

Geneseo High School- New Course Proposal

State Course Code/s:
General Automotive Maintenance **20103A000**
Automotive Service **20106A000**

Name of Courses:
Vehicle Maint & Repair I (Auto 100)
Vehicle Maint and Repair II (Auto 101)

Targeted Grade Level/s and Students:
10th - 12th Graders

Any Prerequisites: Intro to Woods and Metals

Semester or Year Long Course/s- Year long course

Is this course an elective? Yes

Rationale for the new course:

Allows students ability to earn up to 6 college credits.

Description of Course/s:

Vehicle Maint & Repair I (Auto 100)(3 credit hours)- A fundamental course in general vehicle maintenance and repair. Students learn to use basic auto and truck repair terminology, tools and techniques utilized in automotive dealerships and service facilities. The course provides both a general orientation to the vehicle service industry and develops salable vehicle maintenance skills.

Vehicle Maint & Repair II (Auto 101)(3 credit hours)- A fundamental course in general vehicle maintenance and repair. Students learn to use basic auto and truck repair terminology, tools, and techniques utilized in automotive dealerships and service facilities. The course provides both a general orientation to the vehicle service industry and develops salable vehicle maintenance skills. Continuation of AUTO 100 - Vehicle Maint & Repair I.

Unit Names:

Auto 100:

- Unit 1: Shop Safety, Tools, and Equipment
- Unit 2: Automotive Industry Overview & Service Documentation
- Unit 3: Engine Basics & Lubrication Services
- Unit 4: Vehicle Maintenance & Fluid Services
- Unit 5: Electrical Systems & Battery Maintenance
- Unit 6: Wheels, Tires, and Suspension Basics
- Unit 7: Braking Systems Fundamentals
- Unit 8: Customer Service & Employability Skills

Auto 101:

- Unit 1: Advanced Shop Safety, Tooling, and Equipment
- Unit 2: Engine Mechanical Diagnostics & Component Service
- Unit 3: Braking System Service and Hydraulics
- Unit 4: Steering, Suspension, and Wheel Alignment
- Unit 5: Electrical Diagnostics, Starting, and Charging Systems
- Unit 6: Engine Performance, Drivability, and Diagnostic Trouble Codes
- Unit 7: Heating and Air Conditioning (HVAC) Fundamentals
- Unit 8: Advanced Vehicle Maintenance and Service Shop Operations

Main Course Concepts/Skills/Topics to be taught:

Auto 100, Establishes core personal and shop safety protocols, hazard material identification following SDS and OSHA guidelines, hand and power tool selection, and basic equipment operation including vehicle lifting procedures. Provides an overview of automotive industry career paths, dealership and repair shop workflows, professional terminology, repair order documentation, and service manual navigation. Covers four-stroke internal combustion engine fundamentals, engine oil classifications and viscosities, oil filter replacement procedures, and general lubrication system maintenance. Focuses on routine preventive vehicle servicing, including cooling system inspections, power steering and transmission fluid checks, belt and hose replacements, and air filter maintenance. Introduces basic electrical concepts such as voltage, current, and resistance, along with digital multimeter usage, battery inspection and load testing, battery charging, and jump-starting safety. Examines tire construction and sizing specifications, tire pressure monitoring systems (TPMS), wheel mounting and balancing, tire rotation patterns, and steering and suspension component inspections. Details disc and drum brake system operating principles, friction material inspection, rotor and drum wear measurement, and hydraulic fluid checks. Finally, develops customer communication skills, repair order write-ups, professional work ethic, workplace safety standards, and essential entry-level employability skills.

In Auto 101, Advanced Shop Safety, Tooling, and Equipment establishes high-level personal and environmental safety procedures alongside advanced hand, power, and diagnostic equipment operations. Engine Mechanical Diagnostics & Component Service details internal engine diagnostic testing, component inspection, teardown, and precision measurement procedures. Braking System Service and Hydraulics covers comprehensive service, repair, and diagnostic procedures for disc, drum, and hydraulic brake systems. Steering, Suspension, and Wheel Alignment focuses on diagnosing and repairing steering linkages, suspension components, and performing four-wheel alignments. Electrical Diagnostics, Starting, and Charging Systems introduces systematic electrical troubleshooting, circuit analysis, and testing procedures for starting and charging systems using diagnostic meters and scopes. Engine Performance, Drivability, and Diagnostic Trouble Codes details electronic engine controls, sensor operation, scan tool usage, diagnostic trouble code (DTC) analysis, and drivability troubleshooting. Heating and Air Conditioning (HVAC) Fundamentals covers automotive climate control principles, system component operations, refrigerant handling protocols, and system diagnostics. Finally, Advanced Vehicle Maintenance and Service Shop Operations focuses on complex preventative maintenance schedules, advanced repair order documentation, service shop workflows, and professional technician practices.

Any estimated costs: Dual Credit Cost- $30/credit hour - Possible Textbook Cost

Geneseo High School- New Course Proposal

State Course Code/s:
U.S. History to 1877- **04102A000**
U.S. History Since 1877**- 04103A000**

Name of Courses:
Dual Credit American History to 1877 (HIST 105)
Dual CreditAmerican History Since 1877 (HIST 106)

Targeted Grade Level/s and Students:
TBD- 10th-12th grades (10th is traditional US History/APUSH year)

Any Prerequisites: None- possible teacher recommendation

Semester or Year Long Course/s- Semester Courses

Is this course an elective? Yes

Rationale for the new course:

Allows students ability to earn up to 6 college credits.

Description of Course/s:

History 105 (3 credit hours)- Surveys the history of the United States from the discovery of America through 1877, including settlement and Westward expansion, the development of the American government, the growth of the American economy, the evolution of an American style of life and thought, the development of sectionalism culminating in the Civil War, and concluding with the failure of Reconstruction.

History 106 (3 credit hours)-Examines history of the United States from the end of Reconstruction in 1877 through the present, including the rise of the U.S. as a major world power, the continued growth and development of the federal government, efforts to improve the status of minorities and women, growth of the economy, and the changing pattern of American life.

Unit Names:

History 105:

- Unit 1- Thinking Historically
- Unit 2- Exploration and Early America
- Unit 3- Colonial America & Revolution
- Unit 4: Creating a New Nation
- Unit 5: The Early Republic
- Unit 6: Jacksonian America & Expansion
- Unit 7: Immigration, Urbanization & Industrialization
- Unit 8: Slavery & the Expanding Nation
- Unit 9: Westward Expansion & Sectionalism
- Unit 10: The Civil War
- Unit 11: Reconstruction

History 106:

- Unit 1: Industrialization & the New South
- Unit 2: Workers, Unions & the Gilded Age
- Unit 3: Race, Gender & Social Change
- Unit 4: Imperialism & Progressive Reform
- Unit 5: World War I & the 1920s
- Unit 6: Great Depression & New Deal
- Unit 7: World War II & Its Legacies
- Unit 8: Cold War & Postwar America
- Unit 9: Civil Rights & Social Change
- Unit 10: Vietnam & the 1960s
- Unit 11: The 1970s & 1980s
- Unit 12: Contemporary America

Main Course Concepts/Skills/Topics to be taught:

HIST 105 – Students will study the development of the United States from early exploration through Reconstruction, including colonization, the American Revolution, the creation of the new nation, westward expansion, slavery, sectionalism, the Civil War, and Reconstruction. Students will develop skills in analyzing primary and secondary sources, understanding cause and effect, comparing historical perspectives, identifying change over time, and using evidence to support historical conclusions.

HIST 106- Students will study major developments in U.S. history from the end of Reconstruction to the present, including industrialization, immigration, reform movements, world wars, the Great Depression, the Cold War, Civil Rights, and changing political, economic, and social conditions. Students will develop skills in analyzing historical sources and perspectives, identifying cause and effect, understanding continuity and change, and using evidence to develop and communicate historical arguments.

Any estimated costs: Dual Credit Cost- $30/credit hour - Possible Textbook Cost



Geneseo High School- New Course Proposal

State Course Code: **02121A000**

Name of Course: Math 124 (Dual Credit) Calculus I with Analytic Geometry (4 credit hrs)

Targeted Grade Level/s and Students: 11th and 12th Graders

Any Prerequisites: Math 112/116 with a C or better.

Semester or Year Long Course- Year long.

Is this course an elective? - yes

Rationale for the new course: This dual-credit course establishes the first installment of the college calculus sequence. It provides advanced rigorous preparation for 11th and 12th-grade students transferring to four-year institutions to major in mathematics, science, or engineering, while serving as a general education or elective credit for other pathways.

Description of Course: The course places structural emphasis on functions, limits, continuity, the derivative and its real-world applications, differentials, antiderivatives, and the definite integral.

Unit Names:

- Unit 1: **Limits**
- Unit 2: **Derivatives**
- Unit 3: **Applications of the Derivative**
- Unit 4: **Integration**

Main Course Concepts/Skills/Topics to be taught:

- **Concepts:** Universal properties of limits, continuity, rate of change, differentiation rules, optimization, linear approximation, Riemann sums, and the Fundamental Theorem of Calculus.

- **Skills:** Students will demonstrate the ability to compute and apply limits; interpret the graphical and physical meaning of a derivative; use differentiation rules across multiple function types (algebraic, trigonometric, logarithmic, exponential); solve real-world optimization and related rates problems; and use definite integrals to calculate areas and net change.

Any estimated costs:

Course Cost - $120 for 4 credit hours
Textbook Cost- TBD