POLICIES AND PROCEDURES

Students have full responsibility for acquainting themselves with all policies, requirements and procedures pertaining to their academic programs. Ranken reserves the right to change course offerings, course registrations, policies or procedures as it deems necessary. Current policies and procedures can be found in the student handbook.

NONDISCRIMINATION POLICY

Ranken Technical College complies with Title VI of the Civil Rights Act of 1964. The College does not discriminate on the basis of race, color, religion, age, gender, sexual preference, national or ethnic origin or disability in the administration of its educational policies, admission policies, scholarship or loan programs and other college programs.

STUDENTS WITH DISABILITIES POLICY

In compliance with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Ranken Technical College provides access for students with disabilities. The Student Success Center makes every effort to give each student with a disability an equal opportunity to participate in the mainstream of college life at Ranken. Further information on this policy may be found in the student handbook.

SEXUAL HARASSMENT

In keeping with the College’s efforts to treat all members of the Ranken community with dignity and respect, it is the policy of Ranken Technical College that any form of sexual harassment of students or employees at the College is unacceptable and will not be tolerated. Further information on this policy may be found in the student handbook.

SUBSTANCE ABUSE

It is the goal of Ranken Technical College to protect the public health and environment of the College community by promoting an environment free of substance abuse.

DRESS AND APPEARANCE POLICIES

As part of Ranken’s commitment to prepare and train students fully for their future careers, the College has policies on appearance, including apparel, jewelry and casual days. Students should refer to the student handbook “Dress and Appearance Policies” section.

ANNUAL NOTIFICATION UNDER THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

Ranken Technical College will compile a number of important records in the course of a student’s application, enrollment and attendance. These include:
• Admissions record
• Attendance record
• Academic record
• Disciplinary record
• Financial Aid/Business office account record

Students have the right to inspect and review their educational records upon request to the Registrar. Those interested should submit to the Registrar a written request that identifies as precisely as possible the record or records to be inspected. If, after reviewing records, a student finds that they contain errors and are inaccurate or misleading, he or she may request that the records be amended. If the College does not agree with the student’s position, the student may request that a hearing be held. If the student believes that the College has not followed the federal rules under FERPA, the student may write to the U.S. Department of Education. A copy of the complete FERPA policy is available in the Registrar’s office.

Important Note:

The academic transcript of a student is created and maintained by the submission of various other records from faculty and support staff. The academic transcript of a student will be released by Ranken Technical College perpetually. The records that support the academic transcript have retention limits, as defined in the College’s FERPA policy.

RELEASE OF STUDENT INFORMATION

Generally, the College will not release any information about a student to outside individuals without having first received written permission from the student. All students should complete a Release of Information Authorization for inclusion in the academic record on file in the Registrar’s office. On occasion, the College may provide such information under state or federal laws, to auditors, accreditors or other official reviewers.

The release of certain information is not considered a violation of a student’s rights to privacy; the College is permitted to release this information routinely, unless a student specifically asks it not to be released. At Ranken, this general information is considered to be name, program of study, participation in recognized activities, dates of enrollment and academic honors, certificates or degrees earned.

BOOKSTORE REFUNDS

Items returned must be accompanied by a receipt. Tools are returnable for a full refund within 30 days of purchase if they are deemed resalable by bookstore management. Resalable tools are tools that have not been used, engraved, marked on, damaged or abused in any way. Defective tools may be returned for an even exchange with bookstore management approval. Used tools are not returnable except in special circumstances as determined by bookstore management. Students withdrawing from the College have 30 days from the Last Date of Attendance (LDA) in which to retrieve tools. If tools are not retrieved after 30 days, they become the property of Ranken Technical College.

For all other student policies and procedures, please refer to the student handbook.
AUTOMOTIVE COLLISION REPAIR TECHNOLOGY

The Automotive Collision Repair Technology (ACR) program operates in a large shop space devoted exclusively to student training. Utilizing the Inter-Industry Conference on Automotive Collision Repair (I-CAR) Enhanced Delivery Curriculum, instruction will cover crucial industry topics including cycle time, blueprinting and hybrid technology, giving students an advantage when seeking opportunities in the collision repair industry.

Students will learn to repair late-model, collision-damaged vehicles using modern equipment such as frame machines, computerized electronic measuring systems, MIG welders, resistance spot-welding equipment, downdraft spray booths and prep stations.

This program is certified by the National Automotive Technicians Education Foundation (NATEF) in all four areas of auto body repair: Non-Structural, Structural, Refinishing and Mechanical/Electrical.

ASSOCIATE OF TECHNOLOGY, ASSOCIATE OF SCIENCE OR CERTIFICATE OF TECHNOLOGY

Based on the tasks established by the National Institute for Automotive Service Excellence (ASE)/NATEF and I-CAR, this four-semester program provides students with skills to restore collision-damaged vehicles to industry standards.

The importance of certification and training continues to increase in the industry among collision repair facilities and insurance companies. In response to this demand, a graduate of the program has the potential to receive I-CAR ProLevel One, Two and Three certifications and ASE certifications. Graduates may also qualify for Sikkens certification.

Program graduates are trained in:

- Unibody and full frame damage analysis
- Writing estimates manually and electronically
- Making non-structural repairs in metal and plastics
- Performing welding and cutting operations in steel and aluminum
- Straightening structural steel and aluminum
- Replacement of structural components
- Steering and suspension repair and alignments
- Air conditioning systems relating to collision damage
- Diagnosing electrical and electronic problems
- Refinishing systems and the processes to restore the original finish to industry standards
- Refinishing systems and the processes to restore the original finish to industry standards
- Spot-welding equipment, downdraft spray booths and prep stations
- Frame machines, computerized electronic measuring systems, MIG welders and oxyacetylene/plasma cutting process
- Sawing, cutting and sanding of metal and steel
- Vibration, noise and mishandling
- Cycle time, blueprinting and hybrid technology
- Air conditioning systems relating to collision damage
- Diagnosis of electrical and electronic problems
- Refinishing systems and the processes to restore the original finish to industry standards

Students interested in earning the certificate of technology will take all Automotive Collision Repair Technology courses and two general education courses.

The importance of certification and training continues to increase in the industry among collision repair facilities and insurance companies. In response to this demand, a graduate of the program has the potential to receive I-CAR ProLevel One, Two and Three certifications and ASE certifications. Graduates may also qualify for Sikkens certification.

Program graduates are trained in:

- Unibody and full frame damage analysis
- Writing estimates manually and electronically
- Making non-structural repairs in metal and plastics

Course Descriptions

ACR1111 Non-Structural Analysis and Damage Repair Theory

Students will learn about the shop work, personnel safety and safety measures relative to the collision repair industry. The course emphasizes vehicle identification, estimating systems and terminology used in the collision repair process. Students will learn how to properly analyze frontal, side and rear impacts along with performing a mechanical systems analysis. This section also covers basic cosmetic straightening of steel and body filler applications.

Also offered in this course is instruction in the replacement of mechanically fastened, welded and adhesively bonded panels. Provides an in-depth study of plastic repair methods using welding and adhesives. An overview of trim and hardware used in today's vehicles is discussed, along with moving and stationary glass. As an addition to this course, students will complete I-CAR's Intro to Collision Repair. Six credit hours.

ACR1112 Non-Structural Analysis and Damage Repair Shop

Emphasizes application of principles studied in ACR1111 to hands-on work shop. Eight credit hours.

ACR1211 Structural Analysis and Collision Repair Theory

Introduces the Steel Gas Metal Arc (GMA) welding process, preparing the students for the I-CAR Automotive Steel Metal Inert Gas (MIG) welding qualification test. An overview of the oxyacetylene/plasma cutting process is covered along with a section on aluminum welding used in repairing today's modern vehicles. This section prepares the student for the Automotive Aluminum GMA (MIG) Welding Qualification Test. Includes a study of restraint systems and advanced application of movable and stationary glass.

Introduces measuring procedures and how they relate to structural repairs. Provides detailed instructions on structural straightening of steel and aluminum materials along with the replacement of aluminum panels. Six credit hours.

ACR1212 Structural Analysis and Collision Repair Shop

Emphasizes application of principles studied in ACR1211 to hands-on work shop. Eight credit hours.

Day Program Courses

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Title</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td>ACR1111 Non-Structural Analysis and Damage Repair Theory</td>
<td>6</td>
<td>ACR1112 Non-Structural Analysis and Damage Repair Shop</td>
</tr>
<tr>
<td>Second Semester</td>
<td>ACR1211 Structural Analysis and Collision Repair Theory</td>
<td>6</td>
<td>ACR1111, ACR1212 Structural Analysis and Collision Repair Theory</td>
</tr>
<tr>
<td>Third Semester</td>
<td>ACR1211 Structural Analysis and Collision Repair Theory</td>
<td>6</td>
<td>ACR1211, ACR1212 Structural Analysis and Collision Repair Theory</td>
</tr>
<tr>
<td>Fourth Semester</td>
<td>ACR2211 Painting and Refinishing Theory</td>
<td>6</td>
<td>ACR2212 Painting and Refinishing Theory</td>
</tr>
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</table>

Total Technical Credit Hours Required: 56

General Education Courses

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>English/Social Sciences</td>
<td>3</td>
<td>Placement Exam or ENG1099</td>
</tr>
<tr>
<td>English Composition</td>
<td>3</td>
<td>ENG1099</td>
</tr>
<tr>
<td>Oral Communications</td>
<td>3</td>
<td>ENG1099</td>
</tr>
<tr>
<td>Principles of Sociology or Psychology</td>
<td>3</td>
<td>ENG1099 (Co. Req.)</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>3</td>
<td>ENG1099 (Co. Req.)</td>
</tr>
<tr>
<td>Mathematics/Science</td>
<td>3</td>
<td>Placement Exam or MTH1102</td>
</tr>
<tr>
<td>Automotive Service Management</td>
<td>3</td>
<td>MTH1102 or MTH1111</td>
</tr>
<tr>
<td>Survey of Calculus</td>
<td>3</td>
<td>MTH1121</td>
</tr>
<tr>
<td>Technical Communications</td>
<td>3</td>
<td>MTH1220</td>
</tr>
<tr>
<td>College Physics</td>
<td>3</td>
<td>MTH2240</td>
</tr>
<tr>
<td>Survey of Calculus</td>
<td>3</td>
<td>MTH1121</td>
</tr>
</tbody>
</table>

Important Note: Only courses in which a grade of “C” or higher is earned may be applied toward this Ranken degree.

General Education Courses (Certificate of Technology)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Communications</td>
<td>3</td>
<td>MTH1102</td>
</tr>
<tr>
<td>Career Success Skills</td>
<td>3</td>
<td>MTH1220</td>
</tr>
<tr>
<td>Career Success Skills</td>
<td>3</td>
<td>MTH1220</td>
</tr>
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</table>

Courses

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH1100 Elementary/Intermediate Algebra</td>
<td>3</td>
<td>Placement Exam or MTH1099</td>
</tr>
<tr>
<td>MTH2212 College Algebra</td>
<td>3</td>
<td>MTH1100 or MTH1111</td>
</tr>
<tr>
<td>MTH2220 Trigonometry</td>
<td>3</td>
<td>MTH2112</td>
</tr>
<tr>
<td>MTH2230 College Physics</td>
<td>3</td>
<td>MTH2220</td>
</tr>
<tr>
<td>MTH2240 Survey of Calculus</td>
<td>3</td>
<td>MTH2220</td>
</tr>
</tbody>
</table>

Students pursuing Automotive Collision Repair Technology will complete the Automotive Collision Repair Technology program in a large shop space devoted exclusively to student training. Utilizing the Inter-Industry Conference on Automotive Collision Repair (I-CAR) Enhanced Delivery Curriculum, instruction will cover crucial industry topics including cycle time, blueprinting and hybrid technology, giving students an advantage when seeking opportunities in the collision repair industry.

Students will learn to repair late-model, collision-damaged vehicles using modern equipment such as frame machines, computerized electronic measuring systems, MIG welders, resistance spot-welding equipment, downdraft spray booths and prep stations.

This program is certified by the National Automotive Technicians Education Foundation (NATEF) in all four areas of auto body repair: Non-Structural, Structural, Refinishing and Mechanical/Electrical.

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Program graduates are trained in:

- Unibody and full frame damage analysis
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- Refinishing systems and the processes to restore the original finish to industry standards
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- Frame machines, computerized electronic measuring systems, MIG welders and oxyacetylene/plasma cutting process
- Sawing, cutting and sanding of metal and steel
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- Refinishing systems and the processes to restore the original finish to industry standards

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Course Descriptions

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Also offered in this course is instruction in the replacement of mechanically fastened, welded and adhesively bonded panels. Provides an in-depth study of plastic repair methods using welding and adhesives. An overview of trim and hardware used in today's vehicles is discussed, along with moving and stationary glass. As an addition to this course, students will complete I-CAR's Intro to Collision Repair. Six credit hours.

ACR1112 Non-Structural Analysis and Damage Repair Shop

Emphasizes application of principles studied in ACR1111 to hands-on shop work. Eight credit hours.

ACR1211 Structural Analysis and Collision Repair Theory

Introduces the Steel Gas Metal Arc (GMA) welding process, preparing the students for the I-CAR Automotive Steel Metal Inert Gas (MIG) welding qualification test. An overview of the oxyacetylene/plasma cutting process is covered along with a section on aluminum welding used in repairing today's modern vehicles. This section prepares the student for the Automotive Aluminum GMA (MIG) Welding Qualification Test. Includes a study of restraint systems and advanced application of movable and stationary glass.

Introduces measuring procedures and how they relate to structural repairs. Provides detailed instructions on structural straightening of steel and aluminum materials along with the replacement of aluminum panels. Six credit hours.

ACR1212 Structural Analysis and Collision Repair Shop

Emphasizes application of principles studied in ACR1211 to hands-on shop work. Eight credit hours.
AUTOMOTIVE COLLISION REPAIR TECHNOLOGY (CONTINUED)

ACR2110 Non-Structural Repair
This course offers a general overview of repair procedures, surface preparation, straightening minor damage and applying plastic filler. Also included are plastic identification and repair procedures, panel replacement and alignment. This course covers an overview of movable and stationary glass. Students will also complete I-CAR’s Intro to Collision Repair. Six credit hours.

ACR0113 Structural
This course teaches students how to properly use refinish equipment, understand and apply the proper undercoat system, determine areas to be refinished, as well as methods of sanding and applying waterborne paint. Students will learn about blending waterborne paint along with removing minor imperfections. The theory and practice involved in the application of tricoat paint systems, color tinting and plastic refinishing is also covered. Six credit hours.

EVENING PROGRAM COURSES HOURS PREREQUISITES

| Section One | ACR2110 Non-Structural Repair | 6 |
| Section Two | ACR0111 Refinishing | 6 |
| Section Three | ACR2112 Structural | 6 |
| Section Four | ACR0113 Mechanical Collision Repair | 6 |

Total Technical Credit Hours for Certificate Completion 24

COURSE DESCRIPTIONS

For students interested in furthering their education, these courses can be credited toward the Bachelor of Science in Applied Management (BSAM) degree.

ASSOCIATE OF APPLIED SCIENCE
Ranken is offering an Associate of Applied Science degree as a part of the evening program curriculum. You can earn your associate degree with a combination of Ranken’s standard evening school courses as well as our new online courses. You can also transfer credit from other accredited technical training programs, or have your technical work experience evaluated for possible transfer credit. (30 technical credit hours required for graduation.)

For all General Education course requirements, please turn to page 112. For more information about the BSAM degree, please turn to page 104.
The average vehicle today has 30 microprocessors on board, and as technology and electronics continue to influence the automotive industry, many automobile dealerships and independent repair shops are in need of skilled technicians capable of solving new and complex problems.

To meet this need, Ranken offers an Automotive Maintenance Technology (AMT) program that provides students with the comprehensive knowledge and skills required by leading automotive manufacturers and service facilities today.

Our students regularly compete in SkillsUSA and win top honors at the local, state and national levels. The program is certified by the National Automotive Technicians Education Foundation (NATEF), which is a branch of Automotive Service Excellence (ASE) and an industry benchmark of automotive certification.

ASSOCIATE OF TECHNOLOGY, ASSOCIATE OF SCIENCE OR CERTIFICATE OF TECHNOLOGY

Ranken’s AMT program provides students with four semesters of hands-on training and instruction in diagnosing and repairing automotive problems and malfunctions.

The program develops student proficiencies in the following areas:
- Engine repair
- Automatic transmission/transaxle
- Manual drivetrain and axles
- Suspension and steering
- Brakes
- Electrical/electronic systems
- Heating and air conditioning
- Engine performance

During the last 40 days of the program, students will gain real-world experience as they participate in an on-site automotive practicum in which they will service and repair customer vehicles.

Students who wish to pursue a high-performance option may do so at the end of the third semester. See page 36 for more information about our High Performance Racing Technology program.

MANUFACTURERS TRAINING PROGRAMS

For students who have a passion for a specific brand, Ranken currently offers several options: the General Motors (GM) Automotive Service Education Program (ASEP), the Toyota/Lexus Technical Education Network (T-TEN), and the Honda/Acura Professional Automotive Career Training (PACT). All programs train on late model vehicles and incorporate a professional internship in a dealership or repair shop.

To learn more about the GM/ASEP program, see page 32 for the General Motors Technology Program.

For information on the Honda PACT and Toyota T-TEN programs, see page 30 for the Automotive Import Technology Program.

RANKEN AUTOMOTIVE TRAINING AT WENTZVILLE

Ranken’s award-winning Automotive Maintenance program is also offered at our Wentzville location. Students will attend classes loaded with hands-on activities for four days each week while completing the four-semester program. Classes can also be taken in the evening, making it easier to find employment during the day.

AUTOMOTIVE MAINTENANCE TECHNOLOGY
ST. LOUIS AND WENTZVILLE

The program develops student proficiencies in the following areas:
- Engine repair
- Automatic transmission/transaxle
- Manual drivetrain and axles
- Suspension and steering
- Brakes
- Electrical/electronic systems
- Heating and air conditioning
- Engine performance

Important Note: Only courses in which a grade of “C” or higher is earned may be applied toward this Ranken degree.

The program is offered as a four-semester, 60-credit-hour program that also includes an on-the-job training experience.

COURSE DESCRIPTIONS

AMT1003 Automotive Foundations

The Foundations class is designed to prepare students with the knowledge necessary to start their automotive careers while emphasizing the skills needed to gain entry-level employment. Students will learn how to prepare a repair order and navigate electronic information systems such as Alldata, Mitchell and other factory systems. This class will also cover the use of a digital meter to test electrical circuits and how to operate scan tools to retrieve trouble code information from vehicle computers. Students will be trained to work safely in an automotive shop environment and follow a strategic approach in the repair process. The Automotive Foundations class will also include a section on training on automotive engines. Students will learn how to diagnose and service gasoline engines by removing, disassembling and measuring components; this process will be completed with re-assembly, installation and adjustments. Students will also learn how to properly perform fluid maintenance services on modern automotive vehicles. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT1200 Automotive Electronics and Engine Controls

This course is an in-depth study of the diagnosis and repair of electrical problems. Three main sections of electrical are covered in the curriculum; engine control systems, body electronics and computer networking.

The Engine control system portion covers fuel injection, ignition systems and emission systems. The On-board Diagnostic System (OBD) II platform will be taught and students will learn how to use a variety of diagnostic tools such as scan tools, lab scopes, and amp probes. The body electronic section will include all of the power accessories such as windows, seats and door locks. It will also include how to safely diagnose and repair air bag systems. Students will learn how to diagnose and repair computer communication and networking problems and also learn about the proper procedures to replace and program a factory computer on a modern vehicle. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT1203 Automotive Foundations

This course is an in-depth study of the diagnosis and repair of electrical problems. Three main sections of electrical are covered in the curriculum; engine control systems, body electronics and computer networking.

The Engine control system portion covers fuel injection, ignition systems and emission systems. The On-board Diagnostic System (OBD) II platform will be taught and students will learn how to use a variety of diagnostic tools such as scan tools, lab scopes, and amp probes. The body electronic section will include all of the power accessories such as windows, seats and door locks. It will also include how to safely diagnose and repair air bag systems. Students will learn how to diagnose and repair computer communication and networking problems and also learn about the proper procedures to replace and program a factory computer on a modern vehicle. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT1223 Professional Automotive Internship

This course is an in-depth study of the diagnosis and repair of electrical problems. Three main sections of electrical are covered in the curriculum; engine control systems, body electronics and computer networking.

The Engine control system portion covers fuel injection, ignition systems and emission systems. The On-board Diagnostic System (OBD) II platform will be taught and students will learn how to use a variety of diagnostic tools such as scan tools, lab scopes, and amp probes. The body electronic section will include all of the power accessories such as windows, seats and door locks. It will also include how to safely diagnose and repair air bag systems. Students will learn how to diagnose and repair computer communication and networking problems and also learn about the proper procedures to replace and program a factory computer on a modern vehicle. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT1225 Automotive Professional Internship

This course is an in-depth study of the diagnosis and repair of electrical problems. Three main sections of electrical are covered in the curriculum; engine control systems, body electronics and computer networking.

The Engine control system portion covers fuel injection, ignition systems and emission systems. The On-board Diagnostic System (OBD) II platform will be taught and students will learn how to use a variety of diagnostic tools such as scan tools, lab scopes, and amp probes. The body electronic section will include all of the power accessories such as windows, seats and door locks. It will also include how to safely diagnose and repair air bag systems. Students will learn how to diagnose and repair computer communication and networking problems and also learn about the proper procedures to replace and program a factory computer on a modern vehicle. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT1226 Automotive Professional Internship

This course is an in-depth study of the diagnosis and repair of electrical problems. Three main sections of electrical are covered in the curriculum; engine control systems, body electronics and computer networking.

The Engine control system portion covers fuel injection, ignition systems and emission systems. The On-board Diagnostic System (OBD) II platform will be taught and students will learn how to use a variety of diagnostic tools such as scan tools, lab scopes, and amp probes. The body electronic section will include all of the power accessories such as windows, seats and door locks. It will also include how to safely diagnose and repair air bag systems. Students will learn how to diagnose and repair computer communication and networking problems and also learn about the proper procedures to replace and program a factory computer on a modern vehicle. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.
AUTOMOTIVE MAINTENANCE TECHNOLOGY (CONTINUED)

AMT2100 Chassis and Climate Control
The Chassis portion of this course includes steering, suspension and brakes. The steering and suspension sections include how to identify, diagnose and replace steering and suspension components such as rack and pinion steering, Macpherson struts, shocks, ball joints and tie rod ends. Students will learn essential tire components, using the latest in road force wheel balance equipment. Students will also learn how to properly align a vehicle using the latest laser alignment equipment. In the brakes section, students will learn how to complete a proper brake job on both drum and disc systems. Students will use the most up-to-date car brake lathes and true rotors, which are mandatory for most warranty repairs in dealerships. This course will cover how to diagnose and repair ABS and stability control systems. Also covered in this course is Climate Control instruction. Students will learn how to service R134A systems by diagnosing and replacing A/C components, and will use a variety of A/C recovery and refill machines. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT2225 Automotive Line
The line shop is a hands-on application of all automotive areas in an actual shop atmosphere with service and repair of customer vehicles, including training in service-writing and parts techniques. Six credit hours.

AMT2225 Automotive Professional Internship
Students will receive on-the-job experience at a sponsoring dealer or service center under the supervision of a mentor technician. The service manager and the Ranken coordinator evaluate this internship. Six credit hours.

MNG1224 Automotive Service Management
This online course provides students with an understanding of the characteristics, organization, structure, operations and management of the automotive service business. Students will gain a sound foundation of the automotive service business world as they prepare for business or other careers. The objectives of this course are accomplished through the use of case studies and critical thinking exercises and are designed to meet the objectives of the Automobile Service Consultant (ASC). Three credit hours.

AMT2230 Brakes/Vehicle Systems and Suspensions
This course covers the diagnosis, repair and service of automatic transmissions, as well as manual transmissions and clutches. Additional powertrain designs that will be studied include both four- and all-wheel drive transfer cases, which includes the diagnosis and service procedures of U-joints and constant velocity joints. This course will be taught using hands-on training, lecture and on-line modules. Six credit hours.

AMT0110 Engines and Automotive Electricity
AMT2225 (Co. Req.)
This course is the disassembly, evaluation and reassembly of rear wheel drive differentials, for clutches, differentials, manual transmissions and automatic transmissions, transaxles, Constant Velocity (C.V.), limited slip carriers, transfer cases, rear wheel drive and transaxles commonly used today. Students learn torque converters, manual transmission and automatic transmissions. Students will practice hands-on diagnosis and repair of R134A refrigerant systems. The second part of the semester covers the principles of operation, diagnosis and service of computer controlled engines and On-board Diagnostic System (OBD) II technology. The hands-on emphasis includes diagnosis of computer circuitry with a digital automotive scope and various types of scan tools. Computer-related drivability troubleshooting is featured during this course. Six credit hours.

AMT0120 Computer Electronics and Controls
AMT2225 (Co. Req.)
The semester begins with an overview of the automotive service business, including the theory and operation of automotive accessories and automotive air conditioning systems. Students will practice hands-on diagnosis and repair of R134A refrigerant systems. The second part of the semester covers the principles of operation, diagnosis and service of computer controlled engines and On-board Diagnostic System (OBD) II technology. The hands-on emphasis includes diagnosis of computer circuitry with a digital automotive scope and various types of scan tools. Computer-related drivability troubleshooting is featured during this course. Six credit hours.

AMT2120 Computer Electronics and Computer Controls
Six credit hours.

EVENING PROGRAM COURSES

EVENING PROGRAM CERTIFICATE IN AUTOMOTIVE MAINTENANCE TECHNOLOGY
This curriculum emphasizes the most modern diagnostic equipment in the automotive maintenance field. Upon completion of the instruction and hands-on experience in diagnosing and repairing automotive problems and malfunctions, students are prepared to enter the job market as entry-level technicians. The program develops student proficiencies in the following areas:

- Engine repair
- Automatic transmission/transaxle
- Manual drivetrain and axles
- Suspension, steering and brakes
- Electrical/electronic systems
- Heating and air conditioning
- Engine performance

Successful completion of all four semesters is necessary to qualify for a certificate. These classes meet on Monday and Wednesday or Tuesday and Thursday evenings during the first three semesters and Monday through Thursday during the fourth semester. For students interested in furthering their education, these courses can be credited toward the Bachelor of Science in Applied Management (BSAM) degree.

ASSOCIATE OF APPLIED SCIENCE
Ranken is offering an Associate of Applied Science degree as a part of the evening program curriculum. You can earn your associate degree with a combination of Ranken’s standard evening school courses as well as our new online courses. You can also transfer credit from other accredited technical training programs, or have your technical work experience evaluated for possible transfer credit. (30 technical credit hours required for graduation.)

For all General Education course requirements, please turn to page 110. For more information about the BSAM degree, please turn to page 104.
Ranken offers brand-specific training for Toyota/Lexus and Honda/Acura through Toyota/Lexus Technical Education Network (T-TEN) and the Honda/Acura Professional Automotive Career Training (PACT) program. According to the Bureau of Labor Statistics, some employers report difficulty finding workers with the right skills. Ranken's Automotive Import Technology (AIT) program provides its students with brand-specific instruction, giving graduates a competitive advantage when seeking employment in the industry.

In Ranken’s Automotive Import Technology program all of the training will be focused on Toyota/Lexus T-TEN program and Honda/Acura PACT program specifically, because of our exclusive partnership with those brands. An integral aspect of the program involves students gaining real-world experience by working at a sponsoring dealership. Students will have a schedule that alternates between eight weeks of instruction, followed by eight weeks of field work over the four-semester program. Utilizing the same tools, equipment and vehicles that the dealership has, students are prepared to be career-ready for the dealership service environment.

## COURSE DESCRIPTIONS

**AIT1000 Maintenance and Light Repair**
Introduction to automotive service profession and dealership service environment with emphasis on proper procedures of the express service lane; includes overall vehicle inspection, fluid service, brakes, steering & suspension, service information systems and basic scan tool function. Fourteen Credit Hours.

**AIT1200 Engines and Electrical**
The engines section covers teardown and rebuilding of engines, stressing correct measuring and inspection techniques. The electrical section consists of fundamental concepts, battery-starting-charging systems, body electrical and proper diagnosis. Ten Credit Hours.

**AIT2000 Manual Transmissions and HVAC**
This course focuses on identification, diagnosis, repairs of manual transmissions, including transmission removal and replacement, as well as diagnosis and repair of four-wheel drive systems. The Heating Ventilation and Air Conditioning (HVAC) section includes diagnosis and repair of heater and air conditioner problems with an emphasis on component replacement using proper procedures. Ten Credit Hours.

**AIT2200 Automotive Diagnostics**
This course covers diagnosis of check engine light issues, ignition, fuel and emission systems. The automatic transmission section will include removing and replacing transmissions and diagnosis and repair of units. Ten Credit Hours.

**AIT2200 Automotive Diagnostics**
Upon completion of this course, students will be able to repair electrical issues utilizing advanced functions of scan tools and oscilloscopes on powertrain, body and chassis systems. Instruction will emphasize proper diagnostic routines. Ten Credit Hours.

**AIT1105, 1205, 2005 and 2105 Internships (I, II, III and IV)**
Work study in a dealership service department, applying and practicing skills correlated with National Automotive Technicians Education Foundation (NATEF) task list. Two Credit Hours Each.

**MNG1224 Automotive Service Management**
This online course provides students with an understanding of the characteristics, organization, structure, operations and management of the automotive service business. Students will gain a sound foundation of the automotive service business world as they prepare for business or other careers. The objectives of this course are accomplished through the use of case studies and critical thinking exercises and are designed to meet the objectives of the Automobile Service Consultant (ASE). Three credit hours.

### JAP PROGRAM COURSES

| Section One | AIT1100 Maintenance and Light Repair | 14 | Department Approval |
| Section Two | AIT1105 AIT Internship I | 2 | |
| Section Two | AIT1200 Engines and Electrical | 10 | AIT1100 |
| Section Two | AIT1205 AIT Internship II | 2 | |
| Section Three | AIT2000 Manual Transmission and HVAC | 10 | AIT1200 |
| Section Three | AIT2005 AIT Internship III | 2 | |
| Section Four | AIT2100 Engine Controls and Automatic Transmissions | 10 | AIT2000 |
| Section Four | AIT2105 AIT Internship IV | 2 | |
| Section Five | AIT2200 Automotive Diagnostics | 10 | AIT2100 |

| Total Technical Credit Hours for Certificate Completion | 62 | |

### GENERAL EDUCATION COURSES

| English/Social Sciences | ENG1101 College Composition I | 3 | Placement Exam or ENG1099 |
| English/Social Sciences | ENG2102 College Composition II | 3 | ENG1101 |
| Communications | COM1105 Oral Communications | 3 | |
| Social Sciences | SOC1206 Principles of Sociology or | 3 | ENG1099 (Co. Req.) |
| Mathematics/Science | MTH1110 Elementary Algebra or MTH1111 Intermediate Algebra or | 6 | Placement Exam or MTH1000 |
| Mathematics/Science | MTH1112 Elementary Algebra | 3 | Placement Exam |
| Business/Information | BUS1000 Career Success Skills | 3 | |
| Technology | MNG1124 Automotive Service Management | 3 | ENG1099 (Co. Req.) |
| Associate of Science | MNG1212 College Algebra | 3 | MTH1100 or MTH1111 |
| Additional Required | MTH2220 Trigonometry | 3 | MTH2112 |
| Courses | PHY2230 College Physics | 3 | MTH2220 |
| Courses | MTH2240 Survey of Calculus | 3 | MTH2112 |

| Important Note: Only courses in which a grade of “C” or higher is earned may be applied toward this Ranken degree. |
GENERAL MOTORS TECHNOLOGY

The General Motors Technology program at Ranken Technical College is designed to prepare students to pursue careers in servicing and maintaining General Motors (GM) vehicles at Buick, Cadillac, Chevrolet, GMC or AC Delco Professional Service Centers (PSCs). The courses in the program offer more brand-specific instruction and equipment than are offered in general automotive maintenance classes.

Students alternate between blocks of eight weeks of instruction at Ranken and eight weeks of hands-on work in an internship at a sponsoring dealership. This real-world experience gives students the opportunity to work with the same tools and equipment as the service facility technicians. At the end of the four-semester program, students will have completed thirty-two weeks of internship experience, giving them the experience they need to succeed.

ASSOCIATE OF TECHNOLOGY OR ASSOCIATE OF SCIENCE

Ranken's General Motors Technology program prepares students for work in the dealership service environment. This four-semester program provides training and instruction in diagnosing and repairing automotive problems and malfunctions. Program courses are based on the General Motors (GM) Automotive Service Educational Program (ASEP), which provides GM-specific training initiatives to assist GM dealers in educating their next generation of technicians.

Students will develop proficiencies in the following areas:
• Engine repair
• Automatic transmission/transaxle
• Suspension, steering and brakes
• Electrical/electronic systems
• Heating and air conditioning
• Engine performance

Students will develop proficiencies in the following areas:
• Engine performance
• Heating and air conditioning
• Electrical/electronic systems
• Suspension, steering and brakes

Course Descriptions

GMT1100 Maintenance and Light Repair
Introduction to automotive service profession and dealership service environment with emphasis on proper procedures of the express service lane; includes overall vehicle inspection, fluid service, brakes, steering & suspension, service information systems and basic scan tool function.
Ten Credit Hours.

GMT1200 Engines and Electrical
The engines section covers teardown and rebuilding of engines, stressing correct measuring and inspection techniques. The electrical section consists of fundamental concepts, battery-starting-charging systems, body electrical and proper diagnosis.
Ten Credit Hours.

GMT2000 Manual Transmissions and HVAC
This course focuses on identification, diagnosis, repairs of manual transmissions, including transmission removal and replacement, as well as diagnosis and repair of four-wheel drive systems. The Heating Ventilation and Air Conditioning (HVAC) section includes diagnosis and repair of heater and air conditioner problems with an emphasis on component replacement using proper procedures.
Ten Credit Hours.

GMT2100 Engine Controls and Automatic Transmissions
This course covers diagnosis of check engine light issues, ignition, fuel and emission systems.
The automatic transmission section will include removing and replacing transmissions and diagnosis and repair of units.
Ten Credit Hours.

GMT2200 Automotive Diagnostics
Upon completion of this course, students will be able to repair electrical issues utilizing advanced functions of scan tools and oscilloscopes on powertrain, body and chassis systems. Instruction will emphasize proper diagnostic routines.
Ten Credit Hours.

GMT1105, 1205, 2005 and 2105 Internships
II, III and IV
Work study in a dealership service department, applying and practicing skills correlated with National Automotive Technicians Education Foundation (NATEF) task list. Two Credit Hours Each.

MNG1224 Automotive Service Management
This online course provides students with an understanding of the characteristics, organization, structure, operations and management of the automotive service business. Students will gain a sound foundation of the automotive service business world as they prepare for business or other careers.
The objectives of this course are accomplished through the use of case studies and critical thinking exercises and are designed to meet the objectives of the Automobile Service Consultant (ASC). Three credit hours.

Course Descriptions

GMT1100 Maintenance and Light Repair
Introduction to automotive service profession and dealership service environment with emphasis on proper procedures of the express service lane; includes overall vehicle inspection, fluid service, brakes, steering & suspension, service information systems and basic scan tool function.
Ten Credit Hours.

GMT1200 Engines and Electrical
The engines section covers teardown and rebuilding of engines, stressing correct measuring and inspection techniques. The electrical section consists of fundamental concepts, battery-starting-charging systems, body electrical and proper diagnosis.
Ten Credit Hours.

GMT2000 Manual Transmissions and HVAC
This course focuses on identification, diagnosis, repairs of manual transmissions, including transmission removal and replacement, as well as diagnosis and repair of four-wheel drive systems. The Heating Ventilation and Air Conditioning (HVAC) section includes diagnosis and repair of heater and air conditioner problems with an emphasis on component replacement using proper procedures.
Ten Credit Hours.

GMT2100 Engine Controls and Automatic Transmissions
This course covers diagnosis of check engine light issues, ignition, fuel and emission systems.
The automatic transmission section will include removing and replacing transmissions and diagnosis and repair of units.
Ten Credit Hours.

GMT2200 Automotive Diagnostics
Upon completion of this course, students will be able to repair electrical issues utilizing advanced functions of scan tools and oscilloscopes on powertrain, body and chassis systems. Instruction will emphasize proper diagnostic routines. Ten Credit Hours.

GMT1105, 1205, 2005 and 2105 Internships
II, III and IV
Work study in a dealership service department, applying and practicing skills correlated with National Automotive Technicians Education Foundation (NATEF) task list. Two Credit Hours Each.

MNG1224 Automotive Service Management
This online course provides students with an understanding of the characteristics, organization, structure, operations and management of the automotive service business. Students will gain a sound foundation of the automotive service business world as they prepare for business or other careers.
The objectives of this course are accomplished through the use of case studies and critical thinking exercises and are designed to meet the objectives of the Automobile Service Consultant (ASC). Three credit hours.
Ranken’s Diesel Technology program was created to meet the growing need for heavy-duty service professionals in the transportation industry. Diesel technicians today must be prepared to work on a variety of systems from air brakes, to hydraulics, to air conditioning as well as the high-end multiplexed network of computers and electronics. The program is modeled to meet Automotive Service Excellence (ASE) and National Automotive Technicians Education Foundation (NATEF) standards, and it will prepare graduates to be career-ready diesel service technicians. Student who chose the diesel program will take classes in the following areas:

**PREVENTIVE MAINTENANCE AND INSPECTION**
The Preventive Maintenance and Inspection course offers instruction on proper heavy vehicle inspection procedures and safety practices. All major vehicle systems are covered. Students will perform inspections, complete a proper repair order and navigate information systems.

**ENGINES**
This course introduces students to the major systems and components in both spark-ignition (SI) and compression-ignition (CI) engines on modern trucks. Students will learn how to test the condition of an engine and troubleshoot mechanical issues. The class offers hands-on experience rebuilding a diesel engine.

**ELECTRICAL AND ELECTRONIC SYSTEMS**
Electrical and Electronic Systems covers all vehicle electrical systems and components, providing students with the training necessary to diagnose and repair common electrical system issues. Students will be able to read a wiring diagram, develop a troubleshooting strategy and repair electrical issues according to industry standards.

**HYDRAULICS**
This course introduces students to the major systems and components that operate auxiliary equipment on modern trucks. The class trains students to test components and troubleshoot problems in open- and closed-circuit hydraulic systems.

**HVAC**
Heating Ventilation and Air Conditioning (HVAC) introduces technicians to the heating and cooling systems used in today’s trucks. This class reviews the components and features of HVAC systems and presents a hands-on approach to testing and repairing HVAC problems.

**STEERING AND SUSPENSION**
The Steering and Suspension class gives students a good working knowledge of the different types of steering and suspension systems utilized in today’s trucks. Steering system components and operation are discussed in detail and common maintenance procedures are identified.

**BRAKES**
This course will give students a good working knowledge of air brake, hydraulic brake and air-over hydraulic braking systems. Brake system components are discussed in detail and common braking maintenance procedures are covered.

**DRIVETRAINS**
The Drivetrain class introduces students to the major systems and components on modern trucks: standard transmissions, axles, u-joints and power take-offs. The class features drivetrain components and how they interact with each other, servicing, testing and troubleshooting.

**AIR CONDITIONING**
Heating Ventilation and Air Conditioning (HVAC) introduces technicians to the heating and cooling systems used in today’s trucks. This class reviews the components and features of HVAC systems and presents a hands-on approach to testing and repairing HVAC problems.

**FLEET MANAGEMENT**
Companies with large fleets of vehicles need qualified automotive experts to manage those fleets. Local companies like Ameren and Enterprise Rent-A-Car—as well as St. Louis City, St. Louis County and many local police departments—all need fleet managers. Students can now take our new National Association of Fleet Administrators (NAFA)-approved training classes to become a Certified Automotive Fleet Manager (CAFM) or Certified Automotive Fleet Supervisor (CAFS). Students interested in furthering their education by obtaining an Associate of Applied Science (AAS) or Bachelor of Science in Applied Management (BSAM) degree will be given the opportunity to have a Prior Learning Assessment evaluation.

<table>
<thead>
<tr>
<th>COURSE DESCRIPTIONS</th>
<th>HOURS</th>
<th>PREREQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNG3010 Professional Skills Development</td>
<td>3</td>
<td>MNG3011 Vehicle Maintenance Management</td>
</tr>
<tr>
<td>MNG3020 Risk and Asset Management</td>
<td>3</td>
<td>MNG3011 Vehicle Maintenance Management</td>
</tr>
<tr>
<td>MNG3021 Business Management</td>
<td>3</td>
<td>Total Technical Credit Hours for Certificate Completion 12</td>
</tr>
</tbody>
</table>

**EVENING PROGRAM CERTIFICATE OF COMPLETION IN FLEET MANAGEMENT**
This course focuses on leadership skills and development of professional expertise to allow fleet managers and supervisors to continuously educate themselves to stay ahead of the pack. It also provides fleet managers with the tools they need to function in a data-rich, information poor work environment by giving students a general knowledge of Information Technology (IT) which will help them to solve problems and enhance IT functionality. Three credit hours.

**MNG3011 Vehicle Maintenance Management**
Vehicle maintenance directly impacts productivity, driver satisfaction, corporate image, safety, environmental compliance and the financial bottom line. The competencies in this course help students gain an understanding of essential maintenance principals to manage in-house or outsourced maintenance personnel and drivers. The course also deals with both conventional and alternative fuels in centralized and decentralized operations. Three credit hours.

**MNG3012 Risk and Asset Management**
This course focuses on the responsibilities involved with the selection, procurement, use, care and disposal of fleet vehicle and equipment assets. Students will develop planning and decision-making skills for anticipating and responding effectively to uncertain events. Instruction will include varying strategies of dealing with risk by focusing on insurance, subrogation, training and safety, in addition to how to effectively handle a loss. Three credit hours.

**MNG3013 Business Management**
This course focuses on an organization’s rights, boundaries and responsibilities when dealing with leasing companies, automobile dealers, supply or service contractors and insurance companies. Other competencies covered include financial analysis of various acquisition options, ability to conduct a lifecycle analysis, basic accounting principles, benchmarking, outsourcing decisions and preparing and implementing a fleet budget. Three credit hours.
HIGH PERFORMANCE RACING TECHNOLOGY

The High Performance Racing Technology (HPRT) program adds the excitement of aftermarket engine performance improvement to our standard automotive technician training. Our specialized training allows students to design and build any type of high performance engine using a wide variety of aftermarket engine components and control systems and tune it for maximum output and drivability using various acquisition tools and dynamometers.

In order to gain a foundation of mechanical repair, students in the HPRT program will share a basic first semester with the Automotive Maintenance Technology (AMT) program. Upon completion of the first semester, students will be able to focus on the HPRT curriculum, including engines and tuning.

ASSOCIATE OF TECHNOLOGY ASSOCIATE OF SCIENCE OR CERTIFICATE OF TECHNOLOGY

Ranken’s HPRT program provides students with five semesters of hands-on training and instruction in diagnosing and repairing automotive problems and malfunctions. Combining traditional and modern industry practices, the program develops student proficiencies in the following areas:

- Engine Repair
  - Automatic transmission/transaxle
  - Manual drivetrain and axles
- Suspension and steering
- Brakes
- Electrical/electronic systems
- Heating and air conditioning
- Engine performance
- Engine tuning/machining

In addition to the positions offered to AMT graduates, HPRT graduates accept gainful employment in automotive careers that have an emphasis in engines and tuning.

HPRT PROGRAM COURSES

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>First</td>
<td>AHP1003 High Performance Foundations</td>
<td>12</td>
</tr>
<tr>
<td>Second</td>
<td>AHP2002 High Performance Engine</td>
<td>12</td>
</tr>
<tr>
<td>Third</td>
<td>AHP2220 High Performance Tuning</td>
<td>12</td>
</tr>
<tr>
<td>Fourth</td>
<td>AMT2205 Chassis and Climate Control</td>
<td>12</td>
</tr>
<tr>
<td>Fifth</td>
<td>AMT2208 Automotive Drivetrain Systems</td>
<td>12</td>
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GENERAL EDUCATION COURSES (Certificate of Technology)

<table>
<thead>
<tr>
<th>Course Title</th>
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<tbody>
<tr>
<td>English/Social ENG1101 College Composition I 3 Placement Exam or ENG1099</td>
<td>3</td>
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<tr>
<td>COM1101 College Composition II 3 ENG1101</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SOC1206 Principles of Sociology 3 ENG1099 (Co. Req.)</td>
<td>3</td>
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<tr>
<td>BUS1000 Career Success Skills 3</td>
<td>3</td>
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<tr>
<td>Math/Science MTH1110 Elementary Algebra and MTH1111 Intermediate Algebra or MTH1100 Elementary Intermediate Algebra 6 Placement Exam or MTH1059</td>
<td>3</td>
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<tr>
<td>BUS1000 Career Success SAV 3</td>
<td>3</td>
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<tr>
<td>MG1100 Automotive Service Management 3 MTH1110 or MTH1111</td>
<td>3</td>
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</tbody>
</table>

GENERAL EDUCATION COURSES (Certificate of Technology) MTH1110 Elementary Algebra and MTH1111 Intermediate Algebra or MTH1100 Elementary Intermediate Algebra 6 Placement Exam or MTH1059

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<td>BUS1000 Career Success SAV 3</td>
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<tr>
<td>MG1100 Automotive Service Management 3 MTH1110 or MTH1111</td>
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AMT2208 Automotive Drivetrain Systems

This course covers the diagnosis, repair and service of automatic transmissions, as well as manual transmissions and clutches. Additional powertrain designs that will be studied include both four- and all-wheel drive transfer cases, which includes the diagnosis and service procedures of U-joints and constant velocity joints. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT2221 Automotive Line

This course covers the diagnosis, repair and service of automatic transmissions, as well as manual transmissions and clutches. Additional powertrain designs that will be studied include both four- and all-wheel drive transfer cases, which includes the diagnosis and service procedures of U-joints and constant velocity joints. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT2222 Automotive Professional Internship

Students will receive on-the-job experience at a sponsoring dealer or service center under the supervision of a mentor technician. The service manager and the Ranken coordinator evaluate this internship. Six credit hours.

AMT2200 Chassis and Climate Control

This course provides the basis of chassis systems and systems associated with the entire vehicle. Students will have hands-on experience using equipment for chassis repair and service in both the shop and the field. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.

AMT2205 Automotive Drivetrain Systems

This course covers the diagnosis, repair and service of automatic transmissions, as well as manual transmissions and clutches. Additional powertrain designs that will be studied include both four- and all-wheel drive transfer cases, which includes the diagnosis and service procedures of U-joints and constant velocity joints. This course will be taught using hands-on training, lecture and online modules. Twelve credit hours.
MNG1224 Automotive Service Management
This online course provides students with an understanding of the characteristics, organization, structure, operations and management of the automotive service business. Students will gain a sound foundation of the automotive service business world as they prepare for business or other careers. The objectives of this course are accomplished through the use of case studies and critical thinking exercises and are designed to meet the objectives of the National Institute for Automotive Service Excellence (ASE) Automobile Service Consultant Certification. Three credit hours.

EVENING PROGRAM CERTIFICATE IN HIGH PERFORMANCE RACING TECHNOLOGY
The High Performance Racing Technology (HPRT) evening program allows students to gain training in aftermarket engine performance improvement. Our specialized instruction allows students to design and build any type of high performance engine using a wide variety of aftermarket engine components and control systems, to tune it for maximum output and drivability using various data acquisition tools and dynamometers. The focus is on both engines and tuning. Students entering this program must have a foundation of mechanical repair. Past Ranken Automotive Maintenance Technology (AMT) associate degree graduates or current automotive technicians may enter the program with approval from the automotive division chair. Classes typically meet in the evenings Monday – Thursday. For more information about the acceptance requirements for the HPRT program, please contact the Admissions office at (314) 286-4809. HPRT graduates accept employment in automotive machine shops, race shops, automotive tuner/repair shops, aftermarket part manufacturers/suppliers, professional racing teams and aftermarket tool manufacturers/suppliers. Successful completion of both semesters is necessary to qualify for a certificate.

For students interested in furthering their education, these courses can be credited toward the Bachelor of Science in Applied Management (BSAM) degree.

ASSOCIATE OF APPLIED SCIENCE
Ranken is offering an Associate of Applied Science degree as a part of the evening program curriculum. You can earn your associate degree with a combination of Ranken’s standard evening school courses as well as our new online courses. You can also transfer credit from other accredited technical training programs, or have your technical work experience evaluated for possible transfer credit. (30 technical credit hours required for graduation.)

For all General Education course requirements, please turn to page 110. For more information about the BSAM degree, please turn to page 104.

EVENING PROGRAM COURSES
<table>
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<tr>
<th>COURSE DESCRIPTIONS</th>
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<th>PREREQUISITES</th>
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</thead>
<tbody>
<tr>
<td>AHP2202 High Performance Engines</td>
<td>12</td>
<td>AMT2004 or equivalent</td>
</tr>
<tr>
<td>AHP2220 High Performance Tuning</td>
<td>12</td>
<td>AMT2010 or equivalent</td>
</tr>
</tbody>
</table>

Total technical credit hours for certificate completion: 24

COURSE DESCRIPTIONS
AHP2202 High Performance Engines
Contains training on the entire engine machining process. Starting from engine teardown and ending with assembly and dynamometer performance verification, students learn all of the required machining processes for rebuilding a stock type engine. Throughout the course, students also learn the math and science behind the development of a proper high performance power plant while also learning to assemble a high performance engine properly. They will be able to run a complete dyno test to find out how close they are to their desired performance. Twelve credit hours.

AHP2220 High Performance Tuning
This offers a highly interactive look at many of the engine performance and control components used in the high performance tuning industry. Intake and cylinder head air flow improvements such as increased valve size, porting, bigger throttle bodies and exhaust systems are among some of the topics covered. This course covers a wide variety of engine fuel and ignition control systems. The design and application of turbocharger and supercharger systems for gasoline and diesel engines will also be covered, along with nitrous. Students learn carburetor modification and tuning and power train gearing and suspension systems. Twelve credit hours.