are counted twice above, leaving every student with some free electives.

\*Range depends on degree option.

# *First Year Experience (FYE)*

## *MATH 1004 - Discovering Mathematics I*

***Fall: 1 credit, P/F; Spring: 2 credits, A-F; CRN 86979***

### Yearlong course:

- the math major
- career opportunities
- LaTeX
- geometry beyond Euclid
- mathematical modeling
- graph theory
- research... and much more!

### Meet:

- other first-year math majors
- upper-class math majors
- mathematics department faculty members

# Math Course Selection

## Calculus Sequence

- ***MATH 1214 (Preparation for Calculus, 3 credits)***
  - No calculus transfer credit; Have not passed ALEKS placement assessment with 80 or higher
- ***MATH 1225 (Calculus 1, 4 credits)***
  - No calculus transfer credit; Have passed ALEKS
- ***MATH 1226 (Calculus 2, 4 credits)***
  - Transfer credit for 1225
- ***MATH 2204 (Multivariable Calculus, 3 credits)***
  - Transfer credit for 1225 and 1226

# *Mathematics in a Computational Context*

## *MATH 2405H-2406H*

- Prerequisites: MATH 1225 and MATH 1226
- Yearlong honors course (5 credits fall; 5 credits spring)
- Covers MATH 2114, 2214, and 2204
  - Alt: 2114, 2214, 2204 as individual courses in same timeframe
- Fast-paced and conceptual
- Motivated by applications and taught with attention to algorithmic implementation
- Will teach math in a context in which computers are a tool to be used \*when needed\* to handle hard problems





# *Programming Requirement*



- All Degree Options:
  - Consider MATH 1454: Intro to Math Programming
  - Introduction to programming in MATLAB language
  - Focused on mathematical applications
  - Must at least be enrolled in and Eligible for MATH 1225
- ADM Option: CS 1114 (Typically after completing MATH 1225)

# Pathways Concepts

(See checksheet for details)

## Core Concepts

**Discourse**  
9 credits

**Reasoning in the  
Social Sciences**  
6 credits

**Critique and Practice in  
Design and the Arts**  
6 credits

**Reasoning in the  
Natural Sciences**  
6 credits

**Quantitative and  
Computational Thinking**  
9 credits

**Critical Thinking  
in the Humanities**  
6 credits

**Critical Analysis of Identity and  
Equity in the United States**  
3 credits (may be double-counted  
with another core concept)

## Integrative Concepts

**Ethical Reasoning**  
Throughout

**Intercultural and Global Awareness**  
Throughout

Pathway 1: Discourse, 9 credits  
(1f: 6 credits + 1a: 3 credits)

1f-Foundational credits:

Fall Semester

Spring Semester

ENGL 1105 (3).....ENGL 1106 (3)

ENGL 1106 (3)\*

\* If you have transfer credit for ENGL 1105 only.



# *Specialized Courses*



Register for the necessary courses if you are a member of any of the following:


- ***Corps of Cadets***
- ***Cadet Regimental Band***
- ***Marching Virginians*** (Audition required)
- ***Student Athlete***
- ***Living Learning Community Member***
- ***Residential College***




# *Breakout Rooms*



- Shortly you will begin to review and adjust your course schedule as needed
- We've created a personal breakout room for each of you, labeled with your last name
- If you have any questions you wish to ask in private, enter your breakout room
- Jessica or Eric will join you there to assist with your questions as soon as possible



*Once you have 14-17 credits on your fall course schedule*



- Jessica or Eric must check over your schedule
- Complete the Advising Session Exit Form
  - linked on the right-hand side of [math.vt.edu/summeradvising](https://math.vt.edu/summeradvising)