Automotive Restoration Technology Program

Program Purpose Statement & Goals

The department of technology commits itself to developing whole persons through experiential problem solving and the systematic study of automotive restoration technology.

The department achieves this purpose when its students:

- Demonstrate awareness of how automotive and industrial technology changes and interacts with society.
- Are prepared for a professional orientation for employment or advanced programs within the automotive field.
- Acquire technical skills and craftsmanship through systematic study, experiences with technological artifacts, and the solving of technical problems.

Program Core Outcomes

Within the core classes of the Automotive Restoration Program, the department achieves its purposes when graduates:

- Demonstrate an understanding of the major technological systems of the automobile.
- Demonstrate an understanding of authentic antique automobile restoration materials, methods and techniques.
- Demonstrate proficiency in the use of the materials and tools necessary to complete historically authentic automobile restoration work.

Technology Major

McPherson College offers a unique degree program of authentic automotive restoration technology emphasizing hands-on skills and historical research. This program results in a unique departmental blend of contemporary technology and traditional craftsmanship. The Bachelor of Science in Automotive Restoration Technology major has five different emphases from which to choose.

Automotive Restoration Technology: History Emphasis

The goal of the Automotive Restoration Technology: History emphasis is to develop graduates who are prepared for professional pursuits in the area of automotive history and/or graduate study.

Emphasis Outcomes

This program achieves its purposes when graduates:

- Demonstrate knowledge of historical automotive research material sources, methods and techniques necessary to complete historically accurate automotive restorations.
- Demonstrate knowledge of the historical role of the automobile in society.
- Demonstrate knowledge of the role of the automobile in the history of transportation, technology and science.

Requirements

Automotive Restoration Technology Core Courses

TE 100 Intro to Restoration (2 hours)
TE 141 Engine Rebuilding (4 hours)
TE 145 Drivetrain Restoration (3 hours)
TE 152 Sheet Metal Restoration (4 hours)
TE 162 Fundamentals of Woodworking (4 hours) (OR)
TE 262 Machining Technology (3 hours)
TE 200 AR Career Exploration (2 hours)
TE 202 Research & Documentation (2 hours)
TE 271 Chassis Restoration (4 hours)
TE 275 Automotive Paint Restoration (4 hours)
TE 281 Automotive Trim (4 hours)
TE 385 Restoration Assembly Processes (4 hours)
36 hours of core courses (or 37)

History Core Courses

G-HI 130 Introductory Methods for Historical Analysis (3 hours)
G-HI 205 Social History of the Automobile (3 hours)
***G-HI/TE 333** Technology & Society (3 hours)

***HI 410** Colloquium in Historiography (3 hours)
***HI 475** Senior Thesis (3 hours)
15 hours

History Electives

At least 6 credit hours drawn from the following list:
AR/HI 245 The History of Automotive Design (3 hours)
G-HI 150 American History since 1877 (3 hours)
G-HI 220 Modern Europe (3 hours)
G-HI 236 Topics in Social History (3 hours)
G-HI 237 Topics in Political History (3 hours)
HI 301 Advanced Topics in History (3 hours)
6 hours minimum

57 hours in major (or 58)

Automotive Restoration Technology: Management Emphasis

The goal of the Automotive Restoration Technology: Management emphasis is to develop graduates who are prepared for professional pursuits and/or graduate study.

Emphasis Outcomes

This emphasis achieves its purposes when its graduates:

- Demonstrate knowledge, understanding, and application of the principles, concepts, and tools taught within the Management emphasis.
- Perform research, analysis, and critical thinking necessary to integrate key content from various business disciplines.
- Perform effectively in groups.
- Persuasively communicate business-related ideas of a variety of media and settings.

Requirements

Automotive Restoration Technology Core Courses

G-HI 205 Social History of the Automobile (3 hours)
TE 100 Intro to Restoration (2 hours)
TE 162 Fundamentals of Woodworking (4 hours) (OR)
TE 262 Machining Technology (3 hours)
TE 141 Engine Rebuilding (4 hours)
TE 145 Drivetrain Restoration (3 hours)
TE 152 Sheet Metal Restoration (4 hours)
TE 200 AR Career Exploration (2 hours)
TE 202 Research & Documentation (2 hours)
TE 271 Chassis Restoration (4 hours)
TE 275 Automotive Paint Restoration (4 hours)
TE 281 Automotive Trim (4 hours)
TE 385 Restoration Assembly Processes (4 hours)
39 hours (or 40 hours)

Business Management Courses

G-BA 130 Principles of Business Management (3 hours)
EC 202 Survey of Economics (3 hours)
AC 202 Survey of Accounting (3 hours)
BA 221 Marketing (3 hours)
BA 235 Small Business Management (3 hours)
BA 315 Business Law (3 hours)
BA 325 Financial Management I (3 hours)
BA 339 Human Resources Management (3 hours)
***BA 475** Business Strategy and Policy (3 hours)
27 hours

66 hours in major (or 67 hours)

Automotive Restoration Technology: Communication Emphasis

The goal of the Automotive Restoration Technology: Communication emphasis is to develop graduates who have the skills and technical knowledge to communicate effectively in a variety of media to an audience focused on automotive issues.

Emphasis Outcomes

This emphasis achieves its purposes when its graduates:

- Demonstrate knowledge of methods and techniques necessary to complete and document historically accurate automotive restorations.
- Demonstrate knowledge of the historical role of the automobile in society and historical automotive research material sources.
- Demonstrate visual, oral and written communication skills necessary to pursue a career in automotive communication, publishing or other media.
- Understand the media of communication, including mass media and computer technologies.

Requirements

Automotive Restoration Technology Core Courses

G-HI 205 Social History of the Automobile (3 hours)
TE 100 Intro to Restoration (2 hours)
TE 162 Fundamentals of Woodworking (4 hours) (OR)
TE 262 Machining Technology (3 hours)
TE 141 Engine Rebuilding (4 hours)
TE 145 Drivetrain Restoration (3 hours)
TE 152 Sheet Metal Restoration (4 hours)
TE 200 AR Career Exploration (2 hours)
TE 202 Research & Documentation (2 hours)
TE 271 Chassis Restoration (4 hours)
TE 275 Automotive Paint Restoration (4 hours)
TE 281 Automotive Trim (4 hours)
TE 385 Restoration Assembly Processes (4 hours)
39 hours (or 40 hours)

Communication Core

G-CM 120 Intro to Human Communication (3 hours)
CM 135 Media Writing (3 hours)
G-CM 140 Public Speaking (3 hours)
CM 210 Podcasting: Audio/Visual Production (3 hours)
***G-CM 221** Intercultural Communication (3 hours)
CM 305 Editing, OR
CM 310 Public Relations and Social Media Campaigns (3 hours)
CM 315 Communication Practica (3 hours)
CM 375 Junior Seminar in Communication (1 hour)
CM 388 Career Conn. in Communication (OR)
TE 388 Career Conn. In Technology (3 hours)
***CM 475A** Seminar in Communication Research (2 hours)
***CM 475B** Senior Project in Communication (1 hour)
***EN 313** Expository Writing (OR)
EN 420 Creative Writing (3 hours)
31 hours

70 hours in major (or 71)

Automotive Restoration Technology: Art and Design Emphasis

The Automotive Restoration Technology: Art and Design emphasis is for the student who wishes to pursue a career in automotive art. This option will develop majors who possess the technical knowledge and artistic abilities necessary to execute a variety of art skills sensitively and intelligently, analyze and critique art, and relate the creative process to life in personally meaningful ways.

This degree option within the technology and art departments is oriented to meet the needs of students who (1) wish to develop and refine their aesthetic values (2) plan for careers as automotive artists (3) plan to further their art education in graduate school.

Emphasis Outcomes

This emphasis achieves its purposes when its graduates:

- Demonstrate knowledge of history in automotive design.
- Demonstrate the knowledge and skills to produce automotive art.
- Demonstrate an understanding of design principles and elements.
- Demonstrate a completed body of work in a senior exhibition.

Requirements

Automotive Restoration Technology Core Courses

G-HI 205 Social History of the Automobile (3 hours)
TE 100 Intro to Restoration (2 hours)
TE 110 Technical Drawing/CAD (3 hours)
TE 141 Engine Rebuilding (4 hours)
TE 145 Drivetrain Restoration (3 hours)
TE 152 Sheet Metal Restoration (4 hours)
TE 162 Fundamentals of Woodworking (4 hours) (OR)
TE 262 Machining Technology (3 hours)
TE 200 AR Career Exploration (2 hours)
TE 202 Research & Documentation (2 hours)
TE 271 Chassis Restoration (4 hours)
TE 275 Automotive Paint Restoration (4 hours)
TE 281 Automotive Trim (4 hours)
TE 385 Restoration Assembly Processes (4 hours)
42 hours (or 43 hours)

Art Core Courses

G-AR 101 Drawing I (2 hours)
G-AR 102 Painting I (3 hours)
AR 103 Elementary Design (3 hours)
AR 202 Painting II (2 hours)
AR 203 Photography I (2 hours)
G-AR 220 Graphic Design for Non-Art Majors (3 hours)
AR/HI 245 The History of Automotive Design (3 hours)
G-AR 311 Art History II (4 hours)
AR 312 Contemporary Themes in Art (3 hours)
AR 335 Design Software II (3 hours)
AR 475A/B Senior Show: Studio Arts (3 hours–2 hours in fall, 1 hour in spring)
31 hours

73 hours in major (or 74)

Automotive Restoration Design Major Internship/Field experience (recommended):

TE 295/495 Field Experience (work experience in automotive Art/Design) (OR) (1 – 4 hours)
TE 388 Career Connections (Internship in automotive Art/Design) (1 – 10 hours)
1-12 hours total

Automotive Restoration Technology Emphasis

The Automotive Restoration Technology emphasis is for the student who intends to pursue the authentic restoration of vintage and classic vehicles and develop values of craftsmanship, with attention to detail and an emphasis on authenticity. Graduates will be able to reference a wide variety of processes, methods and will have research capabilities. Graduates will be able to understand the automobile as a technological system and understand its development and role in society.

Emphasis Outcomes

This emphasis achieves its purposes when its graduates:

- Possess knowledge of historical automotive research material sources, methods and techniques necessary to complete and document historically accurate automotive restorations.
- Demonstrate proficiency in the use of the materials and tools necessary to complete authentic automobile restoration work.
- Demonstrate the attitudes, knowledge and skills necessary to pursue a business career in antique automobile restoration.
- Demonstrate knowledge of the historical role of the automobile in society.
- Demonstrate knowledge of related and supporting scientific fields.

Requirements

Automotive Restoration Technology Core Courses

G-HI 205 Social History of the Automobile (3 hours)
TE 100 Intro to Restoration (2 hours)
TE 141 Engine Rebuilding (4 hours)
TE 145 Drive Train Restoration (3 hours)
TE 152 Sheet Metal Restoration (4 hours)
TE 162 Fundamentals of Woodworking (4 hours)
TE 200 AR Career Exploration (2 hours)
TE 202 Research & Documentation (2 hours)
TE 262 Machining Technology (3 hours)
TE 271 Chassis Restoration (4 hours)
TE 275 Automotive Paint Restoration (4 hours)
TE 281 Automotive Trim (4 hours)
TE 301 Materials and Processes (3 hours)
TE 360 Electrical & Electronic Systems (4 hours)
TE 385 Restoration Assembly Processes (4 hours)
TE 475 Technology Senior Project (4 hours)
54 hours

6 credit hours from the following upper-level courses:

TE 341 Advanced Engine Rebuilding (3 hours)
TE 406 Woodworking in Automotive Coachwork (3 hours)
TE 414 Advanced Topics in Electrical and Electronic Systems (3 hours)
TE 452 Advanced Sheet Metal Restoration (3 hours)
TE 462 Advanced Manual Machining (3 hours)
TE 480 Advanced Automotive Paint Restoration (3 hours)
TE 481 Advanced Automotive Trim (3 hours)

3 credit hours from the following courses:

TE 252 Vintage Panel Restoration (3 hours)
TE 242 Re-Babbitting (spring – on demand) (3 hours)
TE 353 Finishing Touches (3 hours)
TE 380 Applied Diagnostics (3 hours)
TE 388 Internship (3 hours)

63 hours in major

Recommended Supporting Courses:

AR/HI 245 The History of Automotive Design (3 hours)
G-CH 101 Principles of General Chemistry (4 hours)
G-PH 215 General Physics (4 hours)
TE 110 Engineering Drawing/CAD (3 hours)

Special Course Options:

295/495 Field Experience (1-4 hours)
297 Study Abroad (12-16 hours)
299/499 Independent Study (1-4 hours)
388 Career Connections (3-10 hours)
445 Readings and Research (1-4 hours)