**MATH Courses:**

Core courses:

\_\_MATH 1551 Differential Calc (2)

\_\_MATH 1552 Integral Calc (4)

\_\_MATH 2551/2561 Multivar. Calc (4)

\_\_MATH 2552/2562 Differential Eq. (4)

\_\_MATH 1553/1554/1564 Lin Alg (2/4)\*

Bridging courses:

\_\_MATH 2106 Foundation Math. Proof (3)

\_\_MATH 3012 Applied Combin. (3)

\_\_MATH 3235 Prob. Theory (3)

\_\_MATH 3406 Second Course Lin. Alg (3)

Upper level foundation courses: (C needed)

\_\_MATH 4107 Abstract Algebra I (3)

\_\_MATH 4317 Real Analysis I (3)

\_\_MATH 4320 Complex Analysis (3)

Plus 4 courses from Math Electives List A

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9 additional hours from Math Electives List A or Math Electives List B

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The 9 additional hours cannot be used in four courses listed above.

**Supporting courses:**

\_\_ CS 1301 (3)

\_\_ CS 1331 (3)

\_\_Lab Sci (BIOL, CHEM, EAS) (4)

\_\_PHYS 2211 Physics I (4)

\_\_PHYS 2212 Physics II (4)

Sci/Eng Electives (9):

Three upper level courses (3 hours each) from an approved school, at least two of which must be from the same school. (Approved schools: Biol, Chem, EAS, Neur, Phys, Psyc, Eng Schools, CS, CX, Econ)

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**GA Legislative Requirements** \*\*See other side.

\_\_US History \_\_GA History

\_\_US Constitution \_\_GA Constitution

**General Requirements:**

Humanities(12 total):

\_\_ENGL 1101 (3)

\_\_ENGL 1102 (3)

Humanities/Fine Arts Elective (6):

approved HUM courses, such as literature, phil., foreign language, etc. See catalog.

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Social Sciences (12 total):

\_\_One of HIST 2111, HIST 2112, POL 1101, INTA 1200, PUBP 3000 (3)

Social Science Electives (9): approved SS courses, such as economics, HTS, psychology, sociology, etc. See catalog.

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Wellness

\_\_ APPH 1040/1050/1060 (2)

Free Electives (11)

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**Total**: 122 hours

**Notes:**

\*Linear Algebra – Do not take MATH 1553 Intro to Linear Algebra (2). Take instead MATH 1554 Linear Algebra (4) or MATH 1564 Linear Algebra w/ Abstract Vector Spaces (4).

Math Electives List A and List B on back.

CS 4001-4009 do not count as Sci/Eng Electives

MATH 3670, ISYE 3770, CEE 3770 cannot be used as Math Electives, Sci/Eng Electives, or Free Electives

All courses other than Free Electives must be taken for a letter grade if possible. Up to 9 hours of Free Electives may be taken Pass/Fail.

**Math Electives List A** (all are 3 hours):

MATH 3236 Statistical Theory

MATH 4022 Intro to Graph Theory

MATH 4032 Combinatorial Analysis

MATH 4108 Abstract Algebra II

MATH 4150 Intro to Number Theory

MATH 4210 Mathematical Foundation for Data Science

MATH 4221 Stochastic Processes I

MATH 4261 Mathematical Statistics I

MATH 4318 Real Analysis II

MATH 4347 Partial Diff Equations I

MATH 4431 Introduction to Topology

MATH 4432 Intro to Algebraic Topology

MATH 4441 Differential Geometry

MATH 4541 Dynamics & Bifurcations I

MATH 4640 Numerical Analysis I

**Math Electives List B** (unless otherwise listed, all are 3 hours):

MATH 4262 Mathematical Statistics II

MATH 4280 Intro to Information Theory

MATH 4580 Linear Programming

MATH 4581 Classical Math.Methods in Eng

MATH 4699 Undergrad Research (1-6)

MATH 4755 Mathematical Biology

MATH 4782 Quantum Info & Quantum Computing

MATH 4801 Undergraduate Seminar (1)

MATH 4802 Math Problem Solving (2)

CS 3510/3511 Design & Analysis Algor. I

CS 4510 Automata and Complexity

CS 4530 Randomized Algorithms

CS 4540 Advanced Algorithms

CS 4641 Machine Learning (3)

CX 4140 Comput. Modeling Algorithms

CX 4240 Comput. Data Analysis

ECON 3161 Econometric Analysis

ECON 4180 Game Theory for Economics

ISYE 3133/3833 Engineering Optimization

ISYE 4031 Regression and Forecasting

ISYE 4133 Advanced Optimization

**Not Currently Offered:**

MATH 4080/4090 Senior Project (has been replaced by MATH 4699 Undergrad Research)

MATH 4222 Stochastic Processes II

MATH 4255 Monte Carlo Techniques

MATH 4348 Partial Diff Equations II

MATH 4542 Dynamics & Bifurcation II

MATH 4641 Numerical Analysis II

MATH 4777 Scientific Computing

**Georgia Legislative Requirements (GLRs):\*\***

Students must satisfy requirements in 4 areas: GA History; GA Constitution; US history; US Constitution.

US and GA History requirement is satisfied by one of HIST 2111 or HIST 2112

US and GA Constitution requirement is satisfied by INTA 1200, POL 1101, PUBP 3000

Beginning in Fall 2023, students will also have the option to satisfy these requirements via examinations through Canvas.

Credit for any of the 5 listed courses obtained through AP or transfer credit does **NOT** satisfy the GA History or GA Constitution GLR, only the US History or US Constitution GLR.