Limitless opportunities with several Adult and High School Programs!

Whatever your destination may be, JRTI can help get you there.

HERE TODAY, CAREER TOMORROW!

APPLY ONLINE
www.jamesrumsey.com

2027
2028
SCHOOL YEAR

LOOK INSIDE!
Discover where you can go...

James Rumsey
Technical Institute

EARN COLLEGE CREDITS

Many of our two year programs give you the skills and certification to start out at entry level positions within your field. In addition to giving you specific training within your chosen career path, you will also be in contact with local businesses and institutions that are looking to hire skilled professionals!

EARN EXPERIENCE THROUGH COOPERATIVE EDUCATION

All of James Rumsey Technical Institute's programs are structured as simulated work places. This gives each student the ability to work with one another as a small business and establish dynamic synergies that push technical learning beyond the classroom. Hands-on work experience ensures a stronger understanding of your educational experience while being utilized in a safe and guided environment.

START YOUR CAREER SOONER

All of our programs have strong educational and business relationships with local companies. In addition to being able to move right into your chosen career after successfully completing our courses, you will also have access to career placement services through the school to help start you on your path.

MONEY SAVINGS

James Rumsey Technical Institute offers higher education opportunities at a fraction of the cost of traditional four year schooling, while providing students with a quality education to ensure success in their chosen field.

LOCAL NETWORKING OPPORTUNITIES

Each program instructor keeps current with technology, industry and educational changes throughout the year by being actively involved with local business owners and industry specialists. These outside community members offer their time and support to JRTI throughout the year to play an active role in student development, allowing students the opportunity to explore outside local resources.

JOB PLACEMENT

JRTI's Job Placement Coordinator assists with career openings and availabilities. In addition to this, each instructor teaches interviewing and resume writing skills that are specific to your chosen industry.

ADMINISTRATION

Trent Sherman ..... Director/Principal
Shelby Glover ..... Assistant Director/ACE Assistant Principal
Andrew Albright ..... HS Assistant Principal/Facililties
Chrystal Copenhaver ..... Student Services Coordinator

James Rumsey Technical Institute does not discriminate on the basis of race, color, national origin, sex, religion, disability, age, or any other basis prohibited by law in its programs, activities, or employment practices. For inquiries contact: Shelby Glover, Title IX Director/504 Coordinator, 3274 Hedgesville Rd, Martinsburg, WV 25403, 304-754-7925.

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HIGH SCHOOL PROGRAMS

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Looking for a course we don't offer or want to expand on the program you're taking? JRTI offers an extensive catalog of online courses through ed2go. Choose from either quick classes that take only a few weeks or career training courses that take up to 18 months to complete.

For more information, visit **https://www.ed2go.com/rumsey/**

TRAINING THE LEADERS OF TOMORROW

JRTI is an exciting, active place where students regularly work to develop their leadership skills, learn about career opportunities, represent our region in statewide and national competitions, and contribute to the Eastern Panhandle and surrounding area with community service activities. These activities can be expensive. As a public school, we depend on the generosity and support of our community to provide our students with these opportunities.

Please show your commitment to student excellence and career and technical education by contributing to the various fundraisers our students hold throughout each school year. Our educational programs and student organizations benefit greatly from your support. Donations are accepted at the fundraiser events, in the school office, and through our website.

National Technical Honor Society

REQUEST TO INSPECT INSTRUCTIONAL MATERIALS

Per Senate Bill 704 W. Va. Code §18-5-27, parents, custodians or guardians may request to inspect instructional materials. Instructional materials are defined as materials adopted by the county board of education, supplemental materials that are used in the classroom, and books that are available for the students to read. The bill permits classroom teachers to require parents, guardians or custodians to request an appointment to inspect the materials. The appointment must be scheduled by the classroom teachers within ten days of the request. Teachers are required to explain how the classroom materials relate to content standards adopted by the state board. If books are required class reading, teachers shall include the books on a class syllabus and make the syllabus available. A complaint form may be requested from JRTI Administration where a classroom teacher fails to comply with a provision of the bill. If the county does not resolve the complaint within seven days, the parent may file a complaint with the State Superintendent of Schools on a form made available by the State Superintendent.

ADVANCED CAREER EDUCATION

There are a lot of choices for adult technical education these days. Why is JRTI your best option? We've been serving the community since 1969, and have a proven track record of student success and industry relationships. Unlike many of our competitors, we are not a for-profit school. We are a public institution dedicated to serving the community.

Program Entry Requirements

To ensure successful completion of the course of study, students must meet course requirements and complete all enrollment procedures before being admitted to class. For specific requirements for each program, visit www.jamesrumsey.com or call

304-754-7925.

All adult students who enter James Rumsey Technical Institute must be assessed. The Truck Driving program is the only program that does not require a high school diploma, HISET, TASC™, GED®, or a West Virginia-accepted equivalency diploma.

Enrollment Procedures

Each program's enrollment procedure is slightly different. The best thing to do is to go to the program's page on our website, **www.jamesrumsey.com** You will find a link to the procedures for that specific program.

Check the program's prerequisites. Each program has its own requirements. However, **most** programs require that you be at least 18 years old, and have a high school diploma or WV-accepted equivalency diploma.

Learn more at www.jamesrumsey.com

AUTOMOTIVE TECHNICIAN - MAST

ASE/NATEF Master Certified

- **Full-Time Adult Classes**
- **11-Month Program**
- **17.5 Hours of Training Per Week In-Person**
- **15 Hours of Self-Paced Training Per Week At Home**

The Automotive Technology program trains students for entry-level positions in the automotive industry. Students spend 50 percent of their time working in a supervised shop, and the other 50 percent is spent in the classroom studying related theory.

Automotive technicians are in great demand. In the metropolitan area, technicians can earn an annual salary as high as the mid-$60,000 range. Increased high-tech controls are enabling technicians to earn even more!

Through articulation agreements students can earn 12 hours of credit through the University of Northwestern Ohio. Call 304-754-7925 for more information.

Opportunities in the Field

- Dealerships—Line Mechanic, Specialty Mechanic, New/Used Car Preparation Parts, Parts Sales
- Specialty Shops—Brakes, Tune-Up, Exhaust, Tires
- Independent Shops
- Service Centers
- Service Stores
- Parts Stores

Cooperative Education

Offered through area dealerships, such as

- Apple Valley Chevrolet/Toyota
- Miller Honda
- Miller Jeep
- Thomassen Ford
- Douglas Chevrolet
- Opequon Motors
- Parsons Ford

Academic

Applicant must be a high school graduate or have a GED equivalent and must take the TABE (Test of Adult Basic Education).

Enrollment

Class enrollment is limited to 20.

Graduation

Upon successful completion of the program, graduates receive a certificate. Students are required to take ASE Tests which will recognize them nationally in areas of training.

Health

Students must be in good health, able to lift approximately forty pounds, bend, and stand up to six hours daily on concrete floors.

Application

Prospective students will fill out an application. The information is used in the student selection process. A copy of student's driving record must be submitted.

Clothing

Students wear clothing suitable for the job. In the shop, students will wear leather boots, a sleeved shirt, long pants, and safety glasses.

Curriculum

The curriculum is divided into four (4) marking periods. Classes include:

Automotive Fundamentals

- Careers in Automotive Technology
- Safety
- Tools—use and care

Brakes

- Brakes—Disc and Drum
- Electronic Anti-lock Brakes

Steering and Suspension

- Alignment
- Steering Systems
- Front and Rear Suspension

Engine

- Block/Heads
- Valve train

Engine Performance

- Fuel System Components - Functions
- Emissions Controls
- Computer Inputs/Outputs
- Ignition Systems

Electrical

- Wiring Systems
- Electronic Components
- Scan Tool Use

Heating and Air Conditioning

- A/C System Components
- A/C Operation and Theory
- Heating Components

Courses of Study

9243A Automotive Technology MLR-1
9244A Automotive Technology MLR-3
9245A Automotive Technology MLR-4
9246A Automotive Technology MLR-2
9247A Alternative Fuels
9248A Automotive Technology AST-4
9249A Automotive Technology AST-1
9250A Automotive Technology AST-2
9251A Automotive Technology AST-3
9011A Work-Based Integration & Transition

PUT YOUR AUTOMOTIVE CAREER INTO GEAR!

Admission Procedures Checklist ☑
Automotive Technician MAST

1

Do you meet the prerequisites?

- ☐ Must be 18 years old.
- ☐ Have a high school diploma or WV-accepted equivalency diploma.
- ☐ Students must be in good health, able to lift approximately forty pounds, bend, and stand on concrete floors for up to six hours a day.

2

What to do next

- ☐ Fill out an application online. The registration fee will be deferred until you have been accepted into the program.
- ☐ Meet with the instructor for an interview. You can contact the instructor, Mike King at michael.c.king@k12.wv.us Please bring your driving record to the interview.

3

Final steps

- ☐ The instructor will contact you to inform you if you have met the requirements and have been accepted into the program.
- ☐ Once a student is accepted, they will be required to pay a $75 dollar registration fee to reserve their spot in the class.
- ☐ First semester tuition and fees are due prior to the start of class. Second semester tuition and fees are due prior to the start of the second semester, which begins in January.
- ☐ We will accept payment plans on a case-by-case basis. Accepted students wishing to inquire about a payment plan should see the assistant director, Shelby Glover, to discuss options. Please arrange this meeting immediately after paying the $75 dollar registration fee.

COMMERCIAL DRIVING

Full-Time Adult Classes
CDL-A 10 Weeks Program
CDL-B 2 1/2 Week Program

Commercial Driver Training at James Rumsey Technical Institute is an intense 10-week training program. The major component of the class is hands-on learning. During the first 5 weeks, students gain experience on our unique driving range. Students then advance to road work for an additional 4 to 5 weeks of driving.

Class hours are Monday through Friday 8:00a.m. to 2:40 p.m. Students work in the classroom the first week. During class time, the students will complete ELDT theory and given lessons on Federal Motor Carrier Safety Regulations, size and weight requirements, hours of service requirements, cargo securement, inspection procedures, trip planning, CSA 2010, and employer relations.

Because of state support for this program, the cost to students is low compared to programs of this type and quality. In addition, students completing this program have an excellent success rate in passing the state CDL performance exam.

If you are not within commuting distance, inexpensive lodging is available in our dorms.

Interviews for potential students are conducted on Wednesdays at 2:00 p.m. at the Driving Range at 416 Cumbo Rd, Martinsburg WV, 25403. No appointment is necessary. However, a certified copy of your lifetime driving record is required at the time of the interview. See website for more information.

Daytime and evening classes offered

Length Of Program

10 Weeks, Monday through Thursday 7:00 a.m. to 3:00 p.m. or 2:00 p.m. to 9:00 p.m. with one evening of driving (after dark). CDL test at discretion of State Examiner.

Career Opportunities

The truck driving program boasts a 95% placement rate. The staff at James Rumsey's Truck Driving Program works closely with several companies whose orientation and training programs enable employers to hire entry level drivers. Within two weeks to two months, many employers have students driving full-time as over-the-road tractor trailer drivers.

Class B Training

30 Hours of Training Per Week. Automatic and manual available. If doing manual transmission, must complete an evaluation on double clutch.

Curriculum

Driving Range

- Pre-trip CDL Inspection
- Gear shifting—Double Clutch Method
- Coupling Tractor to Trailer
- Cargo Securement, van and flatbed
- Straight Line Backing
- Range Driving—with strategic maneuvers through various obstructions
- Spotting (parking) Trailers
- Right Turns & off-track training
- 45˚ Backing & parallel parking
- Range Test

Classroom

- Entry Level Driver Training
- Defensive Driving Skills and Techniques
- Hours of Service Regulations
- Weight Distribution and Scaling Procedures
- FMCSA Compliance Training
- CSA 2010 Regulations
- Trip Planning and Navigational Skills
- Visits by recruiters from our various trucking companies.

Road Driving

- Interstate Driving Techniques
- 4-Lane Highway
- 2-Lane Secondary
- City & Town Driving
- Congested Traffic Driving Skills
- CDL Preparation
  - Inspection
  - Skills
  - Driving
- CDL Test
- Mountain Driving Procedures
- Night Driving Procedures
- Loaded Trailer
- Warehouse
  - Docking (ship/receive)

THE CAREER THAT MOVES AMERICA!

1 Do you meet the prerequisites?

- ☐ Must be at least 21 years of age or 18 with two (2) years' experience as a licensed driver. If under 21, you may only drive within your state of residence.
- ☐ Must have no physical impairments that would interfere with their ability to drive a CMV (Commercial Motor Vehicle) as outlined in the FMCSR (Federal Motor Carrier Safety Regulations). Certain medications are also prohibited. You can call the WV DOT @ 304.347.5935 to determine medical eligibility.
- ☐ Must hold a valid driver's license in West Virginia, Virginia, Maryland, or Pennsylvania.
- ☐ Must not have more than six (6) points against your driving record. It is the responsibility of the applicant to furnish a certified original copy of his/her lifetime Department of Motor Vehicle record prior to final acceptance.
- ☐ Must not have been convicted of any of the following crimes:
  - ☐ Driving while under the influence of alcohol or illegal drugs within the past year.
  - ☐ Transporting drugs.
  - ☐ Leaving the scene of an accident during the year prior to enrollment.
  - ☐ Using a vehicle to commit a serious crime.
  - ☐ Be convicted of a felony offense during the year prior to enrollment.

Note: These are minimum CDL requirements. Company hiring policies may be more stringent. It is advisable to discuss personal situations with an instructor.

2 What to do next

- ☐ Fill out an application.
- ☐ Visit the program any Wednesday at 2:00 p.m. to complete the interview process. You may contact one of the instructors:
  - ☐ Kenneth Dombroski – kenneth.dombroski@k12.wv.us
  - ☐ Joe Hall – guyowen.hall@k12.wv.us
- ☐ Pay the registration fee.
- ☐ Schedule and pass a Department of Transportation approved physical examination and drug screen. After passing the physical, a copy must be sent to Charleston along with a CDL application from the DMV.

3 Final steps

- ☐ Students will be permitted to begin after the tuition for the class has been paid or arrangements have been verified in writing from a sponsoring agency.

ELECTRICAL TECHNICIAN

NCCER Certified

- **Full-Time Adult Classes**
- **11-Month Program**
- **17.5 Hours of Training Per Week In-Person**
- **15 Hours of Self-Paced Training Per Week At Home**

The Electrical Technician course concentrates on the academic, technical, and social skills required to be successful in the residential and commercial field. In addition, students have the opportunity to earn NCCER certification for each skill set mastered.

Students are required to purchase their own hand tools, a scientific calculator, and safety glasses.

Opportunities in the Field

There is an increasing demand for skilled electricians who have the knowledge and ability to meet the licensing requirements. The industry is experiencing a shortage of qualified electrical technicians; these positions are among the highest paying and most secure in today's industry.

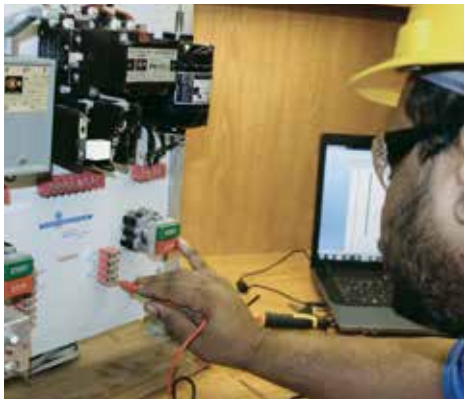
Admission Criteria

Health—Electricians are required to work from ladders and scaffolding, lift loads up to 40 pounds, and stand for long periods of time on concrete floors. Students are required to have the strength and physical endurance to accomplish these tasks.

Enrollment—The class is limited to 22 students. Applications are accepted on a first-come basis.

Length of Program

11 months per year, with maximum number of days absent must not exceed 6 per year.



Clothing

Students wear clothing suitable for the job. Safety equipment must be worn during lab activities.

Curriculum

The curriculum is divided into four marking periods.

UNITS OF STUDY

In each course of study, students develop problem-solving techniques and participate in hands-on activities.

Electrical Trades I

The Electrical Trades I course introduces the student to the knowledge base and technical skills of the electrical trades industry. It begins with the NCCER Core curriculum, which is a requirement for all Level I completions. The students complete the following modules: Basic Safety, Introduction to Construction Math, Introduction to Hand Tools, Introduction to Power Tools, Introduction to Construction Drawings, Basic Rigging, Basic Communication Skills, Basic Employability Skills, and Introduction to Materials Handling. Students then begin developing skill sets in relation to the fundamentals of Electricity such as Orientation to the Electrical Trade and Electrical Safety.

Electrical Trades II

Electrical Trades II continues to build student skill sets in areas such as Introduction to Electrical Circuits, Electrical Theory, Introduction to the National Electrical Code®, Device Boxes, Hand Bending, Raceways and Fittings, Conductors and Cables, Basic Electrical Construction Drawings, Residential Electrical Services, and Electrical Test Equipment.

Electrical Trades III

Electrical Trades III continues to build student skill sets in areas of Alternating Current, Motors: Theory and Application, Electric Lighting, and Conduit Bending.

Electrical Trades IV

Electrical Trades IV continues to build student skill sets in areas of Pull and Junction Boxes, Conductor Installations, Cable Tray, Conductor Terminations and Splices, Grounding and Bonding, Circuit Breakers and Fuses, and Control Systems and Fundamental Concepts.

Courses of Study

9001A Electrical Trades I
9002A Electrical Trades II
9003A Electrical Trades III
9004A Electrical Trades IV
9005A Blueprint Reading for Electricians
9006A Industrial and Commercial Wiring
9007A Integrated Electrical Lab
9008A National Electrical Code
9009A Residential Wiring
9010A Rotating Devices and Control Circuitry
9011A Work-Based Integration & Transition

LIGHT UP YOUR ELECTRICAL CAREER!

Admission Procedures Checklist ☑
Electrical Technician

1

Do you meet the prerequisites?

☐ Must be 18 years old.

☐ Have a high school diploma or WV-accepted equivalency diploma.

☐ Electricians are required to work from ladders and scaffolding, lift loads up to 40 pounds, and stand for long periods of time on concrete floors. Students are required to have the strength and physical endurance to accomplish these tasks.

2

What to do next

☐ Fill out an application. The registration fee will be deferred until you have been accepted into the program.

☐ Meet with the instructor for an interview. You may contact the instructor, Philip Barrett, by email: philip.barrett@k12.wv.us

3

Final steps

☐ The instructor will contact you to inform you if you have met the requirements and have been accepted into the program.

☐ Once a student is accepted, they will be required to pay a $75 dollar registration fee to reserve their spot in the class.

☐ First semester tuition and fees are due prior to the start of class. Second semester tuition and fees are due prior to the start of the second semester, which begins in January.

☐ We will accept payment plans on a case-by-case basis. Accepted students wishing to inquire about a payment plan should see the assistant director, Shelby Glover, to discuss options. Please arrange this meeting immediately after paying the $75 dollar registration fee.

HVAC TECHNICIAN

HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION

- **Full-Time Adult Classes**
- **10-Month Program**
- **17.5 Hours of Training Per Week In-Person**
- **10 Hours of Self-Paced Training Per Week At Home**

Graduates of the HVAC program are qualified for entry into the Heating, Ventilation, Air Conditioning and Refrigeration installation, service, and maintenance fields. This vast industry offers a diverse selection of career opportunities. Entry level positions include:

- Installation Technician
- Maintenance Technician
- Service Technician
- Control Technician
- Oil Burner Technician
- Air Balance Technician

Admission Criteria

Applicant must be a high school graduate or have a GED. Applicant must be in good health and able to lift, bend, and stand on concrete floors for up to six hours a day. No pre-admission test is required.

Course Description

The major units of study explored in this course focus on building a knowledge base and technical skills in the heating, ventilation, and air conditioning industry. Students have the opportunity to earn NCCER credentials for each skill set mastered. In addition students gain the skills necessary for developing a positive work ethic. The course is divided into 50% hands on and 50% classroom work.

Tools

Students are responsible for providing their own tools. Tools cost approximately $1,400.

Graduation

In addition to successfully completing the HVAC Technician program, graduate requirements consist of (1) earning the "Universal" technician level Section 608 certification for refrigerant recovery and (2) passing the R-410A Safety Certification Exam, (3) Low GWP Refrigerant Safety Certification, and (4) NCCER credentials. (5) 1215 hours towards their HVAC Technician in Training license.

Clothing

Students wear clothing suitable for the job. Students are required to wear work-type footwear and provide their own safety glasses. No shorts or open-toed shoes permitted.

Curriculum

The curriculum has been designed to meet industry standards and align with NCCER standards.

- Career Preparation
- Safety
- Leadership Development
- Customer Service
- Introduction to Construction Math
- Hand and Power Tool Basics
- Construction Drawings
- Basic Communication Skills
- Basic Employability Skills
- Material Handling Basics
- Introduction to HVAC
- Trade Mathematics
- Copper and Plastic Piping Practices
- Soldering and Brazing
- Ferrous Metal Piping Practices
- Basic Electricity
- Introduction to Cooling
- Introduction to Heating
- Air Distribution Systems
- Chimneys, Vents, and Flues
- Leak Detection, Evacuation, Recovery, and Charging
- Alternating Current
- Basic Electronics
- Introduction to Control Circuit Troubleshooting
- Troubleshooting Gas Heating
- Troubleshooting Cooling
- Heat Pumps
- Basic Installation and Maintenance Practices
- Sheet Metal Duct Systems

Courses of Study

9041A HVAC Technician I
9042A HVAC Technician II
9043A HVAC Technician III
9044A HVAC Technician IV
9045A Basic Control Circuits
9046A Air Conditioning Applications
9047A Domestic Refrigeration
9048A Fossil Fuel Heating Systems
9049A Heating Systems
9050A Commercial Air Conditioning
9011A Work-Based Integration & Transition

HEAT UP YOUR HVAC CAREER!

Admission Procedures Checklist ☑
HVAC Technician

1

Do you meet the prerequisites?

☐ Must be 18 years old.

☐ Have a high school diploma or WV-accepted equivalency diploma.

☐ Must be in good health and able to lift, bend, and stand on concrete floors for up to six hours a day.

2

What to do next

☐ Fill out an application. The registration fee will be deferred until you have been accepted into the program.

☐ Meet with the instructor for an interview. You can contact the instructor, Rebecca Nelson, at ranelson@k12.wv.us

3

Final steps

☐ The instructor will contact you to inform you if you have met the requirements and have been accepted into the program.

☐ Once a student is accepted, they will be required to pay a $75 dollar registration fee to reserve their spot in the class.

☐ First semester tuition and fees are due prior to the start of class. Second semester tuition and fees are due prior to the start of the second semester, which begins in January.

☐ We will accept payment plans on a case-by-case basis. Accepted students wishing to inquire about a payment plan should see the assistant director, Shelby Glover, to discuss options. Please arrange this meeting immediately after paying the $75 dollar registration fee.

HIGH SCHOOL PROGRAMS FREQUENTLY ASKED QUESTIONS

Learn how JRTI enhances your high school experience without interfering with it.

HOW BIG IS JRTI?

We usually have between 500 and 600 students enrolled in our high school programs each year.

IS JRTI PART OF THE PUBLIC SCHOOL SYSTEM?

Yes it is. We follow Berkeley County Schools' schedule and grading system. Students from Berkeley, Jefferson, and Morgan counties attend our programs. HOPE Scholarship recipients must purchase each quarter in the marketplace.

HOW MUCH DOES IT COST?

JRTI is free to all high school juniors and seniors who reside in Berkeley, Jefferson, and Morgan counties, including home-schooled and private school students.

CAN I STILL TAKE CLASSES AT MY SCHOOL?

Most students attend JRTI for half of the school day. Students earn four credits for tech classes each year. Classes are scheduled either in the morning or in the afternoon.

HOW DO I GET THERE?

Students enrolled in public school ride their normal bus to their home high school. After reporting to your home high school, you board another bus to JRTI. The same bus returns you to your home high school after class. You will then ride your normal bus home. Home-schooled and private school students may need to arrange their own transportation.

CAN I STILL PARTICIPATE IN ACTIVITIES AT MY HIGH SCHOOL?

Absolutely! Even for students who attend JRTI all day. You will still be able to participate in your high school's clubs, sports, band, and prom; you name it! You will still be a student at your school. You will graduate from that school. You will still see your friends, and make new ones from all over the area.

HOW QUALIFIED ARE YOUR TEACHERS?

JRTI has one of the state's most qualified and credentialed faculties. All of our teachers are certified by the WV Board of Education and have several years of experience in their field. If you want to be the best, learn from the best!

I'M GOING TO COLLEGE. WHY SHOULD I ATTEND JRTI?

The biggest misconception people have about career and technical schools is that students planning to go to college can't benefit from technical school. They couldn't be more wrong! All of our programs offer students a leg up over the competition, whether it is on the job or in college. Many of our programs lead directly to a college program. Others offer the practical hands-on side of a discipline that you won't learn in college.

WAIT A MINUTE, I HEARD TECH SCHOOL WAS ONLY FOR STUDENTS WHO STRUGGLE IN THEIR ACADEMIC CLASSES.

Technical school is not an escape from academic studies. JRTI offers an educational experience that combines academic skills with practical hands-on practice, workplace skills, and leadership training. Our job is to prepare you for the demanding world of the 21st Century. All of our programs incorporate math, reading, and writing. The difference is, you will apply these skills in a way that relates directly to your chosen industry.

ATTEND JRTI ALL DAY

Students who prefer the advantages of attending a small school are able to study the tech class of their choice and complete many of their academic credits all on one campus. JRTI offers the 4 core academic classes for 11th and 12th grades.

These classes are taught by highly qualified teachers who not only stress academic rigor, but also incorporate technical career relevance into the lessons and project based learning. Students, who attend the academic program in addition to their technical class, receive a broader educational foundation.

Many of our highly successful students attend JRTI for technical and academic studies. Students feel unified and a part of the school culture when they attend JRTI for their core academic classes. Additionally students who attend JRTI for both technical and academic classes have more opportunities for participation in technical organizations, field trips, and clubs.

Many of the academic courses offer the opportunity to earn EDGE credits. All you need is a grade of 75 or higher every nine weeks and on the semester exams.

HIGH SCHOOL COURSE OFFERINGS

Not sure which program is for you? We offer 18 programs that cover a broad range of interests. Related programs are organized into 9 career clusters. Explore the options based on what type of work appeals to you.

WHAT DO YOU LIKE TO DO?

Explore programs based on your talents and interests.

HOW DO YOU APPLY?

Visit our website
WWW.JAMESRUMSEY.COM
To fill out the application form. Speak with your guidance counselor to arrange an interview.

DID YOU KNOW...

High school students involved in Career and Technical Education are more engaged, perform better and graduate at higher rates.

81% of dropouts say relevant, real-world learning opportunities would have kept them in high school.

The average high school graduation rate for students concentrating in CTE programs is 90.18%, compared to an average national freshman graduation rate of 74.9%.

More than 70% of secondary CTE concentrators pursued postsecondary education shortly after high school.

*Statistics provided by www.acteonline.org

I LIKE TO WORK WITH TECHNOLOGY

DIGITAL TECHNOLOGY
Coding, App & Game Design 18
Cisco Networking Academies 19
SUPPLY CHAIN & TRANSPORTATION
Aerospace Engineering 14

I LIKE TO BE CREATIVE

ARTS, ENTERTAINMENT, & DESIGN
Graphic Design 24
Multimedia Publishing 28
HOSPITALITY, EVENTS, & TOURISM
Prostart Restaurant Management 30

I LIKE TO HELP PEOPLE

HEALTHCARE & HUMAN SERVICES
Allied Health Sciences 15
Therapeutic Services 32
EDUCATION
Early Childhood Classroom Assistant Teacher 21
PUBLIC SERVICE & SAFETY
Emergency & Firefighting Management Services 23
Law & Public Safety 26

I LIKE TO BUILD AND REPAIR THINGS

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*James Rumsey Technical Institute is not affiliated with any of the colleges or universities listed on the following pages.

AEROSPACE ENGINEERING

IT2210

How would you get a 50,000 lb plane to stay in the air?

JRTI has added a new STEM offering to our already impressive list of high school technical programs. Students can get a jump on their education in engineering and aerospace in our hands-on learning environment. If you're thinking about pursuing an engineering degree in college or learning about one of the many aerospace industry support positions, don't miss this opportunity!

The Aerospace Engineering program of study is designed to introduce students to the many aviation careers and further study in aerospace technologies and related industries. The program's four-course sequence will provide students with the opportunity to apply concepts and principles of atmospheric flight and space flight to authentic situations with an emphasis on propulsion systems, ballistic projectiles, airplane wing design, aerodynamic forces, pneumatic projectiles, and quality management and enhance their knowledge of space through a series of projects that include in-depth research, concept application and prototype development.

What you will do in this class

Design, build, and test models and prototypes, produce engineering reports. Sample projects include developing model rockets and gliders.

Skills you will learn

The Engineering Design Process (design, build, and test), industry terminology, tools used to make decisions and solve problems, project management, appropriate and effective research, communicate information such as descriptive statistics to various stakeholders.

Tools you will use

Computers, Client Assistance Programs, test equipment, and presentation tools.

Major Units of Study

Engineering process
Wing design
Propulsion
Ballistics
Basic navigation
Material science

Weighted Credit

Students will receive weighted credit for grades earned in this program. Dual credit and/or articulation agreements will be available to successful completers of this program.

Example Job Titles

Aeronautical Engineer
Mechanical Engineer
Aircraft/Spacecraft Designer
Data Processing Manager
Military Aerospace Engineer

Related College Programs

Aerospace Engineering
WVU, Morgantown, WV

Mechanical Engineering
WVU, Morgantown, WV

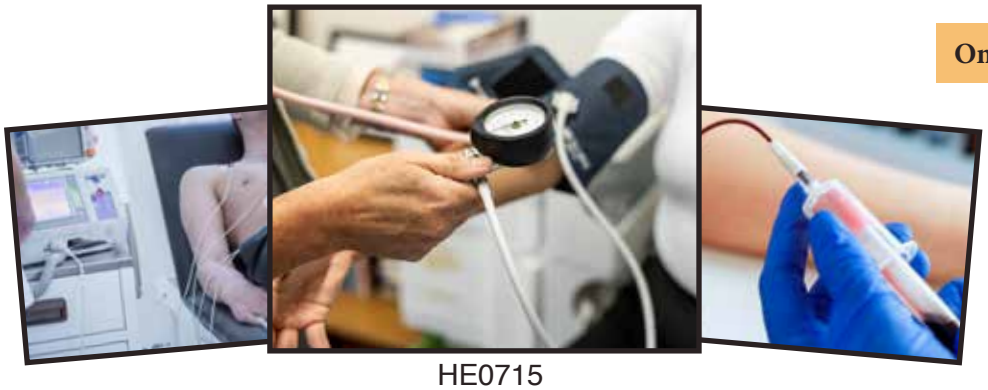
Physics
Marshall University, Huntington, WV

Mathematics
Marshall University, Huntington, WV

Space Studies
American Public University System
Charles Town, WV

ALLIED HEALTH SCIENCES

One-Year Program



HE0715

Lab technicians get the information needed to treat patients.

Allied Health Sciences is a new offering in the JRTI healthcare technical programs. The AHS program will enable students to enhance their healthcare foundation by obtaining skills in the phlebotomy and electrocardiographic areas of diagnostic testing.

The Allied Health Sciences program uses a combination of academic and practical skill demonstration as well as clinical practice that will allow the student to gain the foundational knowledge that leads to entry-level employment and meets standards for national certification once successfully completed.

What you will do in this class

Learn and demonstrate the protocols for providing efficient, accurate diagnostic testing results in phlebotomy and electrocardiographic procedures. Students learn how to do venipuncture procedures using ETS, syringe, and winged (butterfly) blood collection methodologies. Practice the order of draw and tube additives, dermal puncture procedures (fingersticks), point of care testing (POCT) for glucose, and hematocrit, and perform and interpret a 12-lead EKG.

Skills you will learn

- Venipuncture procedures using ETS, syringe, and winged (butterfly) blood collection methodologies
- Order of Draw and tube additives
- Dermal punctures procedures (fingersticks)
- Point of Care Testing (POCT) for glucose and hematocrit
- Perform a 12-lead EKG
- Interpret an EKG

Tools you will use

Simulation phlebotomy arms for adults and children, mobile phlebotomy tray, centrifuge, microscope, stethoscope and blood pressure cuff with sphygmomanometer, EKG machine, computer

Major Units of Study

Healthcare foundations
A&P with focus on the Circulatory System
Venipuncture and dermal puncture procedures and protocol
Blood flow and electrical conduction of the heart
Cardiac cycle with focus on recognizing arrhythmias

Example Job Titles

Phlebotomy Technician (certified)
EKG Technician (certified)
Monitor Technician

Related College Programs

Radiology
HCC, Hagerstown, MD

EKG Technician
Blue Ridge CTC, Martinsburg, WV

Respiratory Therapy
WVU, Morgantown, WV

AUTOMOTIVE TECHNOLOGY

NATEF and AYES Certified

TR1620

The most high-tech device in your house is sitting in the garage.

Every year auto manufacturers release new models. They add more complex computer systems, gadgets, and upgrades of every kind. The race is on to build the most fuel efficient and tech-friendly vehicle on the road. Consumers want their ride to provide modern conveniences and get them where they need to go with as little gas as possible.

As new technologies come along, the amount of skill required to do this work increases. Environmental and economic concerns are increasing the demand for hybrid and electric drive systems. Sharp young technicians are needed who will be able handle these new technologies.

The number of drivers on the road continues to grow. There are over 250 million cars and trucks on the roads in the United States. Every one of those vehicles will need to be repaired at some point. The demand is growing for people who can work on these complex systems and handle the logistics of managing the thousands of parts required to do the work.

> “Mr. Zeger’s automotive class kept me in school, made coming to school enjoyable, and got me prepared for my line of work. — *Seth Miller*

What you will do in this class

The first year of the program focuses on theory and hands-on practice. During the second year, students are responsible for operating a live shop. With roles such as Technician and Shop Foreman, students diagnose problems and perform repairs on vehicles for real customers.

Skills you will learn

Troubleshooting, repair, and replacement of the various components of all major automotive systems, including the engine, brakes, steering, and suspension systems.

Tools you will use

Hand tools, diagnostic scan tools, 2 and 4 post lifts, brake lathes, hydraulic presses

Major Units of Study

Fundamentals of Automotive Technology
Basic Engine Concepts
Brakes
Suspension & Steering

Example Job Titles

ASE Master Automobile Technician
Service Writer
Shop Foreman
Service Manager
Parts Specialist
Parts Manager
Shop Owner

Related College Programs

Mechanical Engineering and Automotive Design
WVU, Morgantown, WV

Automotive Analysis & Repair
Blue Ridge CTC, Martinsburg, WV

Applied Technologies
UNOH, Lima, OH

Auto Technology
Lincoln College of Technology (formerly NADC), Nashville, TN

Automotive Technician
Universal Technical College(UTI), Exton, PA

NATEF
ASE CERTIFIED PROGRAM

CARPENTRY

NCCER Certified

AR1820

Skilled hands can build anything.

Carpentry skills are some of the most useful skills you can have. You can use them to make a good living, or to improve your own home. Use them to start a woodworking hobby. However you apply these skills, you will always be impressed with what you are capable of making.

How would you like to start your own business right after high school? When you turn 18 and have completed this program, you will be able to take the West Virginia Contractors License Exam. You can be your own boss while your friends are still working in fast food.

College is expensive. No matter what your major is, working in the construction trade is a great way to pay for it. You can find work anywhere, and make more during the summer than most college students make in a year.

Start a hobby. Make a living. Pay for college. Own your own business. Build your own house. You can do it all with the versatile and useful set of skills you will learn in the Carpentry program.

> "I am glad that I took this class because it prepares you for the future and gives you a skill that you can use in the real world. If you don't decide to go full time with this skill, you can always come back and use to earn a little side money. Also, the teacher was a big factor since we both like to hunt and fish in our spare time. — *Johnathan Marsceau*

What you will do in this class

Reading blueprints; measuring, cutting, joining, and finishing lumber; installing shingles; building cabinets; and estimating. Students often choose to work on extra projects when time permits. Examples of these projects include archery bows, trophy mounts, plaques, and jewelry boxes.

Skills you will learn

Safety, material handling, framing floors, walls, roofs, stair construction, installing windows and doors, shingles, insulation, drywall, sidings, flooring, cabinets and counter tops

Tools you will use

Hand tools like framing square, speed square, hammers, and saws. Power tools like a planer, table saw, band saw, drill press, circle saw, drills, and routers

Major Units of Study

Framing
Roofing
Drywall
Window and Door Installation
Cold-Formed Steel Framing
Exterior Finishing
Interior Finishing

Example Job Titles

Carpenter
Leadman
Framer
Installer
Roofer
Contractor
Entrepeneur
Real Estate Developer

Related College Programs

Construction Management
Westwood College, Annandale, VA

Construction Engineering & Management
Virginia Tech, Blacksburg, VA

Civil Engineering
Penn State, Harrisburg, PA

Occupational Safety
Fairmont State College, Fairmont, WV

Architecture & Environmental Design
Morgan State University, Baltimore, MD

CODING, AI & GAME DESIGN

One-Year Program

IT1442

Build the apps the world runs on!

Computer applications impact us in almost every area of our life. In the Coding, App & Game Design class, you will learn to write programs ranging from utilities to applications to games using Python as our primary programming language.

In this two year program, first and second year students work together in teams to develop real projects. Second year students act as project leaders, directing the work and supervising their teams. The environment is designed to make the experience realistically reflect project management in the web design and game development industry. Students learn team building and interpersonal skills to prepare them for leadership roles in their careers. Why just learn how to do the work when you can train to be the boss?

A portfolio is an important tool for getting into a college program or landing a job in this field. Our students develop a portfolio to showcase the work they do on both gaming and applications.

> "While at JRTI I learned quite a few things consisting of the Python program, team management, time management, and project sizing. It has been a great experience even if there were a few bumps along the way. — *Jonah-Xavier Grubb*

What you will do in this class

Explore various technologies used to develop applications,games and utilities, such as a Discord Bot. Design and build interactive applications and games through storyboarding, coding, and graphics development.

Tools you will use

Notepad ++, Python, PyCharm, PyGame, Microsoft Office, Windows PC

Skills you will learn

Python programming, GUI Design, Game Design, animation and graphics. We'll also learn some web design and basic Computer Science concepts.
You will Code, Code and then Code (No block coding in this class!)

Major Units of Study

Javascript
HTML5 and CSS3 Coding Validation
Web Design Concepts
Web Publishing
Research Techniques and Design Cycles
Game Development 2D
Game Development 3D

Example Job Titles

Web Designer
Web Developer
Application Development
Game Design
Game Development
Sales and Marketing
Project Management
Flash Developer
Javascript Programmer
Java Programmer

Related College Programs

Game Software Development
Baker College, Allen Park, MI

Game and Simulation Programming DeVry University, Manassas, VA

Graphic Design
Shepherd University, Shepherdstown, WV

Audio Developer
WVU, Morgantown, WV

CISCO NETWORKING ACADEMIES

CCENT, CCNA, MOS, and MTA certified

IT1640

Keep the world connected!

The Cybersecurity/Cisco program will prepare you to work in our technology driven world. Computer technicans, network administrators, and security professionals keep our data safe and maintain the hardware used to run nearly every businesss on the planet.

> "Entering the classroom for the first time, I noticed right away that this program was professional. Throughout my first year, I started to gain the knowledge of what the IT field was all about. I realized very quickly, that I wish to continue with a career in IT. Even though what I have experienced so far was challenging, I know that I will succeed with the support from my peers and my instructor. – *Ethan McCullough*

What you will do in this class

In each course, Cybersecurity/Cisco students will learn technology concepts with the support of interactive media and apply and practice this knowledge through a series of hands-on and simulated activities that reinforce their learning:

- Students complete a basic procedural lab, followed by configuration, implementation, and troubleshooting labs.
- Cisco Packet Tracer activities allow students to model and analyze routing processes that may be difficult to visualize or understand and practice their skills within simulated networks.
- Quizzes, skills assessments, chapter exams, and practice exams provide feedback as students advance through the curriculum.

Skills you will learn

Design, calculate, and apply subnet masks in IPv4 and IPv6 networks. Build an Ethernet network using routers and switches. Use Cisco command-line interface (CLI) commands to perform basic router and switch configurations. Utilize common network utilities to verify small network operations and analyze data traffic. Configure and troubleshoot basic operations of a small switched network. Configure and troubleshoot VLANs and inter-VLAN routing. Configure, monitor, and troubleshoot ACLs for IPv4 and IPv6.

Learn by doing. It's faster, easier to remember, and you won't get bored.

Tools you will use

CISCO1941/K9 Integrated Services Routers Generation 2 (ISR-G2)
HWIC-2T Serial WAN Interface Cards
WS-C2960-24TT-L Cisco Catalyst switches
Linksys EA Series routers (2700, 3500, 4500) or equivalent
Assorted Ethernet and Serial cables and hubs
Computer Terminal

Example Job Titles

Chief Information Officer
Computer and IT Systems Manager
Customer Support Specialist
Data Center Support Specialist
Network Administrator
Network Systems Engineer
Network Service Technician
Database Administrator
Desktop Support Manager

Related College Programs

Cyber Security
Blue Ridge CTC

Information Technology
Blue Ridge CTC

Computer Information Technology
WVU Parkersburg

Information Security Major
WVU Parkersburg

Computer Engineering Comprehensive
Shepherd University

DIESEL EQUIPMENT TECHNOLOGY

ASE and NATEF Certified

TR1740

Diesel is the workhorse of the transportation industry.

The power of diesel engines in tractor trailers and trains gets our products to market. The reliability of diesel drives the farm equipment that harvests those products, and it's the fuel efficiency of diesel that's making it a popular alternative for pickup trucks and even the family car.

Diesel technicians keep America's workhorses running. Whether you're operating a piece of heavy equipment or hauling it to the job site, you need a diesel technician who can get the work flowing again when things go wrong. It doesn't matter if it is a small contractor's only pickup truck or a large company's entire fleet, you can keep them in business as a diesel tech.

Working on diesel engines can be a big job, literally. These aren't the puny engines you're probably familiar with. A truck engine is six times the size of what you'll find in a car. A job that size requires big tools. Diesel techs need to be able to handle the physical demands of this type of engine repair work.

> "A great class. You start with fundamentals, and go through the whole truck. The class also teaches you all aspects of the industry. Without this class, I don't know what I would be doing after high school.
> — *Jacob Golden*

What you will do in this class

Use a combination of online and classroom work to study diesel theory. In the shop, you will learn the hands-on skills to apply the theory, and tune-up and troubleshoot various vehicles including trucks, construction, and farm equipment.

Skills you will learn

Identification, disassembly, cleaning, inspection, and rebuilding of all major components of a diesel engine

Tools you will use

Hand and power tools, precision measurement tools, and laptops used for troubleshooting

Major Units of Study

Fundamentals of Diesel Equipment
Diesel Engine Components
Diesel Support Systems
Electronic Engine Controls

Example Job Titles

Mechanic
Diesel Mechanic
Bus Mechanic
General Repair Mechanic
Diesel Technician
Truck Mechanic
Service Technician
Preventive Maintenance Technician

Related College Programs

Automotive Technician
Universal Technical College(UTI), Exton, PA

Applied Technologies
UNOH, Lima, OH

Diesel Technology
WyoTech, Blairesville, PA

Aviation Maintenance Technology
Pittsburgh Inst. of Aeronautics, Pittsburg, PA

Auto Technology
Lincoln College of Technology (formerly NADC), Nashville, TN

NATEF
ASE CERTIFIED PROGRAM

EARLY CHILDHOOD

CLASSROOM ASSISTANT TEACHER

ED1300

Would you describe yourself as both creative and nurturing?

Students will use creative and critical thinking skills to complete tasks that are comparable to tasks of a child care professional.

Students get to participate in the growth and development of children in our on-site preschool classroom. Students will spend an hour a week minimum working with the children and helping them with their daily tasks.

Consider a career if you are nurturing, patient, and have the ability to problem-solve. You must be a quick thinker and a multi-tasker. Talking to parents must not intimidate you. Being a child care professional is challenging, exciting, fun and entertaining. It is a new experience every day, some days may be a struggle so you definitely need to have a passion for it.

> “I am glad that I have been able to experience and understand that children learn in different ways and need a variety of supportive techniques for them to learn best. I am also pleased that I have learned developmentally appropriate ways to handle less than ideal behaviors that will better guide children to make appropriate choices. Through my experience in this class I have built a tool-box of ideas and techniques to use in my future when I work with children. — *ReAnne Catlett*

What you will do in this class

Students develop activities for children, problem-solve situations that may come up between caregiver and parent, caregiver and child, or caregiver and coworkers. We also complete projects to raise awareness of developmental concerns related to child development.

Create bulletin boards and work on portfolios that showcase your best work.

Work with the children for a minimum of an hour a week. Dance, paint, and play games outside!

Students have a say in how our learning experiences happen, and brainstorm ideas on how to make education better for others. The group-work students do in class is very important, which follows the concept – “it takes a village to raise a child”.

Tools you will use

Cricut/computer, glue, tape, paint, household materials like vinegar and baking soda for volcanos or cornstarch and water for goop, shaving cream, food coloring, kool-aid, and lesson plan resources like Mailbox Yearbooks

Major Units of Study

Universal precautions, ethics, physical development, social-emotional development, language development, learning through play, and developmental theory and appropriate practices

Example Job Titles

Child Care Worker
Licensing Specialist
Teacher
Aide
Students in this class may also go on to careers in social work, child advocacy, early intervention, speech and language pathology, special needs, curriculum development, children’s entertainment, etc.

Related College Programs

Occupational Development

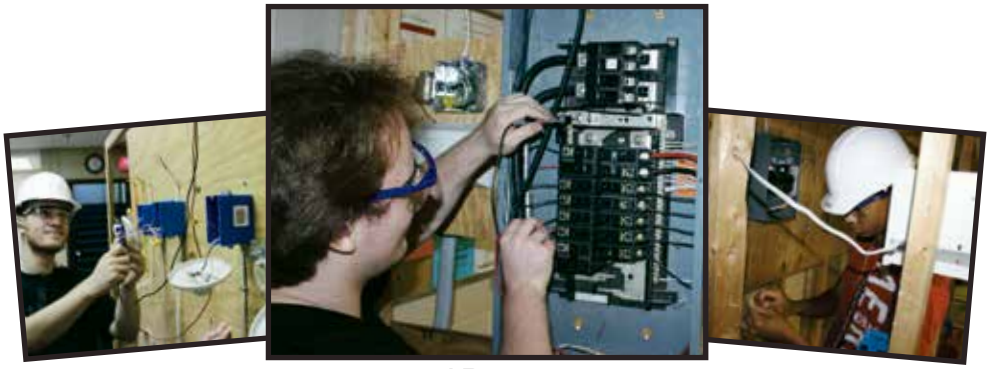
Blue Ridge CTC, Martinsburg, WV

Elementary Education

Shepherd University, Shepherdstown, WV
WVU, Morgantown, WV
Fairmont State University, Fairmont, WV
Concord University, Athens, WV
Shenandoah University, Winchester, VA
George Mason, Fairfax, VA

ELECTRICAL TECHNICIAN

NCCER Certified



AR1760

Where would we be without power?

Practically everything runs on electricity these days. The number of electronics used in offices and homes is growing rapidly. The demand for power is higher than ever. This is a great time to be an electrician!

Our Electrical Technology program will give you a huge head start in the industry. Students who complete the two year program are eligible to take the WV Electrical Journeyman's Test. Those who enter the industry without this training have to work in the field for two years before they can test for this license.

Completers of this program are also eligible to continue their education after high school in JRTI's Electromechanical Technology program (page 12). This opens up career options in the industrial maintenance field, putting you in very high demand in an area full of industrial plants like the four-state region.

Want more options? Training in this program will give you a strong foundation to build on if you want to pursue an electrical engineering degree in college.

> "I thoroughly enjoyed this class. I appreciated not only the hands on parts of the class, but the theory parts of the class too. I believe this class is preparing me very well to go into the workforce as an electrician, and I look forward to taking the second half of this class next year. — *Noah Hose*

What you will do in this class

Install and troubleshoot residential and commercial electrical circuits, run wiring, cut and bend conduit, test circuits, install breaker boxes and lighting fixtures.

Skills you will learn

Installation of residential and commercial receptacles, lighting circuits, electrical services, and EMT PVC RIGID and MC CONDUIT, Calculating current, resistance, voltage, and impedance using Ohm's law. Completers are eligible to test for their WV Electrical Journeyman's license

Tools you will use

hand tools, electrical drills, saws, various types of conduit benders, and multi-meters

Major Units of Study

Safety
Electrical Theory
Residential Wiring
Commercial Wiring

Example Job Titles

Electrician Apprentice
Electrician Journeyman
Electrician Master
Entrepeneur
Electrical Maintenance Technician
Lineman
Industrial Electrician
Installation Technician

Related College Programs

Pre-Engineering
WVU, Morgantown, WV

Mechanical Engineering Technology
Fairmont State, Fairmont, WV

Electrical Distribution Technology
Blue Ridge CTC, Martinsburg, WV

EMERGENCY & FIREFIGHTING

MANAGEMENT SERVICES

LA2200

What does it take to save a life?

In an emergency there is no time for hesitation and no room for mistakes. Do you have what it takes? Firefighters come to the rescue when we need them most. You must be brave, confident, and calm under pressure. This career is not for the timid or weak at heart.

There are many careers and options within the fire service to serve the public. The Emergency and Firefighting Management Services Program will give you the opportunity to explore these options and find out where you fit in. This program uses simulated practical evolutions, including "live burn" exercises, to develop the skills you need to succeed. You will learn as much about yourself and your abilities as the career.

> "Being at James Rumsey in the emergency services program has been challenging, but a great experience. I have enjoyed this program because it has helped me understand what it means to serve my community. I would recommend this program to anyone. — *Kendall Barrett*

What you will do in this class

You will learn the lifesaving skills of a firefighter. You will experience a live burn, climb ladders, pry open doors, cut apart vehicles, operate equipment, use a self-contained breathing apparatus, perform first aid, and learn how to search for victims in a smoke-filled environment You will learn about the turnout gear, tools, and safety equipment firefighters use. You will learn the life skills necessary to learn and work alongside some of the most talented and bravest people you will ever know.

Skills you will learn

Safety, fire suppression, search and rescue ladders, forcible entry, vehicle extrication, fire hose management, communications, hazardous materials incident management, ropes and knots, CPR/First Aid/AED

Tools you will use

Firefighter turnout gear, hose and appliances, hand tools, self-contained breathing apparatus, fire extinguishers, rope, extrication equipment, radios, hazardous materials equipment

Major Units of Study

Firefighting 1
Industrial Hazardous Materials
Firefighting 2
Industrial Incident Command

Certificates You Can Earn

NFPA Firefighter 1
NFPA Firefighter 2 CPR/First Aid
NIMS 100
NIMS 200
MIMN 700
NIMS 800
Vehicle and Machinery Extrication
Awareness Vehicle and Machinery
Extrication Operations Hazardous
Material Awareness
Hazardous Materials Operations

Example Job Titles

Firefighter
EMT
Health Care Provider
Fire Officer
Fire Investigator
Military Firefighter
Paramedic
Safety Officer
Haz-Mat Specialist

Related College Programs

Fire Prevention and Safety Technology
Blue Ridge CTC, Martinsburg, WV

Fire Science / Fire-fighting
Kaplan University, Hagerstown, MD

Occupational Safety
Fairmont State University, Fairmont, WV

Safety Management
WVU, Morgantown, WV

GRAPHIC DESIGN

One-Year Program

AV1850

Vision is the sense we rely on most.

So, why do schools teach us how to communicate verbally and with the written word, but not visually? Is it because it takes a Graphic Designer to do it well?

What is Graphic Design? Graphic Design is about solving problems visually. A Graphic Designer uses text, illustrations, symbols, photography, textures, colors and letterforms to create print and web-based design for a large variety of clients.

Graphic Design is all around you. Have a product or message you want an audience to view? If you are trying to communicate an idea or concept in a visual way, then you will be using Graphic Design to get your message across.

Graphic Design is all around you, from the posters hanging in your room, to your favorite band's logo! All created by a graphic artist! Imagine what you can do, and ask, what will you create?

> "Not only did James Rumsey Technical Institute give me great memories and wonderful friendships, it also gave me the leadership qualities and self confidence that I lacked before attending. James Rumsey has opened up my future in so many ways that I can now sleep a little easier knowing my future is brighter. I will be grateful for my opportunity to learn at such an advanced technical institution for the rest of my life. — *Victoria Grace*

What you will do in this class

Drawing, illustration, and image manipulation using traditional media and computer software, typography, and design fundamentals.

Tools you will use

Adobe design and graphics software, vinyl sign cutter, cutting boards, large format printer, color laser printer

Skills you will learn

Advertising concepts, form and space, advanced layout design, package design, publication design, art direction, color and design fundamentals, image manipulation, typography, layout and concept design, Graphic Design business fundamentals

Major Units of Study

Fundamentals of Illustration
Illustration
Fundamentals of Graphic Design
Graphic Design Applications

Example Job Titles

Graphic Designer
Desktop Publisher
Print Shop Employee
Screen Printer
Sign-Shop Employee
Photographer
Industrial Designer
Web Designer
Medical Illustrator
Computer Animator

Related College Programs

Graphic Design
WVU, Morgantown, WV

Graphic Design
Shepherd University, Shepherdstown, WV

Graphic Design
Art Institutes International, Pittsburgh, PA

Game Art & Design
Art Institutes International, Washington, DC

Digital Arts & Design
Full Sail University, Winter Park, FL

HVAC TECHNICIAN

HE0715

How would you like to keep the world comfortable?

Do you have what it takes to become a HVAC/R technician? Our HVAC/R program will get you trained in this very high-in-demand career. Students that complete the two-year program can take the EPA 608 Universal Certification Exam. Students are eligible for OSHA 10 training.

> “Mrs. Nelson is absolutely the best teacher for this program. I learned so much and was able to go to work no problem after the program. Her teaching style is the best. — *Sawyer Twigg*

What you will do in this class

Learn the theory of how the refrigeration cycle works. Wire electrical boards. Install a heat pump and connect line set, wiring, and ductwork. Use a pressure temperature chart.

Tools you will use

Hand tools, air-acetylene, oxyacetylene, vacuum pump, recovery machine, scales, refrigerant gauge manifold, Electrical multimeter, sheet metal shear and brake.

Skills you will learn

Electrical troubleshooting
Soldering
Brazing
Fabricating ductwork
Proper refrigerant recovery
Charging and evacuation techniques
Customer relations and soft skills

Major Units of Study

Basic Safety
Construction Math
Introduction to HVAC
Basic Electricity
Introduction to Heating
Introduction to Cooling
Hand and power tools
Air Distribution
Soldering and Brazing

Example Job Titles

HVAC Engineer
HVAC Installer
Refrigeration Technician
Service Manager
Solar Technician

Related College Programs

Pre-Engineering
WVU, Morgantown, WV

Mechanical Engineering Technology
Fairmont State, Fairmont, WV

Electrical Distribution Technology
Blue Ridge CTC, Martinsburg, WV

LAW & PUBLIC SAFETY

LA1020

A society is defined by how it defines justice.

The field of criminal justice offers some very exciting and rewarding career opportunities. With new breakthroughs in forensic technology and an ever-evolving domestic and international Criminal Justice landscape, it's almost guaranteed that a career as a law enforcement or criminal justice professional will be anything but boring. There is an ever expanding list of criminal justice and law enforcement career opportunities that welcome individuals with diverse educational and professional backgrounds.

Are you interested in serving and protecting as a uniformed officer on the street, solving crimes with clues at the scene, or defending the innocent in a courtroom? You will learn how to apply your talents to these various specialties in the Criminal Justice program.

Criminal Justice is challenging and rigorous. A strong academic background is recommended for students interested in applying for this program.

> "The Law and Public Safety class gave me so many opportunities to gain real-life, hands on experience in the court room and with many experts in the field. It lead me to internships, lifelong professional networks, and ultimately gave me a jump-start to my career. The best part was the friendships and memories I got to make along the way. — *Caitlyn Kinsey*

What you will do in this class

Participate in debates over legal and ethical issues, learn and practice proper arrest procedures, operate a police car and conduct traffic stops, become a member of a CSI team and investigate staged crime scenes, participate in mock trials and intern in a criminal justice related field.

Skills you will learn

Tactical communication, proper arrest procedures, crowd control, traffic scenarios, situational responses, crime scene investigations, and court proceedings

Tools you will use

Duty belt with handcuffs, training firearm, flashlight, radio, police patrol car with radio, sirens and lights, uniform, crime scene kit with camera, evidence collection containers, sketching materials, measuring devices, computers, and mock court room.

Major Units of Study

Intro to Criminal Justice
Intro to Law Enforcement
Crime Scene Investigation
Criminal Law

Example Job Titles

Police Officer
State Trooper
Game Warden
Detective
Crime Scene Investigator
FBI Special Agent
DEA Agent
Secret Service Special Agent
Border Patrol Agent
Correctional Officer

Related College Programs

Criminology
WVU, Morgantown, WV

Criminal Justice
Blue Ridge CTC, Martinsburg, WV

Administration of Justice
HCC, Hagerstown, MD

Criminal Justice
Marshall University, Huntington, WV

General Law
George Mason University, Arlington, VA

MASONRY

NCCER Certified

AR1910

Masons built the Great Pyramid of Giza, Stonehenge, and the Great Wall of China.

What a mason builds lasts forever. It is an ancient trade that requires physical strength, stamina, and lots of skill. If you like making things with your hands and working outdoors, this is a rewarding career that pays very well.

Masons are some of the highest paid workers in the construction industry, and we need more. The demand for masons is projected to grow by 34% by the year 2022. Skilled masons can work anywhere in the world. This gives you the freedom to pick the job you want, and the job security to keep it as long as you want.

Students in this class gain practical experience working on several projects, including jobs for the school and the community. You will build things that will still be in use when your grandchildren are in high school.

Students interested in pursuing careers in the construction field, like Architecture or Construction Management, will find the hands-on experience of the Masonry program very helpful.

> "I like masonry, because it's a great trade and a lot of fun. I've had a blast this year doing projects in the shop, as well as throughout the school. — *Trevor Dunkelberger*

> "I like working with my hands and building things. I also like spending at least 80% of the time in the shop it's much better than sitting in a classroom all day. — *Bruce Haynes*

What you will do in this class

Lay brick, block, and stone, finish concrete, and set tile on live projects as well as practice projects.

Skills you will learn

Job preparation and layout, laying masonry units to a line, building masonry leads, mixing mortar, cutting brick and block, estimating

Tools you will use

Trowel, wheelbarrow, cement mixer, mallet, chisels, hammer drill, shovel, tape measure, plumb line, wet saw

Major Units of Study

Introduction to Masonry
Masonry Tools and Equipment
Measurements
Drawings and Specifications
Mortar
Masonry Units
Installation Techniques

Example Job Titles

Laborer
Apprentice
Bricklayer
Stonemason
Concrete Finisher
Tile Setter
Plasterer
Foreman
Project Manager
Structural Engineer

Related College Programs

Construction Management
Westwood College, Annandale, VA

Construction Engineering & Management
Virginia Tech, Blacksburg, VA

Civil Engineering
Penn State, Harrisburg, PA

Occupational Safety
Fairmont State College, Fairmont, WV

Architecture & Environmental Design
Morgan State University, Baltimore, MD

MULTIMEDIA PUBLISHING

One-Year Program

AV1684

Engage your audience with photos, video, sound, graphics, and text.

The goal of communication is to inform and entertain. In the communications industry today, you need to do both. Students in this program get hands-on experience with telling stories across multiple media.

Find the stories you want to tell through journalism and creative writing. Make your stories more engaging with design, photography, and video. Then publish them in print, the web, and on mobile devices. Get your work seen through online and social media marketing. Do all this in Multimedia Publishing at JRTI!

Work for someone else, or build your own brand and self-publish. Build an exciting future in the communications industry with your creativity. The opportunities are greater than ever for those who have the skills to capture an audience's attention.

> "I am so happy to have taken this class because my teacher is able to explain things in a way that is exciting and easy to understand. He is a very fun teacher, and always open to learning from us as much as we learn from him. He believes that every student has creativity and with the right guidance and skills learned here you will be able to do whatever you want in life. This class gives many opportunities and prepares you for more than anyone can imagine. Everything I have learned and built on couldn't be done without Mr. Morgan. — *Caroline Knight*

What you will do in this class

Shoot portrait, product, and macro photography. Design products to be sold in the school's online store. Create multimedia content including video, audio, and animation. Write blog articles. Design and print jobs for the school including T-shirts, raffle tickets, and the JRTI yearbook. Build a website for your portfolio to present your work.

Skills you will learn

Photography, Recording and Editing Video and Audio, Basic Motion Graphics and 2D Animation, Graphic Design, Web Design, and Printing T-shirts

Tools you will use

DSLR cameras , computers with Adobe Creative Cloud software, laser and inkjet printers, laminator, bindery tools, heat press

Major Units of Study

Introduction to Visual Communication
Digital Photography
Videography
Cross-Media Publishing

Example Job Titles

Photojournalist
Production Assistant
Videographer
Editor
Digital Media Specialist
Social Media Marketer
Graphic Artist
Animator
Web Designer

Related College Programs

Communication Studies
WVU, Morgantown, WV

Media Production
Marshall University, Huntington, WV

Interactive Design for Media
WVU, Morgantown, WV

Communication and New Media
Shepherd Univ., Shepherdstown, WV

PLUMBING

AR2140

Whether it's water, gas, or chemicals, plumbers keep it flowing.

This course introduces the student to the knowledge base and technical skills of the Plumbing industry.

Plumbing begins with instruction in Basic Safety; Introduction to Construction Math; Introduction to Hand Tools; Introduction to Power Tools; Introduction to Construction Drawings; Basic Rigging; Basic Communication Skills; Basic Employability Skills; and Introduction to Materials Handling.

Students will then begin developing skill sets in the fundamentals of Plumbing such as Introduction to the Plumbing Profession and Plumbing Safety.

What you will do in this class

Students will learn and apply industry safety practices, identify and use plumbing tools and materials, read blueprints, perform measurements and layout, and learn installation and maintain basic water supply and drain, waste, and vent systems. Through hands-on shop experiences and a simulated workplace environment, students will develop technical competencies, problem-solving skills, and professional employability behaviors while exploring career pathways, apprenticeship opportunities, and training in the plumbing trade.

Skills you will learn

- Practice jobsite safety and PPE use
- Use plumbing hand tools and equipment
- Measure, cut, and assemble piping
- Install basic water and vent systems
- Read blueprints and simple schematics
- Apply trade math and measurements
- Demonstrate teamwork and professionalism

Tools you will use

- Pipe wrenches and adjustable wrenches
- Pipe cutters and tubing cutters
- PEX crimping and expansion tools
- PVC primer, cement, and applicators
- Tape measures and levels
- Drills and basic power tools
- Threading and reaming tools

Major Units of Study

Safety
Service and Repair
Joining Pipes and Fittings
Drainage
Vent Installation
Water Supply and Distribution
Hot Water Systems
Installing Fixtures

Example Job Titles

Residential Plumber
Commercial Plumber
Service and Repair Plumber
Pipefitter / Steamfitter
Drain Technician / Cleaner
Plumbing Estimator / Project Manager
Gas Service Technician

Related College Programs

Foundations of Plumbing
Blue Ridge CTC, Martinsburg, WV

Occupational Safety
Fairmont State College, Fairmont, WV

Construction Management
Westwood College, Annandale, VA

Construction Engineering & Management
Virginia Tech, Blacksburg, VA

PROSTART RESTAURANT MANAGEMENT

ProStart
National Restaurant Association Educational Foundation
a WV ProStart Program

HO1010

Who doesn't wish they could do what a chef can do?

There are tons of television shows about cooking and baking competitions. Cooking professionally requires skill, creativity, and the ability to work under pressure. What you see on those shows are chefs pushing those qualities to the limit. They are able to create works of art despite the strict limitations of the contest.

The key to their success is how they manage their team. Strong leadership, cooperation, and communication are what win those competitions, not the food. The menu is nothing without proper execution. The kitchen staff have to work together smoothly for it to work. Under the chef's leadership, each person acts as a critical part of a well oiled machine.

Restaurants don't sell food. They sell a dining experience. Patrons pay for service and atmosphere just as much as what is on the menu. Again, every member of the staff plays an important role in making that experience the best it can be.

Learn to use creativity, leadership, and a love of food to turn your ideas into great dining experiences.

> "I have been able to obtain a good grasp of the industry learning everything from baking cakes to braising meats. I have been able to experiment with foods new to me and of different cultures. ProStart gives an important work-based experience of the industry. — *Lee-Ann Frye*

What you will do in this class

Participate in a simulated hotel workplace, and be given the responsibilities and tasks that are performed daily by hotel employees and management. Create, plan, cost, and execute menus, caterings, special events and run the class like a functioning kitchen, restaurant, cafeteria or food service establishment. Put your skills to the test in Statewide and National level competitions.

Skills you will learn

Cutting and chopping techniques, cooking and baking fundamentals, menu preparation, costing, event planning

Tools you will use

Kitchen knives and utensils, food grinders and processors, small mixers, oven, grill, salamander broiler

Major Units of Study

Safety & Sanitation, Culinary Fundamentals, Culinary Math, Baking & Pastry, Nutrition, Menu Development, Garde Manger, Breakfast Cookery and Meat, Poultry and Seafood Identification & Fabrication.

Example Job Titles

Research Chef
Executive Chef
Food & Beverage Director
Beverage Manager
Dietitian
Executive Steward
Catering Manager
Food Stylist
Food Photographer
Banquet Manager

Related College Programs

Baking and Pastry
Culinary Institute of America, Hyde Park, NY

Food Service Management
Pierpont CTC, Fairmont, WV

Food & Beverage Management
Johnson & Wales, Providence, RI

Hospitality and Tourism Management
Virginia Tech, Blacksburg, VA

ROBOTICS ENGINEERING

MA1630

The future is being built today.

How do you turn metal and plastic into something that makes life better? The world is full of problems waiting for a solution, and solutions waiting to be improved. Engineers are the ones who say "I can find a better way to do that".

Through competition and project management, students in the Robotics program learn how to work as a team to develop solutions to engineering problems. The class is presented with specific challenges, and then students develop solutions. They design and build a robot to perform the tasks presented in the challenge. Team members collaborate to brainstorm, research, and test mechanical designs and programming code.

Students in this program develop the problem solving skills needed to succeed in the challenging fields of computer science and engineering, with the interpersonal and leadership skills to prepare them for project management.

> "I'm glad I took this class because it has taught me a lot about what goes into being an engineer. Robotics has given me insight into what I want my future career to be, as well as teaching me valuable information I can use in that career. — *Jamie Cooper*

What you will do in this class

Construct and program robots to perform various tasks. Compete in VEX and SkillsUSA competitions at the statewide level with the opportunity to compete in National and World level competitions. Prototype using a 3D printer and Autodesk software. Write and test programs in real and virtual simulations.

Skills you will learn

Robot design and fabrication, prototyping and 3D printing, mobile robotics programming, electronic systems, sensors and motor control, basic applied physics

Weighted Credit

Students will receive weighted credit for grades earned in this program. Dual credit and/or articulation agreements will be available to successful completers of this program.

Major Units of Study

Introduction to Robotics
Engineering Notebook
Robotic Systems
Programming
Motors, Gear Trains, and Motion
Circuits and Schematics

Example Job Titles

Mechanical Engineer
Electrical Engineer
Industrial Engineer
Civil Engineer
Aerospace Engineer
Chemical Engineer
Manufacturing Engineer
Computer Science Engineer
Electromechanical Engineer

Related College Programs

Robotics
Shepherd University, Shepherdstown, WV

Mechatronics
Blue Ridge CTC, Martinsburg, WV

Engineering
WVU, Morgantown, WV

Engineering
Marshall University, Huntington, WV

Engineering
Penn State, State College, PA

THERAPEUTIC SERVICES

HE0723

We need health care more than ever.

Based on an aging population, and a retiring workforce, the demand for health care workers will remain high for years to come. As the industry of healthcare changes and grows, an increasing number of career opportunities are becoming available inside and outside of the traditional hospital settings.

The Therapeutic Services program, is a two year program that allows the students to experience healthcare through exploring careers and being fully emerged into the world of healthcare.

Students participate in the Health Occupation Students of America (HOSA), a national student organization that provides unique opportunities through competition, leadership development, motivation, and achievement recognition. HOSA members are students interested in pursuing careers in health professions. HOSA is 100% health care!

> "Being in the Therapeutic Services program has taught me to be compassionate, empathetic, and unselfish because there are people that have medical conditions so severe that they have no will to live. I have learned that I want to be that soft voice that says, it's ok, I'm here or the hand they hold when they are in pain. The clinical experiences that I have received during this course will help me in Nursing School, at Shepherd University. I have learned so many techniques that I feel like an experienced professional already. — *Kearsten Sanders*

What you will do in this class

Students experience what it's like to work as a unit, make policy, use critical thinking to discuss ethical and medical scenarios, and educate the community around them. Students learn hands-on skills through working in health care facilities during on-site clinicals.

Tools you will use

Hospital equipment, stethoscope, scale, first aid kit, personal protective equipment

Skills you will learn

Measure and record vital signs. Practice nursing assistant skills, first aid, CPR, medical terminology, as well as patient care such as bathing, grooming, and mobility assistance

Major Units of Study

History of Healthcare
Healthcare Systems/Insurance
Anatomy and Physiology
Healthcare Safety
Medical Terminology
Medical Math
Human Growth and Development
Infection Control
Healthcare Communications
First Aid/CPR
Nutrition

Example Job Titles

Nurse
Doctor
Therapist
Surgical Technician
Dietician/Nutritionist
Physical Therapist
Insurance Coder
Laboratory Technician

Related College Programs

Veterinary Science
Marshall University, Huntington, WV

Nursing
Blue Ridge CTC, Martinsburg, WV

Internal Medicine
WVU, Morgantown, WV

Radiology
HCC, Hagerstown, MD

WELDING TECHNOLOGY

AWS and NCCER Certified

MA1980

Can you take the heat?

Where would the auto, construction, ship building, or manufacturing industries be without welders? Whether it's an M1 Abrams tank or your grandfather's lawn mower, it can't be built or repaired without welders.

Welding is a very hands-on skill that requires physical strength, stamina, a strong understanding of the various materials used, and most of all, a meticulous attention to detail. This program appeals to students interested in physical work, but are willing to study the theory necessary to understand the science behind the work.

Welders are in high demand in the U.S. military. If your plans after high school include military service, consider joining with welding skills already on your resume.

Of course, the demand is high in private industry as well. Some of the the companies that hire welders are metal repair shops, auto repair shops, construction companies, pipeline companies, aircraft manufacturing plants, shipyards, and marine servicing companies.

Welding has been a huge interest of mine since my seventh grade shop class. Since then, I have always wanted to learn all the different types of welding that the world may provide in my future endeavors. Mr. Albright has been an excellent instructor and welding educator over the past two years. James Rumsey Technical Institute Welding Technology Program delivers a relevant and rigorous curriculum and skill set, related to today's industrial welding career market. — *Stephen Wilt*

What you will do in this class

Read blueprints. Measure, cut, bend, shape, and weld to join sheets, scraps, and tubing of various metals to fabricate parts for construction and equipment repair projects and jobs.

Skills you will learn

Oxyacetylene, shielded metal arc, TIG, and MIG welding, blueprint reading, steel fabrication

Tools you will use

Hand tools, cutters, grinders, oxyacetylene, shielded metal arc, TIG, and MIG welders

Major Units of Study

Welding Safety
Construction Drawings
Rigging
Oxyfuel Cutting
Plasma Arc Cutting
Air Carbon Arc Cutting and Gouging
GMAW and FCAW-Equipment
Physical Characteristics and Mechanical Properties of Metals
GTAW-Equipment

Example Job Titles

Apprentice Welder
Commercial Welder
Journeyman Welder
Certified Pipe Welder
Nuclear Welder
Fabrication Welder
Pipefitter
Production Welder

Related College Programs

Welding Engineer
WVU Parkersburg, Parkersburg, WV

Welding Technology
Bridge Valley CTC, Montgomery, WV

Industrial Maintenance Technology
WV Northern CC, Wheeling, WV

Try out hands-on learning at James Rumsey Technical Institute.

Registration begins in October.

The **Summer Career Academy** provides students about to start 9th and 10th grade with a unique opportunity to explore the growing world of career & technical education. Taking cues from James Rumsey Technical Institute's Simulated Workplace curriculum, students are invited to participate in activities & live jobs related to some of the free high school courses that the school has to offer. This is a **FREE** program for students of the tri-county area (Berkeley, Jefferson, and Morgan).

Sign up on our website.

www.jamesrumsey.com