Students at the Texas Academy of Mathematics and Science must pass all courses taken. The course descriptions have been taken from the University of North Texas catalog:

CHEM 1410  *General Chemistry for Science Majors*
Fundamental concepts, states of matter, periodic table, structure and bonding, stoichiometry, oxidation and reduction, solutions, and compounds of representative elements.

CHEM 1413  *Honors General Chemistry*
Fundamental concepts, states of matter, periodic table, structure, solutions and compounds of representative elements.

CHEM 1420  *General Chemistry for Science Majors*
Thermodynamics, reaction rates, equilibrium, electrochemistry, organic chemistry, polymers, radioactivity and nuclear reactions.

CHEM 1423  *Honors General Chemistry*
Thermodynamics, reaction rates, equilibrium, electrochemistry and nuclear chemistry. This course is strongly advised and may be required for students planning to engage in undergraduate chemical research.

CHEM 1430  *Laboratory Sequence for General Chemistry*
Laboratory techniques, weighing, errors and significant figures, identification and purification of substances, and elementary quantitative analysis.

CHEM 1440  *Laboratory Sequence for General Chemistry*
Quantitative, gravimetric and volumetric analyses; coordination compounds.

CSCE 1030  *Computer Science I*
Introduction to Computer Science and Engineering, problem solving techniques, algorithmic processes, software design and development.

ENGL 1315  *Writing about Literature I*
Writing as a means of critical thinking using readings from poetry and drama as sources for essay topics. Emphasis on the process of perfecting the essay through the writing of several drafts.

ENGL 1325  *Writing about Literature II*
Study of relationship between writing and research with research topics drawn from readings from prose fiction. Emphasis on the process of perfecting the essay through the writing of several drafts.

ENGL 2331  *World Literature*
Comparative and critical reading skills from a global perspective, tracing significant literary themes, texts, movements and genres across a wide range of world literatures and cultures from ancient times to the present day.

ENGR 1030  *Technological Systems*
Introduction to technological systems with focus on societal interrelationships; past, present and future trends; and influence and impact on technological literacy.

ENGR 1304  *Engineering Graphics*
Fundamentals and principles of engineering drafting practices used in technical processes.
ENGR 2301  Statics
Basic theory of engineering mechanics, using calculus, involving the description of forces, moments and couples acting on stationary engineering structures. Equilibrium in 2 and 3 dimensions, free-body diagrams, friction, centroids, centers of gravity and moments of inertia.

HIST 2610  United States History to 1865
From colonial origins through the Civil War.

HIST 2620  United States History since 1865
From the Civil War to the present.

MATH 1650  Pre-Calculus
Preparatory course for calculus: trigonometric functions, their graphs and applications; sequences and series; exponential and logarithmic functions and their graphs; graphs of polynomial and rational functions; general discussion of functions and their properties.

MATH 1710  Calculus I
Limits and continuity, derivatives and integrals; differentiation and integration of polynomial, rational, trigonometric, and algebraic functions; applications, including slope, velocity, extrema, area, volume and work.

MATH 1720  Calculus II
Differentiation and integration of exponential, logarithmic and transcendental functions; integration techniques; indeterminate forms; improper integrals; area and arc length in polar coordinates; infinite series; power series; Taylor’s theorem.

PHYS 1710  Mechanics

PHYS 1730  Laboratory in Mechanics
Laboratory to accompany PHYS 1710.

PHYS 2220  Electricity and Magnetism
Electric fields, dc and ac circuits, magnetic fields and magnetic induction. Electric and magnetic properties of matter.

PHYS 2240  Laboratory in Wave Motion, Electricity, Magnetism, and Optics
Laboratory to accompany PHYS 2220.

PSCI 2305  US Political Behavior and Policy
Explores the connection between the will of the people and the policies implemented by government by focusing on individual political values and attitudes, the mechanisms that connect individual beliefs to government action (parties, interest groups, the media, and elections), and the outcomes of government policy.

PSCI 2306  US and Texas Constitutions and Institutions
An introduction to the institutions of government, with particular emphasis on the U.S. and Texas Constitutions. Focus on the structure and powers of the three branches of government (both national and Texas); the division of power between those branches (separation of powers); the division of power between the national and state governments (federalism); and issues related to civil rights and civil liberties. Satisfies the legislative requirement for a course emphasizing the Texas constitution.

TECM 2700  Technical Writing
Expository writing, especially for science, pre-engineering and business students.

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