PERRY TECHNICAL INSTITUTE

COURSE CATALOG | 2013-2014

FOCUSED ON CAREERS | DRIVEN BY EXCELLENCE

Perry Technical Institute

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ACCSC

Accrediting Commission of Career Schools and Colleges

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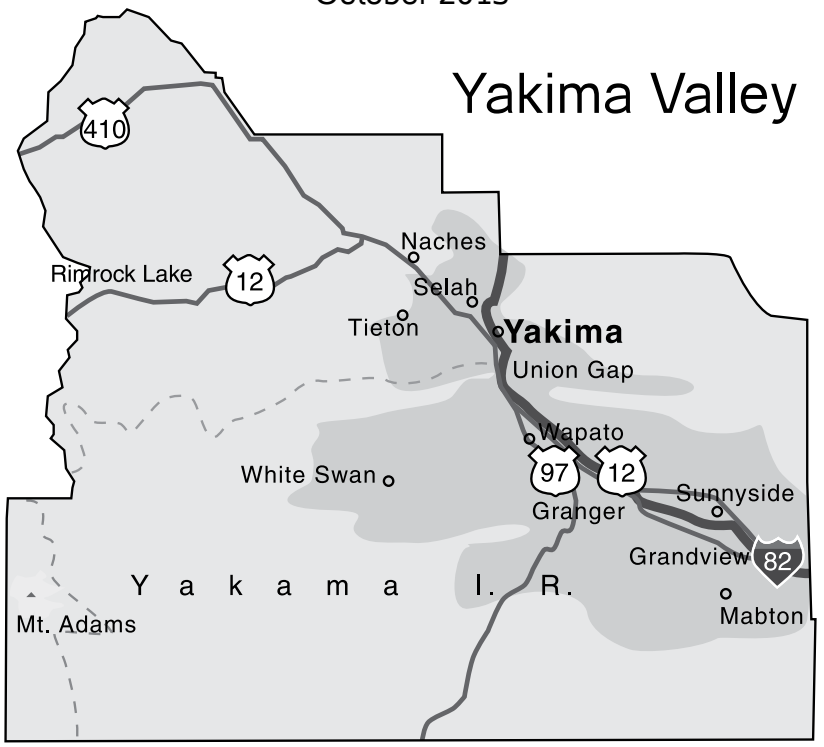

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Workforce Board • 128 10th Ave. SW • Box 43105 • Olympia, WA 98504
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For information regarding graduation and placement rates, program costs and other information, please visit
http://perrytech.edu/doc/gainful_employment.pdf.

Perry Technical Institute does not discriminate on the basis or race, color, national origin,
sex, sexual orientation, disability or age in its programs and activities.

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❖ message from the president

Christine Coté

Thank you for trusting your future to Perry Technical Institute. As a Perry student, you are part of our proud tradition – 74 years of putting people to work.

The training you receive at Perry Tech is founded on the same principles that led Harriet I. Perry to establish the school in 1939 as a lasting memorial to her late husband, J.M. Perry. She had a vision for a school that would provide hard-working, dedicated individuals with progressive training to fill the growing needs of industry.

Over the years, we have remained committed to her vision. In 2012, Perry Technical Institute was one of 17 schools out of more than 800 nationwide to be named a 2012 School of Excellence by the Accrediting Commission of Career Schools and Colleges.

The road to success is full of challenges, but if you commit yourself to your education, you will find what generations of Perry graduates have discovered: a life well-lived in a career you love.

Welcome to Perry. We look forward to sharing in your future success.

Christine Coté
President
Perry Technical Institute

Catalog certified as true and correct in content and policy.
October 2013

❖ mission statement

Perry Technical Institute will provide industry with well-trained people who are motivated to work as team members to meet the needs of industry in our rapidly evolving technological world.

❖ vision statement

Perry Technical Institute will provide the resources and guidance required to allow students to acquire the knowledge, attitudes and skills to achieve employment and success in their chosen career field.

❖ purpose of the harriet i. perry trust

"The purpose of this trust is the creation, establishment, erection, equipment, maintenance, and endowment of an educational institution to be located on or near the vicinity of Yakima, Washington, to be known as THE J.M. PERRY INSTITUTE OF TRADE, INDUSTRIES AND AGRICULTURE, to provide courses of instruction and training of a practical nature and confined to the technical area of such trades, industries, and branches of agriculture as shall qualify and prepare the students to enter a gainful occupation and fill working positions in respective fields of trade, industry, and agriculture in which courses of instruction and training shall be given by the Institute. All applicants for admission to the Institute shall be not less than sixteen (16) years of age, and shall possess a high school education or the equivalent thereof, and shall be admitted upon such terms or payment, not to be prescribed with a view to profit, as may be determined by the trustees in the case of each applicant for admission, depending on the merits, fitness, and qualifications to benefit by the courses of instruction given by the Institute, PROVIDED, HOWEVER, that said Institute shall be open to all persons upon equal terms who possess the qualifications established for admission thereto." (Trust Deed dated December 20, 1939)

❖ history of perry technical institute

Harriet I. Perry founded Perry Technical Institute in 1939 as a lasting memorial to her husband, the late John M. Perry, a noted pioneer business leader in the Yakima Valley. Although his interests were varied, Mr. Perry's main enterprise was J.M. Perry and Company, a commission house dealing in fruit packing, shipping, cold storage, and ice manufacturing.

In an unfortunate turn of events in 1938, Mr. Perry suddenly became seriously ill while on a business trip to Fairbanks, Alaska. He needed immediate surgery and was flown to Seattle. The flight was delayed by bad weather and Mr. Perry died at Maynard Hospital in Seattle on October 1, 1938. He was 77 years old.

One year later, Mrs. Perry announced that she was creating a trust fund to establish J.M. Perry Institute of Trades, Industries and Agriculture. She named three community members to the Board of Trustees: Arthur S. Coffin, Roy A. Matson and Harcourt M. Taylor. Mrs. Perry outlined plans to create a technical school that would train ambitious people in skilled occupations. Curriculum would be streamlined to eliminate non-essentials and enrollment would be open to beginners as well as those students with previous training or experience.

The trustees researched technical schools throughout the United States, gathering information about curriculum, shop construction and equipment. The trustees also searched for a suitable site to build the school. They selected a 54-acre parcel of land adjacent to the Yakima Airport. Four small farms and houses were located on the property, which was purchased for $23,000, or approximately $440 per acre.

Construction of the school's main building began in 1939 and was completed the following year. The total cost of constructing and equipping the building was approximately $650,000. The building included shops, classrooms, administrative offices and an auditorium. The school opened its doors to 211 students on January 2, 1941. The original course offerings were: Aircraft Mechanic; Aircraft Engine Mechanic; Aircraft Radio Mechanic; Automotive Mechanic; Automotive. Body and Fender; Carpentry; Inside Electrical Wiring; Machine Shop Practice; Machine Shop Practice-Tool Making; Painting, Paper Hanging and Decorating; Plumbing and Heating Sheet Metal; Welding-Electric AC and DC; Welding-Oxyacetylene; and General Shop. On July 5, 1950, Mrs. Perry died at the age of 91. She had remained active in school affairs, attending graduation ceremonies and other school events until her death.

In 1969, Perry Technical Institute became the first private technical school in Washington to be accredited by the Accrediting Commission of Career Schools and Colleges of Technology, now known as the Accrediting Commission of Career Schools and Colleges.

Unprecedented growth in the late 1970s and early 1980s created the need to build and equip three additional buildings on campus – Bond Instrumentation Laboratory, Harvey L. Smith Electrical Technology Building and Burnham Prince Agriculture Mechanics Building. In 1996, the main building was remodeled, adding new classrooms for the Telecommunications Program. A women's restroom was added in the main corridor to accommodate the growing number of women enrolling at the school.

In 1998, crews began constructing a 14,360 square foot building to house the Instrumentation & Industrial Automation Technology Program. The Bond Building, which had housed the program since 1945, continued to be used for two classes. The new Instrumentation Building was dedicated on October 16, 1999, and the first students trained in the building in January 2000.

In July 2004, a fire severely damaged the Bond Building. A new building was constructed to replace the fire-damaged Bond Building. The new building housed a portion of the Instrumentation Program and allowed the Machine Technology Program to relocate to the new building and move out of its outdated shop on the west end of campus. The 17,580 square foot building was dedicated on June 23, 2006.

The hangar building on the west end of campus was recently completely renovated. The building houses the Heating, Ventilation, Air Conditioning & Refrigeration Technology Program and the Office Administration Programs. The state-of-the-art facility was dedicated as the Eugene Shields Technical Training Center on July 18, 2009.

To accommodate the addition of the Office Administration Programs, new classrooms were added on the south side of the main corridor in 2007 and again in 2010. The latest expansion also included the addition of a Student Services area which includes Career Services, Learning Resources, the Foundation Office and a campus store. A multipurpose meeting room and staff lounge, complete with a kitchen, was also added at this time.

In 2012, the 16th Avenue building was renovated as the Medical Annex. The annex houses the Medical Office Administration & Coding Program and the Medical Assistant Program.

Over the years, Perry Technical Institute has grown, adding programs and adapting its curriculum to meet the changing needs of industry. The school's mission, however, has remained unchanged. Perry Technical Institute serves industry by equipping workers with both technical skills and positive work habits. The school serves students of all ages and walks of life by equipping them with the knowledge and skills they need for careers that offer family-supportable wages, job security, benefits and opportunities for advancement.

❖ facilities

The Perry Technical Institute campus is located at 2011 W. Washington Ave. on approximately 40 acres of land on the southwest edge of Yakima, Washington, across the street from the Yakima Air Terminal.

The school's facilities include the main building, which houses the Administration Office; the Information Technology & Communication Systems Program; Student Services, the campus store; a 700-seat auditorium; and the Deli. The Eugene Shields Technical Training Center on the west end of campus houses the Heating, Ventilation, Air Conditioning & Refrigeration Technology, the Office Administration Programs; and two sections of the Instrumentation & Industrial Automation Technology Program. The Instrumentation Building, located east of the main building, houses the Instrumentation & Industrial Automation Technology Program and the Machine Technology Program. The Smith Electrical Technology is located behind the main building and the Burnham Price Automotive Technology Building is on the northwest end of campus. The Medical Annex, adjacent to campus on South Sixteenth Avenue, houses the Medical Office Administration & Coding Program and the Medical Assistant Program.

❖ academic calendar 2013-2014

AUTO, BTA, ELECTRICAL, HVAC/R, ITCS, INSTRUMENTATION, MACHINE, MED, MOAC, LAP AND WELDING

SUMMER QUARTER 2013	June 24	Summer Quarter Begins
	July 4	Independence Day, No Classes
	August 5-15	Summer Break
	September 2	Labor Day, No Classes
	September 26	Graduation
	September 26	Summer Quarter Ends
FALL QUARTER 2013	October 1	Fall Quarter Begins
	November 11	Veteran's Day, No Classes
	November 28	Thanksgiving Holiday, No Classes
	December 18	Graduation
	December 18	Fall Quarter Ends
	Dec. 23, 2013 - Jan. 2, 2014	Winter Break
WINTER QUARTER 2014	January 6	Winter Quarter Begins
	January 20	Martin Luther King, Jr. Day, No Classes
	February 17	President's Day, No Classes
	March 26	Graduation
	March 26	Winter Quarter Ends
SPRING QUARTER 2014	April 7	Spring Quarter Begins
	March 31 - April 3	Spring Break
	May 26	Memorial Day, No Classes
	June 19	Graduation
	June 19	Spring Quarter Ends

❖ enrollment

Perry Technical Institute welcomes prospective applicants who are seeking education in one of the school's 11 training programs. Perry Technical Institute admits students of any race/color, sex, creed, marital status, national origin, age, and disability to all rights, privileges, programs, and activities generally accorded or made available to students at the school. The school does not discriminate on the basis of race/color, sex, sexual orientation, creed, marital status, national origin, age, or disability in administration of its educational policies, admissions policies, scholarship and loan programs, and other school administered activities. All applicants must be high school graduates or have earned a General Education Development Certificate (GED), and be at least 16 years of age.

ENROLLMENT PROCEDURES

To apply for admission, applicants should contact an Enrollment representative at Perry Technical Institute to request program information and take a tour of the school facilities. Once the applicant has made a decision to apply for admission to Perry Technical Institute, the applicant must complete an application for admission; provide proof of satisfactory completion of high school or equivalent education; and pay a $45 registration fee. Candidates will confirm they have already received a catalog or will receive one at the time of acceptance to Perry Technical Institute. The Enrollment Office will review the application for admission and notify the applicant in writing the status of admission to the school.

ENROLLMENT REQUIREMENTS

1) Proof of satisfactory completion of high school or equivalent education and valid state-issued photo ID or driver's license.
2) Completed application for admission to Perry Technical Institute with $45 registration fee.
3) Successful completion of the entrance exam for the appropriate program.
4) Payment of $500 tuition deposit to ensure a starting date.
5) Sign enrollment contract and attend mandatory student orientation.

Applicants to the HVAC/R and Automotive programs must have a valid driver's license and Automotive students must provide a three-year driving abstract. Machine Technology applicants must interview with the Department Head. Medical Assistant Program applicants must successfully pass a criminal background check.

We enroll students based on the date on which their enrollment requirements are complete. When classes reach capacity, students are automatically enrolled in the next available start date. Students requesting to be placed on the waiting list will also be automatically enrolled for the next available start date. Students who request a change in enrollment date will be charged a $45 registration fee at the time of the third request.

❖ academic information

ATTENDANCE POLICY

Attendance is mandatory. The scheduled start and end times are as follows:

Automotive	Monday – Thursday	7:30 – 4:00
ITCS	Monday – Thursday	7:30 – 4:00
Instrumentation	Monday – Thursday	7:30 – 4:00
BTA and LAP	Monday – Thursday	7:30 – 4:30
BTA 6	Monday – Thursday	7:30 – 4:00
HVAC/R	Monday – Thursday	7:15 – 4:10
Electrical	Monday – Thursday	7:00 – 4:00
Electrical (beginning Oct. 2013)	Monday – Thursday	6:50 – 4:05
Machine	Monday – Thursday	7:00 – 3:30
MOAC and MAP	Monday – Thursday	7:30 – 4:00
Welding	Monday – Thursday	7:30 – 4:00
Evening Programs	Monday – Friday	4:30 – 9:30
	Variable Saturdays	9:00 – 5:00

INSTRUCTOR NOTIFICATION Students are required to notify the instructor before the scheduled start time each day they are absent or late. Students must also notify instructors when leaving early or arriving tardy from a scheduled break or lunch. Failure to do so may result in an immediate probation.

CLOCKING-IN Students are required to clock-in when arriving and clock-out when leaving, at any given time of the day, other than at stated break periods. Student attendance is recorded by using an electronic time management system. The time displayed on the time clock is the time that will be accounted for. Students are provided with an ID scan card and are required to scan in and out each day. The cost to replace the ID scan card is $5. *Note: If the scanner does not read a card, the student is required to manually punch in his/her assigned student ID number.*

Students leaving campus for an externship are also required to scan their cards at the time they leave or return.

POINTS If a student misses up to three hours of scheduled class time in a day, the student will accrue one point. If a student misses more than three hours of scheduled class time in a day, the student will accrue three points. Once a student has accrued eight or more points in a term, the student is placed on attendance probation for the remainder of the term. If a student amasses additional points while on attendance probation, he or she may be subject to immediate dismissal.

Students are limited to two one-point infractions in a month. For example, if a student misses one hour of scheduled class time (accruing one point) on the 16th day of a given month, the student will only be allowed one more one-point infraction until the 16th day of the following month. At the third one-point infraction in a month, the student will be placed on probation for one month or the end of the term, whichever comes first, and may not accrue any points during the probation period. If additional points are amassed during that month, the student's probation will be extended to the end of the term. Any points accumulated after the probation has been extended may result in immediate dismissal.

If a student misses scheduled class time without clocking-out, the student's instructor will notify the Attendance Coordinator, who will document the missed time and add one point to the student's attendance record.

CLASS CUT is defined as not being present during scheduled

class time at other than stated break periods, or leaving class prior to the end of the scheduled instruction period without instructor permission. This will result in immediate probation.

Following three consecutive days of absences without notification, a student will be dismissed.

Scanning or keying another student's card/ID number will result in dismissal of all parties involved. Grades, financial aid, and Department of Veterans Affairs agencies sponsoring students are dependent on accurate records of attendance.

LEAVE OF ABSENCE A leave of absence is granted only to students who wish temporarily to interrupt their education for the following reasons: medical emergency, military leave, or other approved family crisis. A leave of absence will not be granted for failure to make satisfactory academic progress.

A request for leave must be made to the Associate Dean of Student Affairs, or time away from school will be subject to point accrual. The written request to the Dean of Education must include dated third-party verification of the reason for the leave of absence as well as a typed letter outlining the reason for the request. The Department of Veterans Affairs and the Financial Aid Office will be notified immediately when the student is granted a leave of absence. A leave of absence will be for a maximum of 30 days. Failure to return to class following the leave of absence may result in dismissal. Leave requests must be submitted within five school days of returning to class. Only one leave of absence may be granted per term for each student.

SATISFACTORY ACADEMIC PROGRESS (SAP) POLICY

DEFINITION The student must be making satisfactory academic progress in order to remain eligible for continuous enrollment under regular student status. Students not making satisfactory academic progress will be placed on probation. A student is graded not only on test scores, but also on participation in class, attendance, performance in lab, and conduct.

Students must: Complete each quarter or trimester with a minimum GPA of 2.0, and the minimum grades established for each subject within the department.

PROBATION

If a student has not met the criteria of satisfactory progress at any point during the term, the student will be placed on probation. A student is encouraged to meet regularly with his or her instructor while on probation. A copy of the signed document will be given to the student, the program counselor (if applicable), and the Financial Aid Office and the original is filed in the student's file. While on probation, a student remains eligible to receive Title IV funding. If the student has not achieved satisfactory academic progress by the end of the probation term, he/she may be dismissed.

Exceeding three probations: The school reserves the right to dismiss students who have exceeded three probations. Repeated terms: Financial aid programs do not typically pay for repeated terms.

REPEATING QUARTERS

A student failing to maintain satisfactory progress or withdrawing from a class in the middle of a term may petition to repeat the quarter or trimester. Upon successful completion of the repeated quarter or trimester, the student will be granted the grade for the quarter or trimester successfully completed in lieu of the previous grade.

No student will be allowed to repeat quarters or trimesters that result in a total time of enrollment exceeding 1.5 times the specified time for the program. Repeating quarters/trimesters may affect financial aid eligibility.

All failures requiring the retake of courses will be charged the current academic year quarterly or trimester rate.

TERMINATION OF ENROLLMENT

Withdrawal

Students who voluntarily withdraw from school must complete a Withdrawal Form and have it signed by specified school officials in order to officially close their records.

Dismissal

The school reserves the right to dismiss any student for any of the following reasons:

1) Violation of probation
2) Violation of a last chance agreement
3) Exceeding three probations
4) Three consecutive days of unexcused absences
5) Scanning or keying another student's card/ID number for attendance
6) Exceeding five combined absences (unexcused and/or excused)
7) Aggressive, harassing, or discriminatory acts against other students or employees
8) Failure to pay tuition, fees, books, or tools
9) Failure to meet Satisfactory Academic Progress (SAP)
10) Failure to follow school procedures and policies
11) Acts of theft or dishonesty
12) Failure to comply with safety regulations
13) Malicious damage to school property
14) Insubordinate acts against staff or other Perry Technical Institute employees
15) Drug/alcohol abuse
16) Disruption of the learning environment

The Associate Dean of Student Affairs will conduct a full hearing of the facts and make a recommendation to the President. The authority to dismiss a student is vested only in the President and the President's decision following a review of the facts is final.

APPEAL PROCEDURE

A student who has been dismissed and wishes to appeal that decision must submit a letter to the school President within three business days of the dismissal. The letter must describe any and all circumstances deserving of further consideration. The President will convene an appeal committee consisting of the department head, instructor, and a designated representative of the school in order to review the appeal. The student will be notified within one week of the official appeal decision.

CLASS/PROGRAM CANCELLATIONS

Perry Technical Institute makes every effort to meet the needs and desires of its students; however, special circumstances may require the school to cancel classes or programs due to

insufficient enrollment or funding. The school reserves the right to make such decisions, as warranted.

For more information regarding admission requirements and policies, please contact our Enrollment Office in writing, by telephone, or through the website: Perry Technical Institute, 2011 W. Washington Ave., Yakima, WA 98903, 509.453.0374, toll-free 888.528.8586, or www.perrytech.edu.

CLOCK HOUR/CREDIT HOUR CONVERSION SYSTEM

DEFINITION OF A CLOCK HOUR A clock hour is defined as a full 60 minutes.

DEFINITION OF A CREDIT HOUR A credit hour is a unit that gives weight to the value, level, or time requirements of an academic course. A credit hour is a proxy measure of student learning.

One semester/trimester credit hour equals 45 units (and one quarter credit hour equals 30 units) comprised of the following academic activities:

One clock hour in a didactic (lecture) learning environment = 2 units
One clock hour in a supervised laboratory setting of instruction = 1.5 units
One clock hour of externship = 1 unit

For Financial Aid and Veterans Affairs purposes, the above conversion factors do not apply.

COURSE IDENTIFICATION SYSTEM

Courses have titles represented by letters and numbers. The first few letters refer to the program, and the first number of the following three numbers represents the term. Note: Course crossover may occur in some programs.

Example 1: EL – Electrical Technology
104 – 1st year
Example 2: BTA – Business Technology & Accounting
220 – 2nd year

LETTERING SYSTEM

AU	Automotive Technology
BTA	Business Technology & Accounting Program
EL	Electrical Technology
IN	Instrumentation & Industrial Automation Technology
ITC	Information Technology & Communication Systems
LAP	Legal Assistant/Paralegal
MA	Machine Technology
MED	Medical Assistant
MOA	Medical Office Administration & Coding
RE	Heating, Ventilation, Air Conditioning & Refrigeration Technology
WLD	Welding Technology

GRADING

The progress or grading system by which a student will be evaluated is as follows:

Grade	GPA	Grade	GPA
A	4.0	C	2.0
A-	3.7	C-	1.7
B+	3.3	D+	1.3
B	3.0	D	1.0
B-	2.7	D-	.7
C+	2.3	F	0

P/F	Pass/Fail
I	Incomplete
W	Withdraw
CT	Challenge test

An incomplete grade will revert to a failing grade if it is not completed by the end of the term. Only in the case of a leave of absence will an incomplete be carried into the next term.

Students are given a grade (progress report) upon completion of each term. A copy is sent to the student's counselor (if applicable) and the documentation is maintained in the school's database. A student who wishes to appeal a grade, must submit a letter to the Dean of Education within 15 business days of the completed term. The letter must describe any and all circumstances deserving further consideration. The Dean of Education will convene an appeal committee consisting of the department head, instructor, and a designated representative of the school in order to review the appeal. The student will be notified within one week of the official appeal decision.

MAKE-UP WORK

Make-up work will be available for the following reasons: medical emergency, military leave, or other approved family crisis. To request make-up work, the student must provide the instructor with third-party verification of the reason.

The following types of make-up work are allowed: textbook assignments, quizzes, tests, projects, and lab work.

GRADUATION REQUIREMENTS

1) Completion of:
   75.5 credit hours for Automotive Technology
   116.0 credit hours for Business Technology & Accounting Program
   169.0 credit hours for Electrical Technology
   174.5 credit hours for HVAC/R Technology
   156.5 credit hours for ITCS
   159.0 credit hours for Instrumentation & Industrial Automation Technology
   75.5 credit hours for Legal Assistant/Paralegal
   139.5 credit hours for Machine Technology
   114.0 credit hours for Medical Assistant
   115.5 credit hours for Medical Office Administration & Coding
   74.5 credit hours for Welding Technology
2) Maintain satisfactory progress with a minimum grade point average of 2.0
3) Maintain satisfactory attendance record
4) Maintain proper student conduct
5) Full payment or satisfactory arrangement to fulfill all financial obligations

ASSOCIATE OF APPLIED SCIENCE/CERTIFICATE OF COMPLETION

Business Technology & Accounting students who satisfactorily complete their course of training are granted Associate of Applied Science degrees. Students who satisfactorily complete training in all other programs are granted Certificates of Completion.

ENROLLMENT CAPACITY

Automotive	16 each section, 64 total
BTA	24 each section, 48 total
Electrical	22 each section, 176 total
HVAC/R	22 each section, 88 total
ITCS	24 each section, 96 total
Instruments	22 each section, 176 total
LAP	24 each section, 24 total
Machine	12 each section, 24 total
MED	24 each section, 48 total
MOAC	24 each section, 48 total
Welding	20 each section, 40 total

RE-ENROLLMENT TO PERRY TECHNICAL INSTITUTE

Students intending to re-enroll after withdrawing or being dismissed from Perry Technical Institute are required to complete a Re-Enrollment Form that may be obtained from the Enrollment and Registration Coordinator.

The form will be reviewed by the specified school officials, their responses noted and signed.

The student must write a letter addressed to the Associate Dean of Student Affairs which clearly states the following:

1) The reason for termination
2) The actions taken during the termination period to resolve the problem
3) His/her plan to successfully complete the program

TRANSCRIPTS

Upon graduation, a graduate will receive one free official transcript. Fees are assessed for additional transcripts. Official transcripts are $10 and unofficial transcripts are $3.

❖ student services

FIRST AID/CPR TRAINING

Students are required to have a two-year first aid/CPR certification. Perry Technical Institute offers first aid/CPR classes on campus. The company providing the certification charges the student a fee for this service.

HOUSING

The school does not provide housing for students. Subject to availability, dorm accommodations are available on the Yakima Valley Community College campus for eligible students. Information on rental units and dorm accommodations may be obtained from Perry's Enrollment Office or through the Perry website, www.perrytech.edu.

JOB PLACEMENT

The school does not guarantee placement upon completion of a training program. However, Perry Technical Institute offers continuous career services to its graduates and current students to provide assistance with:

1) Job search planning and implementation
2) Resume and cover letter preparation
3) Mock interviews
4) Locating job advertisements
5) Coordination of company interviews on campus

The Career Services Office may be contacted for more information or to schedule an appointment to receive assistance.

STUDENT ACCIDENT INSURANCE

Perry Technical Institute requires each enrolled student to participate in the school's Student Accident Insurance. The Student Accident Insurance is mandatory and will be applied to the student's account each term for a fee. Information about Student Accident Insurance and claim forms are available through the Facilities and Safety Office.

LEARNING RESOURCE SYSTEM

Perry Technical Institute has a comprehensive learning resource system in place to ensure that students have access to resources which will enhance their learning experience. The learning resource system consists of a customized online database for student and faculty use which accesses full-text electronic resources including reference, periodicals, journals, newspapers, and magazines. The databases are provided through the Washington State Library, ProQuest, and MyiLibrary. In addition, each department has resources available to students. Training is provided on how to locate and use information through the learning resource system.

The PTI Learning Resource Center is located off the main corridor. Hours of operation are Monday through Thursday, from 6:30 a.m. to 5:30 p.m. A current student ID card is required to use the center.

In addition, Perry Technical Institute has a partnership with Davis High School Media Center which provides access to Perry students, faculty, and administration. The Davis High School Media Center, located at 212 S. Sixth Ave., is open Monday through Thursday from 3-8 p.m. and on alternating Saturdays from 10 a.m. to 1 p.m. during the school year. The Media Center offers computers, books, a variety of online resources, free tutoring, computer assistance, and proofreading.

❖ financial aid

Perry Technical Institute offers a variety of financial assistance to eligible students. Aid in the form of grants, loans, jobs, and scholarships help offset the cost of educational expenses. Financial aid is administered in accordance with established state and federal policies and philosophies. The basis of these policies is the belief that financing a student's education is the responsibility of the student and family.

ELIGIBILITY

A student's financial aid award is based on a demonstrated financial need. Need is determined from analysis of the Free Application for Federal Student Aid Form (FAFSA) and the Perry Technical Institute Data Sheet. These forms are analyzed to determine the expected contribution from the student and the student's family toward the educational expenses. Financial need is the difference between total educational expenses for an academic year and the student/family contribution. Financial aid should be viewed as a supplement only after the full resources of the student and family are committed.

SATISFACTORY ACADEMIC PROGRESS REQUIREMENTS FOR FINANCIAL AID RECIPIENTS

DEFINITION Satisfactory Academic Progress (SAP) holds students accountable for meeting the minimum academic standards in an eligible program of study per federal and state financial aid regulations. SAP is reviewed before financial aid is awarded and is reviewed at the end of every term that aid is received.

Students must be making SAP in order to remain eligible for financial aid. To fulfill SAP requirements students must:

1) Complete each term with a minimum GPA of 2.0.
2) Quantitative/credit completion rules: All students at Perry Technical Institute attend full time in programs exceeding 12 credit hours per term. Students must successfully complete 100% of the credits associated with full time awards or aid will be terminated.
3) Progress in program of study at a pace that allows completion within the maximum time frame of 150% (federal funds) and 125% (state funds) of program length.
4) Courses must be completed on time.

If at the end of any term the student is not making SAP, financial aid funds will be terminated. The student will be responsible for funding the next enrollment period and if upon completion of that period the student has the minimum GPA of 2.0 and successfully completed all credits during the period, the students may reinstate their financial aid eligibility.

If, due to extenuating circumstances, the student fails to meet SAP requirements, he or she may appeal the termination of his or her financial aid. Appeals are completed on the Financial Aid General Appeal Form. Based upon its own review of a student's circumstances, the Financial Services Office may make allowable exceptions to the stated SAP requirements. All such waivers will be reviewed on an individual basis and will take into consideration special circumstances. An otherwise eligible student in a repeated quarter resulting from a successful appeal may receive financial aid for a maximum of one repeated term. If the student does not meet both the qualitative and quantitative SAP standards by the end of the repeated quarter, financial aid will be terminated

Reinstatement of Aid: Students' financial aid may be reinstated in one of two ways:

1) By having the Financial Aid General Appeal Form approved.
2) By remaining in school and re-establishing compliance with the minimum cumulative GPA (qualitative) and attendance (quantitative) standards.

WITHDRAWALS (REFUNDS)

Up through the 60% point in each payment period or period of enrollment, a pro-rata schedule is used to determine how much FSA Program funds the student has earned at the time of withdrawal. After the 60% point in the payment period or period of enrollment, a student has earned 100% of the FSA Program funds.

The amount of financial aid earned is the percentage of aid earned multiplied by the total amount of aid that was disbursed for the payment period or period of enrollment as of the day the student withdrew.

1) If the day the student withdrew occurs on or before the student completed 60% of the payment period or period of enrollment for which the assistance was awarded, the percentage earned is equal to the percentage of the payment period for which assistance was awarded that was completed.
2) If the day the student withdrew occurs after the student has completed greater than 60 percent of the payment period or period of enrollment, the percentage earned is 100 %.

The percentage of the payment period or period of enrollment completed is determined by calculating the total number of calendar days in the payment period divided into the number of calendar days completed in that period as of the day the student withdrew.

Funds will be returned in the following order:

1) Unsubsidized Federal Stafford Loans
2) Subsidized Federal Stafford Loans
3) Perkins Loans
4) Federal/Direct Plus Loans
5) Federal Pell Grants
6) FSEOG
7) WA State Opportunity Grant

REFUNDING STATE NEED GRANTS (SNG)

If a student withdraws and his/her last date of attendance is prior to or at 50% of the term, the SNG repayment will be based on the percent of the term not completed, following the procedures outlined in the Washington Student Achievement Council's SNG repayment methodology. Funds will be returned to SNG via the Washington Student Achievement Council's secure portal, CSAW. If a student's last date of attendance is after 50% of the term, the aid is considered 100% earned per the SNG repayment policy and no repayment is processed.

❖ veteran education benefits

Perry qualifies for all chapters of veteran's aid. Selected programs of study at Perry Technical Institute are approved by the Workforce Training and Education Coordinating Board's State Approving Agency (WTECB/SAA) for enrollment of those eligible to receive benefits under Title 38 and Title 10, USC.

Chapter 30 - Montgomery GI Bill – Active Duty Education Assistance Program
Chapter 31 - Disabled – Vocational Rehabilitation
Chapter 32 - VEAP Veterans Education Assistance Program
Chaper 33 - Post-9/11 GI Bill
Chapter 35 - Survivors and Dependents Education Assistance Program
Chapter 1606 - Montgomery GI Bill – Selected Reserve Education Assistance Program
Chapter 1607 - Montgomery GI Bill – Reserve Education Assistance Program
VRAP - Veterans Retraining Assistance Program

To apply for benefits, you may obtain an application at Perry Technical Institute or apply online at http://gibill.va.gov/. Return the completed application to PTI along with a certified copy of your DD214 form. You must also provide copies of transcripts from any other colleges that you have attended. The Veterans Certifying Official will forward applications to the Department of Veterans Affairs.

MILITARY ACTIVE DUTY POLICY

1) A student or military dependent leaving for active duty or due to relocation related to military service during an academic term will receive an Incomplete.
2) The student should request to resume academic work within six months of returning from active duty or relocating back to the area.
3) The school will place the student in the earliest possible enrollment period.
4) Upon returning and finishing the academic work for the class section, the Incomplete will be removed and a final grade for that section will be given.

REFUND POLICY FOR ACTIVE DUTY

1) Refunds will be processed in accordance with the Title IV refund policy when applicable.
2) Upon returning, Military Active Duty students or military dependents whose training was interrupted due to military service will receive a waiver equal to the amount of prior tuition unless financial aid funds were used.

❖ perry technical foundation scholarships

In 1992, a group of community volunteers pledged their commitment to Perry Technical Institute by forming Perry Technical Foundation. The foundation's mission is to raise funds for student scholarships, loans, instructional equipment, and capital improvements which enrich learning on the Perry campus.

The demand for technical training is rising, but so are the costs. The average total cost of completing a two-year training program at Perry is more than $25,000 and approximately 83% of our students receive some form of financial aid. While some students qualify for state and federal assistance, Perry receives no direct funding from government agencies.

Perry Technical Foundation helps Perry Tech students by seeking support from alumni, community members, foundations and corporations. These gifts enable the foundation to offer scholarships to deserving students working toward their career goals. We believe our partnership with the community is essential to fulfilling our mission of providing technical training within the community to provide the nation with a qualified workforce.

❖ quarter tuition schedule

AUTO, BTA, MOAC, MED, HVAC/R, INSTRU, ITCS, LAP, MACHINE, AND WELDING

Summer Quarter – June 24, 2013	$3,401.25
Fall Quarter – October 1, 2013	$3,401.25
Winter Quarter – January 6, 2014	$3,401.25
Spring Quarter – April 7, 2014	$3,401.25

ELECTRICAL

Summer Quarter – June 24, 2013	$3,793.50
Fall Quarter – October 1, 2013	$3,793.50
Winter Quarter – January 6, 2014	$3,793.50
Spring Quarter – April 7, 2014	$3,793.50

Additional Costs (estimates):	**Auto**	**LAP**	**MOAC**	**MED**	**BTA**
Books and Tools	$2,879.00	$3,472.00	$4,556.00	$3,056.00	$3,524.00
Field Trips	150.00	100.00	100.00	100.00	100.00
First Aid/CPR Class	25.00	25.00	25.00	25.00	25.00
Student Accident Insurance (per term)	22.00	22.00	22.00	22.00	22.00
Technology Fee (per term)	15.00	15.00	15.00	15.00	15.00
Lab Fee (per term)	50.00	30.00	30.00	50.00	30.00
Graduation Fee (per term)	13.50	13.50	9.00	9.00	9.00
Background Check				39.00	
Access Certification Exam		100.00	100.00	100.00	100.00
Excel Certification Exam		100.00	100.00	100.00	100.00
Powerpoint Certification Exam		100.00	100.00	100.00	100.00
Word Certification Exam		100.00	100.00	100.00	100.00
Outlook Certification Exam		100.00	100.00	100.00	100.00
Driving Abstract	13.50				
Industry Certifications	15.00	575.00	330.00	95.00	215.00

Additional Costs (estimates):	**ELEC**	**HVAC/R**	**INSTRU**	**ITCS**	**Machine**	**Welding**
Books and Tools	$3,210.00	$2,559.00	$3,670.00	$3,900.00	$4,200.00	$2,100.00
Field Trips	650.00		750.00	750.00	300.00	100.00
First Aid/CPR Class	50.00	25.00	25.00	25.00	25.00	25.00
Student Accident Insurance (per term)	22.00	22.00	22.00	22.00	22.00	22.00
Technology Fee (per term)	15.00	15.00	15.00	15.00	15.00	15.00
Lab Fee (per term)	45.00	50.00		40.00	45.00	500.00
Graduation Fee (per term)	6.75	6.75	6.75	6.75	6.75	13.50
Electrical Training Certificate	42.30	42.30		40.60		
Electrical Field Training Fee	75.00					
ISA Student Membership Dues			20.00			
FCC License Exam			70.00			
Industry Certifications	25.00	208.00		735.00	100.00	385.00

*The State of Washington does not allow for tax-exemption of items purchased for use in the State of Washington such as books and tools for instruction received in the State of Washington.

❖ tuition and fees

TUITION PAYMENT REQUIREMENTS

Students pay tuition on a quarterly basis. Tuition is due at the start of each program quarter. Students with a balance owing will not be allowed to continue into the next enrollment period. There is an optional Tuition Payment Plan (TPP) available which may be subject to a fee and late charges.

DELINQUENT ACCOUNTS

In the event a student's account is delinquent, the student may be required to pay late fees and all reasonable collection costs, including attorney fees and collection agency fees in accordance with Washington State law. Student transcripts may also be held if an account is delinquent.

RETURNED CHECK PROCESSING FEE

A charge of $32 is assessed each time a student's check is returned by a bank withholding payment.

REFUND POLICY

In accordance with federal and state regulations, Perry Technical Institute provides fair and equitable adjustment to all students. If the student is entitled to a refund, the refund must be paid within 30 calendar days of the student's official date of termination.

1) An applicant to the school who is rejected will receive a full refund.
2) An applicant whose class is cancelled will receive a full refund.
3) All monies paid by an applicant will be refunded if the applicant cancels within five business days (except Sundays and holidays) following the date the contract is signed or an initial payment is made, as long as the applicant has not begun training.
4) If the applicant cancels after the fifth business day after signing the contract or making initial payment, but prior to attending class, the school will retain the $45 registration fee and refund any other monies paid by the applicant.
5) A student who has not visited the school facility prior to enrollment will have the opportunity to withdraw within three days following either attendance at a regularly scheduled orientation or following a tour of the school facilities and inspection of equipment with a full refund.
6) The school reserves the right to cancel a class start date due to insufficient enrollment. If this occurs, the student may request a full refund of all monies paid or apply all monies paid to the next scheduled class start date.

When calculating refunds, the official date of a student's termination is the last date of recorded attendance:

1) When notification of withdrawal or cancellation is received in writing on an official Perry Technical Institute Termination of Enrollment Form.
2) When the student is dismissed for a violation of a published school policy.
3) When a student, without notice, fails to attend class for three consecutive days.

The term "period of enrollment for which the student has been charged" is determined by dividing the total number of days that make up the period of enrollment for which the student has been charged into the number of days remaining in that period. Termination date for adjustment computation is the last recorded date of student attendance.

The following schedule is used to calculate refunds:

If the student completes this amount of training:	School refunds to student:
Through the first 10%	90%
11% through 25%	75%
26% through 60%	50%
More than 60%	0%

Any student receiving federal or state financial aid who officially or unofficially withdraws from Perry Technical Institute will have funds returned to the appropriate financial aid program based on the regulations governing the program.

There is no refund for books purchased.

❖ general information

PROGRAM ADVISORY COMMITTEES

Each program at Perry Technical Institute maintains an independent Advisory Committee that meets two times per year to review the established curriculum and comment as to the appropriateness and adequacy of the program objectives, program length, curriculum content, learning resources, facilities and equipment, student graduation, and graduate employment. The majority of the members of each Program Advisory Committee are employers representing the major occupations for which training is provided. Departments with student associations may also include student members as well as instructional staff.

ARTICULATION AGREEMENTS

A collaborated program between Perry Technical Institute and Yakima Valley Community College provides students with the opportunity to earn an Associate of Applied Science in four technical areas*. Upon acceptance into a designated Perry Technical Institute program, students may begin taking required classes at Yakima Valley Community College. This can be done while waiting for entrance into the technical portion of their degree, while they complete the technical portion or after they completed their technical portion.

An Associate of Applied Science along with the technical program allows students to work more effectively in their chosen field and to help them compete for advanced opportunities. An official referral from Perry Technical Institute is required for students enrolling under the terms of this agreement.

In addition to completing their technical program at Perry Technical Institute, students complete credits at Yakima Valley Community College. Credits are designated as core requirements and are required for all programs. For additional information, please contact the Workforce Education Division at Yakima Valley Community College at 509.574.4744 or 509.574.4796 (www.yvcc.edu) or Perry Technical Institute at 509.453.0374.

**The Automotive Technology, Business Technology & Accounting, Legal Office Assistant/Paralegal, Medical Assistant, Medical Office Administration & Coding, Information Technology & Communication Systems, and Welding Technology do not have articulation agreements with Yakima Valley Community College.

An articulation between Perry Technical Institute, the Yakima School District, and the Yakima Valley Technical Skills Center provides high school students with the opportunity to earn credit for one quarter in Perry's Automotive, Machine, Welding, Business, Medical, and Legal programs. In order to qualify, high school students must meet all terms of the articulation agreement, including but not limited to, providing Perry Technical Institute with transcripts that depict transferable credits have been earned.

COMPARABLE PROGRAMS

Information about comparable programs, tuition, and length of programs may be obtained by contacting:

Accrediting Commission of Career Schools and Colleges
2101 Wilson Blvd., Suite 302
Arlington, VA 22201
Telephone: 703.247.4212
www.accsc.org

STUDENT COMPLAINT/GRIEVANCE PROCEDURE

Perry Technical Institute utilizes policies and procedures for handling student complaints and informs the students in writing of them. When a student has a complaint, he/she is encouraged to follow the chain of command and communicate informally first with the instructor, then the Department Head, and then the Associate Dean of Student Affairs. If the student is still unsatisfied, he/she is asked to file a PTI Complaint Form at the Enrollment Office and then encouraged to make an appointment with the President for further discussion and action.

A student may consider contacting the Workforce Training and Education Coordinating Board. Contact information for the Workforce Training and Education Coordinating Board is as follows:

Workforce Training and Education Coordinating Board
128 Tenth Ave. SW
Olympia, WA 98504-3105
Telephone 360.753.5673.

More information can be obtained by referencing RCW's Title 28C > Chapter 28C.10 or 28C.10.084(10) and 28C.10.120 or WACs > Title 490 > Chapter 490-105 > Section 490-105-180

If a student does not feel that the school has adequately addressed a complaint or concern, the student may consider contacting the Accrediting Commission of Career Schools and Colleges. All complaints considered by the commission must be in written form, with permission from the complainant(s) for the commission to forward a copy of the complaint to the school for a response. The complainant(s) will be kept informed as to the status of the complaint as well as the final resolution by the commission. Please direct all inquiries to:

Accrediting Commission of Career Schools and Colleges
2101 Wilson Blvd., Suite 302
Arlington, VA 22201
Telephone: 703.247.4212

A copy of the commission's Complaint Form is available by contacting Perry's Director of Institutional Research & Enrollment Coordinator.

CONDUCT STANDARDS

Admission to Perry Technical Institute carries with it the expectation that students will conduct themselves as responsible members of the school community, that they will comply with the rules and regulations of the institution, maintain high standards of integrity and honesty, respect the rights, privileges, and property of other members of the school community, and will not interfere with legitimate Perry Technical Institute affairs.

Perry Technical Institute maintains the right to make and enforce rules for conduct. This includes the right to dismiss at any time a student whose conduct, academic standing, or health is such that the Administration believes it undesirable for that student to continue at Perry Technical Institute.

A student policy handbook is provided to all new students the first day of class. The booklet provides a complete statement of the policies and procedures and describes student rights and responsibilities which govern students attending Perry Technical Institute, including any disputes involving the school, its faculty or staff and the student.

DRUG-FREE ENVIRONMENT POLICY

Perry Technical Institute prohibits the unlawful manufacture, possession, use, sale, dispensation, or distribution of controlled substances, and the possession or use of alcohol by students and employees on its property and at any school-related activity. Further information on Perry Technical Institute's policies can be found in the Student Handbook. Any violation of these policies will result in appropriate disciplinary actions up to and including dismissal, even for a first offense.

All current students will be required to submit to random drug testing. Students with "Reasonable Suspicion" may be required to be tested for drug or alcohol abuse. Refusal to do so may result in dismissal from the school.

Violations of the law will also be referred to the appropriate law enforcement authorities. Students may be referred to abuse help centers. If such a referral is made, a leave of absence may be required, and re-enrollment will be subject to successful completion of any prescribed counseling or treatment program.

UNLAWFUL HARASSMENT POLICY

All members of Perry Technical Institute's community, including, the faculty, students, and staff, have the right to be free from sexual harassment by any other member of Perry Technical Institute's community. Should a student feel that he/she has been harassed, the student should immediately inform the Associate Dean of Student Affairs and/or the President.

Sexual harassment refers to, among other things, sexual conduct that is unwelcome, offensive, or undesirable to the recipient, including unwanted sexual advances.

All students and employees must be allowed to work and study in an environment free from unsolicited and unwelcome sexual overtures and advances. Unlawful sexual harassment will not be tolerated.

LIABILITY

Perry Technical Institute is not responsible for loss or damage to personal property or for personal injury occurring while on the school grounds or on field trips.

PARKING PERMIT POLICY

All vehicles parked regularly on the Perry Technical Institute campus must have a parking permit visibly displayed on the rearview mirror at all times. If a student forgets his/her parking permit or it is lost or stolen, he/she should report to the Main Office immediately to obtain a temporary permit or to purchase a new permit. Each student is allowed two temporary parking permits per term and after two temporary permits must purchase a new parking permit for $3. If a vehicle is found without a parking permit or in violation of the parking lot regulations, Security will put a parking ticket on the vehicle's windshield describing what action needs to be taken. If the issue is not resolved by the end of the school day, the vehicle may be towed or disciplinary action may be taken. Students who drive multiple vehicles may switch their parking permit between vehicles or purchase another parking permit for $3. All drivers must fill out a Vehicle Registration Form to give the school a record of all vehicles on campus. Students must notify the Main Office if their vehicle information changes.

NON-DISCRIMINATION POLICY

Perry Technical Institute does not discriminate on the basis of race, color, national origin, sex, sexual orientation, disability, or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies:

Director of Institutional Research & Enrollment
Perry Technical Institute
2011 W. Washington Ave. Yakima, WA 98903
509.453.0374 or 888.528.8586

Seattle Office
Office for Civil Rights
U.S. Department of Education
915 Second Ave., Room 3310
Seattle, WA 98174-1099
Telephone: 206.220.7900
Fax: 206.220.7887; TDD: 877.521.2172
Email: OCR.Seattle@ed.gov

STUDENT RECORDS

Students have the right to inspect and request amedment to their confidential education records. A student requesting to review his/her education records shall make the request in writing to the Enrollment & Registration Coordinator. The Enrollment and Registration Coordinator must be presented with proper identification which may include the student's identification card or a driver's license containing a picture of the student.

Perry Technical Institute maintains a permanent educational record for all currently enrolled students that consists of all admissions, academic and information upon which a student's enrollment is based. These records (physical or electronic) are securely maintained and protected against damage or loss (fire, water, theft, tampering, etc.).

Perry Technical Institute maintains an official transcript for all formerly enrolled students (graduates and terminated or withdrawn students). The transcript includes, at a minimum, the program of study; the date of program entry; the date of graduation, termination or withdrawal; and the clock or credit hours and grades earned. An official transcript is available to students upon request and in accordance with the school's policies.

Perry Technical Institute maintains student financial records related to financial aid, tuition and fee payments, and tuition refunds for a minimum of five years. (State or federal regulation or law may require these records to be maintained for a longer period of time.)

CHANGES

This catalog is current as of the date of publication. Perry Technical Institute reserves the right to make changes at any time to any provision of this catalog, including the amount of tuition and fees; academic programs and courses; Perry Technical Institute policies and procedures; faculty and administrative staff; academic calendar; and other dates and provisions. Perry Technical Institute also reserves the right to make changes in equipment and instructional materials, to modify curriculum and, when size and curriculum permit, to combine classes.

From time to time, it may be necessary or desirable for Perry Technical Institute to make changes to this catalog due to the requirements and standards of Perry Technical Institute's accrediting body, state authorization agency or the United States Department of Education, or due to the market conditions, employer needs or for other reasons.

To see the most current version of the catalog, please visit our website at www.perrytech.edu.

❖ automotive technology

Perry Technical Institute's Automotive Technology Program is designed to help students gain the necessary understanding of automotive principles through a variety of experiences including classroom learning, lab activities, working on customer vehicles, writing repair orders, and ordering parts.

The objective of the program is to provide students with a broad base of knowledge and the skills necessary for employment in the automotive industry. The eight recognized areas of automotive repair are addressed in the program: engine performance; engine repair; automatic transmission and transaxle; manual drive train and axles; suspension and steering; brakes; electrical/ electronic; and heating and air conditioning systems.

The Automotive Technology Program is certified by the National Automotive Technicians Education Foundation (NATEF) and the course reflects the national automotive training standards established by the National Institute for Automotive Service Excellence (ASE). Section 609 of the U.S. Clean Air Act of 1990 requires that all mobile service technicians opening the refrigeration circuit in automotive air conditioning systems be certified in refrigerant recovery and recycling procedures. The Automotive Department offers the opportunity to obtain Section 609 Certification and the Mobile Air Conditioning Society Certification.

The goal for students who successfully complete the course is employment as entry-level technicians in the automotive industry. The Automotive Technology Program is 12 months in length (four quarters). The student will earn 75.5 credit hours which are 1,344 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	AU 110	Intro to Automotive Technology	108	6.5
	AU 111	Automotive Engine Repair	120	7.0
	AU 112	Basic Automotive Electrical Systems	108	6.5
			336	20.0
Quarter 2	AU 120	Automotive Chassis Systems	200	11.5
	AU 121	Advanced Automotive Electrical Systems	136	8.0
			336	19.5
Quarter 3	AU 130	Automotive Engine Performance & Drivability	220	13.0
	AU 131	Automotive Climate Control Systems	95	5.5
	AU 132	Automotive & Light Duty Diesel	21	1.0
			336	19.5
Quarter 4	AU 140	Automotive Drive Train Systems	215	12.5
	AU 141	Externship	121	4.0
			336	16.5
	Program Totals		1,344	75.5

AUTOMOTIVE TECHNOLOGY COURSE DESCRIPTIONS

AU 110 Intro to Automotive Technology
This course covers workplace safety, hazardous materials and environmental regulations, use of hand tools, service information resources, basic concepts, systems, and terms of automotive technology. Topics include familiarization with vehicle systems along with identification and proper use of various automotive hand and power tools. Upon completion, students will be able to describe safety and environmental procedures, terms associated with automobiles, and know how to use basic tools and shop equipment.

AU 111 Automotive Engine Repair
This course covers the theory, construction, inspection, diagnosis, and repair of internal combustion engines and related systems. Topics include fundamental operating principles of engines and diagnosis, inspection, adjustment, and repair of automotive engines using appropriate service information. Upon completion, students will be able to perform basic diagnosis, measurement, and repair of automotive engines using appropriate tools, equipment, procedures, and service information.

AU 112 Basic Automotive Electrical Systems
This course covers basic electrical theory, wiring diagrams, test equipment, diagnosis, repair, and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students will be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.

AU 120 Automotive Chassis Systems
This course covers principles of operation and diagnosis/ repair of manually and electronically controlled suspension and steering systems. Also included are the diagnosis and repair of hydraulic brake, drum brake, disc brake, and anti-lock brake

systems. Upon completion, students will be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires and balance wheels, and demonstrate skills in hydraulic brake, drum brake, disc brake, and anti-lock brake systems.

AU 121 Advanced Automotive Electrical Systems
This course covers electronic theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of electronics, lighting, gauges, horn, wiper, accessories, and body modules. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, and troubleshooting. Upon completion, students will be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic components.

AU 130 Automotive Engine Performance & Drivability
This course covers the introduction, theory of operation, and diagnostic procedures used to locate engine performance concerns. Topics will include currently used fuel-injected systems, computerized ignition, injection components, emission control, OBD II (on-board diagnostics), and inter-related electrical/electronic systems. Upon completion, students will be able to diagnose and repair complex engine performance concerns using appropriate test equipment and service information.

AU 131 Automotive Climate Control Systems
This course covers the theory of refrigeration and heating, including manual and electronic climate control systems. Students will understand the importance of recovery and recycling refrigerant as well as adhering to safety and environmental regulations. Upon completion, students will be able to diagnose and safely service climate control systems using appropriate tools, equipment, and service information.

AU 132 Automotive & Light Duty Diesel
This course covers the diagnostic and repair procedures for automotive and light duty diesel engines. Topics include common tools and practices used while servicing diesel engines. Students will identify and learn the variances of today's diesel fuels. Base engine fundamentals and condition diagnosis will be taught in conjunction with the differences, operation and repair of diesel fuel injection systems. Students will also examine exhaust filtering and after treatment systems. Upon completion students will be able to service, diagnose and repair modern diesel engines using computer based information systems and laptop driven scan tools.

AU 140 Automotive Drive Train Systems
This course covers operation, diagnosis, service, and repair of automatic transmissions/transaxles. Topics include hydraulic, pneumatic, mechanical, and electrical/electronic operation of automatic drive trains and the use of appropriate service tools and equipment. This course will also cover manual transmissions/transaxles, clutches, drive shafts, axles, and final drives. Topics include theory of torque, power flow, and manual drive train servicing and repair using appropriate service information, tools, and equipment. Upon completion, students will be able to explain operational theory and diagnose and repair automatic and manual drive trains.

AU 141 Externship
Students will learn advanced career planning practices and demonstrate skills and competencies in externship assignments. Students must have a "C+" or better in current coursework, must not be under any type of probationary contract, and must complete and submit a regular lab work experience employer evaluation. The instructor may terminate industry work experiences at any time if students do not adhere to these requirements.

AUTOMOTIVE TECHNOLOGY BOOK AND TOOL LIST

The book and tool list for students in the Automotive Technology Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $2,879. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

AUTOMOTIVE TECHNOLOGY EQUIPMENT LIST

Students in the Automotive Technology Program utilize the following equipment:

ShopKey5 online repair and estimating software
Automotive fluid service equipment
Automotive cleaning equipment
Vehicle diagnostic platforms
Rotary vehicle hoists
Engine and transmission lifting equipment
Hunter vehicle alignment system
Snap-on diagnostic equipment
McPherson strut compressor
Automatic transmission holders
Differential set-up equipment
Automatic transmission holders
Differential set-up equipment

❖ business technology & accounting

Perry Technical Institute's Business Technology & Accounting Program covers the basic office, computer, accounting, and soft skills needed to be successful in the business world.

Students gain a solid understanding of computers including entry-level keyboarding operations, basic computer maintenance, and desktop publishing. The curriculum reviews basic arithmetic, 10-key skills and computerized accounting and teaches students to manage their personal finances as well as grasp business concepts, the fundamentals of business finance, and managerial accounting. Students learn the soft skills needed in the office environment and the importance of career planning and how to develop a positive customer service environment.

The program prepares students to take the Microsoft Office Specialist (MOS) certification examination in Microsoft Word, Excel, Access, PowerPoint, and Outlook. In addition, students will receive the knowledge and skills needed to become certified in QuickBooks, Payroll and Bookkeeping through national associations such as the American Institute of American Bookkeepers and the National Association of Certified Public Bookkeepers.

The Business Technology & Accounting Program is the launching pad toward entry-level jobs in a variety of business and office positions such as administrative assistant, accounting assistant, accounts payable or receivable specialist, office manager, bookkeeper, and other administrative positions.

The Business Technology & Accounting Program is 18 months in length (six quarters). The student will earn 116.0 credit hours which are 2,016 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	BTA 110	Computer Applications	60	3.5
	BTA 111	Keyboarding I	30	1.5
	BTA 112	Word Processing	60	3.5
	BTA 113	Spreadsheets	60	3.5
	BTA 114	Business English I	60	3.5
	BTA 115	Business Math	66	4.0
			336	19.5
Quarter 2	BTA 120	Database & Integration	88	5.5
	BTA 121	Keyboarding II	30	1.5
	BTA 122	Business Presentation	86	5.0
	BTA 123	Career Planning	30	1.5
	BTA 124	Business Etiquette	42	2.5
	BTA 125	Business English II	60	3.5
			336	19.5
Quarter 3	BTA 130	Fundamentals of Accounting	76	4.5
	BTA 131	Office Administration	54	3.0
	BTA 132	Introduction to Business	60	3.5
	BTA 133	Introduction to Marketing	60	3.5
	BTA 134	Business Communications	51	3.0
	BTA 135	Human Relations	35	2.0
			336	19.5
Quarter 4	BTA 140	Principles of Accounting I	76	4.5
	BTA 141	Entrepreneurship	70	4.0
	BTA 142	Business Ethics	60	3.5
	BTA 143	Economics	65	4.0
	BTA 144	Business Law	65	4.0
			336	20.0
Quarter 5	BTA 210	Principles of Accounting II	91	5.5
	BTA 211	Federal & State Tax Accounting	91	5.5
	BTA 212	Human Resources	71	4.5
	BTA 213	Computerized Accounting Concepts (QuickBooks)	83	5.0
			336	20.5

(cont. on next page)

Quarter 6	BTA 220	Payroll Accounting Concepts	60	3.5
	BTA 221	Accounting Integration (project-based using QuickBooks)	80	5.0
	BTA 222	Customer Service	76	4.5
	BTA 223E	Externship	120	4.0
			336	17.0
	Program Totals		2,016	116.0

BUSINESS TECHNOLOGY & ACCOUNTING COURSE DESCRIPTIONS

BTA 110 Computer Applications
Course introduces the basics of computer hardware and software, networks, the Internet, Outlook, and Publisher. The objective is to allow students to be more comfortable working with personal computers on a daily basis.

BTA 111 Keyboarding I
In this course, students learn beginning typing and 10-key skills. The objectives are for students to learn how to type by touch and how to take a timed keyboarding/10-key test for accuracy and speed.

BTA 112 Word Processing
Students learn how to use Microsoft Word for basic and advanced word processing. The objective of this course is to prepare students to take the MOS certification exam for Word.

BTA 113 Spreadsheets
Students learn Microsoft Excel and how to build business and financial applications for forecasting, budgeting, and basic bookkeeping. The objective of this course is to prepare students to take the MOS certification exam for Excel.

BTA 114 Business English I
A concentrated review of sentence writing, this course emphasizes sentence combining, basic mechanics, and paragraph writing.

BTA 115 Business Math
Students will review the basic operations of arithmetic, understand and manage their personal finances, as well as grasp the fundamentals of business finances. This course will prepare students to be smart shoppers, informed taxpayers, and valued employees. Basic math skills will be covered in a step-by-step manner, building student confidence along the way.

BTA 120 Database & Integration
Students learn how to create and use databases with Microsoft Access. The objective of this course is to prepare students to take the MOS certification exam for Access. Students will also receive hands-on integration of the entire Microsoft Office Suite.

BTA 121 Keyboarding II
In this course, students learn how to improve their accuracy and typing/10-key speed. Students also learn formatting for personal and business letters, memoranda, simple tabulation techniques, proofreading, and editing.

BTA 122 Business Presentation
This course provides instruction in delivering speeches and developing presentation materials. Students will create a variety of charts, graphs, and interactive presentations with the primary use of PowerPoint. Students will be encouraged to complete the MOS Certification in PowerPoint.

BTA 123 Career Planning
This course is designed to teach students how to write a professional cover letter and resume, participate in career networking, search for positions, apply for positions, and negotiate a position in an administrative field.

BTA 124 Business Etiquette
This course focuses on the fundamentals of etiquette as they relate to business and business relationships inside and outside the office.

BTA 125 Business English II
This course emphasizes basic punctuation and grammar rules and covers sentence structure. The course is designed to introduce basic reading skills and to develop basic writing skills. Coursework emphasizes writing from observation as well as writing in response to readings. The focus is on writing sentences which demonstrate a grasp of basic syntax and usage, and writing sound paragraphs which express a main idea clearly and develop it fully with a minimum of errors in sentence structure, punctuation, and spelling.

BTA 130 Fundamentals of Accounting
As an introduction to accounting, students will learn accounting concepts and procedures to include debits and credits, the general journal, general ledger, accounting cycle, banking and cash handling procedures, and payroll entries. The objective of this course is to give students a solid foundation in accounting.

BTA 131 Office Administration
This course is designed to prepare students to manage an office and provides office-related situations including decision-making and critical thinking activities.

BTA 132 Introduction to Business
Students will learn and apply the basic concepts of business. Topics include the business environment, business formation, financing a business, management motivation and leadership, and operations management.

BTA 133 Introduction to Marketing
Students will learn and apply the basic concepts of marketing. Subjects included are an overview of marketing, analyzing market opportunities, product and distribution decisions, promotion and communication strategies, and pricing decisions.

BTA 134 Business Communications
Students learn various forms of written business communications and effective verbal communications including emails, memos, letters, and working effectively in teams.

BTA 135 Human Relations
Human Relations will develop the personal and professional skills needed to be successful in business. Topics include confidence building, seeking to understand, beginning with clarity, knowing your personality profile, coping with difficult people, and balancing professional and personal priorities individually and in a team environment.

BTA 140 Principles of Accounting I
Students will expand their knowledge of accounting concepts and procedures by learning how to account for sales and cash receipts, purchases and cash payments, the worksheet for a merchandise company, bad debts, notes, merchandise inventory and accounting for property, plant, and equipment. The objective of this course is to familiarize students with standard accounting procedures that are found in most companies.

BTA 141 Entrepreneurship
This course focuses on developing and writing a complete business plan. Students will develop a business idea and learn how to bring their idea to market. Students will learn how companies finance, choose employees, purchase assets, develop and define a market, set a pricing structure, create a marketing plan, and then present the idea to industry experts for review.

BTA 142 Business Ethics
This course examines the ethical challenges facing individuals and businesses in modern society. The course utilizes case studies of professionals working in various areas of business and provides guest speakers with real-world experiences.

BTA 143 Economics
This course is designed to promote economic literacy and help students appreciate how economics affects their everyday lives.

BTA 144 Business Law
Business Law will focus on legal issues in the workplace and the legal system as it pertains to business transactions. Topics include contract formation and performance, real property, product liability, and employer/employee relations.

BTA 210 Principles of Accounting II
Students continue to build their accounting skills by learning how to account for partnership equity, corporation stock, corporate dividends, treasury stocks and retained earnings, bonds, the statement of cash flows, financial statement analysis, and cost accounting. The objective of this course is to help students develop the analytical and problem solving skills necessary in accounting and bookkeeping positions.

BTA 211 Federal & State Tax Accounting
This course will introduce students to the fundamentals of tax accounting and state tax requirements. Coursework will focus on individual returns, income and exclusions, business income and expenses, deductions and credits, capital gains and losses, corporate tax, and tax administration and planning.

BTA 212 Human Resources
This course will introduce students to all aspects of human resource management. Students will learn the most up-to-date practices in human resource planning. Topics will include addressing legal requirements, employee compensation and training, employee safety and health, and assessing performance.

BTA 213 Computerized Accounting Concepts
This course will provide a hands-on approach to learning QuickBooks that incorporates a thorough understanding of the software while applying knowledge of the accounting cycle.

BTA 220 Payroll Accounting Concepts
This course will provide students with firsthand experience in calculating payroll, completing payroll taxes, and preparing payroll records and reports. Students will learn through application with realistic, hands-on practice exercises.

BTA 221 Accounting Integration
This is a project-based course that will provide a hands-on simulation project. The project is designed to incorporate the accounting and QuickBooks knowledge gained in previous courses, through realistic practice.

BTA 222 Customer Service
This course emphasizes how to provide excellent customer service. Students learn proper telephone skills, problem resolution skills, and how to handle difficult situations.

BTA 223E Externship
Students will learn advanced career planning practices and demonstrate skills and competencies in externship assignments by electing an externship option pending instructor approval. Students must have a "C+" or better in current coursework, must not be under any type of probationary contract, and must complete and submit a regular lab work experience employer evaluation. The instructor may terminate industry work experiences at any time if students do not adhere to these requirements.

BUSINESS TECHNOLOGY & ACCOUNTING BOOK AND TOOL LIST

The book and tool list for students in the Business Technology & Accounting Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $3,524. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

BUSINESS TECHNOLOGY & ACCOUNTING EQUIPMENT LIST

Students in the Business Technology & Accounting Program utilize the following equipment:

Computers
Copy machines
Fax machines
10-key calculators
Telephones

❖ electrical technology

Perry Technical Institute's Electrical Technology Program offers students a diversified curriculum that guides them through the process of becoming electricians.

Students are introduced to the generation and distribution of AC/DC electricity as well as utilizing green technologies including solar and wind turbine theory and applications. During classroom, lab and fieldwork experiences, students gain valuable theory while incorporating current NEC codes and WAC/RCW rules, laws, and procedures with hands-on application.

The Washington State Department of Labor & Industries recognizes two years of training received from Perry's Electrical Technology Program toward the General Journeyman 01 certification. Graduates must accumulate an additional 4,000 hours of industrial/ commercial electrical work before applying to take their journeyman examination with the State of Washington.

The goal for students who successfully complete this program is entry-level employment as third-year electrical trainees. The two largest groups of potential employers are electrical construction contractors and electrical departments in manufacturing industries.

The Electrical Technology Program is 24 months in length (eight quarters). The student will earn 169.0 credit hours which are 3000 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	EL 110	Electrical Safety	36	2.5
	EL 111	DC Fundamentals I	90	6.0
	EL 112	National Electric Code/WAC Code	109	7.5
	EL 113	Introduction to Voltage Systems	30	2.0
	EL 114L	Lab & Shop Projects	110	5.5
			375	23.5
Quarter 2	EL 120	DC Fundamentals II	75	5.0
	EL 121	AC Theory Single-Phase	100	7.0
	EL 122	NEC/WAC/PPL	131	9.0
	EL 123	Safety Meetings	11	0.5
	EL 124L	Lab & Shop Projects	58	4.0
			375	25.5
Quarter 3	EL 130	AC Motors	30	2.0
	EL 131	NEC Articles 430 & 440	50	3.5
	EL 132	Motor Controls	124	8.5
	EL 133	Safety Meetings	11	0.5
	EL 134L	Lab & Shop Projects	160	10.5
			375	25.0
Quarter 4	EL 140	Introduction to Digital	55	3.5
	EL 141	Programmable Logic Controllers	129	9.0
	EL 142	NEC Review	14	0.5
	EL 143	Safety Meetings	11	0.5
	EL 144L	Lab & Shop Projects	166	8.0
			375	21.5
Quarter 5	EL 210	Blueprint Reading	50	3.5
	EL 211	NEC & Load Sizing Calculations	144	10.0
	EL 212	NEC Articles 500 & 680	30	2.0
	EL 213	Variable-Frequency Drives	50	3.5
	EL 214	Safety Meetings	11	0.5
	EL 215L	Lab & Shop Projects	90	4.5
			375	24.0
Quarter 6	EL 220	AC Theory, Three-Phase & Power Factor	64	4.5
	EL 221	Three-Phase Systems & Distribution	50	3.5
	EL 222	Transformer Connections	55	3.5
	EL 223	NEC Article 450	15	1.0
	EL 224	Conduit Bending & Wiring Practices	45	3.0
	EL 225	Safety Meetings	11	0.5
	EL 226L	Lab & Shop Projects	135	6.5
			375	22.5

(cont. on next page)

Quarter 7	EL 230	Solid State Electronic Fundamentals	105	7.0
	EL 231	Career Planning	20	1.0
	EL 232	Safety Meetings	11	0.5
	EL 233L	Lab & Shop Projects	115	5.5
	EL 234E	Externship	124	4.0
			375	18.0
Quarter 8	EL 240E	Externship	375	12.5
		Program Totals	3000	169.0

ELECTRICAL TECHNOLOGY COURSE DESCRIPTIONS

EL 110 Electrical Safety
Safety requirements for campus, classroom, lab, and shop environments. Proper use and care of personal and school property, tools, equipment and procedures.
Weekly safety meetings for the Electrical Department. The meeting has a safety curriculum that is covered with the students. Safety demonstrations are performed to show the correct way to use tools, ladders, scaffoldings, and other equipment needed in the electrical trade. First aid and CPR certificate awarded after successful completion of class.

EL 111 DC Fundamentals I
Electrical safety, atomic structure, basic electrical definitions, electron flow theory through electrical circuits, conventional flow current flow, and series, parallel and series-parallel combination circuits solving using applied electrical mathematics used for theory utilizing Ohm's Law and Watt's Law; problem solving and transposing, and electronic units of conversion of measure. Application for mathematics will continue throughout the program.

EL 112 National Electric Code/WAC Code
Minimum standards for safe installation and maintenance of electrical systems utilizing the L&I adopted edition of National Fire Protection Association (NFPA Volume 70) WAC 296 46B Rules and Regulations that supersede the NEC minimum standards that are enforced and practiced in the industry, and RCW 19.28 Laws governing competent electrical installers. Electrical circuits, conventional flow current flow, and series, parallel and series-parallel combination circuits solving using applied electrical mathematics used for NEC utilizing Ohm's Law and Watt's Law; problem solving and transposing, and electronic units of conversion of measure. Application of mathematics will continue throughout the program.

EL 113 Introduction to Voltage Systems
Names, schematics, grounding, configurations and hook-ups of single-phase transformers and three-phase transformers used in the industry.

EL 114L Lab & Shop Projects
Introduction to proper drawings and schematics utilizing conductors, cables, switches, receptacles and lighting fixtures. Safe and practical application of classroom instruction on actual equipment. Proper use of personal protective equipment and tools to install and troubleshoot conductors, cables, switches, receptacles, and lighting fixture wiring.

EL 120 DC Fundamentals II
Differences and similarities between DC motors and generators; calculating the counter EMF generated in the armature of the motor; performance characteristics of DC shunt, series and compound motors; assigning correct polarity to interpoles installed in DC motors; drawing the process of controlling speed of various DC motors; drawing the process of reversing the rotation of any DC motor; and determining the speed regulation of DC motors.

EL 121 AC Theory Single-Phase
RL, RC and RLC series circuits and the effects of the inductive and capacitive reactance. Impedance and power factor.

EL 122 NEC/WAC/PPL
Requirements of our local serving utility, Pacific Power. Topics covered will include, but are not limited to, service lateral burial depths, overhead service height requirements, and conduit sizing in relation to service ampacities, Washington Administrative Code (WAC) and Revised Code of Washington (RCW) requirements for the electrical industry including, but not limited to: electrical industry scopes of work, licensing qualifications, exams, fees, penalties, types of certifications, and continuing education requirements.

EL 123 Safety Meetings
Each week there will be a safety meeting for the Electrical Department. The meeting has a safety curriculum and a safety video that are covered with the students. Accident reports and unsafe condition reports are reviewed. Safety demonstrations are performed to show the correct way to use tools, ladders, scaffoldings, and other equipment needed in the electrical trade.

EL 124L Lab & Shop Projects
Using ladder diagrams, students install the wiring to motor control lab stations. Students will also do troubleshooting after the instructor bugs the station.

EL 130 AC Motors
Single-phase motor hook-ups; reversing externally reversible motors; four major parts of a motor; run winding/start windings; using an OHM meter; and properly connect to line voltages. Three-phase wye connected; high and low voltage connections; delta high and low voltage connections; identify, drawing and numbering 9 and 12 lead wye and delta motors; and reversing three-phase motors.

EL 131 National Electrical Code Articles 430 & 440
NEC Article 430 – Motor feeder short-circuit and ground fault protection; motor disconnecting means; and motor branch circuit, short-circuit, and ground-fault protection.

NEC Article 440 – Code section applying to sizing the conductor and protection to central electric space heating equipment; sizing the circuit conductors and protection for a five-horsepower motor used as a blower; and the differences in the rules between motors and air conditioning when installing a disconnecting means.

EL 132 Electro-Mechanical Motor Controls
The principles of two- and three-wire controls and the use of relays, mag-starters, timers, sensors, along with the symbols and ladder diagrams needed to make a successful control installation. Photoelectric controls, thru-beam, retroflective, diffused, and specular types will be addressed. Inductive and capacitive proximity sensors and various other sensors will be utilized in discussion and lab exercises.

EL 133 Safety Meetings
Each week there will be a safety meeting for the Electrical Department. The meeting has a safety curriculum and a safety video that are covered with the students. Accident reports and unsafe condition reports are reviewed. Safety demonstrations are performed to show the correct way to use tools, ladders, scaffoldings, and other equipment needed in the electrical trade.

EL 134L Lab & Shop Projects
Using ladder diagrams, students install the wiring to motor control lab stations. Students will also do troubleshooting after the instructor bugs the station.

EL 140 Introduction to Digital
Examination of several different numbering systems, including but not limited to logic gates, numbering systems, conversions and combination logic.

EL 141 Programmable Logic Controllers
The programmable logic controller, focusing on Allen-Bradley SLC500 series, various small fixed I/O type PLCs. The software covered is RsLogix500, and RsLinx. Programming concepts range from programming of discrete I/Os to the use of analog I/O. Troubleshooting and how to construct programs with all safety concerns.

EL 142 NEC Review
Code evaluation of previously covered code articles.

EL 143 Safety Meetings
Each week there will be a safety meeting for the Electrical Department. The meeting has a safety curriculum and a safety video that are covered with the students. Accident reports and unsafe condition reports are reviewed. Safety demonstrations are performed to show the correct way to use tools, ladders, scaffoldings, and other equipment needed in the electrical trade.

EL 144L Lab & Shop Projects
Students will develop, use, and create programs and use logical diagrams to control the desired process by analyzing inputs and updating outputs and by monitoring devices and troubleshooting the written program.

EL 210 Blueprint Reading
Terms, symbols, layout, organization, and structure of plans that are used for residential, commercial, and industrial buildings. Understand and interpret prints for identification of code violations, conflicts of space, and safety issues.

EL 211 NEC & Load Sizing Calculations
Covering code Articles 220 and 240, calculating the ampacity of service conductors, feeder conductors, branch circuit conductor, and the ampacity rating of the panels and load centers they supply, including the overcurrent devices used for protection.

EL 212 NEC Articles 500 & 680
NEC Article 500 – Requirements for the use of the Class, Division, Group and Zone system and the general installation requirements for electrical wiring and apparatus utilized in hazardous locations.
NEC Article 680 – Applying the provisions of Article 680 to swimming pools, spas, hot tubs, fountains, and similar installations.

EL 213 Variable-Frequency Drives
Fundamentals and functions of both DC motor drives and AC variable-frequency drives.

EL 214 Safety Meetings
Each week there will be a safety meeting for the Electrical Department. The meeting has a safety curriculum and a safety video that are covered with the students. Accident reports and unsafe condition reports are reviewed. Safety demonstrations are performed to show the correct way to use tools, ladders, scaffoldings, and other equipment needed in the electrical trade.

EL 215L Lab & Shop Projects
Variable frequency drives used with motors and motor controllers will give students the hands-on training needed to reinforce the classroom teaching to keep up with industry demands.

EL 220 AC Theory, Three-Phase & Power Factor
Single-phase RL, RC, RLC parallel circuits, vectors, power factor, and correction. Understanding the relationships between current, voltage, and power in three-phase configurations. Three-phase RL, RC, RLC circuits, and vectors. Application of power factor and power factor corrections to save energy and increase system capacity.

EL 221 Three-Phase Systems, Distribution & Power-Factor Corrections
Operational characteristics of three-phase generators – including hydro, solar and wind – and their connection to transformers for the purpose of cross-country power transmission. Circuit characteristics of the transmission and distribution system, the purpose and function of power substations, and local power distribution concepts.

EL 222 Transformer Connections
ASA, NEMA, and industrial standards for transformer lead identification and polarity requirements. Practical application of single-phase isolation type transformer configurations. Practical application of three-phase configurations for isolation type transformers. Practical application of single- and three-phase buck and boost autotransformers.

EL 223 National Electric Code Article 450
NEC Article 450 – Code requirements for sizing of transformers, conductors, and overcurrent protection.

EL 224 Conduit Bending & Wiring Practices
Introduction to the use of hand, hydraulic, and PVC conduit benders. Lab exercises will include the following: predetermined 90-degree stubs, predetermined offsets, box offsets, back-to-back 90-degree stubs, three-bend saddles, four-bend saddles, and kicks.

EL 225 Safety Meetings
Each week there will be a safety meeting for the Electrical Department. The meeting has a safety curriculum and a safety video that are covered with the students. Accident reports and unsafe condition reports are reviewed. Safety demonstrations are performed to show the correct way to use tools, ladders, scaffoldings, and other equipment needed in the electrical trade.

EL 226 Lab & Shop Projects
The student will practice applied wiring techniques in various hands-on exercises and labs including, but not limited to: conduit bending, switch connections, single- and three-phase power factor correction, transformer connections, non-metallic cable, metallic cable, wire pulling, panel, box and device installation, and connections.

EL 230 Solid State Electronic Fundamentals
Function and operation of diodes, SCRs, triacs, diacs, UJTs and their use in rectification and control of current by the switching of PN junctions. Construction, theory, and operation of transistors and their applications to control voltage levels. Basic operation and theory of the op-amp.

EL 231 Career Planning
Students will prepare for an effective career search by learning to create a resume, practicing interviewing skills, and reviewing the job application process.

EL 232 Safety Meetings
Each week there will be a safety meeting for the Electrical Department. The meeting has a safety curriculum and a safety video that are covered with the students. Accident reports and unsafe condition reports are reviewed. Safety demonstrations are performed to show the correct way to use tools, ladders, scaffoldings, and other equipment needed in the electrical trade.

EL 233L Lab & Shop Projects
Lab time will give students the opportunity to apply the use of training equipment including oscilloscopes, signal generators and DC power supplies, used with solid state components to determine how and why they operate. Introducing green technology with solar energy sources and storing and conveying electricity through solar cells.

EL 234E Externship
Students who have a job offer as an electrician may leave the program and work in the field under a training extern agreement with Perry Technical Institute, the employer, and the student. Completion of an externship packet is required.

EL 240E Externship
On-the-job training projects doing hands-on electrical wiring installations in residential and commercial buildings. All trainee electrical installations are supervised by a journeyman electrician and inspected by the Department of Labor & Industries. Completion of an externship packet is required.

ELECTRICAL TECHNOLOGY BOOK LIST, TOOL LIST AND FIELD TRIPS

The book and tool list for students in the Electrical Technology Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $3.445. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

ELECTRICAL TECHNOLOGY EQUIPMENT LIST

Students in the Electrical Technology Program utilize the following equipment:

Computers
Electrical hand tools
Motor control labs
PLC simulators
PLC labs
Transformer connection labs
Power factor correction labs
Conduit bending equipment
Oscilloscopes and related electronic equipment

❖ heating, ventilation, air conditioning & refrigeration technology

Perry Technical Institute's Heating, Ventilation, Air Conditioning & Refrigeration Technology Program covers all aspects of the field, from refrigeration fundamentals to direct digital control and energy management systems. Students learn the curriculum through classroom and extensive hands-on training in lab-related instruction.

Perry Technical Institute's HVAC/R Program is approved by the Washington State Department of Labor & Industries as a 06A HVAC/R Specialty Electrical Training Program. Graduates will be credited with one year (or 2,000 hours) towards the two years (or 4,000 hours) required by the State of Washington to be eligible to take the certification exam for the 06A HVAC/R Specialty Electrical License.

Students have the opportunity to gain industry certifications in several areas, giving them competitive advantages in the employment market. Some of the technician certifications offered include Universal R-410A Safety, EPA 608 Refrigerant, EPA 609 Refrigerant, and Green Mechanical Systems.

Classroom and shop training prepares students to enter the HVAC/R industry as qualified entry-level technicians.

The HVAC/R Technology Program is 24 months in length (eight quarters). The student will earn 174.5 credit hours which are 2,872 clock hours. Labor & Industries does not separate break times and credits 3,000 hours towards classroom participation. Tuition is payable on a quarterly basis. There are four quarters in an academic year. Quarter three and four course offerings may be offered in a sequence other than listed to accommodate seasonal working conditions.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	RE 110	Refrigeration Fundamentals	259	18.0
	RE 111L	Lab & Shop Projects	100	5.0
			359	23.0
Quarter 2	RE 120	Refrigeration & Electric Forced Air Heating	219	15.5
	RE 121L	Lab & Shop Projects	140	7.0
			359	22.5
Quarter 3	RE 130	Residential & Light Commercial HVAC I	229	16.0
	RE 131L	Lab & Shop Projects	130	6.5
			359	22.5
Quarter 4	RE 140	Residential & Light Commercial HVAC II	209	14.5
	RE 141L	Lab & Shop Projects	150	7.5
			359	22.0
Quarter 5	RE 210	Commercial Refrigeration I	218	15.0
	RE 211L	Lab & Shop Projects	141	7.0
			359	22.0
Quarter 6	RE 220	Commercial Refrigeration II	228	16.0
	RE 221L	Lab & Shop Projects	131	6.5
			359	22.5
Quarter 7	RE 230	Industrial Heating & Cooling Systems I	261	18.0
	RE 231L	Lab & Shop Projects	98	4.5
			359	22.5
Quarter 8	RE 240	Industrial Heating & Cooling Systems II	131	9.0
	RE 241L	Lab & Shop Projects	98	4.5
	RE 242E	Externship	130	4.0
			359	17.5
	Program Totals		2,872	174.5

HEATING, VENTILATION, AIR CONDITIONING & REFRIGERATION TECHNOLOGY COURSE DESCRIPTIONS

First Aid
First aid and CPR training is contracted with an outside agency. Current certification is required.

RE 110 Refrigeration Fundamentals
Tools, procedures, and equipment are covered/demonstrated in both the classroom and lab environment. Mathematics is used for practical electrical theory and application of series and parallel electrical circuits as found in the HVAC/R trade. Emphasis is placed on the understanding and application of the four main components of a mechanical compression refrigeration system, each of their functions within the system including the pressures and temperatures associated with each component.

RE 111L Lab & Shop Projects
Students develop the necessary skills for the application and use of electrical and HVAC/R tools and equipment. Students learn the required skills and techniques for the proper joining of copper to copper and copper to steel tubing by use of oxyacetylene torches. Students begin practical application of refrigeration operation and troubleshooting on residential refrigerators and freezers.

RE 120 Refrigeration & Electric Forced Air Heating
Studies expand on the four main components of the refrigeration system. This section of the program also introduces central forced air electric heating systems. Students continue reading and using schematic and ladder diagrams and learn to develop their own electrical diagrams to meet specific operations.

RE 121L Lab & Shop Projects
Lab time includes an emphasis on electrical measurements for troubleshooting and hands-on wiring of equipment. Students complete the wiring and operation of relays, capacitors, single and multi-speed single-phase fractional horsepower motors, heaters, low-voltage heat/cool thermostats, compressors, and fan motors. Time is used for wiring, troubleshooting, and maintaining controls as well as actual operation and troubleshooting of electric furnaces and their controls.

RE 130 Residential & Light Commercial HVAC I
Students review shop safety procedures and are introduced to fall protection and ladder safety. Safe handling of refrigerants and proper HVAC system charging are covered, including refrigerant recovery and applications of R-22, HFC refrigerants R-410A, and R-422B. Students learn the fundamentals of humidifiers and air filtration, including all types of disposable air filters to state-of-the-art electronic air cleaners. Students learn to interpret both ladder and pictorial wiring diagrams. All types of single-phase motors are discussed. The curriculum covers both packaged and split systems of residential and light commercial HVAC equipment.

RE 131L Lab & Shop Projects
This section emphasizes the application of control strategies used to wire and operate HVAC equipment. Students develop all types of wiring diagrams utilizing actual HVAC units. Students are exposed to systems such as heat pumps, oil, gas, and electric forced air HVAC systems. Typical lab projects include tasks such as soldering, steel pipe threading, wiring, and proper refrigerant charging of A/C units. Students are introduced to basic sheet metal fabrication concepts including several sheet metal projects using not only sheet metal hand tools, but the heavier shop fabrication equipment associated with the fabrication of HVAC duct systems.

RE 140 Residential & Light Commercial HVAC II
In this section, students study heating systems that include fossil fuel units such as natural, LP gas units, oil heating systems, electric heating, and heat pump systems. The section covers the combustion and venting process as it relates to fossil fuel heating systems. The duct design process is introduced. Students learn to apply control strategies covered in the classroom to wire and operate several types of HVAC equipment. Residential load calculations are introduced. Students learn the basics of air distribution and balancing residential and light commercial HVAC air delivery systems. The curriculum introduces several types of air side components such as grills, registers, and diffusers as well as equipment typically used for air balancing.

RE 141L Lab & Shop Projects
This course helps students apply the knowledge learned in the classroom to operational HVAC equipment. All laboratory/shop tasks will be performed on functional oil furnaces. The scope of tasks involves electrical wiring, mechanical operation, and combustion analysis of oil heating systems. The study of oil heating systems focuses on high pressure, gun-type oil burners. The primary control systems include both stack and cadmium cell types. Students complete several lab projects including wiring and combustion analysis on natural gas furnaces using both chemical and digital analysis tools.

RE 210 Commercial Refrigeration I
Students begin studying and troubleshooting commercial systems and components. The course covers electrical theory, control circuits, and wiring schematics. RCW 19.28. WAC 29646A, WAC 296401B, and articles from the NEC are also covered.

RE 211L Lab & Shop Projects
This course provides hands-on evaluation and repair of a wide variety of live refrigeration equipment. The curriculum tests the student's ability to set, adjust, and evaluate a wide variety of refrigerant and electrical controls under different operating conditions. Installation, setting, and proper wiring methods as specified by NEC are covered for a variety of control applications.

RE 220 Commercial Refrigeration II
The curriculum covers advanced commercial systems and components, troubleshooting commercial systems, electrical theory, control circuits, and wiring schematics. RCW 19.28, WAC 296-401B, and articles from the NEC are also covered.

RE 221L Lab & Shop Projects
This course provides hands-on evaluation and repair of a wide variety of live refrigeration equipment. The curriculum tests the student's ability to set, adjust, and evaluate a variety of refrigerant and electrical controls under different operating conditions. Installation, setting, and proper wiring methods as specified by NEC are covered for a number of control applications.

RE 230 Industrial Heating & Cooling Systems I
Students are introduced to industrial heating and cooling systems and components, troubleshooting industrial systems, electrical theory, control circuits, wiring schematics, and piping diagrams. This includes NEC compliance, using chapters 2, 3, and 9.

RE 231L Lab & Shop Projects
Lab time gives students the opportunity to apply the skills they have learned. Training equipment, lab projects, computer simulators, and on-site service work allow the student to receive hands-on training to reinforce classroom instruction.

RE 240 Industrial Heating & Cooling Systems II
Students are introduced to advanced heating/cooling systems and related electrical and mechanical components. Troubleshooting, electrical theory, control circuits, wiring, and piping diagrams are emphasized. This includes NEC compliance, using Chapters 2, 3, and 9.

RE 241L Lab & Shop Projects
This course will provide students with the opportunity to evaluate and troubleshoot a wide variety of equipment. Lab time will allow students to apply the skills they have learned. Training equipment, lab projects, computer simulators, and on-site service work will provide the student with hands-on training to help reinforce classroom teaching.

RE 242E Externship
Qualifying students have the option of obtaining practical experience in an HVAC/R environment. Externships must be approved by the Department Head. If the student does not obtain an externship, completion of the HVAC/R capstone project is required.

HVAC/R TECHNOLOGY BOOK AND TOOL LIST

The book and tool list for students in the Heating, Ventilation, Air Conditioning & Refrigeration Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $2,559. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

HVAC/R TECHNOLOGY EQUIPMENT LIST

Students in the HVAC/R Program utilize the following equipment:

Computers
Digital multi-meter
Digital clamp-on ammeter
Digital temperature meter
Elenco oscilloscopes
Ultrasonic refrigerant leak detection
Thermistor vacuum gauge
Digital duct leakage monitor
Digital refrigerant scale
Oxyacetylene torch set
Vacuum pump
Refrigerant recovery equipment
Refrigerant gage manifold
Arc welder
Wire feed welder

❖ information technology & communication systems

Perry Technical Institute's Information Technology & Communication Systems Program teaches the theories and skills needed to work in all areas of communications technology – electronics theory, personal computers, wireless communications, telephone systems, transmission equipment, alarm systems, and data networking and administration.

The program is divided into four six-month sections of curriculum and combines classroom and lab projects to provide students with the proper balance of theory and hands-on experience.

Students can earn numerous industry certifications including CompTIA, Cisco, and FCC. The program is approved by the State of Washington as a two-year Limited Energy (06) Specialty Electrical training program. Graduates are credited with one year towards the two years required to be eligible to take the certification exam for the Limited Energy (06) Specialty Electrical License. Throughout the program, students prepare themselves for the workforce. Resume writing, interview skills, and documentation of their experience at Perry Technical Institute in a portfolio enable the student to conduct an effective job search.

The goal of Perry Technical Institute's Information Technology & Communication Systems Program is to provide graduates with the wide variety of skills necessary to obtain entry-level employment and achieve success in their careers.

The Information Technology & Communication Systems Program is 24 months in length (eight quarters). The student will earn 156.5 credit hours which are 2,688 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	ITC 110	Applied Mathematics for Electronics I	110	7.5
	ITC 111	Electronics: DC/AC Fundamentals	130	9.0
	ITC 112L	Laboratory Instruction	96	4.5
			336	21.0
Quarter 2	ITC 120	Applied Mathematics for Electronics II	110	7.5
	ITC 121	Personal Computers A+	130	9.0
	ITC 122L	PC A+ Laboratory Instruction	96	4.5
			336	21.0
Quarter 3	ITC 130	Communications & Wireless Electronics I	130	9.0
	ITC 131	Digital Electronics I	60	4.0
	ITC 132L	Laboratory Instruction	146	7.0
			336	20.0
Quarter 4	ITC 140	Communications & Wireless Electronics II	120	8.5
	ITC 141	Digital Electronics II	80	5.5
	ITC 142L	Laboratory Instruction	136	6.5
			336	20.5
Quarter 5	ITC 210	Cisco Networking I	60	4.0
	ITC 211L	Cisco Laboratory Instruction I	106	5.0
	ITC 212	Cisco Networking II	50	3.5
	ITC 213L	Cisco Laboratory Instruction II	120	6.0
			336	18.5
Quarter 6	ITC 220	Cisco Networking II (continued)	30	2.0
	ITC 221L	Cisco Laboratory Instruction II (continued)	60	3.0
	ITC 222	Cisco Networking III	80	5.5
	ITC 223L	Cisco Laboratory Instruction III	166	8.0
			336	18.5
Quarter 7	ITC 230	Basic Telephony & Cabling Standards	80	5.5
	ITC 231	Voice Communication Systems I	116	8.0
	ITC 232	Employment Search: Resumes & Interview Skills	20	1.0
	ITC 233L	Laboratory Instruction	120	6.0
			336	20.5
Quarter 8	ITC 240	Voice Communication Systems II	50	3.5
	ITC 241	Limited Energy	60	4.0
	ITC 242L	Laboratory Instruction	106	5.0
	ITC 243E	Externship	120	4.0
			336	16.5
		Program Totals	2,688	156.5

INFORMATION TECHNOLOGY & COMMUNICATION SYSTEMS COURSE DESCRIPTIONS

ITC 110 Applied Mathematics for Electronics I
Mathematics required to evaluate and understand the electronic circuits and equipment which will be covered.

ITC 111 Electronics: DC/AC Fundamentals
Basic electronic components and DC circuit operation are introduced including test equipment and tools. DC network analysis, AC circuits, and their effect on reactive components are covered as well.

ITC 112L Laboratory Instruction
Application of the technical knowledge acquired in the classroom to practical electronic circuits. The concepts of teamwork, analytical problem solving, and troubleshooting are introduced. The students begin preparing a portfolio, documenting their experiences and training through the program.

ITC 120 Applied Mathematics for Electronics II
A continuation of Quarter 1 Mathematics for Electronics. Emphasis is placed on the math necessary to understand AC circuits and decibel power calculations.

ITC 121 Personal Computers A+
Theory, operation, assembly, and maintenance of personal computer hardware and peripheral devices, in a hands-on environment. Operation of PC operating systems, including: software installation, management, utilities, and troubleshooting. Introduction to local and wide-area computer networks. Network protocols, topologies, and services are covered to enable the student to understand basic networking models. Preparation for the CompTIA A+ Certification.

ITC 122L PC A+ Laboratory Instruction
Software and hardware installation is accomplished which allows the student to install, maintain, and troubleshoot computer systems. Workstation configuration using different operating systems as well as virtualization software teaches students the skills necessary to troubleshoot a variety of computer systems. Basic understanding of a wireless network is accomplished through connection and configuration of a wireless router.

ITC 130 Communications & Wireless Electronics I
Advanced DC and AC electronics, transistors, and integrated circuit operational amplifiers utilized as voltage amplifiers, active filters, and oscillators. Radio frequency theory, noise, bandwidth, AM, FM, and digital modulators.

ITC 131 Digital Electronics I
Boolean algebra and binary arithmetic provide the basis for the understanding of complex digital logic circuits. Logic gates and combinational logic.

ITC 132L Laboratory Instruction
Application of the technical knowledge acquired in the classroom to practical power supplies, transistor amplifiers and switches, and operational amplifier circuits. The concepts of teamwork, analytical problem solving, and troubleshooting are reinforced.

ITC 140 Communications & Wireless Electronics II
A continuation of Communications & Wireless Electronics I. RF transmission, propagation, waveguides, transmission lines, and antenna systems are covered. RF system installation, maintenance, and troubleshooting are presented to prepare the student for entry into cellular telephone, microwave communications, wireless networking, and associated fields. The students prepare and test for the FCC GROL certification.

ITC 141 Digital Electronics II
A continuation of Digital Electronics. Analysis, design, and operation of digital circuits.

ITC 142L Laboratory Instruction
Application of the technical knowledge acquired in the classroom to digital circuits, and practical AM and FM radio circuits. Spectrum analyzers and power/SWR measurements on radio transmitter and antenna systems. Radio receiver alignment, testing, and troubleshooting.

ITC 210 Cisco Networking I
(Networking for Home and Small Businesses v4.0) This Cisco Networking Academy course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help desk technicians. It provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small business environments.

ITC 211L Cisco Laboratory Instruction I
Application of the technical knowledge acquired in ITC 210 Cisco Networking I.

ITC 212 Cisco Networking II
(Working at a Small-to-Medium Business or ISP v4.1) This Cisco Networking Academy course prepares students for jobs as network technicians and helps them develop additional skills required for computer technicians and help desk technicians. It provides a basic overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide e-mail services, Web space, and authenticated access. Students learn about the soft skills required for help desk and customer service positions. Helps them prepare for the CCENT certification exam. Network monitoring and basic troubleshooting skills are taught in context.

ITC 213L Cisco Laboratory Instruction II
Application of the technical knowledge acquired in ITC 212 Cisco Networking II.

ITC 220 Cisco Networking II (continued)

ITC 221L Cisco Laboratory Instruction II (continued)

ITC 222 Cisco Networking III
(Introducing Routing and Switching in the Enterprise v4.0) This Cisco Networking Academy course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks, IP telephony requirements, and security. It also introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol.

Hands-on exercises, including configuration, installation, and troubleshooting, reinforce student learning.

ITC 223L Cisco Laboratory Instruction III
Application of the technical knowledge acquired in ITC 601 Cisco Networking III.

ITC 230 Basic Telephony & Cabling Standards
Preparation of the student for entry into the telephone industry. Cabling installation, telephone sets and local loop are covered. The history of the industry and industry terms are presented. National Electrical Code and industry cabling and equipment standards are covered. Data cable installer certificate obtained through industry provided certification. (Certification may occur in section 3 or 4)

ITC 231 Voice Communication Systems I
Installation, programming, and troubleshooting of business telephone systems including key systems, hybrids, and an introduction to PBX switching equipment in a simulated business environment. Transmission lines and long distance networks, which tie telephone switches together, are covered. Customer service concepts are presented, to enable the student to communicate effectively with the customer.

ITC 232 Employment Search: Resumes & Interview Skills
Designed to prepare the student to mount an effective job search. Resume preparation, interview skills and the job application process are covered as the portfolio preparation process is completed.

ITC 233L Laboratory Instruction
Application of the technical knowledge acquired in the classroom to industry standard telephone systems and related equipment. Hands-on experience with industry standard tools and practices is accomplished in the installation of copper and fiber optic cable systems for voice and data networks. Numerous system installation labs and projects enable the student to apply knowledge gained in the classroom to actual field installations. Proper installation practices are covered in accordance with the National Electrical Code and industry standards.

ITC 240 Voice Communication Systems II
A continuation of Quarter 7 Voice Communication Systems. The convergence of voice and data, through the development of Computer-telephone Integration (CTI) and Voice over Internet (VoIP) concepts. Installation, programming and troubleshooting of PBX and VoIP equipment in a simulated business environment is accomplished. Voice mail is integrated into the system and the programming of system features is accomplished. Customer service concepts are presented, to enable the student to communicate effectively with the customer.

ITC 241 Limited Energy
Limited Energy Systems: Alarms & Amplified Sound. Fire alarm system installation, programming and troubleshooting are covered. Proper installation practices are covered in accordance with the National Electrical Code and NFPA 72: National Fire Alarm Code. Amplified sound and speaker systems, including 70V centralized systems and intercom systems are covered. Introduction to Power over Ethernet (PoE) cable and device installation will also be covered in accordance with the Washington State Limited Energy System guidelines.

ITC 242L Laboratory Instruction
Application of the technical knowledge acquired in the classroom to industry standard telephone systems and related equipment. Hands-on experience with industry standard tools and practices is accomplished in the installation of copper and fiber optic cable systems for voice and data networks. Numerous system installation labs and projects enable the student to apply knowledge gained in the classroom to actual telephone equipment and data network cable installations.

ITC 243E Externship
Qualifying students have the option of obtaining practical experience in a workplace environment in lieu of the last month of training on campus. Externships must relate to the training that would occur in the last quarter of ITCS and must be approved by the Department Head. If the student does not obtain an externship, they will be responsible for completing on-campus capstone projects.

INFORMATION TECHNOLOGY & COMMUNICATION SYSTEMS BOOK AND TOOL LIST

The book and tool list for students in the Information Technology & Communication Systems Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $3,900. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

INFORMATION TECHNOLOGY & COMMUNICATION SYSTEMS EQUIPMENT LIST

Students in the Information Technology & Communication Systems Program utilize the following equipment:

Personal computers and servers
Cisco routers
Network switches
Wireless access points
Fluke EtherScope
Fluke network analyzer, cable certifiers, and testers
T1 CSU/DSU
Digital multi-meters
Oscilloscopes, signal generator, and power supplies
Spectrum analyzers cell site test sets
AM/FM signal generators/modulators
Antenna system testers
In-line watt meters
Telephone key system, PBX, and VoIP system
Voice mail system
PA systems 24V and 70V
Fire alarm system

❖ instrumentation & industrial automation technology

Perry Technical Institute's Instrumentation & Industrial Automation Technology Program introduces students to today's world of computerized industrial automated manufacturing.

The program's curriculum covers basic mathematics for electronics, electricity, solid state, digital devices, applied physics, and calculus. Programmable logic controllers, transmitters, transducers, recorders, and controllers are used to simulate control techniques. Temperature, level, flow, and pressure are just a few of the process controls that instrumentation technicians monitor, install, troubleshoot, repair, and calibrate.

The goal of the Instrumentation & Industrial Automation Technology Program is to provide the resources and instruction students need to obtain entry-level employment as instrumentation technicians. Trained instrument technicians work in industries such as petrochemical, pulp and paper, chemical, food processing, metal refining, power generation, and engineering.

The Instrumentation & Industrial Automation Technology Program is 24 months in length (eight quarters). The student will earn 159.0 credit hours which are 2,688 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	IN 110	Math for Electronics	137	9.5
	IN 111	Electrical Fundamentals I	95	6.5
	IN 112L	Lab & Shop Projects	104	5.0
			336	21.0
Quarter 2	IN 120	Solid State Devices	72	5.0
	IN 121	Electrical Fundamentals II	108	7.5
	IN 122L	Lab & Shop Projects	156	7.5
			336	20.0
Quarter 3	IN 130	Operational Amplifiers	84	5.5
	IN 131	Physics I	50	3.5
	IN 132	Instrumentation I	43	3.0
	IN 133L	Lab & Shop Projects	159	7.5
			336	19.5
Quarter 4	IN 140	Physics II	110	7.5
	IN 141	Calculus I	43	3.0
	IN 142	Instrumentation II	65	4.5
	IN 143L	Lab & Shop Projects	118	5.5
			336	20.5
Quarter 5	IN 210	Calculus II	72	5.0
	IN 211	Instrumentation III	69	4.5
	IN 212	Motor Control	25	1.5
	IN 213L	Lab & Shop Projects	170	8.5
			336	19.5
Quarter 6	IN 220	Programmable Logic Controllers	90	6.0
	IN 221	Digital Fundamentals	87	6.0
	IN 222	Networking Fundamentals	30	2.0
	IN 223L	Lab & Shop Projects	129	6.0
			336	20.0
Quarter 7	IN 230	Industrial Computing I	95	6.5
	IN 231	Instrumentation IV	100	7.0
	IN 232L	Lab & Shop Projects	141	7.0
			336	20.5
Quarter 8	IN 240	Analytical Instruments	64	4.5
	IN 241	Industrial Computing II	30	2.0
	IN 242	Employment Preparation	72	5.0
	IN 243L	Lab & Shop Projects	50	2.5
	IN 244E	Externship	120	4.0
			336	18.0
	Program Totals		2,688	159.0

INSTRUMENTATION & INDUSTRIAL AUTOMATION TECHNOLOGY COURSE DESCRIPTIONS

IN 110 Math for Electronics
Numbers, addition, subtraction, multiplication, and division of polynomials, equations, powers of ten, units and dimensions, special products and factoring, algebraic fractions, fractional equations, graphs, simultaneous equations, exponents and radicals and quadratic equations.

IN 111 Electrical Fundamentals I
Electric circuits, starting with the nature of electricity, Ohm's Law and electrical calculations, conductors, insulators, and resistors, series resistive circuits, parallel resistive circuits, series-parallel resistive circuits, voltage cells, and batteries.

IN 112L Lab & Shop Projects
School rules, conduct and dress code, including proper clothing requirements and the use of safety glasses, general safety practices concerning the usage and proper maintenance procedures for electrical and general shop equipment. First aid and CPR training for two-year certification, tool and book purchases, explanation of ISA, overview of basic personal computer operation including the Windows environment focusing on desktop and Explorer. Microsoft Word will be incorporated into technical report writing skills, use of word processor for lab assignments, and applying classroom theory to practical lab assignments.

IN 120 Solid State Devices
Basic definitions, semiconductor diodes, rectifier diode circuits, basic DC power supply, and transformer usage. DC power supplies – single phase, transistor as DC switch, transistor as an AC amplifier, silicon controlled rectifiers, triac, diac, and unijunction transistor, and solid state transducers.

IN 121 Electrical Fundamentals II
Network analysis techniques, network theorems, magnetism, magnetic circuits, inductance, capacitance, series and parallel AC circuits, and power in AC circuits. Angles, trigonometric functions, trigonometric tables, solution of right triangles, trigonometric identities and equations, elementary plane vectors, periodic functions, and phasor algebra.

IN 122L Lab & Shop Projects
Applying classroom theory to practical lab assignments and simulators, using Microsoft Word and AutoCad.

IN 130 Operational Amplifiers
Introduction to OP Amps, first experiences with an Op Amp, inverting and non-inverting amplifiers, comparators and controls, differential, instrumentation, and bridge amplifiers, and integrated circuit timers.

IN 131 Physics I
Technical mathematics and friction, equilibrium, torque and rotational equilibrium, and uniformly accelerated motion are covered in this section of physics.

IN 132 Instrumentation I
Loop concepts, calibration methods, analog transmitters, transducers, controllers, and process variables.

IN 133L Lab & Shop Projects
Applying classroom theory to practical lab assignments and simulators, using Microsoft Word and AutoCad.

IN 140 Physics II
Uniformly accelerated motion is covered in this section of physics. Projectile motion; Newton's Second Law; work, energy and power; impulse and momentum; simple machines; elasticity; fluids at rest; fluids in motion; temperature and expansion; quantity of heat; transfer of heat; and thermal properties of matter are covered.

IN 141 Calculus I
Analytic geometry, equations of curves and curve sketching, functions, and derivatives.

IN 142 Instrumentation II
Instrumentation concepts, calibration, analog and smart transmitters, transducers, controllers, and process variables.

IN 143L Lab & Shop Projects
Applying classroom theory to practical lab assignments and simulators, using Microsoft Word and AutoCad. Safety is stressed at all times.

IN 210 Calculus II
Formulas for calculating derivatives. Applications of derivatives, anti-differentiation, trigonometric functions, and definite integral calculus.

IN 211 Instrumentation III
Process and instrumentation diagramming, loop sheets, electrical diagramming, proportional, integral and derivative controls, tuning controllers.

IN 212 Motor Control
Lock-out tag-out, electric symbols, ladder diagramming, contactors, single-phase, three-phase and DC motors, variable speed devices.

IN 213L Lab & Shop Projects
Applying classroom theory to practical lab assignments and simulators, using Microsoft Word and AutoCad. Safety is stressed at all times.

IN 220 Programmable Logic Controllers
Overview of PLCs, PLC hardware components, fundamentals of logic, basics of PLC programming, developing PLC ladder and wiring diagrams, and basic PLC functions.

IN 221 Digital Fundamentals
Introductory digital concepts, number systems, operations, and codes, logic gates, Boolean algebra and logic simplification, combinational logic, functions of combinational logic, flip-flops, and related devices.

IN 222 Networking Fundamentals
Introduction to networks, network components, and real-world networks.

IN 223L Lab & Shop Projects
Applying classroom theory to practical lab assignments and simulators, using Microsoft Word and AutoCad. Safety is stressed at all times.

IN 230 Industrial Computing I
Configurations of distributive process control, hardware implementations, and plant loop communications all utilizing control simulators.

IN 231 Instrumentation IV
Configurations of distributive process control, hardware implementations, and plant loop communications all utilizing control simulators, Fluid power systems, control valves, and valve positioners. Advanced control concepts.

IN 232L Lab & Shop Projects
Applying classroom theory to practical lab assignments and simulators, using Microsoft Word and AutoCad. Safety is stressed at all times.

IN 240 Analytical Instruments
Applications and implementation of process analyzer systems. Chemistry as it pertains to process analyzers. Theory and operation of electrochemical and compositional process analyzers.

IN 241 Industrial Computing II
Hardware and software configurations and implementation utilizing software packaged for personal computers that provides interfaces between operator and controller. HMI software configurations on PLC-controlled simulators.

IN 242 Employment Preparation
Personal resume development to be used in job search. Development of a list of potential employers for setting interview schedules. Interviewing techniques and feedback from practice interviews. Review of material from previous sections.

IN 243L Lab & Shop Projects
Applying classroom theory to practical lab assignments and simulators, using Microsoft Word and AutoCad. Safety is stressed at all times.

IN 244E Externship
Students who have had a job offer as an instrumentation technician may leave the program and work in the field under a training extern agreement with Perry Technical Institute, the employer, and the student. Completion of the externship packet is required. The Learning Resource System (LRS) contains valuable resources in assisting in the completion of this project. Students not receiving an externship will be required to complete a SCADA capstone project.

INSTRUMENTATION & INDUSTRIAL AUTOMATION TECHNOLOGY BOOK AND TOOL LIST

The book and tool list for students in the Instrumentation & Industrial Automation Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $3,670. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

INSTRUMENTATION & INDUSTRIAL AUTOMATION TECHNOLOGY EQUIPMENT LIST

Students in the Instrumentation & Industrial Automation Technology Program utilize the following equipment:

Computers
Signal generators
Oscilloscopes and related electronic equipment
Digital multi-meter
Analog/digitaltransmitter
Control valves
Recorders
Variable frequency drives
Motor control stations
Pumps
PLC labs
HMI labs
Hydraulic labs
Smart communication devices
Distributed control system

❖ legal assistant/paralegal

Perry Technical Institute's Legal Assistant/Paralegal Program provides a combination of training in traditional office skills, soft skills, and specialized legal skills.

Students gain a solid understanding of computers including entry-level keyboarding operations, basic computer maintenance, and desktop publishing. Students learn the soft skills needed in the office environment and the importance of career planning and how to develop a positive customer service environment. Students then advance into more specialized subjects. They develop a solid understanding of civil law, criminal law, legal terminology, legal research, writing techniques, and legal documents as they prepare for externships and employment opportunities.

The program prepares students to take the Microsoft Office Specialist (MOS) certification examination in Microsoft Word, Excel, Access, PowerPoint, and Outlook. Students will also prepare to take the Accredited Legal Secretary (ALS) and the Certified Legal Assistant (CLA) examinations.

The Legal Assistant/Paralegal Program is the launching pad towards entry-level legal office jobs in businesses such as private legal firms, government offices, and business settings. Paralegals are trained to assist attorneys with legal tasks such as preparing case material and data prior to litigation while understanding and properly using legal terminology.

The Legal Assistant/Paralegal Program is 12 months in length (four quarters). The student will earn 75.5 credit hours which are 1,344 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	LAP 110	Computer Applications	60	3.5
	LAP 111	Keyboarding I	60	3.5
	LAP 112	Word Processing	30	1.5
	LAP 113	Spreadsheets	60	3.5
	LAP 114	Business English I	60	3.5
	LAP 115	Business Math	66	4.0
			336	19.5
Quarter 2	LAP 120	Database & Integration	60	3.5
	LAP 121	Keyboarding II	88	5.5
	LAP 122	Business Presentation	30	1.5
	LAP 123	Career Planning	86	5.0
	LAP 124	Business Etiquette	30	1.5
	LAP 125	Business English II	42	2.5
			336	19.5
Quarter 3	LAP 130	Paralegal Fundamentals I	60	3.5
	LAP 131	Paralegal Ethics	60	3.5
	LAP 132	Civil Litigation	76	4.5
	LAP 133	Legal Terminology & Transcription	35	2.0
	LAP 134	Customer Service	51	3.0
	LAP 135	Legal Research & Writing	54	3.0
			336	19.5
Quarter 4	LAP 140	Medical Terminology	40	2.5
	LAP 141	Employment Preparation	35	2.0
	LAP 142	Criminal Law	65	4.0
	LAP 143	Paralegal Fundamentals II	76	4.5
	LAP 144E	Externship	120	4.0
			336	17.0
	Program Totals		1,344	75.5

LEGAL ASSISTANT/PARALEGAL COURSE DESCRIPTIONS

LAP 110 Computer Applications
This course introduces the basics of computer hardware and software, networks, the Internet, Outlook, and Publisher. The objective is to allow students to be more comfortable working with personal computers on a daily basis.

LAP 111 Keyboarding I
In this course, students learn beginning typing and 10-key skills. The objectives are for students to learn how to type by touch and how to take a timed keyboarding/10-key test for accuracy and speed.

LAP 112 Word Processing
Students learn how to use Microsoft Word for basic and advanced word processing. The objective of this course is to prepare students to take the MOS certification exam for Word.

LAP 113 Spreadsheets
Students learn Microsoft Excel and how to build business and financial applications for forecasting, budgeting, and basic bookkeeping. The objective of this course is to prepare students to take the MOS certification exam for Excel.

LAP 114 Business English I
A concentrated review of sentence writing, this course emphasizes sentence combining, basic mechanics, and paragraph writing.

LAP 115 Business Math
Students will review the basic operations of arithmetic, understand and manage their personal finances, as well as grasp the fundamentals of business finances. This course will prepare students to be smart shoppers, informed taxpayers, and valued employees. Basic math skills will be covered in a step-by-step manner, building student confidence along the way.

LAP 120 Database & Integration
Students learn how to create and use databases with Microsoft Access. The objective of this course is to prepare students to take the MOS certification exam for Access. Students will also receive hands-on integration of the entire Microsoft Office Suite.

LAP 121 Keyboarding II
In this course, students learn how to improve their accuracy and typing/10-key speed. Students also learn formatting for personal and business letters, memoranda, simple tabulation techniques, proofreading, and editing.

LAP 122 Business Presentation
This course provides instruction in delivering speeches and developing presentation materials. Students will create a variety of charts, graphs, and interactive presentations with the primary use of PowerPoint. Students will be encouraged to complete the MOS Certification in PowerPoint.

LAP 123 Career Planning
This course is designed to teach students how to write a professional cover letter and resume, participate in career networking, search for positions, apply for positions, and negotiate a position in an administrative field.

LAP 124 Business Etiquette
This course focuses on the fundamentals of etiquette as they relate to business and business relationships inside and outside the office.

LAP 125 Business English II
This course emphasizes basic punctuation and grammar rules and covers sentence structure. The course is designed to introduce basic reading skills and to develop basic writing skills. Coursework emphasizes writing from observation as well as writing in response to readings. The focus is on writing sentences which demonstrate a grasp of basic syntax.

LAP 130 Paralegal Fundamentals I
This course provides a thorough introduction to not only the legal system in general, but to specific areas of the law and the paralegal's integral role as a member of the legal team. The student will gain a comprehensive understanding of the laws in our society, the importance of ethical and professional responsibilities, and the skills needed to thrive in this environment.

LAP 131 Paralegal Ethics
This course provides a study of legal ethics from the perspective of the paralegal to prepare students for the ethical dilemmas they will face on the job. The ABA Model Rule that applies to attorneys is introduced and students will learn to act in accordance with rules for the ethical conduct of attorneys. Students will also study the Washington Rules of Professional Conduct. Hypotheticals and cases on each topic will be provided for further real-world application.

LAP 132 Civil Litigation
Students will learn the litigation process in detail in a variety of contexts, providing relevance of litigation to other legal specialties, such as personal injury, real estate, employment, and intellectual property law. Students will also be exposed to a variety of sample legal documents, such as complaints, interrogatories and deposition summaries, as well as case studies.

LAP 133 Legal Terminology & Transcription
Students will master all the skills necessary to produce a transcript that accurately reflects court proceedings, depositions, legal stipulations, hearings, and intra/interoffice meetings.

LAP 134 Customer Service
This course emphasizes how to provide excellent customer service. Students learn proper telephone skills, problem resolution skills, and how to handle difficult situations.

LAP 135 Legal Research & Writing
Students will take a hands-on approach to researching, documenting, and citing during the legal research and writing process. Students will receive an introduction to research, analytical principles, and the legal process. They will then take an in-depth exploration of the legal writing process.

LAP 140 Medical Terminology
This course is designed to teach students to accurately spell, pronounce and define common medical terms related to major

disease processes, diagnostic procedures, laboratory tests, abbreviations, drugs, and treatment modalities.

LAP 141 Employment Preparation
This course develops the personal and professional skills needed to be successful in business. Topics include confidence building; seeking to understand; beginning with clarity; knowing your personality profile; coping with difficult people; and balancing professional and personal priorities individually and in a team environment.

LAP 142 Criminal Law
This course covers the essentials of both substantive criminal law and criminal procedure. Students will learn about criminal responsibility and the procedural aspects of the entire criminal justice system from arrest to appeal and habeas corpus.

LAP 143 Paralegal Fundamentals II
This course will provide a continuation of the paralegal's role in the legal organization. Students will also focus on three sections of document preparation that include goals, forms, instruments, pleadings, American jurisprudence, contracts, real estate transactions, wills, trusts, bankruptcy, criminal practices, federal practices, and domestic relations. In this course, students will also undertake a business office filing simulation.

LAP 144E Externship
Students will learn advanced career planning practices and demonstrate skills and competencies in externship assignments. Students must have a "C+" or better in current coursework, must not be under any type of probationary contract, and must complete and submit a regular lab work experience employer evaluation. The instructor may terminate industry work experiences at any time if students do not adhere to these requirements.

LEGAL ASSISTANT/PARALEGAL BOOK AND TOOL LIST

The book and tool list for students in the Legal Assistant/Paralegal Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $3,472. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

LEGAL ASSISTANT/PARALEGAL EQUIPMENT LIST

Students in the Legal Assistant/Paralegal Program utilize the following equipment:

Computers
Copy machines
Scanners
Fax machines
10-key calculators

❖ machine technology

Perry Technical Institute's Machine Technology Program teaches students the machine trade through the integration of machining theory and practical application in the machine shop. Students use the skills they learn to plan and carry out the operations needed to make machined products that meet precise specifications.

The working properties of metals, applied mathematics, blueprint reading, computer numerical control (CNC) programming, and computer-aided manufacturing (CAM) using Mastercam are some of the subjects students study to develop the skills demanded by today's industry. Students will have an opportunity to earn the Mastercam certification.

The goal of the Machine Technology Program is to prepare students for entry-level positions in a variety of manufacturing fields. Graduates will be qualified for positions in industries such as manufacturing, prototyping, job shops, power generation, aerospace, food processing, medical equipment, and other specialty machining industries.

The Machine Technology Program is 24 months in length (eight quarters). The student will earn 139.5 credit hours which are 2,688 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	MA 110	Shop Safety	21	1.0
	MA 111	Mathematics for Machine Technology I	50	3.5
	MA 112	Elementary Blueprint Reading I	35	2.0
	MA 113	Machine Tool Practices I	40	2.5
	MA 114L	Machine Lab	190	9.5
			336	18.5
Quarter 2	MA 120	Mathematics for Machine Technology II	50	3.5
	MA 121	Elementary Blueprint Reading II	36	2.5
	MA 122	Machine Tool Practices II	40	2.5
	MA 123L	Machine Lab	210	10.5
			336	19.0
Quarter 3	MA 130	Mathematics for Machine Technology III	50	3.5
	MA 131	Intermediate Blueprint Reading I	36	2.5
	MA 132	Machine Tool Practices III	40	2.5
	MA 133L	Machine Lab	210	10.5
			336	19.0
Quarter 4	MA 140	Mathematics for Machine Technology IV	50	3.5
	MA 141	Intermediate Blueprint Reading II	36	2.5
	MA 142	Machine Tool Practices IV	40	2.5
	MA 143L	Machine Lab	210	10.5
			336	19.0
Quarter 5	MA 210	Geometric Dimensioning & Tolerancing I	35	2.0
	MA 211	CNC Machine Tool Operation I	30	2.0
	MA 212	Mastercam Mill Level One I	31	2.0
	MA 213L	Machine Lab	240	12.0
			336	18.0
Quarter 6	MA 220	Geometric Dimensioning & Tolerancing II	35	2.0
	MA 221	CNC Machine Tool Operation II	30	2.0
	MA 222	Mastercam Mill Level One II	31	2.0
	MA 223L	Machine Lab	240	12.0
			336	18.0
Quarter 7	MA 230	Geometric Dimensioning & Tolerancing III	35	2.0
	MA 231	CNC Machine Tool Operation III	30	2.0
	MA 232	Mastercam Mill Level Three I	31	2.0
	MA 233E	Externship	240	8.0
			336	14.0

(cont. on next page)

			Clock Hours	Credit Hours
Quarter 8	MA 240	Geometric Dimensioning & Tolerancing IV	35	2.0
	MA 241	CNC Machine Tool Operation IV	30	2.0
	MA 242	Mastercam Mill Level Three II	31	2.0
	MA 243E	Externship	240	8.0
			336	14.0
	Program Totals		2688	139.5

MACHINE TECHNOLOGY COURSE DESCRIPTIONS

MA 110 Shop Safety
This course covers the fundamental safety procedures for each group of machine tools in the shop. General shop safety considerations include proper clothing, eye protection, lifting, first aid, and CPR.

MA 111 Mathematics for Machine Technology I
Operations with fractions, mixed numbers, and decimals as they relate to the machine trades. The topics covered are the basic math skills of addition, subtraction, multiplication, and division. Calculations involving exponents, percentages, and rates are also covered.

MA 112 Elementary Blueprint Reading I
Develops the fundamental skills needed to read and interpret industrial drawings. Topics covered include drawing layouts, drawing symbols, and the different drawing views used to describe machined parts.

MA 113 Machine Tool Practices I
Covers the use of hand tools including hacksaws, files, taps, and dies. Topics also include the use of measuring instruments such as steel rules, vernier scales, micrometers, and dial indicators. Precision layout techniques, drilling machine operation, drill bit sharpening, and tapping are also covered. An introduction to turning machines will include lathe cutting tools, engine lathe tooling, engine lathe operation, and facing and center drilling.

MA 114L Machine Lab
Classroom theory on the operation of drill presses, band saws, bench grinders, and basic hand tools will be applied in the shop. Operations performed will include filing a block square, hacksaw use, precision hole layout, drill bit sharpening, drilling, and tapping.

MA 120 Mathematics for Machine Technology II
This course covers the customary and metric linear measuring systems as well as the fundamentals of algebra found in the machine trades. Topics include using the principles of equality and rearranging of formulas to solve common shop problems.

MA 121 Elementary Blueprint Reading II
Further develops the skills learned in Elementary Blueprint Reading I. Topics covered include the dimensions and symbols used to call-out common features such as counterbores, countersinks, fillets, and spot faces. Other topics include tapers, chamfers, bevels, and screw threads.

MA 122 Machine Tool Practices II
This course covers the different types of lathes, their nomenclature, and their operation and set-up theories. Topics covered include turning, thread cutting, grooving, drilling, and tapping. The operation of band saws, cold saws and abrasive saws is also covered. Dimensional measurements will encompass comparison measuring tools, gage blocks, and angular measuring tools. An introduction to the vertical milling machine will include tooling and set-ups for the mill.

MA 123L Machine Lab
Classroom theory on the operation and set-up of engine lathes will be applied in the shop. Operations will include turning, thread cutting, grooving, drilling, and tapping. Also covered are the set-ups of four-jaw chucks, follower rests, and steady rests.

MA 130 Mathematics for Machine Technology III
This course covers the fundamentals of plane geometry. Common shop problems are solved by applying the geometric principles of triangles, common polygons, and circles. Other topics covered include geometric construction, area calculations, and volume calculations.

MA 131 Intermediate Blueprint Reading I
Covers more advanced blueprinting topics such as orthographic projection, sectioning, and special views used in industrial drawing to further define machined parts. Basic geometric tolerances, their datums and modifiers, along with threaded fasteners, are covered.

MA 132 Machine Tool Practices III
Covers operation and set-up theories of the vertical milling machine. Topics covered include face milling, rough/finish milling, hole layout, drilling, and tapping. Also covered are heat treating of materials, material properties, and material application. An introduction to the horizontal milling machine will include tooling, set-ups, and operation demonstrations.

MA 133L Machine Lab
Classroom theory on the operation and set-up of the vertical milling machine will be applied in the shop. Operations will include face milling, rough/finish milling, hole layout, drilling, and tapping. Also covered are general machine set-ups including dialing vises and head tramming.

MA 140 Mathematics for Machine Technology IV
Introduces trigonometric functions and compound angles as they apply in the machine trades. Calculations of angles and sides of right triangles, the Cartesian coordinate system, the laws of sines and cosines, and compound angle calculations are covered.

MA 141 Intermediate Blueprint Reading II
As a continuation of Intermediate Blueprint Reading I, this course further develops advanced blueprint reading skills required in the machine trades. The topics of pipe threads, dovetails, and steel identification are covered along with structural steel shapes and welding. The special considerations of blueprints for castings, worm gears, and mechanical fasteners are also covered.

MA 142 Machine Tool Practices IV
Covers the operation and set-up theories of horizontal milling machines and surface grinders. Milling topics covered include face milling, rough, and finish milling. Surface grinding topics include selection of grinding wheels, coolant, and work holding options. General shop tools and procedures covered will include the arbor press, hydraulic press, countersinking, counterboring, and reaming. Also, computer numerical control machines will be introduced.

MA 143L Machine Lab
Classroom theory on the operation and set-up of the horizontal milling machines and surface grinders will be applied in the shop. Milling operations will include face milling, rough, and finish milling. Surface grinder operations will include block squaring and angle grinding.

MA 210 Geometric Dimensioning & Tolerancing I
This course covers the fundamental geometric dimensioning and tolerancing skills needed to interpret industrial drawings. Topics include basic dimensioning and tolerancing rules, definitions, symbols, material conditions, form variation, and basic fits of mating parts. Also covered are baseline, chain, direct, and alternate dimensioning.

MA 211 CNC Machine Tool Operation I
Manual programming and operation of CNC machining centers. Topics include defining numerical control, machine types and layouts, coordinate geometry, basic machine control features, programming codes, and structure.

MA 212 Mastercam Mill Level One I
Students use Mastercam to create two- and three-dimensional drawings. Solid modeling and blueprinting are also covered along with general drafting skills.

MA 213L Machine Lab
Students will complete a series of projects designed to hone the skills needed in industry. They will operate a job shop style machine shop doing work for customers and participate in a final class machining project.

MA 220 Geometric Dimensioning & Tolerancing II
A continuation of Geometric Dimensioning & Tolerancing I, this course further develops the geometric dimensioning and tolerancing skills needed to interpret industrial drawings. Topics are datums, material conditions, and material boundary.

MA 221 CNC Machine Tool Operation II
As a continuation of CNC Machine Tool Operation I, this course covers the manual programming and operation of CNC machining centers. Topics include tool function, reference points, work and tool offsets, and rapid positioning. Also covered are linear interpolation, fixed cycles, and hole machining.

MA 222 Mastercam Mill Level One II
Covers programming two dimensional toolpaths with Mastercam. Topics include drilling, tapping, contouring, and pocketing. Circle and slot milling are also covered.

MA 223L Machine Lab
Students will complete a series of projects designed to hone the skills needed in industry. They will operate a job shop style machine shop doing work for customers and participate in a final class machining project.

MA 230 Geometric Dimensioning & Tolerancing III
A continuation of Geometric Dimensioning & Tolerancing II, this course further develops the geometric dimensioning and tolerancing skills needed to interpret industrial drawings. Topics covered include form tolerances, orientation tolerances, and location tolerances.

MA 231 CNC Machine Tool Operation III
As a continuation of CNC Machine Tool Operation II, this course covers the manual programming and operation of CNC machining centers. Topics include cutter diameter compensation, plane selection, circular interpolation contour milling, face milling, and machining slots and pockets.

MA 232 Mastercam Mill Level Three I
Students use Mastercam to create three-dimensional wireframe geometry and surfaces. The proper uses of stock setup, tool libraries, and toolpath verification are also taught.

MA 233E Externship
Students work in various local machine shops under the supervision of an approved employer. They must maintain a minimum GPA of 3.0 and not be on any probation contract in order to eligible to participate in an externship. The instructor or administration may terminate the externship at any time if the student does not adhere to the requirements stated in the Externship Training Packet.

MA 240 Geometric Dimensioning & Tolerancing IV
A continuation of Geometric Dimensioning & Tolerancing III, this course further develops the geometric dimensioning and tolerancing skills needed to interpret industrial drawings. Topics covered are location tolerances, profile tolerances, and run-out tolerance.

MA 241 CNC Machine Tool Operation IV
As a continuation of CNC Machine Tool Operation III, this course covers the manual programming and operation of CNC turning centers. Topics include turning and boring, fixed lathe cycles, parting off and grooving, threading, facing, and contouring.

MA 242 Mastercam Mill Level Three II
This course covers machining three-dimensional shapes with the surface rough and surface finish toolpaths. Other topics include surface high speed toolpaths and using a STL stock model to verify a solid model.

MA 243E Externship
Students work in various local machine shops under the supervision of an approved employer. They must maintain a minimum GPA of 3.0 and not be on any probation contract in order to eligible to participate in an externship. The instructor or administration may terminate the externship at any time if the student does not adhere to the requirements stated in the Externship Training Packet.

MACHINE TECHNOLOGY
BOOK AND TOOL LIST

The book and tool list for students in the Machine Technology Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $4,200. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

MACHINE TECHNOLOGY
EQUIPMENT LIST

Students in the Machine Technology Program utilize the following equipment:

Computers
Cylindrical grinders
Gear hobs
Engine lathes
Vertical and horizontal mills
Surface grinders
Drill presses
Band saws
Vertical machining centers
Turning centers
Wire EDM machine

❖ medical assistant

The Medical Assistant Program prepares students for entry-level positions with medical offices and hospitals. Students will be equipped with valuable skills in office administration as well as clinical and patient care skills. Medical assistants are commonly employed in outpatient physician offices, clinics, health maintenance organizations, and hospitals. The program consists of six quarters of coursework followed by an externship with a local employer.

The goal of the Medical Assistant Program is to prepare graduates for entry-level positions as medical assistants.

The Medical Assistant Program is 18 months in length (six quarters). The courses prepare students to take the Registered Medical Assistant (RMA) examination. The student will earn 114 credit hours which are 2,016 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	MED 110	Computer Applications	60	3.5
	MED 111	Business English I	60	3.5
	MED 112	Keyboarding I	30	1.5
	MED 113	Word Processing	60	3.5
	MED 114	Spreadsheets	60	3.5
	MED 115	Business Math	66	4.0
			336	19.5
Quarter 2	MED 120	Business English II	60	3.5
	MED 121	Database & Integration	88	5.5
	MED 122	Keyboarding II	30	1.5
	MED 123	Business Presentation	86	5.0
	MED 124	Career Planning	30	1.5
	MED 125	Business Etiquette	42	2.5
			336	19.5
Quarter 3	MED 130	Anatomy & Physiology I	60	3.5
	MED 131	Health Care Law & Ethics	88	3.5
	MED 132	Medical Terminology	30	4.5
	MED 133	Medical Career Planning	86	2.0
	MED 134	Human Diseases	30	3.0
	MED 135	Computers in Health Care	42	3.0
			336	19.5
Quarter 4	MED 140	Anatomy & Physiology II	60	3.5
	MED 141	Basic Diagnostic & Procedure Coding	60	3.5
	MED 142	Pharmacology I	60	3.5
	MED 143	Clinical Procedures I	80	5.0
	MED 144	Practice Management & EHR	76	4.5
			336	20.0
Quarter 5	MED 210	Clinical Aspects of Coding & Billing	60	3.5
	MED 211	Surgical Procedures	60	3.5
	MED 212	Pharmacology II	60	3.5
	MED 213	Clinical Procedures II	80	5.0
	MED 214	Communications	76	4.5
			336	20.0
Quarter 6	MED 220	Medical Specialty Procedures	71	4.0
	MED 221	Clinical Procedures III	80	5.0
	MED 222	Electronic Health Records	25	1.5
	MED 223E	Externship	160	5.0
			336	15.5
	Program Totals		2,016	114.0

MEDICAL ASSISTANT COURSE DESCRIPTIONS

MED 110 Computer Applications
This course covers the basics of computer hardware and software, networks, the Internet, Outlook, and Publisher. The objective is to prepare the student to take the MOS certification exam.

MED 111 Business English I
A concentrated review of sentence writing, this course emphasizes sentence combining, basic mechanics, and paragraph writing.

MED 112 Keyboarding I
In this course, students learn beginning typing and 10-key skills. The objectives are for students to learn how to type by touch and how to take a timed keyboarding test for accuracy and speed.

MED 113 Word Processing
Students learn how to use Microsoft Word for basic and advanced word processing. The objective of this course is to prepare students to take the MOS certification exam for Word.

MED 114 Spreadsheets
Students learn Microsoft Excel and how to build business and financial applications for forecasting, budgeting, and basic bookkeeping. The objective of this course is to prepare students to take the MOS certification exam for Excel.

MED 115 Business Math
Students will review the basic operations of arithmetic, understand and manage their personal finances, as well as grasp the fundamentals of business finances. This course will prepare students to be smart shoppers, informed taxpayers, and valued employees. Basic math skills will be covered in a step-by-step manner, building student confidence along the way.

MED 120 Business English II
This course emphasizes basic punctuation and grammar rules and covers sentence structure. The course is designed to introduce basic reading skills and to develop basic writing skills. Coursework emphasizes writing from observation as well as writing in response to readings. The focus is on writing sentences which demonstrate a grasp of basic syntax and usage, and writing sound paragraphs which express a main idea clearly and develop it fully with a minimum of errors in sentence structure, punctuation, and spelling.

MED 121 Database & Integration
Students learn how to create and use databases with Microsoft Access. The objective of this course is to prepare students to take the MOS certification exam for Access. Students will receive hands-on integration of the entire Microsoft Office Suite.

MED 122 Keyboarding II
In this course, students learn how to improve their accuracy and typing speed. Students also learn formatting for personal and business letters, memoranda, simple tabulation techniques, proofreading, and editing. This course covers the basics of computer hardware, software, networks, and the Internet.

MED 123 Business Presentation
This course provides instruction in developing presentation materials. Students create a variety of charts, graphs and interactive presentations. Microsoft PowerPoint enables users to quickly create high-impact, dynamic presentations, while integrating workflow and ways to easily share information. Students will have an opportunity to earn their PowerPoint certification.

MED 124 Career Planning
This course is designed to teach students how to write a professional resume package and to learn basic interviewing skills.

MED 125 Business Etiquette
This course focuses on the fundamentals of etiquette as they relate to business and business relationships inside and outside the office.

MED 130 Anatomy & Physiology I
An introduction to the structure and function of the human body utilizing a system approach. Emphasis placed on human anatomy as well as the physiology of the cell, skeletal system, muscular system, nervous system, cardiovascular, respiratory, urinary, reproductive, endocrine, digestive, lymphatic, special senses, and integumentary systems.

MED 131 Health Care Law & Ethics
This course examines the ethical challenges facing individuals and businesses in modern society. The course utilizes case studies of professionals working in various areas of business and provides guest speakers with real-world experiences.

MED 132 Medical Terminology
This course is designed to teach students to accurately spell, pronounce, and define common medical terms related to major disease processes, diagnostic procedures, laboratory tests, abbreviations, drugs, and treatment modalities.

MED 133 Medical Career Planning
Students learn advanced interviewing skills, how to construct a portfolio of their work and job-seeking skills. This course will guide the student through the elements of career planning, including self-understanding, stress management, teamwork, and exploring a variety of medical careers paths.

MED 134 Human Diseases
Emphasis placed on the disease processes affecting the human body via an integrated approach to specific disease entities, including the study of causes, diagnosis, and treatment of disease.

MED 135 Computers in Health Care
Overview of commonly available software tools used in health care. Introduction to the electronic health record process and medical office database management software found in American health care delivery.

MED 140 Anatomy & Physiology II
This course takes a more advanced look at human anatomy, physiology, and pathophysiology by building on the basics learned in Anatomy I. Students will take an in-depth look at the axial skeletal system, the appendicular skeletal system, articulations, axial muscles, appendicular muscles, the brain

and cranial nerves, the spinal cord and spinal nerves, and various other body systems.

MED 141 Basic Diagnostic & Procedure Coding
This course is an introduction to the basics of diagnostic and procedure coding and presents students with the characteristics and conventions of ICD-9-CM, ICD-10-CM, CPT-4, and HCPCS coding. This course focuses on correct code assignment. Focus is also placed on using official coding guidelines correctly and includes extensive practice coding exercises.

MED 142 Pharmacology I
Provides a basic knowledge of pharmacology including the legal and ethical issues; the terms and abbreviations; the involvement of governmental agencies; the role of the providers and allied health professionals; reading, interpreting and documenting the medication orders; and the effects of medication and common drugs used with each body system including antineoplastics, analgesics, antipyretics, nutritional supplements, and alternative medicines. Students will be introduced to Child Profile. Inventory control and management processes will also be taught.

MED 143 Clinical Procedures I
Demonstrations are provided on assisting the physician in performing physical examinations. Emphasis is placed on obtaining the medical history, measure or vital signs, auditory and visual testing, exam room preparation, equipment set-up, and proper positioning and draping of patients. Patient charting and documentation is also practiced. OSHA, blood borne pathogens, and PPE will be covered in this course.

MED 144 Practice Management & EHR
Students will use an integrated practice management program and EHR to practice capturing the complete patient encounter. HIPAA will be reviewed, and students will begin with scheduling and check-in procedures, and proceed through the entire patient encounter using the PMP and the EHR to document the visit.

MED 210 Clinical Aspects of Coding & Billing
Overviews of Medicaid, Medicare, private insurance, and managed care verification and benefits are presented. Pre-authorization, referral procedures, and medical record documentation will be practiced. A review and practice of diagnostic, procedural, and laboratory coding will also be performed.

MED 211 Surgical Procedures
Instruction is presented on assisting the physician with minor office surgery, patient preparation, tray set-up, scrubbing, identification and use of surgical instruments and supplies, autoclave procedures, postoperative dressing, and surgical asepsis. Students will also learn correct body mechanics for assisting in patient transfer, how to identify different types of fractures, and how to assist with correct casting procedures. Therapeutic modalities, assistive devices, and surgical intervention will be discussed.

MED 212 Pharmacology II
This is the second of two pharmacology classes. This class includes the administration of medication including: safety and quality assurance, enteral, percutaneous, and parenteral routes of medication, medication for multi-system application, and medications related to body systems.

MED 213 Clinical Procedures II
Techniques are taught to enable students to perform the routine laboratory procedures conducted in physicians' offices. Information regarding laboratory mathematics and measurement, use of laboratory equipment, collection and processing of specimens, microbiology, phlebotomy, and routine blood testing is presented. Students will learn about CLIA regulations and what types of tests can be conducted in a CLIA-waived lab.

MED 214 Communications
This course provides the student with experience in the wide range of communication skills necessary for success in medical assisting. Verbal and non-verbal communication, speaking and listening critically, taking into consideration the diversity of our patients, motivational interviewing, and other topics are covered. Patient education, including nutrition and diet, are also addressed. Opportunities will be given to role play patient interaction and patient education scenarios. There will be a strong focus on customer service.

MED 220 Medical Specialty Procedures
Students are trained to assist the physician with special office examinations including pediatric, gynecologic and prenatal, dermatologic, endoscopic, gastrointestinal, geriatric, and neurological.

MED 221 Clinical Procedures III
This course provides a review of the material covered in Clinical Procedures I & II. Students will demonstrate competency in each of the areas taught during the previous courses. This course will also cover externship preparation as well lab safety, electrocardiography, pulmonary testing, and urinalysis.

MED 222 Electronic Health Records
Students will use a simulated EHR to practice hands-on documentation.

MED 223E Externship
This externship provides the student an opportunity to apply the principles and practices learned in the program and utilize entry-level medical assistant skills in working with patients. The student will work under the direct supervision of qualified personnel at the participating site, and under general supervision of program faculty. Performance evaluations will be received bi-weekly from the supervising personnel at the participating site.

MEDICAL ASSISTANT BOOK AND TOOL LIST

The book and tool list for students in the Medical Assistant Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $3,056. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

MEDICAL ASSISTANT EQUIPMENT LIST

Students in the Medical Assistant Program utilize the following equipment:

Computers
Exam tables
ECG/EKG unit
Autoclave
Microscopes
Venipuncture and injection arm

❖ medical office administration & coding program

Perry Technical Institute's Medical Office Administration & Coding Program provides a combination of training in traditional office skills, soft skills, and specialized medical office billing and coding procedures.

Students gain a solid understanding of computers including entry-level keyboarding operations, basic computer maintenance, the Windows operating system, software applications, and desktop publishing. Students learn the soft skills needed in the office environment and the importance of career planning and how to develop a positive customer service environment. Students then advance into more specialized subjects. They learn the basics of working in a medical office setting. Subjects include: medical terminology, anatomy and physiology, human diseases, medical office procedures, and basic and advanced diagnostic and procedures coding.

The program prepares students to take the Microsoft Office Specialist (MOS) exams in Word, Excel, Access, PowerPoint, and Outlook; the National Certification for Medical Office Assistants (NCMOA) exam; and the AAPC's Certified Professional Coder (CPC) exam.

The goal of the Medical Office Administration & Coding Program is to prepare graduates for entry-level positions in the growing field of health care office professionals. Graduates of this program will be prepared for positions such as: medical office assistant, medical coder, receptionist, reimbursement specialist, and other administrative positions in medical offices, hospitals and other health care organizations.

The Medical Office Administration & Coding Program is 18 months in length (six quarters). The student will earn 115.5 credit hours which are 2,016 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hours	Credit Hours
Quarter 1	MOA 110	Computer Applications	60	3.5
	MOA 111	Business English I	60	3.5
	MOA 112	Keyboarding I	30	1.5
	MOA 113	Word Processing	60	3.5
	MOA 114	Spreadsheets	60	3.5
	MOA 115	Business Math	66	4.0
			336	19.5
Quarter 2	MOA 120	Business English II	60	3.5
	MOA 121	Database & Integration	88	5.5
	MOA 122	Keyboarding II	30	1.5
	MOA 123	Business Presentation	86	5.0
	MOA 124	Career Planning	30	1.5
	MOA 125	Business Etiquette	42	2.5
			336	19.5
Quarter 3	MOA 130	Anatomy & Physiology I	60	3.5
	MOA 131	Health Care Law & Ethics	60	3.5
	MOA 132	Medical Terminology	75	4.5
	MOA 133	Medical Career Planning	35	2.0
	MOA 134	Human Diseases	55	3.0
	MOA 135	Computers in Health Care	51	3.0
			336	19.5
Quarter 4	MOA 140	Anatomy & Physiology II	60	3.5
	MOA 141	Basic Diagnostic Coding	83	5.0
	MOA 142	Basic Procedures Coding	91	5.5
	MOA 143	Medical Office Procedures	102	6.0
			336	20.0
Quarter 5	MOA 210	Business Communication	55	3.0
	MOA 211	Medical Reimbursement	66	4.0
	MOA 212	Health Care Delivery Systems	60	3.5
	MOA 213	Intermediate Diagnostic Coding	80	5.0
	MOA 214	Intermediate Procedure Coding	75	4.5
			336	20.0

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			Clock Hours	Credit Hours
Quarter 6	MOA 220	Advanced Coding	60	3.5
	MOA 221	Specialty Coding	80	5.0
	MOA 222	Health Care Records	76	4.5
	MOA 223E	Medical Coding Practicum Externship	120	4.0
			336	17.0
	Program Totals		2,016	115.5

MEDICAL OFFICE ADMINISTRATION & CODING PROGRAM COURSE DESCRIPTIONS

MOA 110 Computer Applications
This course covers the basics of computer hardware and software, networks, the Internet, Outlook, and Publisher. The objective is to prepare the student to take the MOS certification exam.

MOA 111 Business English I
A concentrated review of sentence writing, this course emphasizes sentence combining, basic mechanics, and paragraph writing.

MOA 112 Keyboarding I
In this course, students learn beginning typing and 10-key skills. The objectives are for students to learn how to type by touch and how to take a timed keyboarding test for accuracy and speed.

MOA 113 Word Processing
Students learn how to use Microsoft Word for basic and advanced word processing. The objective of this course is to prepare students to take the MOS certification exam for Word.

MOA 114 Spreadsheets
Students learn Microsoft Excel and how to build business and financial applications for forecasting, budgeting, and basic bookkeeping. The objective of this course is to prepare students to take the MOS certification exam for Excel.

MOA 115 Business Math
Students will review the basic operations of arithmetic, understand and manage their personal finances, as well as grasp the fundamentals of business finances. This course will prepare students to be smart shoppers, informed taxpayers, and valued employees. Basic math skills will be covered in a step-by-step manner, building student confidence along the way.

MOA 120 Business English II
This course emphasizes basic punctuation and grammar rules and covers sentence structure. The course is designed to introduce basic reading skills and to develop basic writing skills. Coursework emphasizes writing from observation as well as writing in response to readings. The focus is on writing sentences which demonstrate a grasp of basic syntax and usage, and writing sound paragraphs which express a main idea clearly and develop it fully with a minimum of errors in sentence structure, punctuation, and spelling.

MOA 121 Database & Integration
Students learn how to create and use databases with Microsoft Access. The objective of this course is to prepare students to take the MOS certification exam for Access. Students will receive hands-on integration of the entire Microsoft Office Suite.

MOA 122 Keyboarding II
In this course, students learn how to improve their accuracy and typing speed. Students also learn formatting for personal and business letters, memoranda, simple tabulation techniques, proofreading, and editing. This course covers the basics of computer hardware, software, networks, and the Internet.

MOA 123 Business Presentation
This course provides instruction in developing presentation materials. Students create a variety of charts, graphs, and interactive presentations. Microsoft PowerPoint enables users to quickly create high-impact, dynamic presentations, while integrating workflow and ways to easily share information. Students will have an opportunity to earn their PowerPoint certification.

MOA 124 Career Planning
This course is designed to teach students how to write a professional resume package and to learn basic interviewing skills.

MOA 125 Business Etiquette
This course focuses on the fundamentals of etiquette as they relate to business and business relationships inside and outside the office.

MOA 130 Anatomy & Physiology I
An introduction to the structure and function of the human body utilizing a system approach. Emphasis placed on the basics of human anatomy as well as the physiology of the cell, skeletal system, muscular system, nervous system, cardiovascular, respiratory, urinary, reproductive, endocrine, digestive, lymphatic, special senses, and integumentary systems.

MOA 131 Health Care Law & Ethics
This course examines the ethical challenges facing individuals and businesses in modern society. The course utilizes case studies of professionals working in various areas of business and provides guest speakers with real-world experiences.

MOA 132 Medical Terminology
This course is designed to teach students to accurately spell, pronounce, and define common medical terms related to major disease processes, diagnostic procedures, laboratory tests, abbreviations, drugs, and treatment modalities.

MOA 133 Medical Career Planning
Students learn advanced interviewing skills, how to construct a portfolio of their work and job-seeking skills. This course will guide the student through the elements of career planning, including self-understanding, and exploring a variety of medical careers paths.

MOA 134 Human Diseases
Emphasis placed on the disease processes affecting the human body via an integrated approach to specific disease entities, including the study of causes, diagnosis, and treatment of disease.

MOA 135 Computers in Health Care
Overview of commonly available software tools used in health care. Introduction to the electronic health record process and medical office database management software found in American health care delivery.

MOA 140 Anatomy & Physiology II
This course takes a more advanced look at human anatomy and physiology by building on the basics learned in Anatomy & Physiology I. Students will take an in-depth look at the axial skeletal system, the appendicular skeletal system, articulations, axial muscles, appendicular muscles, the brain and cranial nerves, the spinal cord and spinal nerves, and various other body systems.

MOA 141 Basic Diagnostic Coding
This course is an introduction to basic diagnostic coding and presents students with the characteristics and conventions of ICD-9-CM and ICD-10-CM (International Classification of Diseases, 9th and 10th Edition, Clinical Modification), and other diagnosis coding systems or code sets (DSM-IV, ICD-0, etc.). Focus is placed on using official coding guidelines correctly and the course includes extensive practice coding exercises.

MOA 142 Basic Procedure Coding
This course is an introduction to basic procedural coding and presents students with the characteristics of CPT-4 (Current Procedural Terminology), HCFPCS (Health Care Financing Administration Common Procedure Coding System) Level II codes, and ICD-10-PCS. The course focuses on correct code assignment and includes extensive practice coding exercises.

MOA 143 Medical Office Procedures
This course introduces and teaches the tasks of a medical office assistant's career: How to perform administrative functions, records management, medical communications, scheduling appointments, and an introduction to patient billing and processing insurance claims. Emphasis is placed on developing a working knowledge of concepts, processes, and procedures in the billing cycle from point of service to receipt of payment. The course covers how to recognize components of a compliance plan for physician office billing, filing of appeals and focuses on decision making and critical thinking activities. Students will learn the importance of customer service in the medical industry. Effective verbal communication and telephone skills are taught. Problem resolution skills and how to handle difficult situations are important elements of this course.

MOA 210 Business Communication
Students learn various forms of written business communication including routine business correspondence (e-mail, memo, letters), reports, and proposals. Students will also take part in team building activities that incorporate communicating at work, communicating in small groups and teams, workplace listening and nonverbal communication, and communicating across cultures. Career planning is also integrated into this course (resume, cover letter, and references).

MOA 211 Medical Reimbursement
Students will study federal, state, and private health insurance plans including managed care systems. Students will learn the processing cycle of health insurance claims, health insurance terminology, reimbursement methodologies for professional services, and proper completion of the 1500 billing form. Students will have hands-on experience with simulated practice management software. An overview of billing system management reports and legal issues related to reimbursement processing.

MOA 212 Health Care Delivery Systems
Students will demonstrate an understanding of health care delivery systems. They will analyze the organization of health care delivery in hospitals, mental health and ambulatory care centers, home health agencies, and nursing homes. Students will have extensive hands-on experience with the UBO4. Emphasis is placed on hospital inpatient billing.

MOA 213 Intermediate Diagnostic Coding
This course will serve as a continuation of basic diagnostic coding and the characteristics and conventions of ICD-9-CM and ICD-10-CM coding. Students will analyze and discuss case studies using more complex code assignments with ICD- 9-CM. Inpatient coding will be covered. Students will compare and contrast ICD-9-CM and ICD-10-CM code assignments and conventions. This course will provide an overview of SNOMED.

MOA 214 Intermediate Procedure Coding
This course will serve as a continuation of basic procedural coding and the characteristics and conventions of RBRVS and APCs. Students will analyze and discuss case studies and more complex code assignments using CPT and HCPCS Level II codes. Students will learn procedure coding for inpatients (ICD-9-CM Volume III or ICD-10-PCS – compares and contrasts the two systems at an introductory level).

MOA 220 Advanced Coding
This course provides students with advanced understanding of complex coding scenarios, with an emphasis on medical coding services such as medical visits, diagnostic testing and interpretation, treatments, surgeries, and anesthesia. This course covers more advanced coding concepts using step-by-step methods that give a more in-depth understanding of physician-based medical coding to ensure gathering the correct information from documents, selecting the right codes, and determining the correct sequencing of those codes.

MOA 221 Specialty Coding
This course provides students with advanced understanding of complex coding scenarios, with an emphasis on coding within different medical specialties. Students will learn the specific coding challenges of each of the following specialties: Obstetrics and Gynecology; Gastroenterology; Podiatry; Dermatology; Ear, Nose and Throat; Surgery; Radiology; and Cardiology.

MOA 222 Health Care Records
Students will demonstrate an understanding of health information department and record systems. Students will

compare and contrast health care data sets (primary versus secondary records). Students will analyze the content and uses of hospital and physician clinic patient records. Students will learn documentation requirements and the evaluation of documentation completeness and quality. This course will expose students to record storage and retrieval systems (manual and electronic). Hands-on training with simulated EHR will be provided.

MOA 223E Medical Coding Practicum Externship
The externship will provide students with coding practices in a hospital, physician's office, clinic or other health care setting with directed projects common to a clinical coding specialist on the job. Students will practice with clinical code assignment and billing methodologies, including projects and cases that replicate typical coding tasks in a physician's office, hospital outpatient clinic, ambulatory surgery, and hospital acute care settings that employ coding professionals. This practicum will focus on building speed and accuracy using actual medical records.

MEDICAL OFFICE ADMINISTRATION & CODING BOOK AND TOOL LIST

The book and tool list for students in the Medical Office Administration & Coding Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $4,556. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

MEDICAL OFFICE ADMINISTRATION & CODING BOOK AND TOOL LIST

Students in the Medical Office Administration & Coding Program utilize the following equipment:

Computers
Copy machines
Scanners
Fax machines
10-key calculators

❖ welding technology

The Welding Technology Program is designed to equip students with welding skills while providing a gateway for entry into a variety of related careers.

During the course of the program, students will be immersed in classroom theory and hands-on lab instruction in welding, fitting, and related metalworking processes. The program will provide students with a foundation that includes safety principles and the essentials of print reading and fabrication plans for welders. Students will also be able to study and apply oxyacetylene cutting, brazing, soldering, gas metal arc welding, flux core arc welding, and carbon arc cutting.

The curriculum will advance into gas tungsten arc welding and pipe welding. Students will be required to demonstrate their skills by completing an advanced welding capstone project. Students will also be encouraged to sit for the American Welding Society (AWS) and Washington Association of Building Officials (WABO) certification tests. Welding certifications include gas tungsten arc welding, gas metal arc, plate, and pipe welding. Classroom and shop training prepares students to enter the industry as qualified entry-level welders.

The Welding Technology Program is 12 months in length (four quarters). The student will earn 74.5 credit hours which are 1,344 clock hours. Tuition is payable on a quarterly basis. There are four quarters in an academic year.

PROGRAM OUTLINE

			Clock Hour	Credit Hours
Quarter 1	WLD 110	Welding Safety	60	3.5
	WLD 111	Print Reading & Fabrication Plans	96	6.0
	WLD 112	Oxyacetylene, Carbon Arc & Plasma	140	8.5
	WLD 113	Basic Metallurgy	40	2.5
			336	20.5
Quarter 2	WLD 120	Introduction to Shielded Metal Arc Welding	168	9.5
	WLD 121	Introduction to Gas Metal Arc Welding	168	9.5
			336	19.0
Quarter 3	WLD 130	Flux Cored Arc Welding	168	9.5
	WLD 131	Gas Tungsten Arc Welding	168	9.5
			336	19.0
Quarter 4	WLD 140	Full Penetration Welds	72	4.0
	WLD 141	Advanced Welding Applications	72	4.0
	WLD 142	Introduction to Pipe Welding	72	4.0
	WLD 143E	Externship	120	4.0
			336	16.0
	Program Totals		1,344	74.5

WELDING TECHNOLOGY COURSE DESCRIPTIONS

WLD 110 Welding Safety
This course offers an introduction to safety practices and procedures that will be most commonly adhered to in the welding industry. General safety considerations will include proper clothing, eye protection, and lifting techniques.

WLD 111 Print Reading & Fabrication Plans
Students develop the ability to interpret blueprints used in welding and fabrication. This course exposes students to sketching, lines, views, visualization, dimensioning, and welding symbols. Students will learn and apply math concepts to the welding industry. These concepts include whole numbers, common fractions, decimal fractions, averages/percentages, metric conversion, geometric computation, angular measurement, and cost estimation.

WLD 112 Oxyacetylene, Carbon Arc & Plasma
Students will study the history and identify the equipment used in oxyacetylene, carbon arc, and plasma welding. They will list and describe the properties and distribution systems as well as explain safety issues that pertain to these welding types. Students will also define, describe, and demonstrate braze welding as well as soldering.

WLD 113 Basic Metallurgy
Students will study and analyze the various changes that take place in metals when they are cut or joined with thermal processes such as welding or thermal cutting. Students will expand upon this knowledge by developing a higher understanding of mechanical property changes.

WLD 120 Introduction to Shielded Metal Arc Welding
Students will analyze the use of shielded metal arc welding in industry and name the components that make up the schematic representation of the shielded metal arc. Topics of study will include appropriate arc temperature, welding machines, power supply, and cable size.

WLD 121 Introduction to Gas Metal Arc Welding
Students receive introductory instruction regarding the process and theory of gas metal arc welding. Students will be exposed to related equipment, set-up procedures, and safety requirements.

WLD 130 Flux Cored Arc Welding
In this course, students will gain an understanding of the flux cored arc welding process and related variables. Students will demonstrate the ability to make various fillet and groove welds as well as define the operational differences between the two main types of flux cored electrodes.

WLD 131 Gas Tungsten Arc Welding
Students will be able to apply the correct selection of tungsten, polarity, gas, and proper filler rod. They will perform fillet and groove welds with various electrodes and filler materials on steel, stainless steel, and aluminum.

WLD 140 Full Penetration Welds
Students will apply brazing and soldering techniques to advance their welding skills in the flat and horizontal positions. Students will use more advanced welding techniques in the vertical and overhead positions. This course will also explore open root full penetration welds using fast freeze electrodes in preparation for pipe welding.

WLD 141 Advanced Welding Applications
Students will gain advanced knowledge of pipe welding, shielded metal arc welding, and gas tungsten arc welding. Students will be given the opportunity to complete an advanced welding project using the knowledge and skills acquired during the program.

WLD 142 Introduction to Pipe Welding
Students will study techniques for producing acceptable weld beading on pipe in addition to troubleshooting when working with pipe welds.

WLD 143E Externship
Students will learn advanced career planning practices and demonstrate skills and competencies in externship assignments. Students must have a "C+" or better in current coursework, must not be under any type of probationary contract, and must complete and submit a regular lab work experience employer evaluation. The instructor may terminate industry work experiences at any time if students do not adhere to these requirements.

WELDING TECHNOLOGY BOOK AND TOOL LIST

The book and tool list for students in the Welding Technology Program is intended to be a minimum requirement to complete the program. Tool and book costs are approximately $2,100. The book and tool list will be provided no later than the first day of class. The estimated price does not include mark-up for program students or sales tax.

WELDING TECHNOLOGY EQUIPMENT LIST

Students in the Welding Technology Program utilize the following equipment:

Computers
Shielded metal arc welding (stick)
Gas tungsten arc welding (TIG/Heliarc)
Gas metal arc welding (MIG)
Flux cored arc welding
Plasma arc cutting and gouging
Carbon arc cutting and gouging
Oxygen acetylene cutting, brazing, and soldering apparatus
Variety of hand tools

❖ board of trustees

Terry Schmalz
Curtis King
Jake Jundt

❖ administration

Christine Coté, President
B.A. – Central Washington University

Tracy Stoffer, Senior Director of Finance & Administration
B.S. – Central Washington University
Certified Public Accountant

Nathan Hull, Dean of Education
B.S. – Central Washington University
B.A. – Eastern Washington University

Jennifer McMurtrey, Associate Dean of Student Affairs
A.A.S. – Columbia Basin College
B.S. – University of Phoenix
M. Ed. – Concordia University

Jill Cope, Director of Institutional Research & Enrollment
B.A. – Minot State University

Josh Phillips, Director of Information Technology
B.S. – City University
Certificate – Telecommunications, Perry Technical Institute

Nicole Trammell Woolpert, Director of Marketing & Recruitment
B.S. – Central Washington University
Certificate – Graphics, Perry Technical Institute

Erin Fishburn, Foundation Director
B.S. – Portland State University

Leanne LaBissoniere, Public Relations Director
B.A. – Central Washington University

Carol Helms, Director of Student Financial Services
A.A. – Yakima Valley Community College

Deann Bergquist, Associate Director of Human Resources
B.A. – Central Washington University
B.S. – Central Washington University

Chelsea Snodgrass, Associate Director of Purchasing & Auxiliary Services
A.A. – Yakima Valley Community College
B.S. – Central Washington University

Jennifer Arnett, Career Services & Employer Relations Manager
A.A. – Yakima Valley Community College
B.S. – Eastern Oregon University

Kaila Lockbeam, Facilities & Safety Manager

❖ faculty

AUTOMOTIVE TECHNOLOGY

Jason Lamiquiz, Department Head
A.A.S. – Yakima Valley Community College

Dusty Morrill, Instructor

Ken Waggener, Instructor
Certificate – Automotive, Perry Technical Institute

Sam Perez, Instructor

MEDICAL TECHNOLOGY

Lashel Church, Department Head
American Academy of Professional Coders – Certified

Doreen Pastrana, Instructor

Danette Muntz, Instructor
Certificate – MOAC, Perry Technical Institute
American Academy of Professional Coders – Certified

Cheryl Johnson, Instructor
A.D.N. – Yakima Valley Community College

OFFICE ADMINISTRATION

Dax Wandling, Instructor
B.A. – Northwest Nazarene University

Guadalupe Martinez, Instructor
B.A. – Eastern Washington University

Becki Willard, Instructor
A.A. – San Bernardino Valley College
Paralegal Certificate – San Bernardino Valley College

ELECTRICAL TECHNOLOGY

Forrest Buchmann, Instructor
Certificate – Electrical, Perry Technical Institute

Dale Eckman, Instructor
Certificate – Electrical, Perry Technical Institute

Dan Lovestrand, Electrical Field Instructor
Certificate – Perry Technical Institute

Matthew Shipley, Instructor
Certificate – Electrical, Perry Technical Institute

Mike Tucker, Instructor
Certificate – Electrical, Perry Technical Institute
A.A.S. – Yakima Valley Community College

Maria Werremeyer, Electrical Field Instructor
Certificate – Electrical, Perry Technical Institute

Michael Yusi, Instructor
Certificate – Electrical, Perry Technical Institute

Ron Zike, Instructor

HEATING, VENTILATION, AIR CONDITIONING & REFRIGERATION TECHNOLOGY

Marc Mitchell, Department Head
Certificate – HVAC/R, Perry Technical Institute
A.A.S. – Yakima Valley Community College

Craig Heckart, Instructor
Certificate – HVAC/R, Perry Technical Institute

Dan Henderson, Instructor
Certificate – HVAC/R, Perry Technical Institute
A.A.S. – Yakima Valley Community College

Van Henderson, Instructor
Certificate – HVAC/R, Perry Technical Institute

INFORMATION TECHNOLOGY & COMMUNICATION SYSTEMS

Michael Smith, Department Head
Certificate – Instrumentation & Industrial Electronics, Perry Technical Institute
A.A.S. – Yakima Valley Community College

Jeanine Benoit, Instructor
Certificate – Telecommunications, Perry Technical Institute

Andy Fischer, Instructor
Certificate – Telecommunications, Perry Technical Institute
A.A.S. – Telecommunications, Yakima Valley Community College

Francisco Magana, Instructor
Certificate – Telecommunications, Perry Technical Institute
A.A.S. – Yakima Valley Community College

INSTRUMENTATION & INDUSTRIAL AUTOMATION TECHNOLOGY

Tony Nirk, Department Head
Certificate – Instrumentation, Perry Technical Institute
A.A.S. – Pierce College Fort Steilacoom

Larry Dagdagan, Instructor
Certificate – Instrumentation, Perry Technical Institute

Patrick Jones, Instructor
Certificate – Instrumentation, Perry Technical Institute

John Koenes, Instructor
Certificate – Instrumentation, Perry Technical Institute

Doug Oswalt, Instructor
Certificate – Instrumentation, Perry Technical Institute

Gerry Ries, Instructor
Certificate – Instrumentation, Perry Technical Institute

Dave Sylvanus, Instructor
Certificates – Instrumentation and Machine, Perry Technical Institute
A.A.S. – Instrumentation and Machine, Yakima Valley Community College

Max York, Instructor
Certificate – Instrumentation, Perry Technical Institute
A.A.S. – ITT Technical Institute

MACHINE TECHNOLOGY

Dan Steinmetz, Department Head

Jay Wellner, Instructor
Certificate – Machine, Perry Technical Institute

WELDING TECHNOLOGY

Leonard Thompson, Instructor
A.T.A. – Centralia Community College

❖ phone list

To call the following, please dial 509.453.0374 and ask for the extension.

Operator 0
Cashier 218

President's Office
President 216
Executive Assistant 214

Foundation Office
Foundation Director 206

Facilities & Safety
Facilities & Safety Manager 214
Administrative Assistant 260

Student/Instructional Services
Dean of Education 211
Associate Dean of Student Affairs 201
Education/Attendance Coordinator 350
Learning Resource & Testing Coordinator 267
Testing Assistant 217
Director of Institutional Research & Enrollment 227
Enrollment & Registration Coordinator 205
Enrollment Specialist 356
Enrollment Specialist 242
Career Services & Employer Relations Manager 226
Career Services Specialist 355

Student Financial Services
Director of Student Financial Services 208
Associate Director of Financial Aid 212
Financial Services Assistant/Cashier 218
Financial Aid Loan Specialist 209
Financial Aid Specialist 245
Financial Aid Assistant 241
Financial Aid Assistant 370
Accounts Receiveable Coordinator 275
Veteran/Program Student Specialist 202

Recruiting/Marketing
Associate Director of Recruitment 220
Student Recruiter 261
Student Recruiter 225
Student Recruiter 351
Director of Marketing & Recruitment 228
Public Relations Director 219

Business Services/Human Resources
Senior Director of Finance & Administration 207
Administrative Assistant 215
Associate Director of Human Resources 210
HR Assistant/Cashier 247/249
Accounts PayableCoordinator/Payroll Specialist 213
Accounts Payable Technician 240
Associate Director of Purchasing & Aux. Services 204
Campus Store & Purchasing Specialist 238
Auxillary Services Assistant 200

Perry Technical Institute is authorized by the Washington Higher Education Coordinating Board (HECB) and meets the requirements and minimum educational standards established for degree-granting institutions under the Degree-Granting Institutions Act. This authorization is subject to periodic review and authorizes Perry Technical Institute to offer specific degree programs. The HECB may be contacted for a list of currently authorized programs. Authorization by the HECB does not carry with it an endorsement by the board of the institution or its programs. Any person desiring information about the requirements of the act or the applicability of those requirements to the institution may contact the HECB at P.O. Box 43430, Olympia, WA 98504-3430.

Perry Technical Institute

2011 West Washington Avenue
Yakima, WA 98903-1296
509.453.0374 • 888.528.8586

❖ the campus

1) Main Office
   - Enrollment — 1st Floor
   - Financial Services — 1st Floor
   - President's Office — 1st Floor
   - Dean of Education — 1st Floor
   - Business Services/HR — 2nd Floor
   - Recruitment — 2nd Floor
   - Public Relations & Marketing — 2nd Floor
2) Instrumentation & Industrial Automation Technology
3) Machine Technology
4) Electrical Technology
5) Automotive Technology
6) Medical Office Administration & Coding, Medical Assistant — Medical Ann
7) Business Technology & Accounting, Legal Assistant/Paralegal — 2nd Floor
8) Heating, Ventilation, Air Conditioning & Refrigeration Technology — 1st Floor
9) Information Technology & Communication Systems
10) Welding Technology
11) Student Services
12) Foundation Office
    Attendance
13) The Hangar Campus Store
14) Deli

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