2013 - 2014 CATALOG

ACCREDITATIONS

Accrediting Commission of Career Schools and Colleges

American Veterinary Medical Association (AVMA),
Veterinary Technology Program

Joint Review Committee on Education in Radiologic Technology (JCERT),
20 North Wacker Drive, Suite 2850 Chicago, IL 60606-3182
(312) 704-5300 e-mail: mail@jrcert.org
Radiologic Technology Program

National Automotive Technicians Education Foundation, Inc. (NATEF),
Automotive Technology Program

APPROVALS

Pennsylvania Department of Education, State Board of Education
United States Department of Education, Title IV Assistance
Pennsylvania Higher Education Assistance Agency (PHEAA)
Office of Vocational Rehabilitation
Veterans Training

American Design Drafting Association (ADDA) International
Curriculum Certification, Drafter Level,
Architectural Drafting & Design Technology Program

REGISTRATIONS

United States Department of Agriculture

www.johnson.edu
3427 NORTH MAIN AVENUE • SCRANTON • PENNSYLVANIA 18508-1495
(570) 342-6404 (800) 293-9675

About This Catalog

This catalog is a primary reference source for students, faculty, staff, and the community and will answer many, if not all, questions regarding Johnson College.

Johnson College reserves the right, in its sole judgment, to make changes of any nature in its programs, calendar, or academic schedule whenever it is deemed necessary or desirable. Changes may include course content, scheduling of classes, and canceling of classes and other academic activities. The College will make every effort to provide students with timely notification of such changes.

This catalog does not establish a contractual relationship but summarizes current information regarding the calendar, admissions, degree requirements, fees, regulations, and course offerings. The information contained in this catalog is correct at the time of printing. Changes in policy, requirements, and regulations may occur during the year.

Non-discrimination Policy

Johnson College does not discriminate with regard to race, color, creed, sex, age, disability, or ancestry in the administration of its educational and admission policies, scholarship, loan, athletic and other school administered programs, or employment practices in accordance with Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, or any other legally protected category. For information regarding civil rights and grievance procedures, contact the President of Johnson College, 3427 North Main Avenue, Scranton, PA 18508, (570) 342-6404.

Accreditation/Approvals

Johnson College is accredited by the Accrediting Commission of Career Schools and Colleges (ACCSC). The Pennsylvania Department of Education, State Board of Education, has approved Johnson College as a two-year college.

The Automotive Technology Program is accredited by the National Automotive Technicians Education Foundation, Inc. (NATEF)

The Radiologic Technology Program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT)
20 North Wacker Drive
Suite 2850, Chicago, IL 60606-3182
(312)704-5300
e-mail: mail@jrcert.org;

The Veterinary Technology Program is accredited by the American Veterinary Medical Association (AVMA)

The Architectural Drafting & Design Technology program has curriculum approval at the Drafter level by the American Design Drafting Association International (ADDA).

Date of Publication September, 2012
O. S. Johnson Technical Institute t/a Johnson College

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Aug. 26	Semester Begins	Monday
Sept. 2	Labor Day, College Closed	Monday
Sept. 11	Activity Day (tentative)	Wednesday
Sept. 18	Drop Date Module I	Wednesday
Sept. 30	Module I Ends	Monday
Oct. 2	Module II Begins	Wednesday
Oct. 14	Fall Break (no classes)	Monday
Oct. 24	Drop Date Module II	Thursday
Nov. 7	Drop Date Semester Courses	Thursday
Nov. 7	Module II Ends	Thursday
Nov. 11	Veteran's Day , College Closed	Monday
Nov. 12	Module III Begins	Tuesday
Nov. 28-Dec. 1	Thanksgiving Recess, College Closed	Thursday thru Sunday
Dec. 5	Drop Date Module III	Thursday
Dec. 19	Module III & Semester Ends	Thursday

Spring Semester 2014

Jan. 6	Semester Begins	Monday
Jan. 20	Martin Luther King Day, College Closed	Monday
Jan. 29	Drop Date Module I	Wednesday
Feb. 10	Module I Ends	Monday
Feb. 12	Module II Begins	Wednesday
Feb. 17	President's Day, College Closed	Monday
March 6	Drop Date Module II	Thursday
March 9-15	Spring Break, No Classes	Sunday thru Saturday
March 27	Drop Date Semester Classes	Thursday
March 27	Module II Ends	Thursday
March 31	Module III Begins	Monday
April 18-21	Break, College Closed	Friday thru Monday
April 24	Drop Date Module III	Thursday
May 7	Module III & Semester Ends	Wednesday
TBA	Commencement Practice	TBA
TBA	Commencement	TBA

2014-2015 ACADEMIC CALENDAR

Fall Semester 2014

Aug. 25	Semester Begins	Monday
Sept. 1	Labor Day, College Closed	Monday
Sept. 10	Activity Day (tentative)	Wednesday
Sept. 17	Drop Date Module I	Wednesday
Sept. 29	Module I Ends	Monday
Oct. 1	Module II Begins	Wednesday
Oct. 13	Fall Break (no classes)	Monday
Oct. 23	Drop Date Module II	Thursday
Nov. 6	Drop Date Semester Courses	Thursday
Nov. 6	Module II Ends	Thursday
Nov. 10	Module III Begins	Monday
Nov. 11	Veteran's Day , College Closed	Tuesday
Nov. 27-30	Thanksgiving Recess, College Closed	Thursday thru Sunday
Dec. 8	Drop Date Module III	Monday
Dec. 18	Module III & Semester Ends	Thursday

Spring Semester 2015

Jan. 5	Semester Begins	Monday
Jan. 19	Martin Luther King Day, College Closed	Monday
Jan. 28	Drop Date Module I	Wednesday
Feb. 9	Module I Ends	Monday
Feb. 11	Module II Begins	Wednesday
Feb. 16	President's Day, College Closed	Monday
March 5	Drop Date Module II	Thursday
March 15-21	Spring Break, No Classes	Sunday thru Saturday
March 25	Drop Date Semester Classes	Wednesday
March 25	Module II Ends	Wednesday
March 27	Module III Begins	Friday
April 3-6	Break, College Closed	Friday thru Monday
April 22	Drop Date Module III	Wednesday
May 4	Module III & Semester Ends	Monday
TBA	Commencement Practice	TBA
TBA	Commencement	TBA

History of Johnson College

Johnson College, a two-year technical college, was founded by Orlando S. Johnson, a wealthy coal baron in the Scranton area who died in 1912. Mr. Johnson left the bulk of his estate to establish and maintain a trade school and his purpose became the mission of the College as an institution "*where young men and women can be taught useful arts and trades that may enable them to make an honorable living and become contributing members of society*."

A board of directors was created and a 41-acre tract in Scranton known as the William H. Richmond estate was selected as the site for the new enterprise. Opening in 1918, the school admitted young men and women who had completed a minimum of eight years of school and were 14 years old.

In 1964, the school became a post-secondary institution requiring applicants to be high school graduates or to have equivalency certificates. The name of the institution was changed from the Johnson Trade School to the Johnson School of Technology in 1966. The school was incorporated as a non-profit corporation in 1967, and in 1968 it was licensed by the Commonwealth of Pennsylvania Bureau of Private Trade Schools. Approval to award a degree of Associate in Specialized Technology came in 1974, with accreditation by the National Association of Trade and Technical Schools (NATTS) following in 1979.

In 1985, the name of the school was changed to Johnson Technical Institute; the three-year Associate in Specialized Technology degree programs were changed to two-year programs in 1987.

Responding to the continuing technological changes in society, the board, administration, faculty, staff and students conducted an intense two-year self-study, beginning in 1994, to assess the institution's strengths and weaknesses. The study led to a formal application to the Commission on Higher Education for status as a two-year college. The Pennsylvania Department of Education approved the application of Johnson Technical Institute as a two-year college in 1997; the change of name to Johnson College was instituted in 2001.

The graduating class of 1998 was the first class to receive either an Associate in Applied Science (A.A.S.) degree or an Associate in Science (A.S.) degree.

Continuing with the expansion of technology programs, a Veterinary Technology program was introduced in 1994. Clinical classes were held off-campus until the erection of a 6,500 square foot Science Center on campus was completed. The program received full accreditation from the American Veterinary Medical Association (AVMA) for the fall semester of 2000. In January, 2004 the College opened the Animal Care Center as a

teaching facility to enhance the Veterinary Technology educational experience. In 1995, Electrical Construction & Maintenance Technology was added to the curriculum, and the Bureau of Private Licensed Schools approved the Diesel Truck Technology program in November of 1996.

A Computer Information Technology program that specializes in enterprise computer networking was approved by the Commission on Higher Education in 2000, and a curriculum in Radiologic Technology received the Commission's approval for the fall, 2002 semester. Logistics & Supply Chain Management Technology program was approved as a program offering for the fall, 2006 semester and the Heating, Ventilation & Air Conditioning Technology program was approved for the fall, 2009 semester. A Welding Certificate program was approved in the spring of 2012 with major courses taught at a satellite location.

Today, approximately 400 students pursue degrees in 13 different trade, technical, or clinical programs. The College's eleven buildings include a library, gymnasium, physical fitness center, classrooms, shops, laboratories, administrative offices and a student apartment complex for on-campus living.

Over the years, Johnson College has served the region by providing programs of technical education and continually evaluates its programs to meet the technology needs of society. This evaluation process is assisted by the Program Advisory Committees of each program area, consisting of regional business and community leaders who meet several times during the year to advise the College on curriculum content, length of programs, and current materials and equipment. They also review placement and retention statistics. The College has maintained the initial intent of Mr. Johnson with a professional and dedicated staff to ensure up-to-date training that prepares graduates to readily step into entry-level positions in business and industry.

The current student body is comprised of approximately 76% males and 24% females. The students spend 60% of their time in technology courses and the remainder in general education classes. The College has an extensive program of internships, cooperative education and practicums with a variety of businesses and professional organizations. One of the important success factors of Johnson College is a consistently high employment rate of students within a short time after graduation.

Today, Johnson College is a valuable resource for the changing technological needs of our region.

Plan of Education

Students come to Johnson College to prepare themselves as entry-level technicians in the business and professional community.

To accomplish this primary objective, students pursue technology courses that amount to approximately 60% of their time at the College. The remaining 40% is spent in general education courses preparing them to advance in their careers. The usual class size is 25 but does not exceed 45 students.

Faculty members bring to each program a combination of professional education and sound, practical experience. The faculty exhibits a personal interest in the progress of all students, encouraging and assisting them to achieve the maximum benefit from their programs of study.

The physical facilities consist of modern classrooms, trade areas, and laboratories that are furnished with tools, machines, equipment, and materials that are required to provide a thorough program of education. Equipment used for training in each program of education is representative of that found in industry and is selected to provide the student with the broadest educational experience possible. Examples of this equipment consist of hand and power tools, specialized testing and repairing apparatus, industrial units and clinical devices. Some departments provide an extension of this exposure by requiring students to participate in a practicum/internship/cooperative educational experience.

Learning opportunities are enhanced through the use of the College library which is kept current with books, periodicals, and brochures and provides students with Internet capability. The Library/Resource Center provides for the gathering of information from a variety of outside services and is a member of the Northeast Pennsylvania Library Consortium. In addition, close contact is maintained with institutional and industrial libraries in the area which provide additional sources of reference information. Further learning comes from the use of educational videos, field trips and presentations by business and industrial consultants.

Careers in technology are constantly changing as a result of new products and developments in materials, tools, machinery, equipment, methods and techniques. Program Advisory Committees, comprised of representatives from business and industry, meet regularly with the faculty and administration to make suggestions on course content so that College programs are kept current.

Mission Statement

Johnson College delivers industry-focused learning in a caring environment designed to develop graduates prepared to enter into and advance in their careers.

Vision Statement

Johnson College: Developing technology leaders for tomorrow.

Johnson College's Core Values

Teamwork We create strong partnerships while recognizing individual strengths and emphasizing respect and mutual support. We freely offer help and assistance to others and seek it when needed. We provide praise and encouragement to fellow employees and celebrate success…both individual and team.

Respect We respect the dignity and potential of each individual. As well as fostering a free and timely exchange of ideas and information in a collegial environment. In return we expect accountability in our people's actions and the consequences of their actions.

Commitment We cultivate professionalism through learning, goal setting, innovation, participation and continuous improvement. We believe in fulfilling our responsibilities to one another, our students, the higher education community, and the public.

Trust We believe in trust. Trust is the belief and confidence in the integrity, reliability and fairness of a person or organization.

Integrity We accomplish our mission with a commitment to ethics, honesty, trust, consistency, and fairness. We openly consult with others whenever in doubt about any decision or action being the right one.

Positive Energy We have passion and pride. What we do makes a difference. We are very excited about the contribution Johnson College makes in the community. We convey our enthusiasm and passion for Johnson College in all our communications and professional interactions. Taking pride in our work allows us to constantly strive to develop and improve. We are passionate about what we do!

The core values of an organization are those values we hold which form the foundation on which we perform work and conduct ourselves.

Degrees Awarded

Johnson College is approved by the Pennsylvania Department of Education and the State Board of Education to award two degrees, the Associate in Science (A.S.) degree and the Associate in Applied Science (A.A.S.) degree. All the programs of study prepare graduates for entry-level positions in their field of study.

The Associate in Science (A.S.) degree is awarded to students who graduate from the following programs:

Computer Information Technology
Radiologic Technology
Veterinary Technology

The Associate in Applied Science (A.A.S.) degree is awarded to students who graduate from the following programs:

Architectural Drafting & Design Technology
Automotive Technology
Biomedical Equipment Technology
Carpentry & Cabinetmaking Technology
Diesel Truck Technology
Logistics & Supply Chain Management Technology
Electrical Construction & Maintenance Technology
Electronic Technology
Heating, Ventilation & Air Conditioning Technology
Precision Machining Technology

Certificates Awarded

The Certificate is awarded to students who graduate from the following programs:

Diesel Preventative Maintenance Technology
Welding Technology*

*All major welding courses will be held at the College's welding shop. This is a satellite location. This location is at 2001 Rosanna Ave., Scranton, PA. The Welding Shop is approximately 1.5 miles from the Main Campus located at 3427 North Main Avenue, Scranton.

ADMISSIONS INFORMATION

Johnson College accepts qualified students regardless of race, religion, disability or national origin. Admission to Johnson College is based primarily upon previous academic success. Previous academic success is seen as a key indicator of an applicant's readiness for future academic challenges and success. The College reserves the right to deny admission or re-admission to any student if, in the opinion of the College authorities, his/her admission is not in the best interest of the student or the College. At a minimum, applicants must have a high school diploma, or its equivalent.

Applicants are encouraged to arrange for a campus visit and a personal information session with an Admissions Representative and appointments may be made to meet with appropriate faculty and current students.

Outline of Admissions Process

1. Complete the application. Student's can apply online at www.johnson.edu. There is no fee to apply online. Students may also contact the admissions office at:

   Johnson College
   3427 North Main Ave.
   Scranton, PA 18508
   570-702-8900
   1-800-2WE-WORK

2. The applicant must have the following items sent to the Admissions Office
   - Official High School Transcripts from every high school attended or GED (GED policy below)
   - An official transcript from each post-secondary institution attended, if applicable
   - An official copy of Scholastic Aptitude Test (SAT) or American College Test (ACT) Scores (Radiologic & Veterinary Technology only)
   - One Letter of Reference (Radiologic & Veterinary Technology only)
   - Completed essay Questionnaire (Radiologic & Veterinary Technology only)
   - Observation Verification Form (Veterinary Technology only)

Students will be notified of a decision as applications are processed.

Admissions Requirements

For all programs

1 year of Algebra with a "C" or higher
2 year of English with a "C" or higher

Radiologic Technology

1 year of Algebra with a "C" or higher
2 years of English with a "C" or higher
1 year Biology with a "C" or higher
1 year of Chemistry with a "C" or higher
1 year of Algebra II or Geometry with a "C" or higher
Physics highly recommended
SAT scores of 900 or above (combined scores of Math & Verbal) **or**
ACT scores 20 or above **or**
ACCUPLACER (see page 10)
GPA 3.0 or higher

Veterinary Technology

1 year of Algebra with a "C" or higher
2 year of English with a "C" or higher
2 years of Biology or a Life Science with a "C" or higher
1 year of Chemistry with a "C" or higher
SAT scores of 1300 or above (combined scores of Math, Verbal & Writing) **or**
ACT scores 18 or above **or**
ACCUPLACER (see page 10)
GPA 2.5 or higher

Certificate Programs

2 years of English with a "C" or higher
1 year of basic mathematics with a "C" or higher

Admissions Procedure

Completed application
Official HS transcript or GED
SAT or ACT scores (if applicable)
One letter of reference (if applicable)
Essay Questionnaire (if applicable)

Radiologic and Veterinary Technology applicants who do not have SAT or ACT scores are required to take the College Board ACCUPLACER exam (administered by the Student Support Services Office of Johnson College) and submit those scores in place of the SAT or ACT scores.

Minimum ACCUPLACER scores for:

Radiologic Technology applicants	
Elementary Algebra	70
Reading Comprehension	70
Sentence Skills	70

Veterinary Technology applicants	
Elementary Algebra	70
Reading Comprehension	70
Sentence Skills	70

All Other Programs	
Elementary Algebra	50
Reading Comprehension	54
Sentence Skills	60

GED Students

Applicants are considered GED students if they have passed the GED exam in lieu of high school graduation and if their high school class would have graduated within 5 years of the beginning of the semester for which admission is sought. A minimum score of 2250 is required for admission. GED applicants are required to submit the following documents and/or information to the Admissions Office before a final admission decision can be made;

1. Official GED scores
2. ACCUPLACER scores and
3. Official transcripts showing all work completed in high school.

Home-schooled Students

Johnson College welcomes applications from home-schooled students. We offer the following information to assist you in assembling your application to Johnson College and to facilitate our evaluation of your candidacy.

The first important step is to get on Johnson College's mailing list. Once you are on the list, you will receive all the important information needed in preparing to attend Johnson College. To get on our mailing list, please e-mail admit@johnson.edu and please include your name, address, phone number, when you plan to attend and your intended major.

Another important step in looking at Johnson College is to come for a campus visit. During a campus visit you will speak to an Admissions Representative and tour campus. To schedule a visit, please call 1-800-2WE-WORK or e-mail us at admit@johnson.edu.

Preparing your Application

We use the same criteria to evaluate home schooled applicants as we do for all others. However, since you may not have a traditional high school diploma, your application might be slightly different. To that end we ask that home schooled students submit the following with their applications;

- If you are under the umbrella of a diploma-granting organization, you will need to submit evidence of the coursework completed and your level of performance;
- In absence of such a document, a transcript describing your high school program of study from a reputable home school correspondence program or a detailed roster of academic coursework at the secondary level.
- Letter of Completion from the primary teacher or program administrator certifying completion of high school and date of high school graduation
- SAT/ACT Scores
- Official transcript from an accredited university or college (if applicable)
- A campus interview may also be required

Upon acceptance, applicants are required to remit a tuition deposit of $250. Refer to the Enrollment Information section for further information on the tuition deposit and other enrollment requirements.

Application Deadline Dates

Radiologic and Veterinary Technology; February 15 of each year
All other programs; May 1 of each year

Acceptance

Admission decisions include an evaluation of the applicant's desire, ability, and potential for success. Interviews with admissions representatives may be required. All application materials will be reviewed and evaluated by the Admission's Representative and forwarded to the Vice President of Enrollment Services for a final decision.

Campus Visit

Applicants are encouraged to visit the College, tour the facilities, meet with students, and discuss career goals with the Admissions staff.

Career Advising

Applicants are encouraged to arrange for career advisement which is available by appointment without charge.

Veterans

Johnson College welcomes veterans and assists them in carrying out their responsibilities with the Veterans' Administration. Johnson College and the Financial Aid administrators are certified officials for VA military benefits.

Rehabilitation

Johnson College welcomes students under the sponsorship of the Office of Vocational Rehabilitation (OVR) and will make reasonable accommodations for the disabled.

SOAR (Students Occupationally and Academically Ready)

SOAR is a career and technical education initiative that establishes statewide articulation between secondary and post-secondary education. These programs of study enable high school graduates in career or technical programs to earn college credit that can be applied to their continued studies at the post-secondary level. Visit http://www.portal.state.pa.us/portal/server.pt/community/programs_of_study/7686 to see how your high school credits may be accepted by the College.

Transfer of Credit Policy

Coursework previously completed at another institution will be evaluated relative to its equivalency to Johnson College courses and to the specific major. The appropriate Department Chairperson and the Registrar will make final decisions on acceptance of coursework from other institutions. Students who wish to transfer courses must follow the procedures below:

- complete the steps listed under Application Requirements
- have official transcripts from all previously attended colleges sent directly to the Registrar's Office
- Provide course descriptions, course syllabus or a college catalog if requested by the Registrar's Office.

A copy of the evaluation will be provided to the student.

The College accepts a maximum of 30 credits from another institution. Of the remaining credits required for graduation, a minimum of 35 must be completed at Johnson College.

Only courses completed with a grade of "C" or higher will be considered for transfer credit. Radiologic Technology courses are not typically granted transfer credit. The Department Chairperson and Clinical Coordinator may grant exceptions on a case-by-case basis. Only courses completed with a grade of C+ or better will be considered for transfer credit.

Transfer credit will appear on the student's transcript but only credits from Johnson College will be used in computing the student's Grade Point Average (GPA) and eligibility for academic honors. It is the responsibility of the student to ensure that all courses have been evaluated prior to registration to avoid duplication of courses.

Coursework completed within the past ten years will be evaluated according to current standards. Coursework completed more than ten years ago will be evaluated on a course-by-course basis by the Vice President of Academic Affairs, Registrar and the appropriate Department Chairperson.

Once enrolled at Johnson College, students may transfer no more than six additional credits without receiving prior approval, based upon a demonstrated hardship, from the Registrar's Office.

Approval for Off-Campus Study

Johnson College will accept credits from other institutions for courses taken by a current student provided the student receives approval from the appropriate Department Chairperson prior to registering for the course and completes the necessary paperwork. The student also must provide the Johnson College Registrar with an official transcript verifying a grade of "C" or higher upon completion of the course. It is the responsibility of the student to ensure these transcripts are forwarded to the Registrar's Office. Students may not transfer more than six credits in approved off-campus classes. Approval forms may be obtained through the Registrar's Office or are available on the Registrar's page of the College's website.

Transfer of Credit with Baccalaureate Institution

Johnson College has program specific articulation agreements with five baccalaureate awarding institutions: Keystone College, Marywood University, Misericordia University, Pennsylvania College of Technology and State University of New York, (SUNY) Canton. The latest listing can be found at
http://www.johnson.edu/docs/registrar/Articulation_Agreements.pdf

ENROLLMENT INFORMATION

Applicants who are accepted to Johnson College must meet the requirements listed below.

Tuition Deposit

A $250.00 tuition deposit is required from accepted students. This deposit will be applied to first-semester tuition. Deposits will be refunded according to ACCSC standards to accepted students who do not enroll.

ACCUPLACER College Placement Exam

All newly-accepted students are required to take the ACCUPLACER College Placement Exam. The ACCUPLACER exam tests students in three areas: Elementary Algebra, Reading Comprehension, and Sentence Skills. Based on the test results, students may be required to participate in the Johnson College Preparatory Program. Written verification of test scores will be provided upon completion of the exam. If the minimal score is not achieved, students have the option of re-taking the test once.

Johnson College Preparatory Program

The Johnson College Preparatory Program provides academic reinforcement services prior to the start of the freshman year. The Preparatory Program includes math, writing, reading and study skills courses as well as access to a computer lab. An accepted student who does not meet minimal ACCUPLACER scores for their specific program area will be required to complete one or more College Prep courses with a grade of "C" or higher during the summer prior to the start of classes. Taking these courses may result in extending a student's program of study and, consequently, may have an impact on eligibility for financial aid. Credits earned in College Preparatory courses cannot be used to meet graduation requirements and do not count as elective courses; grades earned in College Preparatory courses are calculated into overall GPA.

Medical Inoculations

On-campus housing students are required to provide proof of immunization against meningococcal disease to the Student Life Department before being permitted to live on campus.

Information on medical inoculations for Biomedical Equipment Technology, Radiologic Technology and Veterinary Technology students is located in the Special Enrollment Requirements section of the respective program area.

Criminal Background Check
Alcohol and Drug Screening

Some programs of study, educational experiences, clinical practicums, internships, and cooperative education programs, as well as potential employers, may require a criminal background check, child abuse clearance, fingerprinting and/or drug screening. Johnson College is not responsible for the decisions or actions of other institutions or organizations that may result from students' failure of drug screening or background check or students' failure to report the results of these incidents to the College.

The results of a criminal background check will not necessarily preclude admission to Johnson College.

The Freshman Orientation program includes an in-service presentation on the use of drugs and alcohol.

TUITION, FEES, EXPENSES

The following tuition and fees are for the 2012-2013 academic year. The College reviews tuition and fees annually and reserves the right to adjust fees when necessary.

Application Fee

A $30.00 application fee is required of every applicant for degree-seeking status. This fee is refundable only if a student cancels the application within three days of payment. There is no application fee for student's that apply online.

Tuition Deposit

Accepted students must submit a $250.00 deposit within 30 days of receipt of an acceptance letter. This deposit is required prior to registration and is credited to the student's tuition account.

Tuition

Tuition for full-time attendance (12 to 21 credits per semester, 24 to 42 credits per academic year) for the 2012-2013 academic year is $15,500.00.

Tuition for part-time attendance (fewer than 12 credits per semester) is based on the number of credits for which a student registers. The tuition rate per credit is $430.00.

Additional Fees

Fees for part-time students (fewer than 12 credits per semester) are prorated based on the number of credits per semester for which a student registers.

For example a part time student registered for 6 credits per semester will be billed at 50% of fees.

Regardless of number of credits registered, students will be billed 100% for orientation and graduation fees.

All students are required to pay the following annual fees except as indicated:

General Fee ***$250.00***
The general fee covers Student Government allocations, student activities, auto registration/roadway maintenance, and accident insurance with $25,000.00 medical coverage per accident.

Program Fee-Radiologic ***$900.00***
Program Fee-HVAC ***$600.00***
Program Fee-All other programs ***$500.00***
The program fee defrays the institutional operating costs associated with maintaining and upgrading equipment within each program.

Computer Lab Fee ***$280.00***
The computer lab fee covers the cost of utilization of the computer labs and a personal e-mail account for all students.

Orientation Fee ***$100.00*** *(freshmen only)*
The Orientation Fee covers the cost of the College's Freshman Orientation program.

Graduation Fee ***$150.00*** *(to be submitted with graduation application)*
The graduation fee covers the cost of diplomas, caps and gowns, invitations, and the post-graduation reception. There is no reduction in the fee for graduates who do not attend commencement. The graduation fee is required for each degree earned.

On-Campus Housing
The on-campus housing cost is $6,590 per student per year for a double-occupancy apartment and $4,800 per student per year for a triple occupancy. This cost includes a meal plan and applies only to students who live in on-campus housing. A one-time security deposit of $300 is required. Students who would like to have telephone, cable and/or internet connection services are responsible for those expenses. Housing registration forms may be obtained from the Student Life Office.

Books & Supplies
Books and supplies will cost approximately $1,500-$2,000 per school year; this amount may vary substantially depending on the program in which a student is enrolled.

Transcript Fee
Johnson College will provide an official transcript to each student, free of charge, at graduation. Subsequent transcripts are available at a fee of $5.00 each upon written request. Request forms may be obtained from the Registrar's Office. Official transcripts (bearing the seal of the College and the signature of the Registrar) are sent directly to the university, college, agency or employer indicated by the student. Official transcripts will not be issued unless all financial obligations have been met at the time of the request. Johnson College is permitted to withhold official transcripts from former students who have defaulted on a federal Stafford Loan. A copy of the transcript will be furnished to the former student with the notation "unofficial" stamped on it. Unofficial transcripts may be requested by students for their personal use at a fee of $5.00.

Medical Inoculations
Information on medical inoculations for Biomedical Equipment Technology, Radiologic Technology and Veterinary Technology students is found in the Enrollment Requirements section for the respective program area. These costs vary for each program based on the type and fee for each clinic.

Special Fees
Information on special fees for Automotive, Biomedical Equipment Technology, Diesel, Radiologic Technology and Veterinary Technology is found in the Enrollment Requirements section for the respective program area.

Senior Testing Fees
Seniors in their last semester of education in Automotive, Diesel, HVAC, and Logistics programs will be charged a testing fee that is required for industry certification. Fee costs will be reflected on the most current Enrollment Agreement for that academic year.

Radiologic Technology Summer Practicum Fee
In addition to tuition and fees, Radiologic Technology students will have a summer practicum fee of $1,200. Students are responsible for the costs of required health exams and immunizations.

Veterinary Technology Summer Internship Fee
In addition to tuition and fees, Veterinary Technology students will have a summer internship fee of $1,000. Students are responsible for the costs of required health exams and immunizations.

Other Fees

Drop/Add a course	$ 15.00
Re-admission	$ 15.00
Change of grade	$ 25.00
Returned Check	$ 25.00
Late registration	$ 30.00
Credit by examination	$ 100.00

FINANCIAL AID

Financial aid helps meet college costs, both educational (tuition and fees,) and living (food, housing, and transportation) for those who qualify. Through various programs offered by state and federal governments, as well as private lenders, financial aid helps the cost of education become affordable.

Several forms of financial assistance are available to students who qualify. Participation in programs funded by state and federal agencies requires the Financial Aid Office to comply with the regulations set forth by each agency concerning student eligibility and academic progress standards. This will generally require the completion of the Free Application for Federal Student Aid (FAFSA).

Responsibility for financing an education rests first with students and their families. Financial aid should be viewed as supplementary, to be used only after the full resources of students and their families are committed.

Eligibility

Each funding source has its own eligibility requirements; further information is available through the Financial Aid Office.

Grants

The following grants are need-based aid to eligible students:

Federal Pell Grant
Federal Supplemental Educational Opportunity Grant (FSEOG)
PHEAA Grant (Pennsylvania Higher Education Assistance Agency)
Johnson College Institutional Grant

Loans

Federal Direct Subsidized Student Loan
Federal Direct Unsubsidized Student Loan
Federal Direct Parent Loan for undergraduate Students (PLUS)

Employment

Students who are interested in on-campus employment through work-study programs may obtain further information from the Financial Aid Office.

Federal Work-Study: an on-campus, federally-funded employment program that provides supplemental assistance to students who demonstrate financial need.

Johnson College Work-Study: an on-campus, institutionally-funded employment program that provides supplemental assistance to students regardless of financial need.

Satisfactory Academic Progress and Receipt of Financial Aid

Federal regulations require that educational institutions measure students' progress toward a declared educational degree objective both quantitatively and qualitatively. In accordance with these regulations, Johnson College has established the following standards to measure a student's academic progress for each academic year. These standards will be applied uniformly to all students when determining their eligibility for federal and/or Johnson College funds regardless of whether the student previously received these funds. Should a student fail to meet any of these requirements they are deemed not eligible to receive Title IV funding and/or Johnson College funds until the deficiency is made up by the student.

Enrollment Status**
Students enrolled for at least 12 credits per semester are considered "Full Time" for that semester.
Students enrolled for at least 9 credits but less than 12 credits per semester are considered "Three-Quarter Time" for that semester.
Students enrolled for at least 6 credits but less than 9 credits per semester are considered "Half Time" for that semester.
Students enrolled for less than 6 credits per semester are considered "Less Than Half Time" for that semester.

**** Enrollment status is determined at the end of the 100% tuition refund period each term ****

PHEAA state grant recipients who received assistance as full time students must complete a minimum of twenty-four (24) credits for every two (2) semesters of state grant assistance while those who received assistance as part time students must complete a minimum of twelve (12) credits for every two (2) semesters of state grant assistance. This requirement must be met even if the state grant was received for attendance at another institution.

Quantitative Requirement
All students must successfully complete (earn) a minimum of 80% of all the credits he or she has attempted at Johnson College during the entire period of enrollment. Total credits earned divided by total credits attempted equals the percentage. Credits attempted

are all those for which the student has enrolled as of the end of the add/drop registration period (1st week of the semester).

Successful completion is defined as the assignment of a passing grade to the courses attempted and equates to the number of credits earned. Failure, withdrawal, incomplete or other designations to the courses attempted are not considered successful completion.

Courses that are repeated will be counted in the calculation of credits attempted and will be counted only once as credits earned when the student receives a passing grade. Aid is granted for repeated course work but does not include more than one (1) repetition of a previously passed course.

If an incomplete grade becomes a passing grade, a reevaluation of the number of credits earned is conducted to assess the student's successful completion of the required number of credits. It is the student's responsibility to inform the Financial Aid Office of such a grade change.

Developmental courses are counted as hours attempted and, if successfully completed, hours earned. Credits earned are counted toward academic progress but do not count towards a student's degree. Therefore, these credits will be excluded from the time allowed to complete a degree requirement or the PACE at which a student will graduate.

For transfer students, transfer hours accepted are counted as both attempted and earned toward degree requirements.

****

Qualitative Requirement

In addition, students must meet the following minimum Cumulative Grade Point Average (CGPA) requirements:

1. At the end of the first semester of undergraduate study: **1.80**
2. At the end of all years of undergraduate study: **2.00**

****

Time Allowed to Complete Degree Requirements (PACE)

Under Federal regulations, the maximum time frame that a student may have to complete a degree is 150% of the published length of the educational program for a full-time student. This includes all semesters even if no financial aid was received. A student must have approximately **69** credits to complete a degree at Johnson College and therefore, it is expected that all students should complete all degree requirements by the time the student has attempted **104** credits. Students who do not continue to meet these standards will not be on PACE to graduate and thereby will be a risk of losing their Title IV funding. In order to stay on pace, a full-time student should complete an average of **18**

credits per semester. Students who change majors are responsible for completing their degree requirements within the specified timeframe.

Procedures for Checking Satisfactory Academic Progress
For degree students, an annual evaluation of a student's academic standing and progress to determine federal and state eligibility is made at the end of each spring semester. Academic progress will be determined by the Financial Aid Office based upon the information contained in the student's academic transcript as of the date of the review. A student who fails to meet the standards for minimum satisfactory academic progress will be notified in writing that he/she is ineligible for aid the next academic semester.

For credit based certificate programs, an evaluation of a student's academic progress is made at the midpoint of the program.

Once a student achieves the minimum standards, it is his/her responsibility to request reinstatement from the director of financial aid.

Grade Level Progression
Students must have completed a minimum of least 30 credits in order to be classified as a second-year student.

Financial Aid Appeals

Students who do not meet Satisfactory Academic Progress requirements have the right to appeal. Students may appeal the discontinuation of their financial aid if failure to meet the standard was the result of an undue hardship caused by death of a relative, student injury or illness, or other special circumstances. An appointment should first be made with a Financial Aid Counselor for an initial review of the situation. The appeal must be type written and submitted to the director of financial aid within 30 days from the date of the student's suspension notification letter and must include evidence that supports the claim of mitigating circumstances. The appeal should include an explanation of the extenuating circumstances which resulted in the student's inability to meet the requirements. The student must show that the hardship that created the poor academic performance has been resolved and should not impede academic success in the future. In some cases, supporting documentation may also be required. The director of financial aid will review all appeals.

If the appeal is granted, the student's financial aid eligibility will be reinstated and the student will be on probation for the next semester. Minimum standard for progress must be met by the end of the probationary semester.

If the appeal is denied, financial aid will only be reinstated when the student achieves the minimum standards**.**

Industry Tuition Reimbursement Plans

Many companies provide their employees with reimbursement for education expenses. Students should consult their employer for further information. Arrangements for this type of payment should be set up with the Bursar's Office prior to the start of classes.

Scholarships and Merit Awards

In addition to the financial aid programs cited above, scholarships and merit awards are available to eligible students. Criteria for individual scholarships are listed below; further details may be obtained through the Financial Aid Office. Scholarships and merit awards are not necessarily renewable from first year to second year and may require re-application. Recipients of all scholarships and merit awards are determined primarily by the Johnson College Director of Financial Aid unless required otherwise by an individual scholarship.

Award amounts for endowed scholarship funds are determined annually according to earnings on the funds and in accordance with Johnson College policies. Annual awards of non-endowed scholarships are determined on a year-to-year basis contingent on continued funding of the scholarships.

Scholarships

Alekna Memorial Scholarship is based on financial need after other forms of financial aid have been awarded. Preference is given to students from the Tunkhannock, Elk Lake or Lackawanna Trail (Pennsylvania) school districts.

Edgar A. and Ida M. Alekna Scholarship provides funds to students who demonstrate financial need. Students of all majors are eligible.

John K. and Mary E. Blackledge Memorial Scholarship, Mr. & Mrs. John P. Sweeney, Sr., Benefactors, is awarded to a first-year student. The scholarship is renewable for the second year if the recipient continues to meet the scholarship criteria, which includes good academic standing and commitment to quality education.

Margaret Briggs Scholarship is awarded to a first or second-year student with financial need; preference is given to students from Lackawanna County.

Sean J. Calpin Automotive Technology Scholarship Fund of the Scranton Area Foundation is awarded to a student in the Automotive Technology program who has a Grade Point Average of 3.00. The student must display good citizenship and service to others as well as have a sincere commitment to the automotive technology field.

Cars on Campus Scholarship is awarded to a financially-needy second-year student who shows persistence in his/her studies. Special preference will be given to students from the technical trade areas such as Architectural Drafting and Design, Automotive, Biomedical Equipment, Carpentry and Cabinetmaking, Diesel, Precision Machining and Heating, Ventilation and Air Conditioning Technology.

CMC Rich Vinansky Memorial Scholarship is awarded to two first-year students in the Radiologic Technology program.

Vernon "Terry" Decker Scholarship is awarded to a second-year non-traditional student, with preference given to a student in the Electronic Technology program. Students who show initiative, desire and financial need will be considered.

Ben Franklin Award of the Scranton Area Foundation is awarded to a second-year student from Lackawanna, Pike, Susquehanna, or Wyoming County (Pennsylvania). Academic achievement, good citizenship and financial need are considered in the selection process.

John T. Gerod Scholarship is awarded to a first or second-year student with preference given to students enrolled in the Precision Machining Technology program. This scholarship is based on instructors' recommendations, scholastic achievement, and a sincere interest in the machine trades field.

Thomas Hesser Scholarship is awarded to a first or second-year student enrolled in the Automotive Technology program. It is based on educational achievement, initiative and desire to succeed, as well as instructors' recommendations.

Hill's Pet Nutrition, Inc. Scholarship is awarded to a second-year student with financial need in the Veterinary Technology program.

Frank & Jean Hubbard Scholarship are awarded to graduates of North Pocono High School who will be attending their first year at Johnson College and who are recommended by their principal or guidance office for demonstrating scholastic achievement, leadership, entrepreneurial abilities, and financial need. The recipient must take 15 credits each semester and the scholarship is renewable when specific conditions are met. Recipients are reviewed on academic achievement.

Johnson College Employees Scholarship is awarded to a first-year student with financial need. Preference will be given to a student in the technical area of the Faculty Co-Chair of the previous year's Annual Fund Campaign.

Lackawanna Home Builders Association Scholarship is awarded to a second-year student in the Carpentry & Cabinetmaking Technology program who is a resident of Lackawanna County (Pennsylvania) and a full-time student with a first-year minimum GPA of 3.00. It is based on academic performance, citizenship, and financial need.

F. David Mercanti Memorial Scholarship is awarded to a first or second-year student with financial need in the Carpentry and Cabinetmaking Technology program.

Ruth Stitt Morgan Memorial Scholarship is given to a second-year student enrolled in the Veterinary Technology program. Preference will be given to students with strong desire and enthusiasm to their program area. The recipient must have at least a B average and a satisfactory performance in the first-year clinical rotation.

Northeast Pennsylvania Veterinary Medical Association Scholarship is awarded to a second-year student in the Veterinary Technology program with a minimum GPA of 3.00.

Novitsky Family Scholarship Fund is awarded to a first year student in the Automotive Technology program. A student who shows great perseverance, determination and focus will be chosen. The scholarship may be renewed for the recipient's second year.

John R. O'Hara Scholarship assists a first-year student from the Greater Scranton-Lackawanna County (Pennsylvania) area who demonstrates academic excellence, leadership qualities, community commitment and technology area excellence.

P. Fricchione and Sons Scholarship is awarded to a student in good academic standing, who has financial need and is majoring in the Heating, Ventilation and Air Conditioning Technology (HVAC) program.

Anthony Ploskonka Memorial Scholarship is awarded to a first-year student with a minimum high school grade point average of 3.00; recipients must perform a minimum of ten hours of community service per year. The scholarship is renewable for the second year if the recipient continues to meet the scholarship criteria.

Irene Ploskonka Memorial Scholarship is awarded to a first-year student with financial need and a minimum high school grade point average of 2.50; recipients must perform a minimum of ten hours of community service per year. The scholarship is renewable for the second year if the recipient continues to meet the scholarship criteria.

Pocono Mountain Street Rod Association Scholarship is awarded to a second-year student enrolled in the Automotive Technology program. The recipient must be a full-time student with financial need and have a minimum GPA of 2.50.

Presidential Scholarship is awarded to two first-year students based upon academic preparation in high school. Priority consideration is given to both high school academic records and SAT/ACT scores. The half-tuition scholarship is renewable for the second year for recipients who maintain full-time status and a minimum Grade Point Average of 3.50.

Bill Puntar Memorial Scholarship is awarded to first-year students from the Lakeland and/or Forest City School Districts with preference given to students who are enrolled in the Automotive Technology Program.

Anthony F. Rosar Memorial Scholarship is awarded to a second-year student in the Carpentry & Cabinetmaking program who attains a 3.0 GPA or higher and is actively involved in volunteering their time to those in need.

Ross Family Foundation Scholarship is awarded to a student who is in good academic standing with the College. A student from any of the program areas is eligible.

Scranton UNICO Foundation Scholarship is awarded to a first-year student with financial need; the recipient may re-apply for second-year funding.

Society of Broadcast Engineers, Chapter II is awarded to a student in the Electronic Technology program who intends to pursue a career in electronic media.

Islyn Thomas Achievement Award is given to a first or second-year student with preference given to students enrolled in the Precision Machining Technology program. This scholarship is awarded to one student annually, based on financial need, community service, and technology area excellence.

Villa Capri Cruisers Car Club, Inc. Scholarship is given to a student enrolled in the Automotive Technology program who shows the greatest financial need.

Merit Awards

Orlando S. Johnson Merit Award is given to two first-year students who have a Scholastic Aptitude Test (SAT) score of 1,000 or higher and a GPA of 3.30 or higher. The Orlando S. Johnson Merit Award is renewable for the second year for recipients who maintain full-time status and a minimum Grade Point Average of 3.30.

Richmond Merit Award is given to two first-year students who have an SAT score of 850 or higher and a GPA of 3.00 or higher. The Richmond Merit Award is renewable for the second year for recipients who maintain full-time status and a minimum Grade Point Average of 3.00.

Moffat Merit Award is given to two first-year students who have an SAT score of 800 or higher and a GPA of 2.80 or higher. The Moffat Merit Award is renewable for the second year for recipients who maintain full-time status and a minimum Grade Point Average of 2.80.

Technology Merit Award is given to two first-year students who have a GPA of 3.00 or higher and community or technology work experience. The Technology Merit Award is renewable for the second year for recipients who maintain full-time status and a minimum Grade Point Average of 3.00.

WITHDRAWAL AND ADJUSTMENT OF CHARGES

Students who officially withdraw from their programs of study at Johnson College may be eligible for an adjustment of tuition charges and fees. Adjustments are based on the official date of withdrawal or the last day of documented class attendance, as determined by the Registrar.

Tuition Adjustment

Students who withdraw or are terminated from Johnson College during the semester will be entitled to an adjustment of tuition and fees according to the following schedule:

Withdrawal:	**Adjustment:**	**Withdrawal:**	**Adjustment:**
before classes begin	100%*	sixth week	60%
first week	90%	seventh & eighth week	50%
second & third week	80%	ninth & tenth week	40%
fourth & fifth week	70%	after tenth week	no refund

*See Application of Policy (1), found on the next page.

Johnson College institutional grants, PHEAA grants, and scholarship funds awarded to students who withdraw or are terminated will be adjusted according to the same schedule.

Federal aid and/or state grant assistance (such as PHEAA) and/or institutional assistance from Johnson College may not cover all unpaid institutional charges due the College upon the student's withdrawal. In such cases, students will be billed for remaining balances.

State Guidelines

Pennsylvania and other state's grants will be adjusted in accordance with the agency's stated guidelines. PHEAA Grant funds are generally reduced by the same percentage as the tuition reduction received by students who withdraw from their programs of study. However, it should be noted that PHEAA reserves the right to make the final decision on the percentage of the reduction.

Federal Guidelines

In accordance with federal regulations, students who receive federal financial aid and withdraw from Johnson College during the first 60% of a semester will have their federal financial aid adjusted based on the percentage of the semester completed prior to the withdrawal. Students will be entitled to retain the same percentage of the federal financial aid received as the percentage of the semester completed. This percentage is calculated

by dividing the number of days in the semester (excluding breaks of five days or longer) into the number of days completed prior to the withdrawal (excluding breaks of five days or longer). The date of withdrawal will be based on the official date of withdrawal or the last day of documented class attendance as determined by the Registrar.

Once the amount of federal funds to be returned has been calculated, the funds will be returned in the following order:

- Unsubsidized Federal Direct Student Loans
- Subsidized Federal Direct Student Loans
- Federal Direct Parent Loan for Undergraduate Students (PLUS)
- Pell Grants
- Academic Competitiveness Grant (ACG)
- Federal Supplemental Educational Opportunity Grants (FSEOG)

The amount to be returned to a specific federal program may not exceed the total amount awarded from that program.

First-year, first-time borrowers who withdraw before the 30th calendar day of the program of study are prohibited from receiving Federal Direct Student Loan funds (Unsubsidized Direct Loans and Subsidized Direct Loans) at the time they withdraw.

Application of Policy

(1) Applicants who have not visited the school prior to enrollment will have the opportunity to withdraw without penalty within three business days following either the regularly scheduled orientation procedures or following a tour of the school facilities and inspection of equipment where training and services are provided.

(2) All monies paid by an applicant must be refunded if requested within three days after signing an enrollment agreement and making an initial payment. An applicant requesting cancellation more than three days after signing an enrollment agreement and making an initial payment, but prior to entering the school, is entitled to a refund of all monies paid minus a registration fee of 15% of the contract price of the program, but in no event may the school retain more than $150. Any refunds due to applicants shall be refunded within 30 days from a notice of cancellation or failure to appear on or before the first day of class.

(3) Any refunds due to students who begin attending classes shall be refunded within 30 days from the date of withdrawal or the last day of attendance as determined by the Registrar, whichever is later.

(4) The withdrawal date is used to determine the percentage of the period of enrollment completed and, therefore, the amount of aid a student has earned. The date of determination that the student is no longer enrolled is used in the following circumstances:

- Students who receive a refund of financial aid prior to withdrawing from Johnson College may owe a repayment of the federal financial aid funds received. Students will be contacted by the Financial Aid Office in such situations and will be given 30 days from the date of determination to repay the funds to Johnson College. Students who fail to return the unearned portion of federal financial aid funds given to them will become ineligible for continued receipt of financial aid until such time as the repayment is made.
- Within 30 days of the date of determination, Johnson College must return the amount of federal funds for which it is responsible.
- Within 30 days of the date of determination, Johnson College must offer withdrawing students any amount of post-withdrawal disbursement that is not credited to the student's account.
- Within 90 days of the date of determination, Johnson College must respond to a request by a student or parent to make all or a portion of the post-withdrawal disbursement.

Further information about refunds or rebates of financial aid may be obtained from the Financial Aid Office.

ACADEMIC INFORMATION

Freshman Seminar

The Freshman Seminar is an interdisciplinary introduction to the first-year college experience, including policies and resources, study skills, test preparation, use of college resources, technology, electronic mail, academic and career planning, time and money management, and discussion of relevant contemporary topics in health and wellness.

Successful completion of FS 101 is a graduation requirement. Failure to successfully complete the course will require a rescheduling of the course for a subsequent semester or at the end of the freshman year to an intensive Independent Study. Students who have previously earned an associate's degree or higher from an appropriately accredited institution of higher education will be exempt from this course with official verification.

Change of Name and/or Address

The Registrar's Office must be informed of any changes to a student's personal information, such as name, address, telephone number, and/or place of employment. It is the student's responsibility to keep the College informed of any changes to student information. In the event of a name change, a marriage license or divorce decree must be presented along with the Name Change form. Name Change forms may be obtained through the Registrar's Office or on the college website at www.johnson.edu under Current Students/Academics/Registrar.

Verification

A verification letter provides proof of enrollment, graduation, student status, or other student related information. It does not provide specific course or grade information as found on an official transcript. Verification letters may be requested by organizations such as an insurance company or sponsor. Verifications are provided free of charge to all students, both current and previously enrolled students. Letters verifying enrollment will not be provided prior to the beginning of the semester; if a student needs verification prior to the start of the semester, a letter will be provided stating that the student is "scheduled to enroll."

Length of Programs

The academic year, consisting of two 16-week semesters, begins in August and ends in May. Programs of degree-based education are four semesters totaling 64 weeks except those which may require summer internships. Certificate programs of education are two semesters totaling 32 weeks. Total program hours vary by department.

Prior Learning Assessment

Prior Learning Assessment (PLA) in Pennsylvania is a joint collaboration by the Pennsylvania Department of Education and the Pennsylvania Department of Labor & Industry. PLA is defined as a validated process to evaluate knowledge and skills students gain from life experiences. When these prior learning experiences demonstrate college-level learning and align with college course competencies, postsecondary institutions may award college credit. (Evaluation of prior learning completed 10 years before the request date is based on review by the Vice President of Academic Affairs, appropriate Department Chair and Registrar's Office.)

Johnson College has entered into a Prior Learning Assessment Agreement with the Pennsylvania Department of Education to apply PLA standards in the following manner.

Credit by Examination

- **AP (ADVANCED PLACEMENT) -** Students who have completed advanced courses in high school or vocational-technical school may be eligible for advanced placement. Students seeking advanced placement should indicate their intention to the Admissions Office prior to the beginning of the semester. Such students will be required to complete an application for advanced placement and to take a competency exam. Upon completion of the exam (a grade of "B" or above is required for advanced placement), students will be notified and the information will be entered on their transcript but not calculated into their GPA. Advanced Placement scores from the College Board may be substituted for the College's advanced placement exam.
- **Advanced Placement Mathematics -** The Mathematics faculty will review previous academic records of students who test at or above an 85 in the Algebra Accuplacer placement test to determine if they are sufficiently prepared for advanced placement into MAT 201 (College Algebra & Trigonometry). Students requiring six (6) MAT credits who opt for the advanced placement into MAT 201 must register for an advanced MAT course to complete graduation requirements. Students in the Logistics program of study are required to complete 3 credits, MAT 121, as part of their degree requirements.
- **CLEP (College Level Examination Program) –** Students who have completed CLEP exams prior to attending Johnson College should submit their exam scores at the time of application to the College (a grade of "B" or above is required). The appropriate Department Chair and the Registrar's Office will review the test to determine applicability to awarding credit for Johnson College coursework.
- **ECE (Excelsior College Examinations) –** Students who have completed Excelsior exams prior to attending Johnson College should submit their exam

scores at the time of application to the College (a grade equivalent to "B" or above is required). The appropriate Department Chair and the Registrar's Office will review the test to determine applicability to awarding credit for Johnson College coursework.

- **DSST (DANTES (Defense Activity for Non-Traditional Education Support) Subject Standardized Tests) –** Students who have completed DSST exams prior to attending Johnson College should submit their exam scores at the time of application to the College (a grade equivalent to "B" or above is required). The appropriate Department Chair and the Registrar's Office will review the test to determine applicability to awarding credit for Johnson College coursework.
- **Johnson College Challenge Examination –** Full-time students, who are currently enrolled in a course and who believe they have adequate knowledge of the subject, may request to receive credit by examination. To complete a course under this policy, a student must make arrangements with the class instructor and obtain approval by the appropriate department chairperson, the Vice President of Academic Affairs, and the Registrar. Students should submit a completed Challenge Examination Form (obtainable from the Registrar's Office or under the Forms section of the Registrar's webpage). The fee for taking the Challenge Exam is $100 and must be paid prior to the examination. Students who do not have a receipt from the Business Office will not be allowed to sit for the examination. Testing must take place prior to the completion of the third week of class. The college will not allow more than three full-course equivalents completed by Challenge Examination to count toward a degree, unless the Vice President of Academic Affairs approves a request based on a demonstrated hardship.

Service Members Opportunity College

Johnson College is recognized as a Service Members Opportunity College (SOC) for members of the Military Services also including the National Guard, the Coast Guard and the Office of the Secretary of Defense. The Vice President of Enrollment Services serves as the contact person for service members and may be reached at admit@johnson.edu.

Credit for Military Experience – Educational Programs

Students who have completed educational programs offered by branches of the American armed services may be granted academic credit for their coursework. Students should submit an official transcript of their coursework as part of the admissions process. Transcripts will be evaluated according to the guidelines stated by the American Council on Education ACE Guide to the Evaluation of Educational Experiences in the Armed Services in determining the value of learning acquired in military service. Upon review by the appropriate Department Chair and the Registrar's Office, credit may be awarded

for appropriate learning acquired in military service at levels consistent with ACE Guide recommendations and/or those transcripted by the Community College of the Air Force when applicable to a service member's program of study. Applicants who have served in the armed services must submit a certified copy of form DD-214, Report of Separation.

Credit for Military Experience – Military Workplace Learning

As an SOC institution, Johnson College assists service members and veterans to incorporate credits into their degree programs based on collegiate-level learning achieved not only through formal school training but also through occupational experience and nationally-recognized non-traditional learning testing programs (see Credit by Examination).

Johnson College recognizes the value of specialized military training courses. The appropriate department chair and Registrar's Office will review and if appropriate award credit for Military Occupational Specialties (MOS) and Navy Rates and Ratings as recommended by the ACE Guide to the Evaluation of Educational Experiences in the Armed Services. Students must submit an official transcript of their military training courses for evaluation.

Workforce Training

Johnson College recognizes the knowledge and skills that students may acquire as result of training in the workplace. The American Council on Education (ACE) National Guide to College Credit for Workforce Training is used to determine if the knowledge and skills demonstrate college-level learning. Credit recommendations from ACE may be used to obtain college credit or for advanced placement.

Students seeking credit for Workforce Training should send an official transcript from the ACE Transcript Service to the Registrar's Office for review. The appropriate Department Chair and Registrar will review such transcripts on a case-by-case basis.

If a student has participated in Workforce Training that is not recognized by the American Council of Education, they may seek validation of that training for credit through use of the Johnson College Challenge Exam procedure.

Registration

Johnson College hosts a series of Program Orientation Days during the summer to facilitate registration for incoming fall freshmen. The Registrar's Office handles registration for students who do not attend their Program Orientation Day as part of the enrollment process. Freshmen may make any necessary schedule changes to their Fall schedule during the first week of the semester.

Subsequent registrations are held twice a year during the prior semester. The Registrar will announce the procedures and dates of registration. A late registration fee of $30.00 is charged to students who fail to register during those dates.

Students who have outstanding balances will be put on Bursar's Hold by the Bursar's Office and will not be permitted to register until that hold is released by the Bursar.

All students must meet with their academic advisor prior to registration and obtain an official class schedule from the Registrar.

Students are permitted to attend only those classes for which they have officially registered and paid. An officially registered student is one who:

- has submitted an approved registration form
- has reconciled all charges with the Bursar's Office
- has been accepted for scheduling by the Registrar.

It is the responsibility of students to ensure that they are following the suggested program outline and meeting all program requirements for graduation. Failure to do so may result in extending their program of education.

Student Academic Course Load

A student is considered full-time when registered for a minimum of 12 credits per semester. A student is considered part-time when registered for fewer than 12 credits. A student typically carries 12 to 21 credits in both the fall and spring semesters. An academic overload occurs when a student attempts to register for more than 21 credits in a semester. Students who wish to register for more than 21 credits must have the permission of the Vice President of Academic Affairs. Students who are granted permission for an academic overload are subject to additional tuition charges.

Formation of Sections and Cancellation of Courses

Johnson College reserves the right to cancel a program, course, or section, to change the time of meeting, to subdivide a section, or to combine two or more sections as circumstances may require. Every effort is made to minimize the impact of such changes on students. Students who are involved in a change of schedule should see their academic advisor, or the Registrar.

Course Audits

Students may audit a course for personal enrichment. They may attend classes and participate in lectures and laboratory activities but are not required to complete assignments or take tests. Students who elect to audit a course will receive a grade of "AU" on their transcript that indicates that no grade or credit has been given for the course. The charge for audited courses is the same as for credit courses.

Practicum/Internship/Cooperative Education Experience

Johnson College offers opportunities for practicum/internship/cooperative education experience that integrates technical studies with supervised work experience. Students may be employed by industry, business or government organizations for a specific period of time in positions related to their technical fields and must meet all requirements for these experiences. Additional information about this program is available in the Career Services office.

Change of Major

A change of major may be made at any time during the first two academic weeks of a semester. Currently enrolled students who wish to change their major must complete a Change of Major form and obtain the required signatures as indicated on the form. Forms may be obtained through the Registrar's Office.

Change of Schedule

After a student is registered, changes to the schedule may be made through the process of adding and/or dropping a course. Students may be admitted to another course or change sections, depending on availability of seats, only during the first academic week of a semester. Schedule Change forms are available through the Registrar's Office.
A $15.00 Drop/Add fee will be assessed for each Drop/Add form submitted.

Student-Initiated Dropping of a Course – Semester Classes
From the first day of class to the end of the second week of the semester, a student may drop a course without notation, provided a Drop/Add form is submitted with the required signatures. Dropping a course during this period results in no grade or transcript record.

From the third week of the semester to the end of the tenth week of class, a student-initiated withdrawal receives a grade of "W" (Withdrew) which is not calculated into the student's Grade Point Average (GPA) but does appear on the student's transcript.

From the eleventh week to the last day of the course, students are not permitted to withdraw from a class.

Student-Initiated Dropping of a Course – Module Classes
Module drop dates are published in the College catalog (General Information Academic Calendar) as well as on the Academic Calendar provided to all students when they receive their fall schedules.

For the first two days of the module, a student may drop a course without notation, provided a Drop/Add form is submitted with the required signatures. Dropping a course during this period results in no grade or transcript record. (Note: withdrawing from the College during the first two weeks of the semester results in no grade or transcript record.)

On the third day of the module until the module drop date, a student-initiated withdrawal receives a grade of "W" (Withdrew) that is not calculated into the student's Grade Point Average (GPA) but does appear on the student's transcript.

Students are not permitted to withdraw from modules after the published module drop date.

Student-Initiated Adding of a Course
A student may add a course during the first week of a 16-week semester provided a Drop/Add form is submitted with the required signatures.

After the first week of the semester, approval from the course instructor is required to add a course.

After the second week of the semester, approval of the Vice President of Academic Affairs is required to add a course.

Repeated Courses

Students may repeat a course in which they earned a "D+", "D" or "F" in order to improve their Grade Point Average (GPA). The repeated course will appear on the student's transcript twice. The original grade will be replaced with an "R" and only the new grade will be used in calculating the student's GPA. A course may be repeated no more than three times.

Students receiving a grade of "D+", "D" or "F" may elect to take the course at another institution and transfer the credit for it to Johnson College. In this event, the original grade will be replaced with an "R" and will be used only in calculating the total number of credits required for graduation. Transfer credit will not be used in the calculation of a student's cumulative GPA.

Credit Hours and Grading System

Each course has a credit-hour value based upon the required number of hours per week in the classroom, laboratory, or technical area as well as the appropriate number of additional outside work clock hours that support the didactic component of the class.

clock hour = 50 minute period
15 hours of lecture + 30 clock hours of additional outside work = 1 credit
30 hours of lab = 1 credit
45 hours of internship = 1 credit
30 hours of technical area = 1 credit
clinical practicum 240-360 hours (Radiologic Technology students only) = 1 credit *

**The Clinical Practicum Experience described by the Joint Review Committee on Education in Radiographic Technology (JRCERT) at a facility recognized by the JRCERT as meeting appropriate qualifications for delivery of clinical education. A clinical practicum experience is utilized for providing learning experiences to develop attainment of required program competencies. A Clinical Practicum site requires JRCERT recognition.*

Course achievement levels and cumulative Grade Point Averages are provided on semester transcripts using the following grading system:

Letter Grade	Numerical Relationship	Quality Points
A	96-100	4.0
A-	92-95	3.67
B+	88-91	3.33
B	84-87	3.0
B-	80-83	2.67
C+	76-79	2.33
C	72-75	2.0
C-	68-71	1.67
D+	64-67	1.33
D*	60-63	1.0
F	0-59	0.0

I**	Incomplete
W	Withdrew

* Minimal passing grade

** A grade of "Incomplete" will be awarded only in exceptional circumstances. A grade of "Incomplete" must be completed within 10 school days. If the grade is still "Incomplete" beyond this period, the grade becomes an "F" or Failure and the course must be repeated.

Cumulative Grade Point Average is computed using the following formula:

$$\text{Cumulative GPA} = \frac{\text{total quality points earned per semester(s)}}{\text{total credit hours attempted per semester(s)}}$$

ATTENDANCE POLICY

Class Cuts

Class cuts are not permitted and will be recorded as absences.

Attendance and Tardiness

Students are responsible for understanding and adhering to the following attendance policy:

- Students are required to be present and punctual for classes and scheduled conferences with instructors, and College administrators.
- Students who miss 15% of a course will be notified via e-mail through the student portal.
- Students who miss 25% of a course may be advised by the instructor to withdraw from the course; notification will be made via e-mail through the student portal.
- Faculty members are required to record attendance daily.
- Students who enroll for a course but do not attend classes and fail to formally withdraw from the course are financially responsible for the course and will receive the grade earned in that class.
- Students who withdraw from a course after the second week and before the tenth week of the semester because of absenteeism will receive a grade of "W" (Withdrew) and are financially responsible for the course.
- Announcement of the College closing due to inclement weather or emergency conditions will be made on the College's website (www.johnson.edu), WYOU-TV, WNEP-TV, and local radio stations. Information may also be obtained by calling Johnson College at (570) 342-6404 and following the prompts.

Students' attendance records will reflect tardiness based on the course syllabus.

Make-up Work

When students are absent because of conditions beyond their control, they may be permitted to make up lost time in their academic and/or major courses. It is the responsibility of the student to request consideration for make-up work from the instructor. Make-up work is not permitted for the purpose of receiving Veterans Administration Training Allowances.

Satisfactory Academic Progress

Students must maintain a Grade Point Average (GPA) of at least 1.80 for the first semester and a cumulative GPA of 2.00 for subsequent semesters, while completing at least 80% of credits attempted. Failure to maintain the prescribed GPA may prevent students from progressing to higher level courses within their program and may result in dismissal from the program.

Students who are in danger of not meeting the GPA requirement are advised to meet first with their faculty advisor, then with Financial Aid, and then with the Registrar to discuss alternatives and options.

Students must complete their degree at a pace of 150% for financial aid purposes; for example, a student in a two-year Associate degree program must complete within three years.

Information on minimum GPAs for Radiologic Technology and Veterinary Technology students is in the Retention section for each respective program area.

Academic Probation

Students whose GPA is below the minimum standard of 1.80 for the first semester or a cumulative GPA of 2.00 in subsequent semesters will be placed on academic probation for the next semester. Students must meet with the Financial Aid office to discuss financial aid eligibility. Students on probation are required to follow *Guidelines for Students on Academic Probation* as outlined in the Johnson College Student Handbook and to participate in the College's SUCCESS Program. After completion of the probationary period, students are required to maintain a minimum cumulative GPA of 2.00.

* Specific Probation policies for Radiologic and Veterinary Technology students can be found in their respective Programmatic Handbooks.

Students who fail to satisfy the minimum standards for academic progress may be dismissed from the College.

Termination from the College

Johnson College makes every effort to assist students in achieving their academic goals; however, the College reserves the right to dismiss students due to special circumstances. In such cases, charges will be adjusted according to College policy and the College will:

- send letters of concern to the student
- counsel the student prior to termination or dismissal
- inform the student of his/her termination or dismissal.

Dismissal from a Program of Study

Specific Dismissal policies for Radiologic Technology and Veterinary Technology students can be found in the Radiologic & Veterinary Technology Programmatic Handbooks.

Withdrawal from the College

Students who wish to withdraw from Johnson College must:

- meet with the Registrar and the Director of Financial Aid
- inform the Coordinator of On-Campus Housing where applicable
- complete an Official Withdrawal form available from the Registrar's Office.

Upon official withdrawal, grades will be recorded on the transcript as "W" (Withdrew).

Johnson College does not consider absence from class an official notice of withdrawal. A student who stops attending class without officially withdrawing will receive the grade earned in that course.

Medical Withdrawal and Re-entry Policy

Johnson College observes a Medical Withdrawal and Re-entry Policy. Further information is available in the Johnson College **Student Information Handbook.**

Student Complaint/Grievance Procedure

Students having an academic issue should follow the procedure in the **Student Information Handbook** under Appeal of Academic Decisions & Due Process. The handbook is found on the Johnson College website under "Current Students/Student Resources." Complaints not pertaining to academic issues should be forwarded in writing to the Division Chair of the appropriate department. Upon completion of this step, if the complainant is still unsatisfied with the results, a copy of the complaint should be forwarded to the Vice President of Academic Affairs for review. The complainant will be kept informed of the process of the complaint and the decision. The complainant has the option to continue the process by reviewing the ACCSC Complaint Grievance procedure.

Schools accredited by the Accrediting Commission of Career Schools and Colleges must have a procedure and operational plan for handling student complaints. If a student does not feel that the school has adequately addressed a complaint or concern, the student may consider contacting the Accrediting Commission. 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. Inquiries may be directed to the Accrediting Commission of Career Schools and Colleges, 2101 Wilson Blvd./Suite 302, Arlington, VA 22201; (703)247-4212; http://www.accsc.org/
A copy of the Commission's Complaint Form is available at the College and may be obtained by contacting the Vice President of Academic Affairs.

Readmission Policy

Johnson College encourages students to complete their education degrees. To assist students in this endeavor, the College has established the following readmission policy.

Readmitted students are those students who have been separated from Johnson College for no more than two consecutive semesters, excluding summer session, and who have earned more than 30 credits prior to seeking to return. Otherwise, the student is considered a new applicant and must contact the Admissions Office to file a new application.

Students wishing to be readmitted, as defined above, must apply for readmission by contacting the Registrar's Office. A readmission application must be completed and submitted with a $15.00 readmission fee. Students who desire to be readmitted must have no financial balance and/or any other obligation due to the College.

Students wishing to return who were on academic probation at their time of separation from Johnson College may also be required to meet with the Vice President of Academic Affairs prior to being considered for re-admission.

Students who have been dismissed from Johnson College for academic reasons may seek readmission using the procedure outlined above. The Vice President of Enrollment Services, Department Chairperson, and Vice President of Academic Affairs make the decision for readmission jointly. Students will be enrolled on a probationary status and may be required to take a reduced academic schedule and/or participate in the SUCCESS Program. (Individual program readmission criteria may be found in individual program handbooks.)

Students who are readmitted are required to complete the graduation requirements in effect at the time they re-enter Johnson College. Coursework previously completed will be evaluated to determine if it meets current requirements. Students who have taken courses at other post-secondary institutions since their last date of attendance at Johnson College must submit official college transcripts of that coursework.

Veterans' Readmission

Johnson College complies with Readmission Requirements for Service Members as outlined in the Higher Education Opportunity Act (HEOA) section 487.

The HEOA provides that an institution may not deny readmission to a service member of the uniformed services for reasons relating to that service. In addition, a student who is readmitted under this section must be readmitted with the same academic status as the student had when he or she last attended the institution.

This applies to service in the uniformed services, whether voluntary or involuntary, on active duty in the Armed Forces, including service as a member of the National Guard or Reserve, for a period of more than 30 days under a call or order to active duty of more than 30 days.

To view the full act visit: http://www2.ed.gov/heoa

Readmission Procedure

1) The Bursar's Office will first review all applications to determine if the student is in good financial standing with the College, before they are considered for readmission.
2) Applications of students deemed eligible for readmission will be reviewed by the Registrar's Office and will also be sent to the Department Chair for review and to determine if there any stipulations to be added to readmission.
3) If a student originally left Johnson College for medical reasons, student must provide a medical release from a licensed medical provider to the Vice President of Academic Affairs.
4) After notification of readmission and any requirements for readmission, student must meet with the Financial Aid and/or Bursar's office to develop a plan to finance their education.
5) Students then must complete normal course registration procedures in conjunction with an academic advisor or the registrar.
6) After meeting with the academic advisor or registrar, student will meet with the Registrar's Office to fill out appropriate enrollment paperwork and to register for classes.

Graduation Requirements

Students must meet the following requirements in order to be eligible to graduate from Associate Degree programs:

- completion of Freshman Seminar (FS 101)
- completion of 65 credits for Logistics & Supply Chain Management Technology; 66 credits for Heating, Ventilation & Air Conditioning Technology; 68 credits for Veterinary Technology; 69 credits for Carpentry & Cabinetmaking Technology, Electrical Construction & Maintenance Technology, Electronic Technology, Precision Machining Technology; 72 credits for Architectural Drafting & Design Technology, Automotive Technology, Computer Information Technology, Diesel Truck Technology and Radiologic Technology; 75 credits for Biomedical Equipment Technology
- completion of a minimum of 35 credits at Johnson College (requests for exceeding the College's minimum credit requirement must be submitted to the Registrar in writing and approved by the Vice President of Academic Affairs)
- completion of a practicum/internship/cooperative education experience for students in the Biomedical Equipment Technology, Logistics & Supply Chain Management Technology, Radiologic Technology and Veterinary Technology programs

- achievement of a cumulative Grade Point Average (GPA) of 2.00. Refer to the Retention section in the respective program areas for Radiologic Technology and Veterinary Technology
- full payment or satisfactory arrangement to fulfill all financial obligations
- submission of a completed Graduation Application form by the stated deadline.

Students must meet the following requirements in order to be eligible to graduate from certificate program:

- completion of 50 credits for Diesel Preventative Maintenance Certificate
- completion of 42 credits for Welding Technology Certificate
- full payment or satisfactory arrangement to fulfill all financial obligations
- submission of a completed Graduation Application form by the stated deadline
- completion of a minimum of 25 credits at Johnson College

Students who have not met the graduation requirements will not be allowed to participate in Commencement exercises, will not be eligible for Commencement Awards, and will not have their names listed in the Commencement Program.

Academic Honors and Recognition

The President's List
The President's List is published at the end of each semester citing students who achieve a minimum 3.90 GPA, while carrying a minimum of 12 Johnson College credits and matriculating toward a degree. Students who receive a grade of W, F, or I on their transcript for the semester will not qualify for the President's List.

Honors upon Graduation
Graduating students are eligible for recognition based upon scholastic merit. Highest Honors Awards are conferred on graduates with the highest cumulative GPAs among the candidates for the Associate in Applied Science and the Associate in Science degrees. *Summa Cum Laude*, *Magna Cum Laude*, and *Cum Laude* are citations conferred by the College for exceptional academic achievement and completion of a challenging curriculum. Students who are in danger of not meeting graduation requirements at the time of commencement will not be awarded honors.

Students who earn a cumulative GPA of 3.90 or higher will graduate Summa Cum Laude. Those with a cumulative GPA of at least 3.80 and equal to or less than 3.89 will graduate Magna Cum Laude. Those with a cumulative GPA of at least 3.70 and equal to or less than 3.79 will graduate Cum Laude.

Second Degree

Students who wish to obtain a second degree may do so if they fulfill the following requirements:

- Students must be admitted into the major program in which the second degree is desired by the Admissions Department and/or Department Chair.
- Students must meet all of the curriculum requirements of the second degree for both major and required courses and successfully complete those courses which cannot be equated with courses taken in the first degree program.
- Students must meet with the Registrar and/or the Department Chairperson of the second degree program to determine the minimum number of credits that need to be completed for the second degree in addition to the credits taken in the first degree program.

Student Records and Record Maintenance

In accordance with the Family Educational Rights and Privacy Act of 1974 (FERPA), student records are maintained in the Registrar's Office of the College and are available for inspection by appointment during normal business hours. All documents are the property of Johnson College and may not be copied, duplicated or removed.

Student records may be viewed by College officials with a legitimate educational interest, certain federal and state agencies responsible for enforcement of the Privacy Act, officials of other colleges to which the student has sought enrollment, and accrediting institutions. In the case of a health or safety emergency, parents who claim a student as a dependent for income tax purposes may also view the records. All other requests for student educational records must have the written consent of the student.

The Privacy Act exempts certain records from the individual's examination, as follows:

- financial records of parents
- medical or paramedical records used only for treatment purposes; the individual may have a doctor or other competent professional review these records.
- law enforcement records that are used solely for law-enforcement purposes
- confidential letters of reference submitted prior to January 1, 1975 or letters of reference submitted after January 1, 1975 that were designated as confidential by the student at the time of his/her solicitation or submission.

Student Rights of Privacy and Access

Unless directed by the courts or by determination of a school official that a "need to know" situation exists, information other than "directory information" is not released without a student's written consent. Directory information is determined to be a student's name, address, telephone number, enrollment status, e-mail address, program of study, dates of attendance, participation in activities and sports, honors received, degrees awarded and dates of awarding.

If a student does not wish directory information to be released, a Request to Prevent Disclosure of Directory Information must be submitted to the Registrar's Office within the first two weeks of a semester. Students may restrict directory information from being released without their permission; however, this also will prevent the Registrar from releasing information to the media regarding graduation or awards since that information includes the student's address.

Johnson College assumes that failure on the part of any student to specifically request the withholding of categories of "directory information" indicates individual approval for disclosure.

Johnson College will not release grade information to a student's parent(s) or guardian(s) without the student's written permission; no grade information will be released over the telephone.

STUDENT SERVICES

Student Information Handbook

The Johnson College **Student Information Handbook** is accessible through the Johnson College website (www.johnson.edu) to all students to explain assistance, regulations, organizations, scheduling, faculty, facilities, and curriculum. Johnson College adheres to a strict disciplinary sanction policy for violations of the campus rules and/or regulations. Students may reference this Sanction Policy in the Johnson College Student Handbook. It is the responsibility of the student to read the Handbook entirely and to comply with all regulations.

Facilities

Library/Resource Center
The Library/Resource Center at Johnson College is a technology-based library offering online computer services in addition to more than 4,500 volumes, 130 current periodical subscriptions and 300 items in the video collection. The library and its resources are available for on site use by the general public.

Computer Labs
Two computer labs are conveniently located in the Moffat Building. Computers are equipped with the latest available Microsoft Windows, Word, Excel, Access, Power Point, and tutorial software. Computers are also available in the Library/Resource center for student use. Johnson College also provides wireless access campus wide.

Fitness Center
The Moffat Building has a fitness/training area available for student use featuring equipment such as Nautilus, Gravitron, treadmills, stair climbers, exercise bikes and free weights. Hours of operation are contingent upon the facility's availability.

Cafeteria
Located in the Moffat Building, the cafeteria is professionally staffed and provides breakfast, lunch, and snacks. The cafeteria is generally open Monday through Friday from 7:30am-2:00pm. Vending machines are available for after-hours snacks and beverages.

Student Apartment Housing
Due to the number of limited spaces in our apartments, preference is given to those students living furthest away from campus. In the event that you are not approved for housing due to over occupancy, you will be placed on a waiting list. If after you are granted housing, you fail to meet one of the housing deadlines (Housing Deposit/Verification Form/Payment, Housing Preference Form, and Health Clearance

Form), you will be placed on a waiting list. There is a priority deadline of June 1st for students to submit their Housing Interest Form to be considered for housing. The apartment-type units are modestly furnished and have ample storage and closet spaces. The first floor has a kitchen and living area and the second floor has a bedroom, closet, and bathroom. When students complete and return their Housing Deposit/Verification Form and deposit, students agree to pay the remaining balance for on campus housing for one year, to pay for a meal plan, and to abide by the Housing License and Policies, as well as, the rules, regulations, policies and procedures outlined in the Johnson College Student Handbook. The apartments are supervised by the Residence and Student Life Coordinator, Resident Assistants, and security officers who patrol the premises from 11:00pm to 6:00am Monday through Friday and 6:00pm-1:00am Saturday and Sunday. The apartments are also monitored by closed-circuit security cameras. Pennsylvania law requires students residing in campus housing to submit documentation of immunization against meningococcal disease (meningitis) before being permitted to live on campus. Apartments accommodate three students; a handicapped accessible unit is also available.

Bookstore

Johnson College provides students with an online bookstore for text, supply and apparel purchases. The bookstore can be accessed by visiting http://www.johnson.edu/current-students/student-resources/bookstore.
The online store allows students a variety of choices in their book purchases. Students have options to purchase new or used text materials, or if available, utilize the ***book rental*** and ***eBook*** options. Any questions regarding your online purchases can be directed to the Student Life Department located in Richmond Hall.

National Honor Societies

Alpha Beta Kappa
Alpha Beta Kappa is a national honor society open to students who attain a cumulative GPA of 3.50 or higher by the beginning of their last semester at Johnson College and who have participated in a student activity during their time on campus. Eligible activities include Student Government, Social Force, Johnson College Student Ambassador Program, Senior Class Leadership, athletics, and/or serving as a peer tutor. Students are inducted into the Omega of Pennsylvania chapter during a ceremony prior to graduation.

Chi Alpha Epsilon
Chi Alpha Epsilon is a national honor society that was chartered at Johnson College in 2002. Full-time students who enter the College through a variety of programs and achieve a Grade Point Average (GPA) of 3.00 for two consecutive semesters will be considered for induction into Chi Alpha Epsilon. Eligible programs include the

Provisional Accept program and the Summer Preparatory Program. Students who utilize the services of the Student Support Services Office or participate in the SUCCESS program will also be considered for induction. Chi Alpha Epsilon promotes continued high academic standards, honors academic excellence and offers additional opportunities for recognition throughout the students' college years as they continue to excel in their course work. New members are inducted during a formal ceremony.

Career Services

Career Services provides assistance for students and alumni seeking part-time, internship, summer and full-time employment opportunities. Career Services furnishes information on career choices as well as assistance with resume preparation, job search strategies, career fair preparation and interviewing skills in individual appointments and class presentations. Fall and Spring Career Fairs are held on campus where students and alumni can explore various employment opportunities with a variety of organizations and options for further education. The Associate Director of Career Services regularly visits employers to learn more about the employment requirements and advises them of the various Johnson College technical programs. Information from these visits is shared with faculty, students and alumni. Employers are also invited to campus to present to students and to conduct interviews.

Student Life

Student Life Department
The mission of the Student Life Department is to create experiences for students that promote involvement, learning and success. Recognizing that growth and learning occur in all facets of campus life, the Student Life team collaborates with students, faculty, alumni, staff and community leaders to provide innovative and intentional programs, activities, and services that compliment the student's academic experience and fosters their personal and professional growth.

All student based clubs and organizations are under the supervision of the Student Life Department. A representative from each student club or organization must serve as an advisory member of the Student Government Association.

Freshman Orientation

Freshman Orientation is held to help incoming students adjust to college life and provide the information needed to make them successful at Johnson College. All new students are required to attend.

Clubs and Organizations

Student Government Association
The Student Government Association provides students with an opportunity to develop leadership skills while contributing constructively to Johnson College and the student body. Generally, student representatives are selected from each technical or clinical program and must maintain a 2.00 cumulative GPA.

The goals of the Student Government Association are as follows:

- to advocate student needs and represent the student body in matters related to College policy and activities
- to promote opportunities for educational, personal, social, and cultural enrichment of all students
- to articulate educational quality and safety in the instructional programs
- to promote effective communication with all levels of the College community
- to promote Johnson College's reputation and encourage respect for the College's environment.

Social Force Club
Social Force Club is a community service organization for students. Members of Social Force participate in activities such as the Thanksgiving Food Drive, the Giving Tree Christmas project, and other community service activities as decided by the members. Social Force meetings are usually held bi-weekly during the lunch periods. Membership is open to all students and new members are always welcome.

Ambassador Program
The Student Ambassador Program consists of enthusiastic, knowledgeable, reliable students who are charged with assisting the Admissions Office in the recruitment of potential students and overall student retention for the school.

Student Ambassadors must have outstanding public speaking skills, strong communications skills, and a willingness to work in a team environment. Students who are selected for the program have the opportunity to gain valuable leadership skills, acquire useful resume boosters, develop pride in themselves and the College, and meet new people.
The Ambassador Program is under advisement of the Director of Student Life. There will also be a selected Senior Ambassador to serve as a point of contact and mentor for the group. All students selected for the Ambassador program are a vital part of the Johnson College community and their feedback and suggestions are valued and encouraged. Program requirements may be obtained through the Student Life Department.

Senior Class Leadership Committee
The Senior Class Leadership Committee is a student-driven campaign to leave a legacy for future generations of Johnson students by raising funds for a senior class gift. The Senior Class Gift will be evolving into the Senior Class Leadership Project that will provide student leadership opportunities, instill a greater appreciation for the philanthropic spirit of Johnson College and to encourage continued connection to their alma mater, long after Commencement Day.

Johnson Activity Group (JAG)
This organization is an opportunity for students to plan and implement social events on campus. J.A.G. offers students the prospect to boost creative thinking and leadership skills outside the classroom, by conducting regular meetings, planning, promoting, and implementing events, and maintaining an annual budget. Johnson Activity Group is open for all students to join.

Athletics
Johnson College offers three inter-collegiate sports to students: Men's basketball, Men's/Women's bowling, and Men's/Women's cross-country. Johnson College Jaguars compete against institutions such as various campuses of Penn State University and regional community colleges.

An intramural sports program is also supervised by the Student Life department and offers a variety of athletic activities throughout the academic year.

Additionally, Johnson College offers a Cheerleading Club which primarily supports the Men's basketball program and other activities on campus.

Tech Clubs
Several technical programs have student clubs that promote campus and community awareness of the program as well as sponsor activities of technical interest to students in the program. Membership is open to all students in the program.

Alumni Council
The Johnson College Alumni Council is the leadership body of the Alumni Association that supports various educational, fundraising, and social activities that foster lifelong relationships between students, alumni and their alma mater.

Student Support Services

Career Services
Career Services provides assistance for students seeking part-time employment during the school year, summer employment, and full-time employment following graduation. Career Services directs students to individuals who will assist them with career choices as well as assistance with resume preparation, job search strategies and interviewing skills.

Counseling
Johnson College's counseling program is available to students who may need support or assistance with either academic or personal issues. Faculty or staff members may refer students to the counseling program or students may self-refer. Students may schedule appointments or just "drop by" as the need dictates. Counseling services are confidential and available at no additional cost.

Perkins Grant
The Perkins Grant program is a federal grant that enables Johnson College to provide support services to students who qualify within the program's guidelines. The program includes a comprehensive system of advising, counseling, and tutorial support.

Tutoring
Tutoring opportunities are available for general education and technical area courses. Scheduling of the tutoring session(s) is coordinated through the Student Support Services Office and is dependent on the availability of the tutor and the student.

Students may be referred for tutoring by their instructor or they may self-refer. They must register in the Student Support Services office by completing an Individualized Student/College Agreement. By signing the agreement, the student agrees to attend the scheduled tutoring sessions or to notify both the tutorial coordinator and tutor if they are unable to attend. If the student misses 3 sessions without notifying staff, the contract can be voided by Student Support staff. The appointment time slot is then opened for another student.

Evaluations are completed each semester by the tutors and the tutees. There is no additional cost to the student for tutoring services.

Learning Support / Testing Accommodations
Learning Support, in the form of learning and testing accommodations, is available to students with disabilities or ADHD. Students may contact the Support Services Office to find out what documentation is required to substantiate the need for accommodations and/or make a request for accommodations. Please reference the Policies and Procedures section of this handbook for additional information.

SUCCESS Program
The SUCCESS Program is a tool offered to students who are motivated to achieve academic and personal success at the college level. The SUCCESS Program is designed to assist students with the transition to college-level academics and to help them to achieve their goals. Students are referred to the program through the admissions process, by a faculty or staff member, by the Vice-President of Academic Affairs, or by self-referral.

The SUCCESS Program offers tutoring, counseling, and advising services to students. Additional information about this program is available in the Student Support Services Office, Moffat Building.

Educational Resources
The Student Support Services Office has a full array of resources available for student use. Students may borrow from a library of audio tapes, video tapes, and books on such subjects as anger management, self-esteem, how to study, how to take exams, how to take notes, time management, math, English, study skills, etc. Also available to students are voice recorders, dictionaries, hand-held spell-checkers, calculators, and relaxation tapes. Students may borrow these items for a semester at a time as needed.

Deaf / Hard of Hearing
Policies for Students Utilizing Sign Language Interpreting Services are found in the Policies and Procedures section of this document. Any questions concerning this and other learning accommodations can be directed to the Assistant Director of Student Support Services / Disabilities Services Coordinator in the Student Support Services Department of the College at (570) 702-8955.

Student Responsibilities, Conduct, and Dress

Johnson College students are responsible for reading and abiding by all rules and policies described in this **Catalog** and the **Student Information Handbook**. Students are personally responsible for following policies and procedures as they affect their academic progress, financial obligations, and relationships with College authorities, and eligibility for graduation.

Johnson College students are expected at all times to conduct themselves in a responsible manner that conforms to generally accepted standards of adult behavior. Students should show courtesy and respect for other students and the faculty as well as the administrative and support staff of the College. Students also must accept the need for various College regulations and comply with the directives of those authorized to enforce the regulations. Failure to conduct themselves in an acceptable manner may subject students to penalties such as suspension, expulsion or arrest.

Johnson College students are also expected to exercise good judgment in selecting attire that is appropriate to an educational environment and to abide by all College policies regarding the wearing and use of safety equipment and apparel.

When in doubt about any College directive, students should seek advice from their faculty advisor or the appropriate office within the College.

Sexual and Other Unlawful Harassment

Johnson College is committed to providing an educational environment that is free of discrimination and unlawful harassment. Actions, words, jokes, or comments based on an individual's sex, race, ethnicity, age, religion, or any other legally protected characteristic will not be tolerated. As an example, sexual harassment is a form of misconduct that is demeaning to another person or undermines the integrity of the relationship, and is strictly prohibited.

Anyone engaging in sexual or other unlawful harassment will be subject to appropriate disciplinary action, up to and including termination of employment or termination from his/her program of education.

Any staff member, student, or supervisor who becomes aware of possible sexual or other unlawful harassment should promptly advise the President of the College.

PROGRAM OBJECTIVES
AND EMPLOYMENT OPPORTUNITIES

Descriptions of programs on the following pages include a sequence of courses for each program. The sequence is designed to satisfy prerequisite requirements, to ensure access to courses that are not available every semester, and to ensure the completion of course requirements. Students are encouraged to adhere to the sequence as much as possible in order to complete the program in the traditional two-year time frame.

Johnson College recognizes that not all students are able to progress through the course sequence as presented. Students who are not able to adhere to the sequence are encouraged to consult with their faculty advisors in order to ensure completion of graduation requirements.

Architectural Drafting & Design Technology (AAS)

Program Objective
The Architectural Drafting & Design Technology program prepares students as entry-level technicians in basic hand drafting, computer-aided drafting (CAD) and Building Information Modeling (BIM) for residential and commercial construction. Students will work and learn in all areas of Architectural design and drafting. Instruction and hands on learning includes all phases of building design drafting and specifications.

Career Opportunities
Graduates work as designers, computer drafters, construction estimators and drafters, architects' representatives and field construction inspectors.
Typical employers in the architectural career field are residential, commercial, and industrial contractors and land developers; architectural design firms, civil design firms, and structural engineering companies; modular and mobile home builders; and government design agencies.

Program Goals
- The ADT program prepares the student for entry level employment in the drafting and design field
- Decision making skills are enhanced by critiquing of drawings for presentation, information, and accuracy
- The program provides an educational foundation for career advancement and lifelong learning

Certification
American Drafting and Design Association International (ADDA)

Pregnancy Policy
It is the student's choice whether or not to inform the Department Chairperson of a pregnancy. If a student chooses not to do so, no accommodations can be made regarding the student's internship assignment or program of study. Students who choose to disclose their pregnancy should contact the Department Chair.

Architectural Drafting & Design Technology
Major Courses (48 Credits)

ADT 111	Introduction to Drafting	4
ADT 112	Site Plans and Details	4
ADT 113	Residential Planning	4
ADT 114	Introduction to Computer Assisted Drafting (CAD)	4
ADT 115	Residential Working Drawings	4
ADT 116	Residential Building Systems	4
ADT 213	Codes and Ordinances	4
ADT 214	Specifications I	4
ADT 215	Specifications II	4
ADT 220	Building Information Modeling I (Residential Modeling)	4
ADT 221	Building Information Modeling II (Commercial Modeling)	4
ADT 216	Applied Architectural Drafting **or** ADT 217 **or** ADT 218	4
ADT 217	Internship	4
ADT 218	Co-op Educational Experience	4
General Education - Core (21 Credits)		
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
MAT 101	College Algebra I and Trigonometry	3
MAT 110	Trigonometry	3
MCH 201	Statics & Strength of Materials	3
Electives (5/6 Credits)		5/6
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**72**

This course prepares students with skills labeled by the Commonwealth of Pennsylvania as those used in traditional or evolving green occupation.

Architectural Drafting & Design Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
ADT 111	Introduction to Drafting	4
ADT 114	Introduction to Computer Assisted Drafting (CAD) Planning	4
ADT 112	Site Plans and Details	4
MAT 101	College Algebra I and Trigonometry	3
BUS 101	Introduction to Business	3
FS 101	Freshman Seminar	1
		19
Semester 2		
ADT 113	Residential Planning	4
ADT 115	Residential Working Drawings	4
ADT 116	Residential Building Systems	4
ENG 101	English Composition I	3
CPT 101	Microcomputer I	3
MCH 201	Statics & Strength of Materials	3
		21
First Year Totals		**40**
Semester 3		
ADT 213	Codes and Ordinances	4
ADT 214	Specifications I	4
ADT 215	Specifications II	4
MAT 110	Trigonometry	3
ENG 212	Public Speaking	3
	Elective	2/3
		20/21
Semester 4		
ADT 220	Building Information Modeling I (Residential Modeling)	4
ADT 221	Building Information Modeling II (Commercial Modeling)	4
ADT 216	Applied Architectural Drafting **or** ADT 217 **or** ADT 218	4
ADT 217	Internship	
ADT 218	Co-op Educational Experience	
		12
Second Year Totals		**32/33**
Program Totals		**72/73**
Minimum Credits to Graduate		**72**

Automotive Technology (AAS)

Program Objective
The Automotive Technology program prepares students as entry-level technicians in the automobile and diesel industries.

Career Opportunities
Graduates can work for employers in the automotive career fields of automotive, truck, farm and earthmoving equipment dealerships; truck, power generation and construction companies; automotive service centers; engine repair/machine shops; automotive equipment distributors; independent service garages; automotive parts manufacturers; sales representation; and auto insurance companies. Gradates work with brake systems, transmissions, alignments and repairs; representatives in claim, sales and service; and truck/fleet maintenance technicians.

Program Goals
- Graduates will possess the appropriate skills needed for entering the Automotive Technology field.
- Graduates will understand the importance of professional behavior, as well as comply with the daily changes within the Automotive Industry and will meet the challenges of continued growth within the Automotive Technology Profession.
- Graduates will be provided the skills that will allow them to choose careers in the field.

Programmatic Accreditation
The Automotive Technology program is accredited by the
National Automotive Technician Education Foundation (NATEF),
101 Blue Seal Drive, S.E., Suite 101, Leesburg, VA 20175
Email: webmaster@natef.org Phone: (703) 669-6650 Website: www.natef.org

Special Fees
In addition to tuition and fees, Automotive Technology Students will have a fee of $171 to cover State and Federal Licensing Requirements; State Inspection, Emissions and HVAC license.

Pregnancy Policy
It is not required to tell the instructor if you are pregnant but it is highly recommended because of the lifting and other requirements of the program that may jeopardize the health of the mother and fetus.

Automotive Technology
Major Courses (48 Credits)

AUT 141	Introduction to Automotive Service Field / New and Used Vehicle Preparation	4
AUT 142	Hydraulic Brake Systems	4
AUT 143	Steering and Suspension	4
AUT 144	Electrical & Electronic Systems	4
AUT 145	Engine Performance & Emissions	4
AUT 147	Automotive Fuels & Emissions	4
AUT 241	Engine Overhaul	4
AUT 242	Diesel Fuel Injection	4
AUT 243	Heating & Air Conditioning	4
AUT 244	Automatic Transmissions	4
AUT 245	Manual Transmissions & Differentials	4
AUT 247	Internship **or** AUT 248 **or** AUT 249	4
AUT 248	Co-op Educational Experience	4
AUT 249	Automotive Electrical Technology	4
Related Courses (3 credits)		
IET 101	Introduction to Automotive and Diesel Electronics	4
General Education Core (15 Credits)		
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
MAT 101	College Algebra I and Trigonometry	3
Electives (5/6 Credits)		5/6
Other Requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**72**

Automotive Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
AUT 141	Introduction to Auto Service Field/ New and Used Vehicle Preparation	4
AUT 142	Hydraulic Brake Systems	4
AUT 143	Steering & Suspension	4
IET 101	Introduction to Automotive & Diesel Electronics	3
ENG 101	English Composition I	3
FS 101	Freshman Seminar	1
		19
Semester 2		
AUT 144	Electrical & Electronic Systems	4
AUT 145	Engine Performance & Emissions	4
AUT 147	Automotive Fuels and Emissions	4
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
MAT 101	College Algebra I and Trigonometry	3
		21
First Year Totals		**40**
Semester 3		
AUT 241	Engine Overhaul	4
AUT 242	Diesel Fuel Injection	4
AUT 243	Heating & Air Conditioning	4
ENG 212	Public Speaking	3
	Elective	3
	Elective	2/3
		20/21
Semester 4		
AUT 244	Automatic Transmissions	4
AUT 245	Manual Transmissions & Differentials	4
AUT 247	Internship **or** AUT 248 **or** AUT 249	4
AUT 248	Co-op Educational Experience	
AUT 249	Automotive Electrical Technology	
		12
Second Year Totals		**32/33**
Program Totals		**72/73**
Minimum Credits to Graduate		**72**

Biomedical Equipment Technology (AAS)

Program Objective
The Biomedical Equipment Technology program prepares students as entry-level technicians for the operation, inspection, installation, calibration, repair, maintenance and safety of patient-care and non-patient care equipment.

Career Opportunities
Graduates work as technicians and sales representatives in the field of electronic instrumentation and computer repair. Typical employers in the biomedical field are hospitals; medical centers; contract maintenance firms; dental, medical, and optical facilities; computer, electronic and medical instrumentation manufacturers; and electronic media and telecommunications companies.

Program Goals
- Graduates will possess the skills necessary to obtain an entry-level Biomedical Technician position.
- Graduates will understand the importance of professional behavior and life-long learning within the Biomedical Technology profession.
- Graduates will possess the appropriate skills needed for decision-making and critical thinking, providing them opportunities for professional advancement within the Biomedical Technology field.

Special Enrollment Requirements
Prior to the start of the first semester, students must provide proof of a criminal background check and hepatitis B vaccination. Proof of a PPD two-step testing (TB test) is required prior to the start of the student's second year.

Internship/Cooperative Education Experience
A five-week internship or cooperative education experience at an approved site is a requirement for graduation and must be completed in the last semester of the second year. Students must satisfy the internship requirements of both Johnson College and the internship provider. Student's GPA is the first consideration in internship placement. Students may be required to make their own arrangements for internship outside the local area. Students must have a cumulative GPA of 2.00 to qualify for an internship.

Many internship sites require proof of current health care coverage, criminal, child abuse and FBI background checks, and/or drug and nicotine tests. Internship sites may bar students from an internship if a criminal record exists or a drug/nicotine test has a positive result. Costs for travel to and from an internship site are the responsibility of the student. Internships are typically unpaid.

Pregnancy Policy

It is the student's choice whether or not to inform the Department Chairperson of a pregnancy. If a student chooses not to do so, no accommodations can be made regarding the student's internship assignment or program of study. Students who choose to disclose their pregnancy should contact the Department Chair.

Biomedical Equipment Technology
Major Courses (48 Credits)

EET 101	DC Electricity and Instrumentation	4
EET 102	Alternating Current and Passive Devices	4
EET 103	Semiconductor Principles & Applications I	4
EET 104	Semiconductor Principles & Applications II	4
EET 105	Digital Electronics I	4
EET 106	Digital Electronics II	4
BET 201	Medical Equipment Standards and Testing	4
BET 202	Intro. to Medical Tel. & Networking	4
BET 203	Physiological Monitoring Devices	4
BET 204	Life Support Systems	4
BET 205	Specialized Medical Systems **or** BET 207 **or** BET 208	4
BET 207	Internship I	4
BET 208	Co-op Educational Experience	4
General Education Core (24 Credits)		
BUS 101	Introduction to Business	3
CHE 101	Chemistry I	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 211	Communication Theory	3
or ENG 212	Public Speaking	3
MAT 101	College Algebra I and Trigonometry	3
MAT 201	College Algebra II and Trigonometry	3
Related Course (3 credits)		
PHA 201	Physiology & Anatomy	3
Electives (2/3 Credits)		2/3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**75**

This course prepares students with skills labeled by the Commonwealth of Pennsylvania as those used in traditional or evolving green occupation.

Biomedical Equipment Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
EET 101	DC Electricity and Instrumentation	4
EET 102	Alternating Current and Passive Devices	4
EET 103	Semiconductors Principles & Applications I	4
CHE 101	Chemistry I	3
MAT 101	College Algebra I and Trigonometry	3
FS 101	Freshman Seminar	1
		19
Semester 2		
EET 104	Semiconductors Principles & Applications II	4
EET 105	Digital Electronics I	4
EET 106	Digital Electronics II	4
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
		21
First Year Totals		**40**
Semester 3		
BET 201	Medical Equipment Standards and Testing	4
BET 202	Introduction to Medical Telecommunications & Networking	4
BET 203	Physiological Monitoring Devices	4
ENG 211	Communication Theory	3
or ENG 212	Public Speaking	
MAT 201	College Algebra II & Trigonometry	3
	Elective	2/3
		20/21
Semester 4		
BET 204	Life Support Systems	4
BET 205	Specialized Medical Systems	4
BET 207	Internship **or** BET 208	4
BET 208	Co-op Educational Experience	
PHA 201	Physiology & Anatomy	3
		15
Second Year Totals		**35/36**
Program Totals		**75/76**
Minimum Credits to Graduate		**75**

Carpentry & Cabinetmaking Technology (AAS)

Program Objective

The Carpentry & Cabinetmaking Technology program prepares students as entry-level trades people in the layout, estimation, and construction of residential construction including the installation of trim, furniture, stairs, and cabinets. The skill set would also include weatherization installers and technicians and conservation retrofitters. Leadership and management skills are stressed. Students work with industry standard tools and equipment such as table saws, jointers, power tools, hand tools, pneumatic nailers, and laser levels.

Career Opportunities

Graduates work as rough and finish carpenters, cabinetmakers, mill workers, building product representatives, and custom woodworkers.

Typical employers in the carpentry and cabinetmaking career field are residential, commercial, and industrial construction companies; remodeling contractors; cabinet and showcase manufacturers; mill-work companies and lumber yards; wholesale and retail building product suppliers; modular home manufacturers; large institutional, business, and industrial complexes; and architectural engineering firms.

Program Goals

- The carpentry and cabinet making program will prepare the student for entry level employment in a variety of fields.
- The program will cover residential construction from the “ground to the clouds” and does so with an emphasis on safety first.
- The student will use hand, portable and stationary machines that can be found on construction sites or in cabinet shops.
- The student will examine the pre-planning phases of construction through the sale of the structure and apply sound customer relation practices.

Pregnancy Policy

It is not required to tell the instructor if you are pregnant but it is highly recommended because of the lifting and other requirements of the program that may jeopardize the health of the mother and fetus.

Carpentry and Cabinetmaking Technology
Major Courses (48 Credits)

CCM 161	Woodworking Tools & Machines I	4
CCM 162	Woodworking Tools & Machines II	4
CCM 163	Kitchen & Bath Design Standards	4
CCM 167	Cabinet and Component Construction	4
CCM 166	Interior Finishes	4
CCM 168	Exterior Finishes	4
CCM 261	Site Preparation & Layout	4
CCM 262	Stairs	4
CCM 263	Floor/Wall Framing Principles	4
CCM 264	Roof Framing Principles I	4
CCM 265	Roof Framing Principles II	4
CCM 266	Applied Industrial Practices **or** CCM 267 **or** CCM 268	4
CCM 267	Internship	4
CCM 268	Co-op Educational Experience	4
General Education Core (18 Credits)		
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
MAT 101	College Algebra I and Trigonometry	3
MAT 110	Trigonometry	3
Electives (2/3 Credits)		2/3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**69**

Carpentry & Cabinetmaking Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
CCM 161	Woodworking Tools & Machines I	4
CCM 162	Woodworking Tools & Machines II	4
CCM 163	Kitchen & Bath Design Standards	4
MAT 101	College Algebra I and Trigonometry	3
CPT 101	Microcomputer I	3
FS 101	Freshman Seminar	1
		19
Semester 2		
CCM 167	Cabinet and Component Construction	4
CCM 166	Interior Finishes	4
CCM 168	Exterior Finishes	4
ENG 101	English Composition	3
BUS 101	Introduction to Business	3
	Elective	2/3
		20/21
First Year Totals		**39/40**
Semester 3		
CCM 261	Site Preparation & Layout	4
CCM 262	Stairs	4
CCM 263	Floor/Wall Framing Principles	4
MAT 110	Trigonometry	3
ENG 212	Public Speaking	3
		18
Semester 4		
CCM 264	Roof Framing Principles I	4
CCM 265	Roof Framing Principles II	4
CCM 266	Applied Industrial Practices **or** CCM 267 **or** CCM 268	4
CCM 267	Internship	
CCM 268	Co-op Educational Experience	
		12
Second Year Totals		**30**
Program Totals		**69/70**
Minimum Credits to Graduate		**69**

Computer Information Technology (AS)

Program Objective
The Computer Information Technology Program prepares students as entry-level technicians for the maintenance, repair, and troubleshooting of the hardware and software used in today's local and wide area computer networking and information systems.

Career Opportunities
Typical employers are any business or industry using information technology today. Some examples of these are banks, hospitals, educational institutions, government facilities, mail order facilities, retail chains, school districts, and manufacturing facilities. Students work with current industry standard computers, and computer networks.

Program Goals
- Graduates will possess the appropriate skills needed for entering the Computer Information Technology field.
- Graduates will learn the importance of good communications skills with all areas of a project.
- Graduates will develop critical thinking skills for troubleshooting various hardware and software issues.

Pregnancy Policy
It is not required to tell the instructor if you are pregnant but it is highly recommended because of the lifting and other requirements of the program that may jeopardize the health of the mother and fetus.

Computer Information Technology
Major Courses (48 Credits)

CIT 161	Computer Hardware	4
CIT 162	Computer Operating Systems	4
CIT 163	Network Principles and Architectures	4
CIT 164	TCP/IP Network Design Configuration and Maintenance	4
CIT 165	LAN Security Design	4
CIT 166	Linux Networking Service and Support	4
CIT 261	Principles LAN/WAN Design and Maintenance Principles	4
CIT 262	Server and Network Operating System Principles	4
CIT 263	Advanced Network Operating System Principles	4
CIT 264	Web Programming I	4
CIT 265	Systems Analysis and Design	4
CIT 266	Internetworking Applications	4
	or CIT 267 **or** CIT 268 **or** CIT 269	
CIT 267	Internship	4
CIT 268	Co-op Educational Experience	4
CIT 269	Web Programming II	4
Related Course (3 credits)		
PRG 101	Programming for the Enterprise	3
General Education Core (18 Credits)		
BUS 101	Introduction to Business	3
DAT 201	Database: Principles & Applications	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
MAT 101	College Algebra I and Trigonometry	3
MAT 201	College Algebra II and Trigonometry	3
Electives (2/3 Credits)		2/3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**72**

Computer Information Technology
Associate in Science (AS)
Semester Program Outline

		Credits
Semester 1		
CIT 161	Computer Hardware	4
CIT 162	Computer Operating Systems	4
CIT 163	Network Principles and Architectures	4
PRG 101	Programming for the Enterprise	3
ENG 101	English Composition I	3
FS 101	Freshman Seminar	3
		19
Semester 2		
CIT 164	TCP/IP Network Design Configuration and Maintenance	4
CIT 165	LAN Security Design	4
CIT 166	Linux Networking Service and Support	4
BUS 101	Introduction to Business	3
MAT 101	College Algebra I and Trigonometry	3
	Elective	2/3
		20/21
First Year Totals		**39/40**
Semester 3		
CIT 261	Principles LAN/WAN Design and Maintenance Principles	4
CIT 262	Server and Network Operating System Principles	4
CIT 263	Advanced Network Operating System Principles	4
DAT 201	Database: Principles & Applications	3
ENG 212	Public Speaking	3
MAT 201	College Algebra II and Trigonometry	3
		21
Semester 4		
CIT 264	Web Programming I	4
CIT 265	Systems Analysis and Design	4
CIT 266	Internetworking Applications	4
	or CIT 267 **or** CIT 268 **or** CIT 269	
CIT 267	Internship	
CIT 268	Co-op Educational Experience	
CIT 269	Web Programming II	
		12
Second Year Totals		**33**
Program Totals		**72/73**
Minimum Credits to Graduate		**72**

Diesel Truck Technology (AAS)

Program Objective
The Diesel Truck Technology program prepares students as entry-level technicians with the latest information on diagnosis, repair procedures, preventive maintenance, and necessary safety applications in diesel technology. The course prepares students to take the voluntary mechanic certification test (ASE) in heavy-duty trucks. Graduates work as tune-up, brakes, transmission and refrigeration technicians; diesel truck repair and fleet maintenance technicians; service writing technicians; and sales and service representatives.

Career Opportunities
Typical employers of diesel truck technicians are truck, farm, and earth-moving equipment dealerships; trucking, power generation, and construction companies; truck service centers; engine repair/machine shops; truck equipment distributors; independent service garages; automotive parts manufacturers; sales representatives; and insurance companies.

Program Goals
- Graduates will possess the appropriate skills and safety awareness that are needed for decision-making, critical thinking for entry into the Diesel Truck Technology field.
- Graduates will understand the importance of professional behavior and life-long learning within the Diesel Truck Industry.
- Graduates will meet the needs of the Diesel Truck Technology field. Graduates will be provided the skills that will provide them the opportunities in various areas of the diesel profession.

Special Fees
In addition to tuition, students are responsible for a testing fee of $211 that is charged at the beginning of the senior's last semester of school. This fee covers industry specific testing.

Pregnancy Policy
It is not required to tell the instructor if you are pregnant but it is highly recommended because of the lifting and other requirements of the program that may jeopardize the health of the mother and fetus.

Diesel Truck Technology
Major Courses (48 Credits)

DTT 141	Introduction to Truck/Trailer Service Field	4
DTT 142	Air Brake Systems	4
DTT 143	Steering & Suspension	4
DTT 144	Electrical & Electronic Systems	4
DTT 145	Diesel Fuel Injection Systems	4
DTT 146	Diesel Engine Overhaul	4
DTT 241	Diesel Engine Performance and Tune-up Procedures	4
DTT 242	Manual Transmission Overhaul	4
DTT 243	Differentials and Drive Line	4
DTT 244	Automatic Transmission Diagnostics Basic Hydraulics	4
DTT 245	Heating, Air Conditioning and Refrigeration	4
DTT 246	Applied Diesel Truck Principles and Applications **or** DTT 247 **or** DTT 248	4
DTT 247	Internship	4
DTT 248	Co-op Educational Experience	4
Related Courses (3 Credits)		
IET 101	Introduction to Automotive and Diesel Electronics	3
General Education Core (15 Credits)		
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
MAT 101	College Algebra I and Trigonometry	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
Electives (5/6 Credits)		5/6
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**72**

Diesel Truck Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
DTT 141	Introduction to Truck/Trailer Service Field	4
DTT 142	Air Brake Systems	4
DTT 143	Steering & Suspension	4
IET 101	Introduction to Automotive & Diesel Electronics	3
ENG 101	English Composition I	3
FS 101	Freshman Seminar	1
		19
Semester 2		
DTT 144	Electrical & Electronic Systems	4
DTT 145	Diesel Fuel Injection Systems	4
DTT 146	Diesel Engine Overhaul	4
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
MAT 101	College Algebra I and Trigonometry	3
		21
First Year Totals		**39/40**
Semester 3		
DTT 241	Diesel Engine Performance and Tune-up Procedures	4
DTT 242	Manual Transmission Overhaul	4
DTT 243	Differentials and Drive Line	4
ENG 212	Public Speaking	3
	Elective	3
	Elective	2/3
		20/21
Semester 4		
DTT 244	Automatic Transmission Diagnostics, Basic Hydraulics	4
DTT 245	Heating, Air Conditioning and Refrigeration	4
DTT 246	Applied Diesel Truck Principles & Applications	4
	or DTT 247 **or** DTT 248	
DTT 247	Internship	
DTT 248	Co-op Educational Experience	
		12
Second Year Totals		**32/33**
Program Totals		**72/73**
Minimum Credits to Graduate		**72**

Electrical Construction & Maintenance Technology (AAS)

Program Objective:
The Electrical Construction and Maintenance Technology program prepares students as entry-level technicians for the operation, inspection, installation, calibration, repair, maintenance and safety of residential and commercial electrical equipment.

Career Opportunities:
Graduates work as residential and commercial electricians, industrial engineering technicians in production environments. Graduates will also be prepared as quality assurance technicians, linemen or technicians for the power industry. Typical employers in the electrical field are telecommunications companies, utilities, Union and Non-union electrical companies and manufacturing companies.

Program Goals:

- The student will be prepared as an entry-level technician in the electrical construction and maintenance industry
- Graduates will demonstrate safe electrical practices and understand how important they are in the electrical environment.
- Graduates will acquire a foundation of education and skills for career advancement and lifelong learning.

Pregnancy Policy
It is not required to tell the instructor if you are pregnant but it is highly recommended because of the lifting and other requirements of the program that may jeopardize the health of the mother and fetus.

Electrical Construction & Maintenance Technology
Major Courses (48 Credits)

ECM 101	Fundamentals of Electricity	4
ECM 102	Introduction to Residential Wiring	4
ECM 103	Principles & Applied Practices of Residential Wiring	4
ECM 104	Advanced Residential Circuit Installation	4
ECM 105	Service Installation & Troubleshooting	4
ECM 106	Commercial Wiring	4
ECM 201	Industrial Motor Control	4
ECM 202	Advanced Motor Control Circuits	4
ECM 203	Programmable Logic Controllers	4
ECM 204	Industrial Maintenance I	4
ECM 205	Industrial Maintenance II	4
ECM 206	Applied Practice and Special Topics	4
	or ECM 207 **or** ECM 208	
ECM 207	Internship	4
ECM 208	Co-op Educational Experience	4
General Education Core (18 Credits)		
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 211	Communication Theory	3
or ENG 212	Public Speaking	
MAT 101	College Algebra I and Trigonometry	3
MAT 201	College Algebra II and Trigonometry	3
Electives (2/3 Credits)		2/3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**69**

Electrical Construction & Maintenance Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
ECM 101	Fundamentals of Electricity	4
ECM 102	Introduction to Residential Wiring	4
ECM 103	Principles & Applied Practices of Residential Wiring	4
CPT 101	Microcomputer I	3
ENG101	English Composition I	3
FS 101	Freshman Seminar	1
		19
Semester 2		
ECM 104	Advanced Residential Circuit Installation	4
ECM 105	Service Installation & Troubleshooting	4
ECM 106	Commercial Wiring	4
BUS 101	Introduction to Business	3
MAT 101	College Algebra I and Trigonometry	3
		18
First Year Totals		**37**
Semester 3		
ECM 201	Industrial Motor Control	4
ECM 202	Advanced Motor Control Circuits	4
ECM 203	Programmable Logic Controllers	4
MAT 201	College Algebra II and Trigonometry	3
ENG 211	Communication Theory	3
or ENG 212	Public Speaking	
	Elective	2/3
		20/21
Semester 4		
ECM 204	Industrial Maintenance I	4
ECM 205	Industrial Maintenance II	4
ECM 206	Applied Practice and Special Topics **OR**	4
ECM 207	Internship **OR**	
ECM 208	Co-op Educational Experience	
		12
Second Year Totals		**32/33**
Program Totals		**69/70**
Minimum Credits to Graduate		**69**

Electronic Technology (AAS)

Program Objective
The Electronic Technology program prepares graduates as entry-level technicians. Students will become proficient in the theoretical and practical applications associated with electronic devices, instrumentation controls, and systems.

Career Opportunities
Graduates work as technicians and sales representatives in the field of electronic instrumentation and computer repair. Typical employers in the electronic career are machine, tool, and instrumentation manufacturers; electronic service companies; communication industries; electronic media; and electronic sales.

Program Goals

- Graduates will be able to troubleshoot electronic circuits and systems using theoretical principles and measured values to resolve operational issues.
- Graduates will demonstrate the ability to communicate with a customer, team member or supervisor in a professional manner to determine the nature of a problem or to explain repairs.
- Graduates will be able to use hand tools and test equipment in a safe manner.

Pregnancy Policy
It is the student's choice whether or not to inform the Department Chairperson of a pregnancy. If a student chooses not to do so, no accommodations can be made regarding the student's internship assignment or program of study. Students who choose to disclose their pregnancy should contact the Department Chair.

Electronic Technology
Major Courses (48 Credits)

EET 101	DC Electricity and Instrumentation	4
EET 102	Alternating Current and Passive Devices	4
EET 103	Semiconductors Principles & Applications I	4
EET 104	Semiconductors Principles & Applications II	4
EET 105	Digital Electronics I	4
EET 106	Digital Electronics II	4
EET 201	Communication Electronics I	4
EET 202	Communication Electronics II	4
EET 203	Industrial Electronics	4
EET 204	Programmable Logic Controllers	4
EET 205	Introduction to Automation & Robotics	4
EET 206	Applied Electronics Principles & Applications	
	or EET 207 **or EET** 208	4
EET 207	Internship	4
EET 208	Co-op Educational Experience	4
General Education Core (18 Credits)		
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
MAT 101	College Algebra I and Trigonometry	3
MAT 201	College Algebra II and Trigonometry	3
Electives (2/3 Credits)		2/3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**69**

This course prepares students with skills labeled by the Commonwealth of Pennsylvania as those used in traditional or evolving green occupation

Electronic Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
EET 101	DC Electricity and Instrumentation	4
EET 102	Alternating Current and Passive Devices	4
EET 103	Semiconductors Principles & Applications I	4
CPT 101	Microcomputer I	3
MAT 101	College Algebra I and Trigonometry	3
FS 101	Freshman Seminar	1
		19
Semester 2		
EET 104	Semiconductors Principles & Applications II	4
EET 105	Digital Electronics I	4
EET 106	Digital Electronics II	4
BUS 101	Introduction to Business	3
ENG 101	English Composition I	3
	Elective	2/3
		20/21
First Year Totals		**39/40**
Semester 3		
EET 201	Communication Electronics I	4
EET 202	Communication Electronics II	4
EET 203	Industrial Electronics	4
ENG 212	Public Speaking	3
MAT 201	College Algebra II and Trigonometry	3
		18
Semester 4		
EET 204	Programmable Logic Controllers	4
EET 205	Introduction to Automation & Robotics	4
EET 206	Applied Electronics Principles & Applications	4
	or EET 207 **or** EET 208	
EET 207	Internship	
EET 208	Co-op Educational Experience	**12**
Second Year Totals		**30**
Program Totals		**69/70**
Minimum Credits to Graduate		**69**

Heating Ventilation & Air Conditioning Technology (AAS)

Program Objective
The Heating Ventilation and Air Conditioning program is to provide students with the skills needed for entry-level positions in the installing, repairing and troubleshooting various heating and cooling equipment. Students will work with industrial standard tools associated with equipment such as oil and gas furnaces, refrigeration units, and air conditioning equipment.

Career Opportunities
Graduates work as Heating Air Conditioning & Refrigeration Mechanics, Installers; Geothermal Installers, and control technicians.
Typical employers in the HVAC trade career include custom job shops; research laboratories; wholesale and retail sales.

Program Goals
- Graduates will possess the skills necessary to obtain an entry-level position.
- Graduates will have an understanding of safe HVAC practices and how important they are in the HVAC environment.
- Graduates will understand the importance of professional behavior and life-long learning, and will meet the challenges of continued technological growth within the field.

Special Fees
In addition to tuition and fees, HVAC students will have an additional fee of $600.00 to cover the cost of supplies and materials used in the hands-on learning process. A onetime EPA certification fee of $75 will be charged prior to the start of their senior year.

Pregnancy Policy
It is not required to tell the instructor if you are pregnant but it is highly recommended because of the lifting and other requirements of the program that may jeopardize the health of the mother and fetus.

Heating Ventilation & Air Conditioning Technology
Major Courses (44 Credits)

HAC 151	Introduction to Refrigeration	4
HAC 152	HVAC/R Electricity I	3
HAC 153	Pipefitting	3
HAC 154	Print Reading and Codes for HVAC	3
HAC 155	HVAC/R Electricity II	3
HAC 156	Air Conditioning Systems	4
HAC 251	Heating System Design & Installation	4
HAC 252	HVAC Controls I	4
HAC 253	Hydronic Heating Systems	4
HAC 254	Refrigeration Applications Commercial Systems	4
HAC 255	HVAC Controls II Commercial	4
HAC 256	Applied HVAC Principles and Applications	4
	or HAC 257 **or** HAC 258	
HAC 257	Internship	4
HAC 258	Co-op Educational Experience	4
General Education Core (21 Credits)		
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 211	Communication Theory	3
MAT 101	College Algebra I and Trigonometry	3
MAT 201	College Algebra II and Trigonometry	3
PHY 101	Introductory Physics	3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**66**

Heating Ventilation & Air Conditioning Technology

Associate in Applied Science (A.A.S.)

Semester Program Outline

		Credits
Semester 1		
HAC 151	Introduction to Refrigeration	4
HAC 152	HVAC/R Electricity I	3
HAC 153	Pipefitting	3
BUS 101	Introduction to Business	3
MAT 101	College Algebra I and Trigonometry	3
FS 101	Freshman Seminar	1
		17
Semester 2		
HAC 154	Print Reading and Codes for HVAC	3
HAC 155	HVAC/R Electricity II	3
HAC 156	Air Conditioning Systems	4
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
PHY 101	Introductory Physics	3
		19
First Year Totals		**36**
Semester 3		
HAC 251	Heating Systems Design & Installation	4
HAC 252	HVAC Controls I	4
HAC 253	Hydronic Heating Systems	4
ENG 211	Communication Theory	3
MAT 201	College Algebra II and Trigonometry	3
		18
Semester 4		
HAC 254	Refrigeration Applications Commercial Systems	4
HAC 255	HVAC Controls II	4
HAC 256	Applied HVAC Principles and Applications	4
	or HAC 257 **or** HAC 258	
HAC 257	Internship	
HAC 258	Co-op Educational Experience	
		12
Second Year Totals		**30**
Program Totals		**66**
Minimum Credits to Graduate		**66**

Logistics & Supply Chain Management Technology (AAS)

Program Objective
Supply Chain Management prepares students for industry certification exams and entry-level management positions in the field of supply chain management. Careers include inventory management, master resource planning, scheduling and planning, transportation logistics management, route planning, physical distribution management, transportation marketing, customer service, procurement, quality control and operations management. Typical employers include warehousing and transportation distributors, large manufacturing facilities, retail and wholesale distributors.

Career Opportunities
Typical employers include warehousing and transportation distributors, large manufacturing facilities, government, third party logistics, retail and wholesale distributors.

Program Goals

- Graduates will possess the skills necessary to obtain industry certification and entry-level positions in business management, logistics, transportation, warehousing, supply-chain management, or operations.
- Graduates will understand the importance of general business management subjects as well as specific knowledge of information critical to success in the field.
- Graduates will possess the appropriate skills needed for supervision, decision-making, project management, and critical thinking, allowing for advancement into supervisory positions.
- Graduates will be able to recognize areas for improvement that will lead to cost reductions and provide logistical advantages over the competition.

Special Fees
In addition to tuition and fees, Logistics students will have an additional fee of $175.00 to cover the cost of professional testing their senior year. The fee covers the cost of taking the first APICS exam leading to Certification in Production and Inventory Management (CPIM).

Internship/Cooperative Education Experience
A five-week internship or cooperative education experience at an approved site may be completed in the last semester of the second year. Students must satisfy the internship requirements of both Johnson College and the internship provider as a condition of graduation. Students must have a cumulative GPA of 2.00 to meet the minimum qualification for internship through Johnson College. Some internship sites may require students to obtain a higher GPA in their agreement. Some internship sites may also require proof of current health care coverage, a criminal background check, and/or a drug test. Internship sites may bar students from an internship if a criminal record exists or a drug test has a positive result. Costs for travel to and from an internship site are the responsibility of the student.

Pregnancy Policy
It is the student's choice whether or not to inform the Department Chairperson of a pregnancy. If a student chooses not to do so, no accommodations can be made regarding the student's internship assignment or program of study. Students who choose to disclose their pregnancy should contact the Department Chair.

Logistics & Supply Chain Management Technology
Major Courses (43 Credits)

LOG 191	Basics of Supply Chain Management	3
LOG 192	Transportation Management	3
LOG 194	Warehousing and Distribution	3
LOG 195	Production and Inventory Control	3
LOG 291	Total Quality Management	3
LOG 294	International Logistics	3
LOG 297	Internship OR	4
LOG 298	Co-op Educational Experience	4
ACC 101	Accounting I	3
BSL 201	Business Law	3
BUS 101	Introduction to Business	3
BUS 201	Project Management	3
ECO 211	Introduction to Macroeconomics	3
MNG 185	Principles of Management	3
MNG 284	Management and Supervision	3

General Education Courses (21 Credits)

CPT 101	Microcomputer I	3
ECO 111	Introduction to Microeconomics	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
HMN 101	Introduction to Humanities	3
MAT 121	Introduction to Statistics	3
SBS 201	Social/Behavioral Science	3

Other requirements

FS 101	Freshman Seminar	1

Minimum Credits to Graduate **65**

Logistics & Supply Chain Management Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
LOG 191	Basics of Supply Chain Management	3
LOG 192	Transportation Management	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
MNG 185	Principles of Management	3
FS 101	Freshman Seminar	1
		16
Semester 2		
LOG 194	Warehousing and Distribution	3
LOG 195	Production and Inventory Control	3
BUS 101	Introduction to Business	3
MAT 121	Introduction to Statistics	3
ENG 212	Public Speaking	3
		15
First Year Totals		**31**
Semester 3		
LOG 291	Total Quality Management	3
BUS 201	Project Management	3
HMN 101	Introduction to Humanities	3
ACC 101	Accounting I	3
ECO 111	Introduction to Microeconomics	3
		15
Semester 4		
BSL 201	Business Law	3
ECO 211	Introduction to Macroeconomics	3
LOG 294	International Logistics	3
MNG 284	Management and Supervision	3
SBS 201	Social/Behavioral Science	3
LOG 297	Internship **or**	4
LOG 298	Co-op Educational Experience	
		19
Second Year Totals		**34**
Program Totals		**65**
Minimum Credits to Graduate		**65**

Precision Machining Technology (AAS)

Program Objective
The Precision Machining Technology program prepares graduates for entry-level work in the machining field. Students learn about safety, tools, equipment, conventional lathes, mills, and surface grinders, computer numerical machines (CNC), materials, heat treating, metallurgy and precision measuring instruments.

Career Opportunities
Graduates work as machinists, machine set-up technicians, maintenance machinists, computer numerical control operators, CNC set-up technicians, and quality control technicians.
Typical employers in the machine trade career include machine tool and product manufacturers; custom job shops; research laboratories; plastics industries; wholesale and retail machine tool sales; aircraft, shipbuilding, and automobile manufacturing industries.

Program Goals
- Graduates will acquire the skills necessary to obtain an entry-level position in the machining field.
- Graduates will demonstrate safe machine shop practices and understand how important they are in the machining environment.
- Graduates will acquire the skills needed to set-up and operate manual lathes and milling machines as well as CNC lathes and CNC mills.
- Graduates will acquire a foundation of education and skills for career advancement and lifelong learning.

Pregnancy Policy
It is not required to tell the instructor if you are pregnant but it is highly recommended because of the lifting and other requirements of the program that may jeopardize the health of the mother and fetus.

Precision Machining Technology
Major Courses (48 Credits)

PMT 121	Safety & Tool Usage	4
PMT 122	Engine Lathe Set-up & Operation	4
PMT 123	Milling Machine Set-up & Operation	4
PMT 124	Combined Machine Practices	4
PMT 125	CNC Lathe Set-up & Operation	4
PMT 126	CNC Milling Set-up & Operation	4
PMT 221	Machining Management	4
PMT 222	Computer Aided Design/Quality Control	4
PMT 223	Computer Aided Machining - Applied	4
PMT 224	Comprehensive Machining Processes	4
PMT 225	Grinding Set-ups and Operations	4
PMT 226	Applied Machining Practices	4
	or PMT 227 **or** PMT 228	
PMT 227	Internship	4
PMT 228	Co-op Educational Experience	4
General Education Core (18 Credits)		
BUS 101	Introduction to Business	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
MAT 101	College Algebra I and Trigonometry	3
MAT 110	Trigonometry	3
Electives (2/3 Credits)		2/3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**69**

Precision Machining Technology
Associate in Applied Science (AAS)
Semester Program Outline

		Credits
Semester 1		
PMT 121	Safety & Tool Usage	4
PMT 122	Engine Lathe Set-up & Operation	4
PMT 123	Milling Machine Set-up & Operation	4
BUS 101	Introduction to Business	3
ENG 101	English Composition I	3
FS 101	Freshman Seminar	1
		19
Semester 2		
PMT 124	Combined Machine Practices	4
PMT 125	CNC Lathe Set-up & Operation	4
PMT 126	CNC Milling Set-up & Operation	4
MAT 101	College Algebra I and Trigonometry	3
CPT 101	Microcomputer I	3
		18
First Year Totals		**37**
Semester 3		
PMT 221	Machining Management	4
PMT 222	Computer Aided Design/Quality Control	4
PMT 223	Computer Aided Machining - Applied	4
ENG 212	Public Speaking	3
MAT 110	Trigonometry	3
	Elective	2/3
		20/21
Semester 4		
PMT 224	Comprehensive Machining Processes	4
PMT 225	Grinding Set-ups and Operations	4
PMT 226	Applied Machining Practices	4
	or PMT 227 **or** PMT 228	
PMT 227	Internship	
PMT 228	Co-op Educational Experience	
		12
Second Year Totals		**32/33**
Program Totals		**69/70**
Minimum Credits to Graduate		**69**

Radiologic Technology (AS)

Program Objective
The Radiologic Technology program prepares students for entry-level positions in a hospital or outpatient clinical setting. Graduates will be prepared to take the national license examination to become registered radiographers.

Career Opportunities
Graduates can work as technologists in hospitals, medical service centers, and outpatient imaging centers or with additional training, graduates of the program can qualify to work as CT and MRI technologists, radiation therapists, mammographers, plus many other special imaging modalities.

Program Mission Statement
The mission of the Radiologic Technology Program at Johnson College is to develop competent, professional radiographers whose expertise will meet the community they serve by providing patient- centered care in a professional, compassionate and responsible manner.

Program Vision Statement
The vision of the Radiologic Technology Program at Johnson College is rooted in the ideals set forth by Orlando Johnson; to provide industry-focused learning and to prepare graduates to compete and excel in the working community

What do Radiologic Technologists do?
The radiologic technologist must be well educated. In addition to learning numerous positions to obtain a medical diagnosis, one must have well developed knowledge of the human body and the variances of different pathological conditions. Along with positioning a radiographic technologist learns the dynamic of the procedures of x-rays and mechanics of the equipment, safe radiation practices, and collaborative learning in the medical environment.

Programmatic Accreditation
The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology (JCERT)
20 North Wacker Drive, Suite 2850 Chicago, IL 60606-3182
(312) 704-5300 E-mail: mail@jrcert.org

Program Goals

Goal One: Graduates will possess the skills necessary to obtain an entry-level radiologic position

Student learning outcome

- Graduates will demonstrate competence in position skills.
- Graduates will be able to utilize the knowledge to set appropriate technical factors.
- Graduates will practice safe radiation practices.

Goal Two: Graduates will understand the importance of professional behavior and life-long learning.

Student learning outcome

- Students/Graduates will be a responsible member of the healthcare team.
- Students/Graduates will display professionalism in the medical environment.
- Students/Graduates will demonstrate a good work ethic in the clinical environment.

Goal Three: Graduates will possess the appropriate skills needed for decision-making and critical thinking, and make professional advancement within the Radiologic Technology field.

Student learning outcome

- Graduates will partake in personal and professional growth opportunities.
- Students/Graduates will assess patient condition and adjust the situation or procedure accordingly.
- Students/Graduates will demonstrate the necessary oral and written communication skills.

Goal Four: Graduates will meet the needs of the patient.

Student learning outcome

- Graduates will be able to critique images for diagnostic purpose.
- Graduate will be able to adjust standard procedures to meet the needs of the individual patient for non-routine exams.

Required Courses

Required courses in high school include Algebra I and Algebra II or Geometry, Biology and Chemistry.

Recommended Courses

Recommended courses include Physics and math courses higher than Algebra II.

Special Admissions Requirements
A minimal Scholastic Aptitude Test (SAT) score of 900 for combined math and verbal or a minimal American College Test (ACT) of 20 is required for admission. The new writing component of the SAT will be reviewed by the Admissions Office and may assist in determining placement and/or admission to the College.
Applicants must take either Biology or Chemistry and attain a grade of "C" or higher. A completed Radiologic Technology questionnaire must be submitted. Application deadline is February 15 of each year.

Special Enrollment Requirements
Prior to the start of the first semester, students must provide proof of eight hours of observation in a Radiology department, a hepatitis B vaccination, and verification of healthcare coverage.

Special Fees
In addition to tuition and fees, Radiologic Technology students will have a summer practicum fee of $1,200.00. Students are responsible for the costs of required health exams and immunizations.

Retention
Throughout the program of study, students are required to maintain a cumulative Grade Point Average (GPA) of at least 2.00 and a minimum grade of 2.33 in each Radiologic Technology major course in order to remain in the program. Students who do not meet the GPA requirements for Radiologic Technology subjects will be placed on Academic Probation as outlined in the **Radiologic Technology Handbook**.

Clinical Practicums
Clinical practicum rotations at approved sites must be completed. Students must satisfy the clinical requirements of both Johnson College and the clinical provider as a condition of graduation.

Clinical sites require criminal background checks, fingerprinting, child abuse clearance and drug testing. Clinical sites may bar students from clinical rotations if a criminal record exists or a drug test has a positive result.

Pregnancy Policy
It is the student's choice whether or not to inform the Department Chairperson and Clinical Coordinator of a pregnancy. If a student chooses not to do so, no accommodations can be made to the student's clinical assignment or program of study. Students who choose to disclose their pregnancy are required to follow the guidelines of the Pregnancy Policy as stated in the **Radiologic Technology Student Handbook**.

Student Handbook
Radiologic Technology students are responsible for reading and abiding by all policies and procedures in the **Radiologic Technology Student Handbook.**

Program Effectiveness

The JRCERT requires the Program's Effectiveness Data be made available to the general public. Johnson's Radiology Program effectiveness data is below.

Radiology Program Effectiveness Data Criteria	**Result**
5 year average pass rate on the national certification examination in Radiography	99%
5 year average job placement rate	86%
2011 program completion rate	73%

Radiologic Technology
Major Courses (37 credits)

RAD 132	Radiologic Positioning I/Lab	4
RAD 133	Radiologic Exposures & Principles I/Lab	4
RAD 134	Introduction to Radiology/Patient Care	2
RAD 135	Radiologic Positioning II/Lab	4
RAD 136	Radiologic Exposures & Principles II/Lab	4
RAD 137	Radiologic Nursing Procedures	1
RAD 138	Radiation Biology & Protection	3
RAD 231	Radiologic Pathology	2
RAD 233	Image Analysis	2
RAD 234	Advanced Exposures	2
RAD 236	Advanced Medical Imaging	2
RAD 237	Registry Seminar	2
PRA 131	Clinical Practicum I	1
PRA 132	Clinical Practicum II	1
PRA 231	Clinical Practicum III	1
PRA 232	Clinical Practicum IV	1
Related Courses (10 credits)		
HAP 101	Human Anatomy & Physiology I	3
HAP 102	Human Anatomy & Physiology II	3
MTR 100	Medical Terminology	1
PHY 101	Introductory Physics	3
PHY 201	Imaging Physics	3
General Education Core (21 credits)		
CPT 101	Microcomputer I	3
HMN 101	Introduction to Humanities	3
ENG 101	English Composition I	3
ENG 211	Communication Theory	3
or ENG 212	Public Speaking	3
MAT 101	College Algebra I and Trigonometry	3
or MAT 201	College Algebra II and Trigonometry	3
MAT 121	Introduction to Statistics	3
SBS 201	Social Behavioral Science	3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**72**

Radiologic Technology
Associate in Science (AS)
Semester Program Outline

		Credits
Semester 1		
RAD 132	Radiologic Positioning I/Lab	4
RAD 133	Radiologic Exposures & Principles I/Lab	4
RAD 134	Introduction to Radiology/Patient Care	2
HAP 101	Human Anatomy & Physiology I	3
MAT 101	College Algebra I and Trigonometry	3
or MAT 201	College Algebra II and Trigonometry	
MTR 100	Medical Terminology	1
FS 101	Freshman Seminar	1
		18
Semester 2		
PRA 131	Clinical Practicum I	1
RAD 135	Radiologic Positioning II/Lab	4
RAD 136	Radiologic Exposures & Principles II/Lab	4
RAD 137	Radiologic Nursing Procedures	1
HAP 102	Human Anatomy & Physiology II	3
PHY 101	Introductory Physics	3
ENG 101	English Composition I	3
		19
Summer Session I		
PRA 132	Clinical Practicum II	**2**
First Year Totals		**39**

Radiologic Technology
Associate in Science (AS)
Semester Program Outline

		Credits
Semester 3		
PRA 231	Clinical Practicum III	1
RAD 138	Radiation Biology & Protection	3
RAD 233	Image Analysis	2
RAD 234	Advanced Exposures	2
CPT 101	Microcomputer I	3
ENG 211	Communication Theory	3
or ENG 212	Public Speaking	
PHY 201	Imaging Physics	3
		17
Semester 4		
PRA 232	Clinical Practicum IV	1
RAD 231	Radiologic Pathology	2
RAD 236	Advanced Medical Imaging	2
RAD 237	Registry Seminar	2
HMN 101	Introduction to Humanities	3
MAT 121	Introduction to Statistics	3
SBS 201	Social/Behavioral Science	3
		16
Second Year Totals		**33**
Program Totals		**72**
Minimum Credits to Graduate		**72**

Veterinary Technology (AS)

Program Objective
The Veterinary Technology program prepares students to join an animal-care team as entry-level technicians. Technicians collect samples, perform lab tests, take radiographs, prepare the surgical suite, assist in surgery, monitor anesthesia, provide general nursing care to patients, and assume other clinical duties. Second-year students complete clinical rotations in the Animal Care Center, a pet wellness center on the campus of Johnson College. The program prepares students to become Certified Veterinary Technicians (CVT) upon passing the Veterinary Technician National Exam (VTNE).

Career Opportunities
Graduates work in many areas of veterinary medicine such as small and large animal clinics, private practice, research facilities, academia, zoos, laboratories, pharmaceutical companies, and government agencies such as the United States Department of Agriculture (USDA).

Program Goals
- Graduates will possess the skills necessary as outlined by the CVTEA required tasks for licensure/certification as an entry-level Veterinary Technician
- Graduates will posses skills that will enable continuing education within the veterinary technology profession.
- Graduates will abide by the NAVTA Veterinary Technician Oath.

Programmatic Accreditation
The Veterinary Technology program is accredited by the American Veterinary Medical Association (AVMA).

Recommended Courses
Recommended courses in high school include Physics, and math courses at a level of Algebra II or higher.

Special Admissions Requirements
A minimal high school grade point average (GPA) of 2.5 along with a minimal Scholastic Aptitude Test (SAT) score of 1300 total or a minimal American College Test (ACT) of 18 is required for admission.

Applicants must take Biology and Chemistry and attain a grade of "C" or higher. A completed Veterinary Technology questionnaire must be submitted and ten hours of observation at a veterinary clinic is required. Application deadline is February 15 of each year.

Special Enrollment Requirements
Prior to the start of the first semester, students must provide proof of a tetanus inoculation. Rabies inoculation is also required to participate in any laboratory and clinical activities involving animals.

Special Fees
In addition to tuition and fees, students are responsible for the purchase of clinic, lab, and class supplies as well as the costs of immunizations. Veterinary students will have a fee of $1,000.00 to cover the cost of a summer off-campus internship or cooperative education experience.

Retention
Veterinary Technology students are required to maintain a cumulative 2.33 GPA (76% or higher) in VET courses. Additionally, a student must receive an average grade of "C" (72% or higher) or higher in each VET course. If the student's GPA falls below 2.33, the student will be placed on academic probation. Please review to the Veterinary Technology Program Syllabus for details concerning academic progress and probation details.

VET 204 and VET 208, Senior Clinical Rotations I and II are capstone courses. The clinical experiences are to provide an environment allowing students to incorporate and enhance all AVMA required tasks. Students must receive a score of 70% or better on Clinical Rotation written final exams, oral/practical exams, and instructor evaluations of students. Students who do not obtain a minimum score of 70% in any of the three evaluations will receive a letter grade of "F" for the rotation and must repeat the course. Students are also required to adhere to strict guidelines on patient neglect or cruelty.

Internship/Cooperative Education Experience
A five-week internship or cooperative education experience at an approved site must be completed after the last semester of the second year. Students must satisfy the internship requirements of both Johnson College and the internship provider as a condition of graduation.

Some internship sites may require a criminal background check and/or a drug test. Internship sites may bar students from an internship if a criminal record exists or a drug test has a positive result. Costs for travel to and from an internship site are the responsibility of the student.

Pregnancy Policy
Students should contact the Veterinary Technology Department Chair for a copy of the program's pregnancy policy.

Veterinary Technology Major Courses (47 Credits)

VET 101	Introduction to Veterinary Technology/Clinical Mgmt.	1
VET 102	Clinical Applications for Large Animals	2
VET 102L	Clinical Applications for Large Animals Lab	2
VET 103	Clinical Applications for Small Animals	2
VET 103L	Clinical Applications for Small Animals Lab	1
VET 104	Animal Anatomy and Physiology I	3
VET 104L	Animal Anatomy and Physiology Lab I	1
VET 105	Animal Anatomy and Physiology II	3
VET 105L	Animal Anatomy and Physiology Lab II	1
VET 106	Animal Husbandry/Breeds/Nutrition	2
VET 201	Pharmacology & Anesthesia	3
VET 202	Clinical Pathology	2
VET 202L	Clinical Pathology Lab	1
VET 203	Parasitology	2
VET 203L	Parasitology Lab	1
VET 204	Clinical Rotation I	1
VET 205	Surgical Nursing I and Lab	2
VET 206	Microbiology & Immunology	2
VET 206L	Microbiology & Immunology Lab	1
VET 207	Surgical Nursing II and Lab	2
VET 208	Clinical Rotation II	1
VET 209	Veterinary Radiology	1
VET 210	Intensive Care Applications	3
VET 211	Diseases & Zoonoses	3
VET 212	Internship	4
or VET 213	Co-op Educational Experience	4
General Education Core (18 Credits)		
BUS 101	Introduction to Business	3
CHE 101	Chemistry I	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
ENG 212	Public Speaking	3
MAT 101	College Algebra I	3
Electives (2/3 Credits)		2/3
Other requirements		
FS 101	Freshman Seminar	1
Minimum Credits to Graduate		**68**

Veterinary Technology
Associate in Science (AS)
Semester Program Outline

		Credits
Semester 1		
VET 101	Introduction to Veterinary Technology/Clinical Management	1
VET 102	Clinical Applications for Large Animals	2
VET 102L	Clinical Applications for Large Animals Lab	2
or VET 103	Clinical Applications for Small Animals	2
VET 103L	Clinical Applications for Small Animals Lab	1
VET 104	Animal Anatomy & Physiology I	3
VET 104L	Animal Anatomy & Physiology Lab I	1
MAT 101	College Algebra I	3
ENG 101	English Composition I	3
FS 101	Freshman Seminar	1
		15/16
Semester 2		
VET 102	Clinical Applications for Large Animals	2
VET 102L	Clinical Applications for Large Animals Lab	2
or VET 103	Clinical Applications for Small Animals	2
VET 103L	Clinical Applications for Small Animals Lab	1
VET 105	Animal Anatomy and Physiology II	3
VET 105L	Animal Anatomy and Physiology Lab II	1
VET 106	Animal Husbandry/Breeds/Nutrition	2
VET 203	Parasitology	2
VET 203L	Parasitology Lab	1
CHE 101	Chemistry I	3
ENG 212	Public Speaking	3
		18/19
First Year Totals		**34**

Veterinary Technology
Associate in Science (AS)
Semester Program Outline

Semester 3		
VET 201	Pharmacology & Anesthesia	3
VET 202	Clinical Pathology	2
VET 202L	Clinical Pathology Lab	1
VET 204	Clinical Rotation I **OR** VET 208 Clinical Rotation II	1
VET 205	Surgical Nursing I and Lab	2
VET 206	Microbiology & Immunology	2
VET 206L	Microbiology & Immunology Lab	1
BUS 101	Introduction to Business	3
		15
Semester 4		
VET 207	Surgical Nursing II and Lab	2
VET 208	Clinical Rotation II **OR** VET 204 Clinical Rotation I	1
VET 209*	Veterinary Radiology	1
VET 210	Intensive Care Applications	3
VET 211	Diseases & Zoonoses	3
CPT 101	Microcomputer I	3
	Elective	2/3
		15/16
Summer Semester		
VET 212	Internship **or**	4
VET 213	Co-op Educational Experience	4
		19/20
Second Year Totals		**34/35**
Program Totals		**68/69**
Minimum Credits to Graduate		**68**

* Must be taken concurrently with VET 204 offered in Semester 3 & 4.

CERTIFICATE PROGRAMS

Diesel Preventative Maintenance Technology (Certificate)

The Diesel Preventative Maintenance Technician program prepares students to enter the workforce ready to perform routine repair procedures, preventive maintenance, and safety applications.

Graduates work as brake technicians as well as perform routine maintenance and make general repairs.

Typical employers of Diesel Preventative Maintenance technicians are truck, farm, and earth-moving equipment dealerships; trucking companies; truck service centers; engine repair/machine shops; truck equipment distributors; independent service garages.

Diesel Preventative Maintenance Technology Major Courses (32 Credits)		
DTT 141	Introduction to Truck/Trailer Service Field	4
DTT 142	Air Brake Systems	4
DTT 143	Steering & Suspension	4
DTT 144	Electrical & Electronic Systems	4
DTT 145	Diesel Fuel Injection Systems	4
DTT 146	Diesel Engine Overhaul	4
DTT 241	Diesel Engine Performance and Tune-up Procedures	4
DTT 242	Manual Transmission Overhaul	4
Related Courses (3 Credits)		
IET 101	Introduction to Automotive and Diesel Electronics	3
General Education Core (9 Credits)		
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
BUS 101	Introduction to Business	3
Electives	**(6 credits)**	3
Minimum Credits to Graduate		**50**

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit our website at http://www.johnson.edu/prospective-students/certificate-programs-gainful-employment/

DIESEL PREVENTATIVE MAINTENANCE TECHNOLOGY CERTIFICATE

Semester Program Outline

Semester 1

DTT 141	Introduction to Truck/Trailer Service Field	4
DTT 142	Air Brake Systems	4
DTT 143	Steering & Suspension	4
IET 101	Intro. to Auto & Diesel Electronics	3
(* MAT 0100	College Prep Algebra-based on Accuplacer)	3
Total Semester 1		**15/18***

Semester 2

DTT 144	Electrical & Electronic Systems	4
DTT 145	Diesel Fuel Injection Systems	4
DTT 146	Diesel Engine Overhaul	4
CPT 101	Microcomputer I	3
Total Semester 2		**15**

SUMMER SESSION

BUS 101	Introduction to Business	3
ENG 101	English Composition I	3
Total Summer Session		**6**

Semester 3

DTT 241	Diesel Engine Performance & Tune-Up	4
DTT 242	Manual Transmission Overhaul	4
ELECTIVE		3
ELECTIVE		3
Total Semester 3		**14**

TOTAL CREDITS CERTIFICATE **50 / 53***

Welding Technology (Certificate)

The Welding Technology certificate course prepares students for entry-level work in the welding industry. Students learn about safety, hand tools, oxy-acetylene torches, plasma arc, shielded metal arc welding (stick), gas metal arc welding (MIG), gas tungsten arc welding (TIG), flux cored arc welding, metallurgy, print reading, and weld symbols.

Graduates work as welders, welder/fabricators, maintenance welders, fitters, ornamental metal sculptors, and welder helpers.

Typical employers in the welding industry include structural steel fabricators, custom metal shops, industrial contractors, shipyards, pipe and pressure vessel fabricators, and retail welding sales.

Welding Technology Major Courses (30 Credits)		
WTC 101 *	Welding Fundamentals	4
WTC 102	Shielded Metal Arc Welding I	4
WTC 103	Shielded Metal Arc Welding II	4
WTC 104	Shielded Metal Arc Welding III	3
WTC 105	Gas Metal and Flux Cored Arc Welding	4
WTC 106	Gas Tungsten Arc Welding	4
WTC 107	Pipe Welding I	4
WTC 108	Pipe Welding II	3
Related Courses (6 Credits)		
BRT 101	Blueprint Reading	3
MAT 100	Math for Welders	3
General Education Courses (6 Credits)		
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
Minimum Credits to Graduate		**42**

For more information about our graduation rates, the median debt of students who completed the program, and other important information, please visit our website at http://www.johnson.edu/prospective-students/certificate-programs-gainful-employment/

*****All major welding courses will be held at the College's welding shop. This is a satellite location. This location is at 2001 Rosanna Ave., Scranton, PA. The Welding Shop is approximately 1.5 miles from the Main Campus located at 3427 North Main Avenue, Scranton.

WELDING TECHNOLOGY CERTIFICATE

Semester Program Outline

Semester 1

WTC 101	Welding Fundamentals	4
WTC 102	Shielded Metal Arc Welding I	4
WTC 103	Shielded Metal Arc Welding II	4
WTC 104	Shielded Metal Arc Welding III	3
BRT 101	Blueprint Reading	3
MAT 100	Math for Welders	3
Total Semester 1		**21**

Semester 2

WTC 105	Gas Metal & Flux Cored Arc Welding	4
WTC 106	Gas Tungsten Arc Welding	4
WTC 107	Pipe Welding I	4
WTC 108	Pipe Welding II	3
CPT 101	Microcomputer I	3
ENG 101	English Composition I	3
Total Semester 2		**21**

TOTAL CREDITS CERTIFICATE 42

COURSE DESCRIPTIONS

Programs of Study

Architectural Drafting & Design Technology

This course prepares students with skills labeled by the Commonwealth ofPennsylvania as those used in traditional or evolving green occupation

Course No.	Course Title	Credits
ADT 111	**Introduction to Drafting**	**4**

This course is an introduction to basic drafting. It explores the importance of drafting, the required tools and equipment, and the production of orthographic and isometric drawings.

ADT 112 **Site Plans and Details** **4**

This course introduces site planning. The course also covers detailing and sectioning of drawings needed for Residential Construction. It introduces Green Building Techniques into the detailing process on the contract drawings.
Prerequisite: ADT 114

ADT 113 **Residential Planning** **4**

This course is instruction on residential drawing. The course explains floor plans, elevations and basic structural drawing work in detail. The course continues to accommodate Green Building Technology where it applies to the construction design.
Prerequisite: ADT 114

ADT 114 **Introduction to Computer Assisted Drafting (CAD)** **4**

This course introduces computers into drafting. It explains basic CAD commands required to produce working drawings.

ADT 115 **Residential Working Drawings** **4**

This course expands on the procedures for developing architectural residential drawings. It explains interior and exterior finishes and interior space planning and includes creation of related schedules and details.
Prerequisite: ADT 114

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ADT 116 **Residential Building Systems** **4**

This course introduces students to the various systems within a residential project. It includes development of electrical, plumbing and HVAC plans. It explains Green Building Technology as it relates to Residential Systems.
Prerequisite: ADT 114/115

ADT 213 **Codes and Ordinances** **4**

This course emphasizes the design and preparation of construction drawings with regard to building regulations for the protection of public health, safety, and welfare. It includes standards necessary for computer drafting. The course explains what it means to be Sustainable and what practices are used in Green Building Technology for commercial buildings.
Prerequisite: ADT 114

ADT 214 **Specifications I** **4**

This course emphasizes specifications and their relationship to drawing plans and related details. This course covers specifications for site work, concrete, masonry, metals, wood, plastics and related computer drafting.
Prerequisite: ADT 114

ADT 215 **Specifications II** **4**

This course continues to explore project specifications and their relationships to plans and details. This course covers specifications for thermal and moisture protection, doors, windows, finishes, specialties and related computer drafting. *Prerequisite:* ADT 114

ADT 216 **Applied Architectural Drafting** **4**

This course is a requirement for students not participating in an internship. It will provide practical on-campus experience in active design and facilities management projects.

ADT 217 **Internship** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)

ADT 218 **Cooperative Educational Experience** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

ADT 220 **Building Information Modeling I** **4**

The course expands computer skills to include Building Information Modeling. This course includes simple residential building modeling and presentation of the projects in multi-views. It will also include drawing sections, drawing annotation and 3D-views.
Building Information Modeling is the foundation for advanced sustainability design.

ADT 221 **Building Information Modeling II** **4**

This course expands computer skills in Building Information Modeling. This course will include more complex, multi-story commercial building models. It will also include building sections, call out views along with 3D views and schedules for the project.

Automotive Technology

Course No.	Course Title	Credits

AUT 141 **Introduction to Automotive Service Field/ New & Used Vehicle Preparation** **4**

This course covers information on hand tools, machines, and equipment common to the automotive field, general service procedures, lubricants, reference manuals, and pre-delivery inspection of new and used cars. Operations and jobs are completed on components and complete vehicles to reinforce the information presented.

AUT 142 **Hydraulic Brake Systems** **4**

This course covers information on hydraulic brake systems: mechanical system principles, major components, disc and drum brakes assembly, master cylinder and wheel cylinder operations, hydraulic lines and hoses, brake switches, bleeding hydraulic brake systems, antilock brake principles and service. *Prerequisite:* AUT 141

AUT 143 **Steering and Suspension** **4**

This course covers information on steering and suspension systems, theory and principles, independent suspensions, geometric principles, four-point wheel alignment, factors affecting wheel alignment, tools and equipment used for steering and suspension, troubleshooting of suspension and steering, wheel bearings service, manual steering, power steering systems operation. *Prerequisite:* AUT 142

AUT 144 **Electrical & Electronic Systems** **4**

This course covers information on electricity, basic electrical circuits, tool and equipment, batteries, charging systems, starting systems, lighting systems, horn, wipers and washers, cooling fans, instrument circuits, body electrical systems. *Prerequisite:* AUT 143

AUT 145 **Engine Performance & Emissions** **4**

This course covers information and practical experience on the operation and approved servicing of emission systems, computerized emission control systems, computerized engine procedures and live vehicles to reinforce the information presented. *Prerequisite:* AUT 144

AUT 147 **Automotive Fuels & Emissions** **4**

This course covers information and practical experience on the operation and approved servicing of fuel injection systems, introduction to fuel injection systems, closed-loop theory, closed-loop diagnostics, and basic troubleshooting. This information is conveyed through live vehicle work. *Prerequisite:* AUT 145

AUT 241 **Engine Overhaul** **4**

Information and practical experience is provided for engine overhaul procedures. The latest high priority tasks recommended by ASE (Automotive Service Excellence) are taught. This will prepare students to take the Mechanic Certification Test in engine repair. Emphasis is placed on the repair of cylinder heads, valve trains, and engine blocks.
Prerequisite: AUT 146

AUT 242 **Diesel Fuel Injection** **4**

This course covers information and operation of the diesel fuel injection systems. An in-depth study of safety procedures, preventive maintenance, and distinctions between General Motors, Dodge and Ford are stressed. *Prerequisite:* AUT 241

AUT 243 **Heating & Air Conditioning** **4**

This course covers information on the operation of heating and air conditioning as applied to today's cars and trucks. New learning experiences in the troubleshooting and servicing of these systems are taught. High priority tasks recommended by ASE (Automotive Service Excellence) are covered. This will prepare students to take the Mechanic Certification Test in heating and air conditioning.
Prerequisite: AUT 242

AUT 244 **Automatic Transmissions** **4**

This course covers the information and practical experience necessary to service automatic transmissions. Systematic troubleshooting procedures, adjustments, and unit overhaul are a part of this program. The latest high priority tasks recommended by ASE (Automotive Service Excellence) are presented. This will prepare students to take the Mechanic Certification Test in Automatic Transmissions. *Prerequisite:* AUT 243

AUT 245 **Manual Transmissions & Differentials** **4**

This course covers the theory and service experience on complete power-train systems for front-, rear-, and four-wheel drive vehicles. New learning experiences include inspection, replacement, servicing, and

rebuilding of manual transmissions, transaxles, locking hubs and power take-off systems. In addition, servicing, troubleshooting and overhaul for 4-wheel drive differentials and drive differentials and drive shafts will be covered. *Prerequisite:* AUT 244

AUT 247 Internship 4

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)

AUT 248 Cooperative Educational Experience 4

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

AUT 249 Automotive Electrical Technology 4

This course covers information directly related to IET 101 – Introduction to Automotive and Diesel Electronics in an industrial application. Practical use of theory and principles will be utilized in order to identify and diagnose different electrical and electronic concerns.
Prerequisite: AUT 245

IET 101 Introduction to Automotive & Diesel Electronics 3

This course will provide the student with an understanding of DC electric principles and the different electronic devices seen in modern diesel and automotive vehicles. It will explain instruments and procedures used in testing and measuring these devices.

Biomedical Equipment Technology

This course prepares students with skills labeled by the Commonwealth ofPennsylvania as those used in traditional or evolving green occupation

Course No.	Course Title	Credits

EET 101 **DC Electricity and Instrumentation** **4**

This course introduces the student to the theory and operation of basic DC circuits, circuit construction, operation and troubleshooting. Basic alternative energies technologies are introduced. The student will also gain practical experience in soldering, digital multi-meter usage, and Ohm's Law applications for testing and troubleshooting electric circuits. Elements of proper disposal of batteries and other circuit components considered to be hazardous waste are included.

EET 102 **Alternating Current and Passive Devices** **4**

This course introduces the student to circuitry basic to AC electrical theory. It identifies the fundamental differences between AC and DC energy sources and circuit components. It also introduces oscilloscope usage, AC units, nomenclature and electromagnetism. The course will also cover inductors, transformers, and capacitors and their effects in AC circuits. Work place energy efficiency and conservation habits are included. The concepts of RCL circuits and their use as passive filters will be covered. *Prerequisite:* EET 101

EET 103 **Semiconductors Principles & Applications I** **4**

This course provides an introduction to semiconductor theory, the different types of semiconductor components, their symbols, characteristics, and uses. Basic power supplies and amplifiers are covered, concentrating on characteristic waveforms, theory and troubleshooting. Practice is provided regarding diodes, transistors and circuit applications. Sustainable practices to minimize resources and chemical use are and integral part of the course. *Prerequisite:* EET 102

EET 104 **Semiconductors Principles & Applications II** **4**

This course continues the study of bipolar transistors by introducing their utilization in large signal amplifiers and coupling techniques. Field effect transistors and subfamilies are then covered. The operational amplifier and its characteristics and configurations are thoroughly covered. Amplifier troubleshooting is included, highlighting methods of determining causes and locating problems. The thyristor family of electronic components is introduced by emphasizing characteristics, circuitry, and methods of troubleshooting. *Prerequisite:* EET 103

EET 105 **Digital Electronics I** **4**

This course begins by familiarizing the student with the fundamental gates, numbering systems and simplification techniques used for the implementation of digital circuitry. It continues by discussing different IC specifications and interfacing problems found between different families of digital logic. The later portion of the course studies the different digital codes, seven segment displays and flip-flops with emphasis placed throughout the course on symbology, nomenclature and troubleshooting. Complex programmable logic devices are included throughout this course. *Prerequisite:* EET 104

EET 106 **Digital Electronics II** **4**

This course continues the study of digital electronics by introducing counters, registers, arithmetic logic circuits and digital to analog interfacing. It examines the circuitry of each section with emphasis on characteristic waveforms and troubleshooting. Complex programmable logic devices will be used throughout this course as an additional modeling tool. *Prerequisite:* EET 105

BET 201 **Medical Equipment Standards and Testing** **4**

The student learns the requirements and methods of testing medical equipment for conformance with industry standards and manufacturer's specifications. Students are then introduced to the hierarchy of statutes, regulations, standards including accreditation standards, and hospital policies for medical equipment management and safety. Students perform extensive equipment testing to verify conformance with national standards and manufacturer's specifications. Students learn standard practices for electrical safety testing, equipment management and medical ethics as they pertain to the Biomedical Technician. Equipment management principles that maximize life span and minimize life-cycle costs are stressed. Sustainable practices to minimize resource and chemical use are also emphasized. *Prerequisite:* EET 106

BET 202 Introduction to Medical Telecommunications & Networking 4

This course introduces the student to information and practice regarding data communications, beginning with an overview of what telecommunications is and including understanding of key terms. The student will then learn the fundamentals of modulation, multiplexing, and basics of cabling and cabling terminations. The student will progress to wireless data communication, and on to today's digital networking principles and protocols and their implementation in medical information networks. *Prerequisite:* BET 201

BET 203 Physiological Monitoring Devices 4

The beginning of this course is an explanation of the types of hazards encountered in the hospital environment and the role of the BMET in controlling them. It continues by discussing the different types of transducers and electrodes used with biomedical equipment. The course concludes by examining ECG and pressure monitors, concentrating on the test equipment used to test and verify accuracy. *Prerequisite:* BET 202, EET 106

BET 204 Life Support Systems 4

This course is an overview of the types of medical equipment needed to support patients with life threatening problems. Examples of such equipment are defibrillators, pacemakers, ventilators and hemodialysis units. The function of each type of equipment is discussed. Some pieces of equipment are examined thoroughly in relation to functional testing, preventive maintenance, parts identification, and description of circuits. *Prerequisite:* BET 203

BET 205 Specialized Medical Systems 4

This course describes the different types of specialized medical equipment found in the hospital environment. Lasers, x-ray, ultrasound imaging and nuclear imaging equipment are examples of the topics covered. The basic theory and function of each piece of equipment is explained with emphasis on patient and personal safety. Hands-on testing of ultrasound and x-ray imaging systems are performed. *Prerequisite:* BET 204

BET 207 **Internship** **4**

This experience is designed to expose the student to the actual hospital environment. Students are placed into a hospital after meeting all prerequisites and academic requirements. Students are expected to adhere to all hospital policies and regulations during their internship. The internship exposes students to actual hospitals and their staff, departments, patients, and equipment. In the internship, the student performs preventive maintenance, safety analysis, and minor repairs on selected pieces of medical equipment. (No compensation)
Prerequisite: BET 205

BET 208 **Cooperative Educational Experience** **4**

This work experience is designed to expose the student to an actual clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a cumulative GPA of 2.00, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with their work term facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)
Prerequisite: BET 205

PHA 201 **Physiology and Anatomy** **3**

The structure and functions of the human body as related to biomedical instrumentation are the subject matter covered in this course. Major body systems are discussed, followed by correlations to the physiological variables to be measured and the basic principles of instrumentation that could be used.

Carpentry & Cabinetmaking Technology

Course No.	Course Title	Credits

CCM 161 **Woodworking Tools and Machines I** **4**

Classroom lecture, demonstrations, and intensive, safe use of hand, portable and stationary tools will introduce the student to the woodworking field. Also covered are the various properties of wood, such as species, types, grain direction and defects. Project planning and calculations are covered in this course as well.

CCM 162 **Woodworking Tools and Machines II** **4**

The safe operation of portable and stationary woodworking equipment are the core elements of this course. Through demonstration and guided application the student will be introduced to the use of the portable electric saw, the overhead router, the hand router, the band saw, the portable drill, the drill press, plate joiner, the saber saw and the reciprocating saw. *Prerequisite:* CCM 161

CCM 163 **Kitchen and Bath Design Standards** **4**

The focus of this course is in the design and types of construction of the various cabinets and counters found in a typical residential structure. It is essential that all woodworkers know the sizes, construction, and standards used in the construction industry. This course develops the skills necessary to read a set of drawings to either construct or install cabinetry. *Prerequisite:* CCM 162

CCM 167 **Cabinet and Component Construction** **4**

The focus of this course is the cutting of components and construction of cabinets, faceframes, doors and drawers common to the cabinetmaking industry. The special operations required on specific wood working machinery and the assembly of these cabinets' components is practiced in this course. Hinges, pulls, slides and similar door and drawer hardware are also studied. *Prerequisite:* CCM 163

CCM 166 **Interior Finishes** **4**

Interior finishes is the study and practice of the common materials and procedures used for finishing the interior of a building. Students will be exposed to skills in the safe use of equipment and materials common to the construction industry. Students will be required to demonstrate knowledge of different materials and applications in the construction industry. *Prerequisite:* CCM 162

CCM 168 **Exterior Finishes** **4**

Exterior finishes is the study and practice of the common materials and procedures used for finishing the exterior of a building. Students will be exposed to skills in the safe use of equipment and materials common to the construction industry. Students will be required to demonstrate knowledge of different materials, applications and estimating procedures of the various resources used in the construction industry.
Prerequisite: CCM 162

CCM 261 **Site Preparation and Layout** **4**

This course covers the factors needed to be considered before the start of a building project. The kind of structure, the use of the structure, soil and climate conditions, methods of construction, and placement of the structure on the lot are examples of subjects studied in this course. Elements of the building codes and zoning laws that apply to site layout procedures are also examined in this course.

CCM 262 **Stairs** **4**

This is a course designed to teach the student the basics of stair construction. Covered during this course will be the math calculations necessary to design a safe and functional stairway and the methods of layout and construction necessary to install stairs.

CCM 263 **Floor/Wall Framing Principles** **4**

This course covers the construction terminology, materials, methods and practical lessons in the various types of floor and wall framing principles found in the construction industry today. Student involvement with building codes, construction terminology, materials estimating and proper construction techniques give the student a broad knowledge of modern construction practices.

CCM 264 **Roof Framing Principles I** **4**

Extensive study and practice in the framing of a common gable roof are the main elements of this course. Construction terminology, safe framing practices to follow when framing a gable roof, application of building codes, solving rafter lengths and cutting and fitting rafters are all considered. Estimating materials and roof coverings concludes this course.

CCM 265 **Roof Framing Principles II** **4**

This course is designed as a study of and practice in the construction principles of the many different and complicated roof systems found in the construction industry today. Beginning with the hip roof, then the intersecting roof and special roof systems, such as an unequal slope roof system, this course offers the specialized framing skills sought in industry. *Prerequisite:* CCM 264

CCM 266 **Applied Industrial Practices** **4**

This course is designed so the student can practice and further enhance the carpentry skills experienced through all previous modules. Emphasis will be placed on the quality of work and the development of a positive work ethic.

CCM 267 **Internship** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)

CCM 268 **Cooperative Educational Experience** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

Computer Information Technology

Course No.	Course Title	Credits

CIT 161 **Computer Hardware** **4**

The focus of this course includes, but is not limited to the essential skills needed to assemble, configure, repair, upgrade, optimize and perform preventative maintenance on personal computer hardware. This course also covers topics such as safety and environmental issues, as well as communication and professionalism. Knowledge and hands-on experience gained in this course will help prepare students for the CompTIA A+ Essentials and Practical Application certification examinations.

CIT 162 **Computer Operating Systems** **4**

The focus of this course includes, is but is not limited to the essential skills and information a student will need to install, upgrade, repair, configure, troubleshoot, optimize, and perform preventative maintenance of basic personal computer operating systems and related software applications. This course also covers topics such as safety and environmental issues as well as communication and professionalism. Knowledge and hands-on experience gained in this course will help prepare students for the CompTIA A+ Essentials and Practical Application certification examinations. *Prerequisite:* CIT 161

CIT 163 **Network Architectures, Principles, and Protocols** **4**

The focus of this course includes, but is not limited to a vendor-neutral view of the knowledge and hands-on practice necessary to design, install and support the modern networking systems. This course builds the student's knowledge of network media, topologies, protocols and standards, as well as network implementation methods and support skills. This course also covers topics such as safety, environmental issues and professionalism. Knowledge and hands-on experience gained in this course will help prepare students for the CompTIA A+ Essentials and Practical Application and Network+ certification examinations.
Prerequisites: CIT 161, CIT 162

CIT 164 **TCP/IP Network Design Configuration and Maintenance 4**

The focus of this course includes, but is not limited to basic and advanced concepts of network and computer addressing with TCP/IP, both v4 and v6. This course provides groundwork information needed for network design, management, maintenance and support. Students will learn to install, configure and support TCP/IP on both Microsoft and Linux based networks, as well as install and support TCP/IP applications and services. Knowledge and hands-on experience gained in this course will help prepare students for the CompTIA A+ Essentials and Practical Application certification examinations, as well as many Cisco certification examinations. *Prerequisites:* CIT 161, CIT 162, CIT 163

CIT 165 **Information System Security Design and Administration 4**

The focus of this course includes, but is not limited to most theory and hands-on experience necessary to pass the Certified Information Systems Security Professional (CISSP) certification examination. Students will learn to design and implement a secure and reliable Local Area Network environment. The administration of both Windows and Linux users, groups and their permissions within the network environment, as well as drafting many relevant IT security policy statements, physical security of a network environment will be covered in depth. Students will also begin to prepare a Disaster Recovery plan for a sustainable & secure network environment; students will use this to begin building their own unique portfolio. *Prerequisite:* CIT 164

CIT 166 **Linux Networking Service and Support 4**

The focus of this course includes, but is not limited to the exploration of tools, techniques, procedures and utilities necessary to design, implement and support a Linux-based Local Area Network. The coursework includes comprehensive details of potential areas of network and system configuration, troubleshooting, performance monitoring, fine-tuning and writing shell scripts for the purpose of performance monitoring and troubleshooting in a Linux environment will be covered in depth.
Prerequisite: CIT 163 and CIT 164

CIT 261 **LAN/WAN Design and Maintenance Principles** **4**

The focus of this course includes, but is not limited to the exploration of factors essential to effective Local and Wide Area Network designs, implementation and maintenance. Students will explore the installation, configuration, and support of Cisco and open source technologies in both LAN and WAN routed environments. Students will also learn to diagnose and resolve unexpected LAN/WAN related problems. The design, implementation and maintenance of VLANS will also be covered. Knowledge and hands-on experience gained in this course will help prepare students for the CCNA exanimation certification.
Prerequisites: CIT 163 and CIT 164

CIT 262 **Server and Network Operating System Principles** **4**

The focus of this course includes, but is not limited to the theory and hands-on experience related to both on-site and remote service and support network servers. Coursework includes the interconnection of multiple servers with diverse network operating systems, as well as multiple workstations with diverse operating systems in a multiple VLAN environment. *Prerequisite:* CIT 163

CIT 263 **Advanced Network Operating System Principles** **4**

The focus of this course includes, but is not limited to advanced principles and hands-on experience related to industry standard server Network Operating System platforms and server virtualization. Installation, configuration and remote administration of both Host Network Operating Systems and Guest Network Operating Systems will be covered in detail. Techniques relating to service and support of both Microsoft and Linux based server platforms, as well as e-mail platforms Microsoft Internet Information Server and Apache Web server will also be covered in detail. The practical use of various server software and the issues encountered during the integration of a company DMZ with a typical company intranet and the Internet will be covered.
Prerequisite: CIT 163, CIT 261 and CIT 262.

CIT 264 **Web Programming I** **4**

The focus of this course includes, but is not limited to the knowledge and techniques necessary to author industry standard web pages using HTML, XML, CSS, and Java script. Students will analyze problems and develop solutions for a typical company web page, as well as the web pages installation and support on both Windows Internet Information Server and Linux Apache Web Server platforms. Students will also be exposed to basic techniques used to resolve database issues.

Prerequisites: CIT 261, CIT 262, CIT 263, MAT 101, DAT 201, PRG 101

CIT 265 **Systems Analysis and Design** **4**

The focus of this course includes, but is not limited to system analysis and design techniques. Students will learn to use the appropriate systems development methodologies and follow the life cycle of equipment. Students will use the methodology and/or the information center techniques learned in previous courses to achieve a working solution to system development problems. Emphasis will be placed on the fundamentals of systems analysis and design of real world solutions to typical business related system problems. The course will culminate in the creation of a functional prototype of the student's own design. Students will then integrate their perfected prototype into a working business environment.

Prerequisites: CIT 164, CIT 264, MAT 101, DAT 201, PRG 101

CIT 266 **Internetworking Applications** **4**

The focus of this course includes, but is not limited to an application of systems theory and hands-on experience gained throughout the program's previous courses. Students will work in teams while using project-based learning to master both old and new concepts of network design, implementation, and support.

Prerequisites: CIT 164 and CIT 265

CIT 267 **Internship** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, maintaining a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester.

CIT 268 **Cooperative Educational Experience** **4**

This work experience is designed to expose students to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

CIT 269 **Web Programming II** **4**

The focus of this course includes, but is not limited to an introduction to server-side scripting and web data access using a currently popular server side application platform and relational database. The course includes variables, control structures, functions, arrays, files, and databases. It exposes students to the creation a data-driven web application through the use of PHP and Structured Query Language (My SQL) to access and update information in a database. This course builds on knowledge and hands-on experience learned in CIT 264, DAT 201, and PRG 101 to author a dynamic web site. *Prerequisites:* CIT 264, DAT 201, PRG 101

PRG 101 **Programming for the Enterprise** **3**

This introductory programming course is required for Computer Information Technology students. Topics include introductory programming concepts, procedures and functions, object-oriented programming design and implementation, and problem-solving skills. The course focuses on Visual Basic and Hypertext Markup Language (HTML) in a lab environment.

Diesel Truck Technology

Course No.	Course Title	Credits

DTT 141 **Introduction to Truck/Trailer Service Field** **4**

This course covers information on hand tools, machines and equipment common to the truck field, general service procedures, lubricants, reference manuals, pre-delivery inspection of new and used trucks/trailers, and preventive maintenance procedures.

DTT 142 **Air Brake Systems** **4**

This course covers information on air brake systems. Mechanical foundation and air supply and service system principles, major components, parking brake systems, brake system diagnostics, service to drum brake assemblies, air lines and hoses, brake switches, antilock brake principles and service are all a part of this course. High priority tasks recommended by ASE (Automotive Service Excellence) are covered. This will prepare students to take the ASE technician certification test in Brakes.

DTT 143 **Steering & Suspension** **4**

This course covers information on steering and suspension systems, theory and principles, independent suspensions, geometric principles, factors affecting wheel alignment, tools and equipment used for steering and suspension, troubleshooting of suspension and steering, wheel bearings service, manual steering, and power steering systems operation.

DTT 144 **Electrical & Electronic Systems** **4**

This course covers information on electricity, basic electricity circuits, tools and equipment, batteries, charging systems, starting systems, lighting systems, horn, wiper and washers, cooling fan and instrument circuits, and body electrical system.

DTT 145 **Diesel Fuel Injection Systems** **4**

This course covers information on the theory and operation of the different types of diesel fuel injection pumps, nozzles and injectors, including current electronic fuel injectors. In-depth study of fuel system preventive maintenance, troubleshooting diagnostics, injection pump timing and installation procedures, and replacement methods for injectors and nozzles are taught.

DTT 146 Diesel Engine Overhaul 4

Diesel engine principles of operation on four- and two-stroke engines are covered. Component identification, measurement and replacement, along with complete tear down and overhaul procedures are covered in this course. This will prepare students to take the ASE technician certification test in Diesel Engines.

DTT 241 Diesel Engine Performance and Tune-up Procedures 4

This course covers information and practical experience on the operation and approved servicing, troubleshooting, and tune-up procedures on several different current models of diesel engines.

DTT 242 Manual Transmission Overhaul 4

This course covers the information and service experience in truck manual transmissions. New learning experiences include inspection, replacement, servicing and rebuilding of manual transmissions and power take-off systems. High priority tasks recommended by ASE are covered.

DTT 243 Differentials & Drive Line 4

This course covers the information, overhaul, service and troubleshooting of the rear differentials and drive shaft. High priority tasks recommended by ASE are covered.

DTT 244 Automatic Transmission Diagnostics, Basic Hydraulics 4

This course provides information and practical experience necessary to service automatic transmissions found in many heavy diesel trucks. Systematic troubleshooting procedures are all part of this program to assist the technician in the proper repair procedures, installation, and repair of hydraulic systems.

DTT 245 Heating, Air Conditioning, Refrigeration 4

This course covers the fundamentals of the heating, air conditioning and refrigeration systems as applied to today's trucks and refrigerated trailers. New learning experiences in the troubleshooting and servicing of these systems are taught. High priority tasks recommended by ASE are covered. This will prepare students to take the technician certification test in Heating, Ventilation, and Air Conditioning.

DTT 246 **Applied Diesel Principles and Applications** **4**

This course is intended to re-examine and emphasize specific mechanical skills and diagnostic techniques and to apply them to principles and theories learned in previous modules. Students are expected to hone the specific skills to prepare them for entry-level positions upon graduation.

DTT 247 **Internship** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)

DTT 248 **Cooperative Educational Experience** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

IET 101 **Introduction to Automotive & Diesel Electronics** **3**

This course will provide the student with an understanding of DC electric principles and the different electronic devices seen in modern diesel and automotive vehicles. It will explain instruments and procedures used in testing and measuring these devices.

Electrical Construction & Maintenance Technology

Course No.	Course Title	Credits

ECM 101 **Fundamentals of Electricity** **4**

This course covers general safety principles, basic construction guidelines, laws governing electricity, basic hand tool usage, print reading, electrical safety, circuit construction and operation. This course will also begin to outline use and interpretation of the National Electrical Code (NEC).

ECM 102 **Introduction to Residential Wiring** **4**

This course will provide information on conductor ratings, wiring styles, grounding, and practical experience in basic residential electrical wiring. DC circuit theory will be introduced in this course. *Prerequisite*: ECM 101

ECM 103 **Principles & Applied Practices of Residential Wiring** **4**

This course is a continuation of basic residential wiring with advanced practical experience in lighting branch circuits and special purpose circuits. DC circuit theory will continued to be discussed in this course.
Prerequisite: ECM 102

ECM 104 **Advanced Residential Circuit Installation** **4**

This course is a continuation of advanced electrical residential wiring. In addition to practical application, examination of skills, troubleshooting, and the maintenance and repair of electrical circuits, the course will cover NEC requirements and installation of residential electrical services. AC circuit theory will be introduced in this course.
Prerequisite: ECM 103

ECM 105 **Service Installation & Troubleshooting** **4**

This course is a continuation of electrical residential wiring. The focus of the practical experience and problem solving skills are in panel board selection, electric service, and overcurrent protection such as fuses and circuit breakers, as well as low voltage lighting and cooling systems. AC circuit theory will continued to be discussed in this course.
Prerequisite: ECM 104

ECM 106 **Commercial Wiring** **4**

This course provides information and practical experience in installation of electrical systems for commercial buildings, reading architectural drawings, and branch circuit feeders and installation, as well as appliance and special systems found in commercial buildings. Students receive practical experience in conduit bending. Three phase circuits and inductive loads will be covered in this course. *Prerequisite*: ECM 105

ECM 201 **Industrial Motor Control** **4**

This course will introduce the basic principles and practices of motor control pertaining to magnetism, AC/DC contractors and motor starters, time delay and control devices, motor types and motor theory.
Prerequisite: ECM 106

ECM 202 **Advanced Motor Control Circuits** **4**

This course is a continuation of theory and practice in reversing motor circuits, power distribution systems, solid-state electronic control devices, electro-mechanical relays, reduced voltage and accelerating/decelerating methods. Also covered is an introduction to programmable logic controller (PLC) wiring and programming.
Prerequisite: ECM 201

ECM 203 **Programmable Logic Controllers** **4**

This course will cover PLC wiring and programming. The student will be exposed to motor control/PLC integration and wiring. PLC functions such as timers, counters and sequencers will be explored.
Prerequisite: ECM 202

ECM 204 **Industrial Maintenance I** **4**

This course covers the theory and practice of industrial mechanics including calculations, rigging, lifting, ladders, hydraulics, lubrication, pneumatics, flexible belt drive systems, vibration and alignment.
Prerequisite: ECM 203

ECM 205 **Industrial Maintenance II** **4**

This course covers the service and repair principles and practices for industrial electrical systems, industrial electronic devices, programmable controllers, welding, boilers, HVAC, mechanical and fluid power systems. *Prerequisite*: ECM 204

ECM 206 **Applied Practice and Special Topics** **4**

This course provides the opportunity to integrate all theory and practical experiences learned in previous modules. It is intended to be student project based which will prepare students for an entry-level position. In addition, special topics such as high voltage will be introduced to further enhance their problem-solving and practical skills.

ECM 207 **Internship** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)

ECM 208 **Cooperative Educational Experience** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

Electronic Technology

This course prepares students with skills labeled by the Commonwealth ofPennsylvania as those used in traditional or evolving green occupation

Course No.	Course Title	Credits

EET 101 **DC Electricity and Instrumentation** **4**

This course introduces the student to the theory and operation of basic DC circuits, circuit construction, operation and troubleshooting. Basic alternative energies technologies are introduced. The student will also gain practical experience in soldering, digital multi-meter usage, and Ohm's Law applications for testing and troubleshooting electric circuits. Elements of proper disposal of batteries and other circuit components considered to be hazardous waste are included.

EET 102 **Alternating Current and Passive Devices** **4**

This course introduces the student to circuitry basic to AC electrical theory. It identifies the fundamental differences between AC and DC energy sources and circuit components. It also introduces oscilloscope usage, AC units, nomenclature and electromagnetism. The course will also cover inductors, transformers, and capacitors and their effects in AC circuits. Work place energy efficiency and conservation habits are included. The concepts of RCL circuits and their use as passive filters will be covered. *Prerequisite:* EET 101

EET 103 **Semiconductors Principles & Applications I** **4**

This course provides an introduction to semiconductor theory, the different types of semiconductor components, their symbols, characteristics, and uses. Basic power supplies and amplifiers are covered, concentrating on characteristic waveforms, theory and troubleshooting. Practice is provided regarding diodes, transistors and circuit applications. Sustainable practices to minimize resources and chemical use are and integral part of the course. *Prerequisite:* EET 102

EET 104 **Semiconductors Principles & Applications II** **4**

This course continues the study of bipolar transistors by introducing their utilization in large signal amplifiers and coupling techniques. Field effect transistors and subfamilies are then covered. The operational amplifier and its characteristics and configurations are thoroughly covered. Amplifier troubleshooting is included, highlighting methods of determining causes and locating problems. The thyristor family of electronic components is introduced by emphasizing characteristics, circuitry, and methods of troubleshooting. *Prerequisite:* EET 103

EET 105 **Digital Electronics I** **4**

This course begins by familiarizing the student with the fundamental gates, numbering systems and simplification techniques used for the implementation of digital circuitry. It continues by discussing different IC specifications and interfacing problems found between different families of digital logic. The later portion of the course studies the different digital codes, seven segment displays and flip-flops with emphasis placed throughout the course on symbology, nomenclature and troubleshooting. Complex programmable logic devices are included throughout this course.

EET 106 **Digital Electronics II** **4**

This course continues the study of digital electronics by introducing counters, registers, arithmetic logic circuits and digital to analog interfacing. It examines the circuitry of each section with emphasis on characteristic waveforms and troubleshooting. Complex programmable logic devices will be used throughout this course as an additional modeling tool. *Prerequisite:* EET 105

EET 201 **Communication Electronics I** **4**

This course begins by familiarizing the student with the fundamental theory, safety, circuits and test equipment used in communications. The course continues to cover modulation techniques, transmitters and receivers. Construction, safety and testing of communication circuits are an integral part of this course. *Prerequisite:* EET 106

EET 202 **Communication Electronics II** **4**

This course continues the study of the principles and applications of electronic communication systems beginning with processes of multiplexing and de-multiplexing. The course continues with a study of digital transmission, transmission lines and antennas. The course concludes with an overview of communication systems to include television, optical, satellite and wireless technologies. Safety and troubleshooting are emphasized throughout the course.
Prerequisite: EET 201

EET 203 **Industrial Electronics** **4**

This course begins with a study of industrial solid state and logic devices and compares these devices to the standard devices used for small scale electronics. The course continues with a comparison between digital logic and relay logic. The issues of power control and triggering circuits are examined with the use of power transistors, thyristors and associated circuitry. The course concludes with a study of sensors, transducers, output devices and an introduction to control topologies. Safety and troubleshooting are emphasized throughout the course.
Prerequisite: EET 106

EET 204 **Programmable Logic Controllers** **4**

This course begins with an introduction to programmable logic controllers (PLCs), their uses and configurations. The course continues with an examination of the different types of hardware devices that are used in conjunction with PLCs. This course will cover the programming of PLCs from the simple relay logic functions to advanced functions used in PLCs. An emphasis is placed on programming projects throughout the course.

EET 205 **Introduction to Automation and Robotics** **4**

This course begins with a study of the terminology used in automation and robotics systems, coordinate systems, and physical makeup of a robotic system. It continues with an examination of the power systems, lifting capacities and applications for robots. The course will conclude with an investigation of sensors, vision systems, artificial intelligence and the principles and techniques involved in working with robotics. Safety is emphasized throughout the course. *Prerequisite:* EET 204

EET 206 **Applied Electronics Principles & Application** **4**

This course is intended to provide practical electronic projects and procedures to principles and theories learned over the previous modules. Students will be expected to hone their practical skills to better prepare them for an entry-level position upon graduation. Associate theory will be discussed to enhance the student's practical abilities.
Prerequisite: EET 205

EET 207 **Internship** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation) *Prerequisite*: EET 205

EET 208 **Cooperative Educational Experience** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation) *Prerequisite*: EET 205

Heating Ventilation & Air Conditioning Technology

Course No.	Course Title	Credits
HAC 151	**Introduction to Refrigeration**	**4**

This is the first of two (2) courses in refrigeration. The course familiarizes its students with safety procedures for the use of tools and materials; basic principles of operation of compressors, condensers, and evaporators; control of systems; and performance of standard tests.

HAC 152 **HVAC/R Electricity I** **3**

This course introduces students to AC and DC circuits, interpretation of electrical schematics, use of electrical test equipment, regulation of electrical systems, and installation of electrical apparatus in accordance with the National Electrical Code.

HAC 153 **Pipefitting** **3**

The fundamental tools, equipment, and procedures used in pipefitting are covered in this course. Matching system components and making proper connections are studied, planned, and practiced. Applications to domestic water distribution and hot water production will be discussed. The student will also be introduced to duct work fabrication.

HAC 154 **Print Reading and Codes for HVAC** **3**

HVAC blueprint reading is reviewed in relation to each of the curriculum's systems: heating, ventilation, air conditioning, and plumbing. The symbols and specifications pertaining to each system are explained so that they can be followed in the system's installation and repair. Overview of National Codes and Standards will be discussed.

HAC 155 **HVAC/R Electricity II** **3**

This course is a continuation to HVAC/R 152. Motor controls used in HVAC systems will be reviewed with emphasis on reading of electrical prints, wiring, and troubleshooting of these systems. An overview of PLC controls will be also covered. P*rerequisite:* HAC 152

HAC 156 **Air Conditioning Systems** **4**

This course exposes the student to the design, operation, and installation of air conditioning systems. All of the systems' components are studied in relation to their compatibility for ventilation, air handling, and climate control. Calculation formulas are studied, appropriate systems are discussed, and components are arranged to meet specifications and to comply with codes. *Prerequisite* HAC 151

HAC 251 **Heating System Design and Installation** **4**

The study of gas, fuel oil, electric, and coal heating systems includes the calculation of heat requirements, production, circulation, and loss. Various boiler units and their related accessories are evaluated for fuel choice, efficiency, and installation. Heating needs within a variety of climate zones and formulas to calculate heat loss are studied.

HAC 252 **HVAC Controls I** **4**

The regulation of residential HVAC systems is the focus of this course. All HVAC controlling units from circuit breakers to thermostats are reviewed. Both operational theory and installation are covered for all controls. *Prerequisite* HAC 152

HAC 253 **Hydronic Heating Systems** **4**

The boilers and furnaces of forced hot-water heating systems are studied in this course, along with their distribution and return piping. The systems are evaluated for their efficiency as well as for their cost for components, installation, and operation. *Prerequisite* HAC 153

HAC 254 **Refrigeration Applications Commercial Systems** **4**

This course stresses the refrigeration systems used to regulate air temperature, humidity, and circulation. Both stationary and mobile units are examined in a variety of large, walk-in applications. Proper handling of refrigerants is stressed in accordance with federal regulations. Calibration, testing, and troubleshooting of all components are covered. Electrical, mechanical, and material safety is emphasized. *Prerequisite* HAC 151, HAC 156

HAC 255 HVAC Controls II Commercial 4

The regulation of large-scale, commercial HVAC systems is the focus of this course. Operational theory and compatibility of controls to specific systems are the course's main concentration. Both electric and computer controls are integrated into single and multi-zone air-handling systems. An overview of pneumatic controls will be discussed.
Prerequisite: HAC 252

HAC 256 Applied HVAC Principles and Applications 4

This course is intended to re-exam and emphasize mechanical skills and diagnostic techniques and to apply them to principles and theories learned in previous modules. Students are expected to hone the specific skills to prepare them for entry-level positions upon graduation.

HAC 257 Internship 4

This work experience is designed to expose the student to an actual industrial, commercial, or clinical environment. Students are placed into a contracted facility after they have completed 50 credit hours, have a 2.0 GPA, and have met all other program prerequisites and academic requirements prior to their final spring semester. The student is expected to adhere to all policies and regulations associated with their work term facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation.)

HAC 258 Cooperative Educational Experience 4

This work experience is designed to expose the student to an actual industrial, commercial, or clinical environment. Students are placed into a contracted facility after they have completed 50 credit hours, have a 2.0 GPA, and have met all other program prerequisites and academic requirements prior to their final spring semester. The student is expected to adhere to all policies and regulations associated with their work term facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

Logistics & Supply Chain Management Technology

Course No.	Course Title	Credits

LOG 191 **Basics of Supply Chain Management** **3**

The basic concepts in managing the complete flow of materials in a supply chain from suppliers to customers are covered in the Basics module. This module covers manufacturing, distribution, service, and retail industries. This includes the fundamental relationships in the design, planning, execution, monitoring, and control that occur. Coursework is intended to prepare students for the first APICS Certification exam.

LOG 192 **Transportation Management** **3**

Past, present, and future trends in product movement to and from the product's origin are reviewed. Time and cost of various transporters and routes are discussed. Government regulation for safe product handling is covered. *Prerequisites:* LOG 191

LOG 194 **Warehousing and Distribution** **3**

This course covers all aspects of the supply and distribution chain and management including computer operations, bar codes, resupply, storage, handling, and subcontracting. An overview of the use of industry specific programs is also covered. Materials handling and OSHA requirements will be covered. *Prerequisites:* LOG 191

LOG 195 **Product and Inventory Control** **3**

Master Planning of Resources and Detailed Scheduling and Planning are covered in this course. The course will explore demand management, sales and operations planning, master scheduling, and distribution planning. The effects of techniques such as MRP, CRP, lean, TOC, will also be covered. Coursework is intended to prepare students for the second and third APICS Certification exams. In addition, standard measurements for inventory and materials will be examined. *Prerequisites:*LOG 191, ECO 111, MNG 185

LOG 291 **Total Quality Management** **3**

This course focuses on the development of efficient product management from production to customer relations. Various manufacturing processes are evaluated and the importance of employee input is stressed. Products are followed for quality control beyond production to purchase and warranty. Methodologies like Lean and Six Sigma will be addressed. *Prerequisites:* BUS 101, MAT 121

LOG 294 **International Logistics** **3**

This course examines the policies and procedures used in the global transfer of materials and products. Consideration of cultures, manpower, geography, politics, natural resources, and communication are introduced, and strategic planning is coordinated to meet the requirements of international trade. *Prerequisites:* LOG 194, LOG 195

LOG 297 **Internship** **4**

This is a planned and supervised off-campus experience in the workplace. It may be paid or unpaid. A selection of acceptable work sites and situations is offered to give students exposure to schedules, pressures, and responsibilities that are encountered in the world of work. Students are placed into a contracted facility after completing 45 credit hours and having a 2.00 GPA. With the approval of the program advisor, students can petition to enroll in an internship after completion of 30 credits.

LOG 298 **Cooperative Educational Experience** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 45 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course (Compensation.) With the approval of the program advisor, students can petition to enroll in an internship after completion of 30 credits.

MNG 185 **Principles of Management** **3**

This is an introductory study of the fundamental concepts and approaches to the management of employees and production. Traditional and current organizational methods of planning, decision making, and motivating are reviewed. Emphasis is on diversity in the workforce and ethics in the business environment.

MNG 284 **Management and Supervision** **3**

This course deals with the more complex aspects of management. Because of the needs of today's business world, students will be taught not only how to manage people but also how to manage performance, processes, and relationships. Learning to deal with pressure and constant change will be discussed. *Prerequisites:* MNG 185

Precision Machining Technology

Course No.	Course Title	Credits

PMT 121 **Safety and Tool Usage** **4**

This course covers Machine Tool theory including safety practices and working concepts of hand tools, band saws, belt sanders, pedestal grinders, drill presses, and cutting tools. It also provides practical applications including jobs and projects involving hand tools, cutting, deburring, sharpening, and grinding various cutting tools.

PMT 122 **Engine Lathe Set-Up and Operation** **4**

Safety, cutting speeds, types of lathes, lathe accessories, lathe operation, and measuring instruments are covered in this course. Practical application includes jobs and projects using three- (3) and four- (4) jaw chucks, as well as collets. Lathe operations covered include facing, turning, center drilling, reaming, boring, tapering, knurling, and thread chasing. The course provides students with technical competence in using lathe accessories, as well as in lathe operations. Technical competence in the use of measuring instruments is also stressed.

PMT 123 **Milling Machine Set-Up and Operation** **4**

Information about safety, types of milling machines, milling machine attachments, milling operations, and measuring instruments is contained in this course. Practical applications include jobs and projects that start with basic milling machine set-ups and operations and continue to grow in complexity. Measuring instruments are also stressed in this course.

PMT 124 **Combined Machine Practices** **4**

Lathe and milling machine operations, as well as measuring tool use, are emphasized in this course. An introduction to metallurgy and heat-treating is also included. Practical applications consist of projects that require milling and turning operations. Projects consist of more than one part requiring machining for desired fit and proper heat-treating. The importance of machining to size is stressed in multiple part projects. Safety is emphasized in milling operations, turning operations, measuring tool use, and heat-treating.

PMT 125 **CNC Lathe Set-Up and Operation** **4**

This course covers the general information needed to program CNC lathes. Programs written by the student will include straight and taper turning. Programming radii as well as thread chasing, drilling and

tapping are also included. Computer Numeric Control (CNC) lathe safety procedures, tooling set-up, programming and CNC lathe operation are included in the practical application portion of this course.

PMT 126 CNC Milling Set-up & Operation 4

This course covers the general information needed to program CNC milling machines. Programs written by the student will include contours, cutter compensation, and hole patterns. CNC milling safety, tool set-up, programming and CNC milling machine operation are included in the practical application portion of this course.

PMT 221 Machining Management 4

This covers machine-scheduling estimates, print control and revisions, actual production, assembly, inspection, and final production analysis. This course places students as owners of their own shop in which they will be asked to choose a part, estimate machine times, check or create blueprints, and machine parts. Finally, parts are assembled, inspected, and evaluated for profit or loss.

PMT 222 Computer Aided Design/ Quality Control 4

This course introduces the students to the use of CAD software to create geometry that will later be used for CAM. Practical application includes a group of exercises created to familiarize the students with MasterCam and its functions. Also covered in this course are quality control, tool use, and calibration. Practical application includes inspection other people's work and keeping track of discrepancies between part and print.

PMT 223 Computer Aided Machining - Applied 4

This course stresses taking geometry from CAD software files and transferring the geometry to CAM software. Practical experience includes creating geometry in MasterCam, creating toolpath to machine part, inputting cutter information, transmitting toolpath to CNC and machining the part. Part inspection is the final step. The students will receive practical experience in creating geometry, creating toolpath, transmitting to CNC machine, and inspecting parts.

PMT 224 Comprehensive Machining Processes 4

Covered in this course are the more advanced methods of machining including wire and sinker electrical discharge machining, waterjet cutting machines and laser cutting machines. Machining allowances and processes will also be covered. Cutting torch and welding applications

will also be a part of this course. The addition of more complex parts and machining processes will be looked at.

PMT 225 Grinding Set-ups and Operations 4

Types of grinders, safety rules, operations, and tool and cutter grinding are covered in this course. Use of measuring instruments is emphasized. Practical experience includes setting up and operating surface grinders, grinding taper and straight shafts, and grinding end mills. Inspection of parts after grinding is also stressed.

PMT 226 Applied Machining Practices 4

Practical experience includes designing, machining, and assembling a project. The project tests the student's machining abilities by demanding accuracy and lack of machine marks. Also covered are final touches on polishing skills with conventional machines. All machines in the shop are at the student's disposal.

PMT 227 Internship 4

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)

PMT 228 Cooperative Educational Experience 4

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

Radiologic Technology

Course No.	Course Title	Credits

RAD 132 **Radiologic Positioning I/Lab** **4**

This course introduces the student to basic terminology used in radiographic positioning. The curriculum provides a comprehensive study of theory and principles of basic positions of the upper and lower extremities, bony thorax, chest, abdomen, gastrointestinal system, biliary tract and urinary system. This course is designed to develop competency through a combination of lecture and laboratory. Further practice will come in the actual clinical setting under the guidance of an assigned clinical radiographer.

RAD 133 **Radiologic Exposures & Principles I/Lab** **4**

This course is an introduction to the fundamental concepts and techniques relating to the production of x-rays. Emphasis through lecture and lab, is placed on the factors affecting an acceptable radiograph: contrast, density, recorded detail and visibility of detail. Students will display work with darkroom applications, display basic radiation protection standards, be familiar with assorted radiographic equipment.

RAD 134 **Introduction to Radiology/Patient Care** **2**

This course will introduce the student to the field of radiology. It will review today's health care and hospital environment, accrediting bodies, and the professional ethics guiding the health worker today. The profession will be examined to assist students in committing themselves to a career in Radiography. This course also provides a comprehensive study of basic concepts regarding patient care. The student will study proper body mechanics, transfer techniques, medical asepsis, communication skills with patients and co-workers, how to measure vital signs, how to deal with medical emergencies, and isolation techniques. Professionalism and legal implications will also be discussed.

RAD 135 **Radiologic Positioning II/Lab** **4**

This course is a continuation of RAD 132. The course is designed to develop competency in diagnostic procedures of the vertebral column and cranium. Competence will be demonstrated on a weekly basis in a laboratory setting. Further practice will come in the actual clinical setting under the guidance of an assigned clinical radiographer.
Prerequisites: RAD 132, RAD 133, RAD 134, HAP 101

RAD 136 **Radiologic Exposures & Principles II/Lab** **4**

A continuation of RAD 133, through lecture and lab, this course is designed to acquaint students with the comprehensive analysis of the factors affecting image quality requiring integration of all exposure and technical factors previously learned. The student will learn the components, principles and operation of digital imaging systems and the factors that impact image acquisition, display, and retrieval in radiology.
Prerequisites: RAD 131, RAD 132, RAD 133, RAD 134, HAP 101

RAD 137 **Radiologic Nursing Procedures** **1**

This course is a continuation of patient care techniques. It progresses into theory and advanced application of the clinical concepts of patient care and medical techniques in the radiology department. The student will become familiar with venipuncture, contrast media use and interactions, sterile technique, history taking and basic pharmacology.
Prerequisites: RAD 132, RAD 133, RAD 134

RAD 138 **Radiation Biology & Protection** **3**

This course describes the effects of ionizing radiation on cells in the human body. Special emphasis is placed on how the effects of x-ray radiation affect biological tissue. Radiation protection and monitoring concepts will be reviewed. The student will learn the importance of applying the ALARA concept for patient and staff safety. Discussion of regulatory agencies and their involvement in radiation protection will also be included. Stochastic and Non-stochastic effects are also discussed. *Prerequisites:* RAD 132, RAD 133, RAD 134, HAP 102

RAD 231 **Radiologic Pathology** **2**

This course emphasizes human pathology on a gross anatomic level. Inflammatory, immunology, infections, traumatic and neoplastic processes will be emphasized. Specific diseases will be studied in further depth from an organ system approach.
Prerequisites: RAD 135, RAD 136, RAD 137, HAP 102

RAD 233 **Image Analysis** **2**

This course is designed to provide students with a basis for analyzing radiographic images for diagnostic purposes. Students will become acquainted with the importance of minimum imaging standards, problem solving technique for image evaluation and the factors that can affect the image quality. Students will be responsible for looking at radiographs to decide whether they are diagnostically acceptable and assure consistency in the production of quality images.

Prerequisites: HAP 102, RAD 135, RAD 136, PHY 201

RAD 234 Advanced Exposures 2

This course is an introduction of the basic principles and techniques of digital radiology. Topics include image acquisition, display, archiving along with principles of both digital system and film quality assurance and maintenance.
Prerequisites: RAD 135, RAD 136, RAD 137, PRA 132

RAD 236 Advanced Medical Imaging 2

This course familiarizes the student with the different modalities within the field of radiology. The students will explore topics in specialized areas such as CT, MRI, Nuclear Medicine, Mammography, PET, Bone Densitometry, US, and Radiation Oncology. The students will review, cross sectional anatomy, trauma radiology, myelograms, arthrograms and pediatric imaging.
Prerequisites: RAD 138, RAD 231, RAD 232, PHY 201

RAD 237 Registry Seminar 2

This course is established to assist the student in preparing for the registry examination given by the American Registry of Radiologic Technologists (ARRT). *Prerequisite:* PRA 231

PRA 131 Clinical Practicum I 1

An introduction to the clinical radiographic experience applies radiographic theory and provides learning experiences to help the student acquire expertise and proficiency in a variety of diagnostic radiographic procedures at specified levels of competency. Students will work on various radiographic equipment, and show competency in anatomy and physiology and radiographic positioning. Additionally, students will integrate knowledge of patient care, medical ethics and apply critical thinking skills into daily radiographic practice. Students will spend a minimum of 16 per week hours in the clinical environment. Students must have verification of current CPR certification, annual health examination, immunizations, and all current clearances required by Johnson College.
Prerequisites: RAD 132, RAD 133, RAD 134, HAP 101

PRA 132 Clinical Practicum II 2

A continuation of the clinical radiography experience applies radiographic theory and provides learning experiences to help the student acquire expertise and proficiency in a variety of diagnostic radiographic procedures at specified levels of competency. Students will display basic radiation protection standards, become familiar with various radiographic equipment, and show competency in anatomy and physiology as well as radiographic positioning. Additionally, students will integrate knowledge of patient care, develop critical thinking skills and medical ethics into daily radiographic practice. Students will spend a minimum of 40 hours in the clinical environment per week, which will include one weekend and a 3-11 shift for 5 days. Students must have verification of current CPR certification, annual health examination immunizations, and all current clearances required by Johnson College.
Prerequisites: PRA 131, HAP 102, RAD 135, RAD 136, RAD 137.

PRA 231 Clinical Practicum III 1

A continuation of the clinical radiography experience applies radiographic theory and provides learning experiences to help the student acquire expertise and proficiency in a variety of diagnostic radiographic procedures at specified levels of competency. Students will work on various radiographic equipment, and show competency in anatomy and physiology and radiographic positioning. Additionally, students will integrate knowledge of patient care, develop critical thinking skills and medical ethics into daily radiographic practice. Students will spend a minimum of 16 hours per week in the clinical environment. Students must have verification of current CPR certification, annual health examination, immunizations and all current clearances required by Johnson College. *Prerequisite:* PRA 132

PRA 232 Clinical Practicum IV 1

The clinical radiography experience applies radiographic theory and provides learning experiences to help the student acquire expertise and proficiency in a variety of diagnostic radiographic procedures at specified levels of competency. Students will work on various radiographic equipment, and show competency in anatomy and physiology and radiographic positioning. Additionally, students will integrate knowledge of patient care, develop critical thinking skills and medical ethics into daily radiographic practice. Students will spend a minimum of 24 hours per week in the clinical environment. During this final practicum, students will be offered an optional rotation through specialized modailities. Students must have verification of current CPR

certification, annual health examination, immunizations and all current clearances required by Johnson College. *Prerequisite:* PRA 231

HAP 101 Human Anatomy and Physiology I 3

This course is the first semester of a medically-oriented study of the structure and function of the human body. It is designed for students specializing in health-related and science programs. Topics include basic biochemistry; basic genetics; cells; tissues; and the integumentary, skeletal, muscular, endocrine and nervous systems. Successful completion of recent high school biology and chemistry courses is highly recommended.

HAP 102 Human Anatomy and Physiology II 3

This course is the second semester of a medically-oriented study of the structure and function of the human body. Topics include digestive, cardiovascular, respiratory, lymphatic, immune, urinary, reproductive systems and the inclusion of anatomical topography and transverse anatomy. *Prerequisite:* HAP 101.

MTR 100 Medical Terminology 1

This course is a survey of the terminology used routinely in the medical environment. It will begin with a learning of the common root words used in constructing medical terms and integrate commonly used medical acronyms and abbreviations. The information will be presented according to anatomical systems. The student will be responsible for knowing the written and auditory recognition of the terminology reviewed.

PHY 201 Imaging Physics 3

This course is structured to help the student understand the physics of radiology and the equipment used to produce x-rays, the electrical principles of x-ray production, and atomic physics. *Prerequisite:* PHY 101

Veterinary Technology

Course No.	Course Title	Credits

VET 101 **Introduction to Veterinary Technology/ Clinical Management** **1**

This course focuses on the duties and responsibilities of veterinary technicians as well as job opportunities in the field of veterinary technology. The human-animal bond and ethical issues are introduced to the student. This course provides students with the basic understanding of operations in a clinical setting in addition to office and managerial duties of technicians such as scheduling, ordering, inventory control, teamwork dynamics, and compassion fatigue. Students are required to attend an OSHA training in order to complete clinical assignments (a certificate will be granted upon completion). Students may be required to participate in activities of the Johnson College Animal Care Center to gain hands on experience to enhance the course material.

VET 102 **Clinical Applications for Large Animals** **2**

This course introduces students to large animals (horses, cows, goats, sheep, and pigs). Students will learn about restraint and handling of large animals with an emphasis on safety. Material covered will include basic nursing care (medicating, physical exams, sample collection, as well as other routine procedures). Students will familiarize themselves with the large animal setting (farms/barns) in addition to various tools and techniques found in large animal medicine.

VET 102L **Clinical Applications for Large Animals Lab** **2**

This lab class provides students with hands-on experience with various large animal species. Animals will vary with availability. Students are strongly recommended to obtain a rabies inoculation. Tetanus inoculation is required and documentation must be provided.

VET 103 **Clinical Applications for Small Animals** **2**

This course provides information on skills needed to work in a clinical setting. Emphasis will be on safety, handling and restraint techniques, general patient care and assessment, and medicating small animals. The course will also concentrate on rabbits, rats, mice and guinea pigs. *Lab animal rotations are associated with this course requiring weekend animal rotations.*

VET 103L **Clinical Applications for Small Animals Lab** **1**

This lab class provides students with hands-on experience with canine, feline, and various lab animal species (rabbits, mice rats, and guinea pigs). Animals will vary with availability. Students must provide proof of wavier or of pre-exposure for the rabies inoculation and tetanus inoculation in order to participate in the lab. *Lab animal rotations are associated with this course requiring weekend animal rotations.*

VET 104 **Animal Anatomy and Physiology I** **3**

This course places an emphasis on cellular anatomy and morphology, principles of histology, and microscopic anatomy of tissues. Genetics, cellular reproduction, anatomy & physiology of blood, skeletal and muscle systems will be included in this course noting specific differences between species and emphasizing clinical use. Proper terminology is utilized to describe the major organs of each system, their location and functions.

VET 104L **Animal Anatomy and Physiology Lab I** **1**

This lab course emphasizes the proper use of microscopes as well as safety in the lab. Topics will include cell morphology and histology. The skeletal system will also be covered.

VET 105 **Animal Anatomy and Physiology II** **3**

This course is a study of the anatomical and physiological systems of animals that may be encountered by the veterinary technician. It provides exposure to major anatomical and physiological systems, noting specific differences between species and emphasizing clinical use. Proper terminology is utilized to describe the major organs of each system, as well as their locations, and functions. The course will cover the following systems: nervous, integument, special senses, cardiac, respiratory, immune, alimentary, endocrine, urinary, and reproduction as well as basic avian anatomy and physiology. *Prerequisites:* VET 101, VET 104

VET 105L **Animal Anatomy and Physiology Lab II** **1**

This lab course emphasizes anatomical study through the dissection of the cat. To help the student understand species variation, other organs will be used in the lab. *Prerequisites*: VET 104L

VET 106 Animal Husbandry/Breeds/Nutrition 2

This course introduces students to the basic care and management of common companion and farm animals as well as breeding. Various breeds of each species are highlighted as well as basic nutritional requirements. Reptile and avian species, husbandry and reproduction are covered as well. Students may be required to participate in activities of the wellness center to gain hands-on experience to enhance the course material. *Prerequisite*: VET 101

VET 201 Pharmacology & Anesthesia 3

This course is the study of the theory and application of pharmacology. Classifications of drugs and their usage, with specific information on mechanism of action, side effects, and dosing will be discussed. Students will be exposed to drug calculations and be expected to prepare and administer medications. This course covers dispensing medication and client instruction on how to give medications as well as educate clients on adverse reactions to medications. *Prerequisites:* VET 102, VET 102L, VET 103, VET 103L, VET 104, VET 104L, VET 105, VET 105L

VET 202 Clinical Pathology 2

This course is designed to familiarize the student with diagnostic laboratory procedures commonly performed in the veterinary field. Discussion includes clinical chemistry, veterinary hematology, urology and cytology. In addition, sample collection and handling is covered along with instrumentation and equipment maintenance. *Prerequisites:* VET 101, VET 104, VET 104L, VET 105, VET 105L, CHE 101

VET 202L Clinical Pathology Lab 1

This lab is designed to enhance and reinforce lecture and/or demonstrations by allowing students the opportunity to practice a variety of laboratory tests common to veterinary medicine. Students will perform hematological analyses, clinical chemistries, and urinalysis in addition to ear and skin cytology. *Prerequisites:* VET 101, VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L, CHE 101

VET 203 Parasitology 2

This course is the study of common internal and external parasites found in domestic and food animals. The characteristics, methods of transmission, life cycle and clinical signs commonly seen in animals will be studied including a review of safety concerns when dealing with these samples. *Prerequisites:* VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L, VET 106

VET 203L Parasitology Lab 1

This course allows students to practice sample collection, preparation and evaluation of samples for parasitologic examination. Laboratory sessions will include techniques for identifying intestinal, blood and external parasites. *Prerequisite:* VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L, VET 106

VET 204 Clinical Rotation I 1

Each student will be assigned to specific areas within the Johnson College Animal Care Center. Areas will include radiology, lab, kennel, reception, pharmacy, and examination rooms, as well as other areas within the facility. Students will work alongside a licensed technician to hone skills learned in lecture and in labs. *Prerequisite:* Students must have successfully completed all first year courses before clinical rotations can be taken. *Students must have successfully completed all first year courses before clinical rotations may be taken.*

VET 205 Surgical Nursing I and Lab 2

This course focuses on anesthesia principles and practices and standard surgical procedures. This course covers the role of a surgical technician in regards to preoperative procedures, prepping, scrubbing, assisting, and post-operative procedures, as well as client education/communication. Dental procedures will be a focus of this course. This course includes 15 hours of laboratory time. *Prerequisites:* VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L, VET 106

VET 206 Microbiology & Immunology 2

This course is a study of the history, classification and nomenclature of bacteria, fungi and viruses. The course will include discussions on sample collection and handling in addition to laboratory procedures in bacteriology, mycology virology and immunology. *Prerequisites:* VET 104, VET 104L, VET 105, VET 105L, CHE 101

VET 206L **Microbiology & Immunology Lab** **1**

This course involves identifying bacteria common to veterinary medicine. Students perform biochemical and other tests involved in identifying microorganisms. Sample collection, handling and preparation are stressed as well as the precautions taken when working with samples. Students perform common laboratory tests used to identify viral and fungal diseases. *Prerequisites:* VET 104, VET 104L, VET 105, VET 105L, CHE 101

VET 207 **Surgical Nursing II and Lab** **2**

This course focuses on surgical procedures (spays and neuters as well as other common surgeries of both small and large animals) as well as ECG application and interpretation for patient monitoring. The course places special emphasis on pain management, wound management, physical therapy and other nursing care duties and responsibilities of technicians. This course includes 30 hours of lecture and 15 hours of lab. *Prerequisite:* VET 205

VET 208 **Clinical Rotation II** **1**

Each student will be assigned to specific areas within the Animal Care Center. Areas will include treatment, lab, kennel, and surgery, as well as other areas within the facility. Students will work alongside a licensed technician to hone skills learned in lecture and in labs. *Prerequisite:* Students must have successfully completed all first year courses before clinical rotations can be taken.

VET 209 **Veterinary Radiology** **1**

This course is a study of radiological procedures for domestic animals common to veterinary medicine. It includes an overview of radiographic properties and equipment, restraint and positioning techniques, as well as exposing, developing and assessing radiographs. Record keeping and safety issues are discussed in addition to specialized radiographic studies. Students are provided hands-on opportunity to practice the techniques learned in class. *Prerequisites:* VET 101, VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L

VET 210 **Intensive Care Applications** **3**

This course is a study of the technician's role in emergency and intensive care. Students will study fluid therapy, blood transfusion, CPR and other procedures associated with emergency and critical care protocols. This course also includes 8 hours of exposure to emergencies in an emergency facility. *Prerequisites:* VET 101, VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L

VET 211 **Diseases and Zoonoses** **3**

This course is the study of diseases affecting domestic animals. Necropsy and sample submission are discussed. Etiology, clinical signs, diagnoses, prevention, treatments and public health issues are discussed. A study of vaccination protocols for each species is also included. *Prerequisites:* VET 101, VET 102, VET 102L, VET 103, VET 103L, VET 105, VET 105L, VET 106, VET 201, VET 206, VET 206L

VET 212 **Internship** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (No compensation)

VET 213 **Cooperative Educational Experience** **4**

This work experience is designed to expose the student to an industrial, commercial, or clinical environment. Students are placed into a contracted facility after completing 50 credit hours, having a 2.00 GPA, and meeting all other program prerequisites and academic requirements prior to their final spring semester. Students are expected to adhere to all policies and regulations associated with the facility. Students will work on projects selected to expose the student to "live" work situations, while building upon the student's knowledge, skill and attitude as an entry-level technician and will be used to grade the student's performance for the course. (Compensation)

Welding Technology

Course No.	Course Title	Credits

WTC 101 **Welding Fundamentals** **4**

This course covers welding trade theory including safety, tool usage, equipment set up and standard terms and definitions. Basic welding and cutting techniques, tank safety and welding safety will be taught.

WTC 102 **Shielded Metal Arc Welding I** **4**

This course is designed to teach the student the basic principles, practices, and applications of SMAW. The course also covers basic metallurgy and how to identify weld problems and defects.

WTC 103 **Shielded Metal Arc Welding II** **4**

This course is designed to introduce more advanced welding practices and procedures. Horizontal groove joints and vertical welding techniques will be covered as well as weld inspection tools, destructive and non-destructive testing methods.

WTC 104 **Shielded Metal Arc Welding III** **3**

This course covers the most advanced SMAW practices. The concentration will be on vertical stringers and weaves conforming to the AWS structural welding code. Weld problems, corrections and carbon arc gouging techniques will be covered in this course. Students will be introduced to and begin practice on overhead welding.

WTC 105 **Gas Metal and Flux Cored Arc Welding** **4**

This course covers the most advanced SMAW practices. The concentration will be on overhead welding. Gas metal arc welding and flux cored arc welding will also be taught. Students will be given classroom theory and hands on instruction in both processes as well as an overview of the AWS structural welding code.

WTC 106 **Gas Tungsten Arc Welding** **4**

This course introduces students to the GTAW welding process. The equipment, consumables, practices and procedures are discussed, with extensive practice in the GTAW process.

WTC 107 **Pipe Welding I** **4**

This course introduces students to the practices and procedures used to weld pipe and piping systems. SMAW processes and procedures are covered as well as pipe welding codes, tools, materials and equipment needed for pipe welding.

WTC 108 **Pipe Welding II** **3**

This course introduces students to the practices and procedures of pipe welding with the gas tungsten arc welding process. The GTAW process and procedures are covered as well as pressure vessel fabrication, semi-automatic, mechanized and automated pipe welding.

BRT 101 **Blueprint Reading** **3**

This course provides detailed information to help the students gain the skills that are required to read prints that are most common in the welding industry. Basic lines and view, dimensions, bill of materials and structural shapes are emphasized in this course. Accuracy of measurements and attention to detail will be stressed in the course.

MAT 100 **Math for Welders** **3**

This course is an examination of basic arithmetic, (adding, subtracting, multiplying, and dividing whole numbers, decimals and fractions) as well as percents. This course also covers metric system measurements, computation of geometric measure and shapes, angular development and measurement, and including bends, stretch-outs, economical layout, and takeoffs.

General Education Courses

Business

Course No.	Course Title	Credits

ACC 101 **Accounting I** **3**

This introductory course covers the basic principles of accounting: the accounting equation, the accounting cycle, the trial balance, accounting worksheet, adjusting and closing entries and the preparation of basic financial statements will be covered. An emphasis will be placed on learning the basics of microcomputer accounting.

BSL 201 **Business Law** **3**

This course is an overview of the law as it pertains to the business environment. An introduction to law, legal process, negligence and contracts, among other topics, will be reviewed. *Prerequisites:* BUS 101, ECO 111, MNG 185

BUS 101 **Introduction to Business** **3**

This course includes a survey of current business practices with an examination of the topics of management, ethics, organization, finance, marketing, and human resources function. Particular attention will be paid to examining the current economic environment. Students will also learn about basic personal income, household money management and financial planning skills as well as basic economic decision-making skills. This course may also be offered in a distance education format, when available.

BUS 201 **Project Management** **3**

Project Management explores the fundamental knowledge, terminology and processes of effective project management. Topics include project integration management, project scope, time and cost management, human resource management, communication, ethics, risk and procurement. *Prerequisites:* MNG 185

ECO 111 **Introduction to Microeconomics** **3**

This course covers the basic concepts of economics. Topics include supply and demand, optimizing economic behavior, prices and wages, monetary system, interest rates, banking system, unemployment, inflation, taxes, government spending and international trade. Upon

completion, students should be able to explain alternative solutions for economic problems faced by private and government sectors.

ECO 211 **Contemporary Issues in Macroeconomics** **3**

This introductory course will familiarize students with the current trends and issues surrounding the field of economics. Changes in global and national trends, with a concentration on the impact these issues have on growth and productivity of global industries, will be examined. *Prerequisites:* ECO 111, BUS 101

ENT 101 **Entrepreneurship I** **3**

This course acquaints the student with a realistic approach to the problems and concerns of starting a small business. An understanding of the economic and social environment within which the small business functions will be developed. The student will be familiarized with the writing of a business plan. *Prerequisite:* BUS 101

MNG 185 **Principles of Management** **3**

This is an introductory study of the fundamental concepts and approaches to the management of employees and production. Traditional and current organizational methods of planning, decision making, and motivating are reviewed. Emphasis is on diversity in the workforce and ethics in the business environment.

MNG 284 **Management and Supervision** **3**

This course deals with the more complex aspects of management. Students will be taught not only how to manage people but also how to manage performance, processes, and relationships. Learning to deal with stress and constant change also will be discussed. *Prerequisites:* MNG 185, LOG 192, LOG 195

Computers

Course No. **Course Title** **Credits**

CPT 101 **Microcomputer I** **3**

This course provides a basic overview of microcomputer fundamentals and applications. It includes a study of word processing using Microsoft Word; spreadsheet applications using Microsoft Excel; and simple databases using Microsoft Access. The student is also exposed to basic computer operations, managing files, and a brief introduction to PowerPoint.

DAT 201 **Database: Principles & Applications** **3**

This course is designed to introduce the student to database processing by examining basic database models and applying these models to creating and managing multi-user database systems. This course uses instructor guided project based learning to become proficient with Microsoft Access and SQL Server. *Prerequisite:* PRG 101

English

Course No.	Course Title	Credits

ENG 0100 **Basic College Writing** **3**

This course is designed to help the entering college student prepare for college-level writing. Word choice and mechanics are reviewed. Emphasis is placed on sentence and paragraph structure and development in writings such as article reviews and brief essays.

ENG 101 **English Composition I** **3**

This course develops writing competency through the students' construction of all types of essays. Additional writing assignments include a course notebook, job resume and cover letter, sentence definitions, summaries, instructions, and technical research paper completed in Modern Language Association (MLA) style. Outlining, mechanics, syntax, and format are stressed in all writing assignments.

ENG 102 **English Composition II** **3**

Language structure, usage, and rhetorical principles are stressed as a means to developing clear, coherent writing. Individualized written expression is developed through the use of the essay. Students will read a series of essays that will serve as samples for their writings. The writings will consist of essays using narration, description, exposition, and persuasion. A research paper completed in the MLA style is also required. *Prerequisite:* ENG 101

ENG 211 **Communication Theory** **3**

Specialized communication that helps readers, viewers, and/or listeners respond to the challenges of the world of technology in which we are asked to be ethically and legally responsible is studied and practiced in this course. The class content has an impact on everyday life. The four components of the course are the following: understanding communication in the workplace; acquiring the tools/strategies needed for effective workplace communication; creating effective workplace documents; and developing, maintaining, and using effective workplace communication. Throughout the course socially situated activities, collaboration, diversity, and learning aids are integrated into the course content. *Prerequisite:* ENG 101

ENG 212 **Public Speaking** **3**

Stressed in this course is the importance of oral communication for one's understanding, evaluating, explaining, and altering various occupationally related conditions. The study of the mock interview and discussions is the starting point in which students are introduced to group oral communication. The remaining course content includes theory and practice in the organization, preparation, delivery, and evaluation of extemporaneous discourse as used in interpersonal, small group, and public speaking situations. Each student delivers a minimum of six speeches (counted as test grades) per semester and is involved in class critiquing of all speeches delivered in class *Prerequisite:* ENG 101

Humanities

Course No.	Course Title	Credits

HMN 101 **Introduction to Humanities** **3**

This course creates an appreciation for cultural values and differences as portrayed in music, painting, architecture, video and literature. When possible, examples that include multiple arts are studied. Diversity is stressed in all examples.

Mathematics

Course No.	Course Title	Credits
MAT 0100	**College Prep Algebra**	**3**
	This course covers arithmetic with the real number system, algebraic and polynomial expressions and their simplification, linear equations and formulas, ratio and proportion and percents.	
MAT 101	**College Algebra I and Trigonometry**	**3**
	This course covers linear equations and inequalities, ratio and proportions, basic operations involving algebraic, polynomial and rational expressions, exponent rules and factoring, an introduction to geometry, including perimeter, area and volume, right triangle trigonometry and radian measure. (Prerequisite: One year of high school algebra.)	
MAT 110	**Trigonometry:**	**3**
	Investigates angles triangles, trigonometric functions and equations, radian and degree measurements, circular functions, graphs, identities, vectors, complex numbers, polar coordinates, parametric equations, and applications. (Prerequisite: MAT 101 or permission from the Mathematics Department Chair.)	
MAT 121	**Introduction to Statistics**	**3**
	This course is intended to introduce students to the basic concepts of data collection, data analysis and statistical inference. Topics include an overview of observational and experimental study designs, graphical and numerical descriptive statistics, probability distributions for simple experiments and random variables, sampling distributions, confidence intervals and hypothesis testing for the mean and proportion in the one sample case. The emphasis is on developing statistical reasoning skills and concepts. (Prerequisite: One year of high school algebra.)	
MAT 201	**College Algebra II and Trigonometry**	**3**
	This course covers systems of equations, solutions to quadratic and higher degree equations, roots and radicals, and oblique triangles. (Prerequisite: MAT 101 or permission from the Mathematics Department Chair.)	

MAT 202 **Precalculus** **3**

The course investigates fundamentals of plane analytical geometry, conic sections, complex numbers and polynomial, rational, exponential, logarithmic, and trigonometric functions. (Prerequisite: MAT 201 or permission from the Mathematics Department Chair.)

Physical Fitness

Course No.	Course Title	Credits

PED 101 **Physical Fitness** **2**

This class will consist of skills and fitness pertaining to various games and physical activities. The activities consist of volleyball, basketball, badminton, and weight training. The student will learn basic movement through exercises and fitness for better health in the future.

Reading/Study Skills

Course No.	Course Title	Credits

RSS 0100 **College Reading/Study Skills** **3**

This course is designed to develop the student's fundamental reading abilities. Through extensive practice, the student learns to read efficiently and critically. Improved vocabulary and increased reading rate of speed are accomplished while the student's ability to comprehend and retain what he/she reads is developed. The study skills portion of the course allows students to develop the academic skills necessary for success in college-level work. The basic study skills of listening, note-taking, and time management are reviewed. Various study formulas and test-taking strategies are discussed and practiced by the students. A discussion of stress management and theories of memory round out the course content to aid the college student.

Science

Course No.	Course Title	Credits

CHE 101 **Chemistry I** **3**

This course emphasizes the fundamentals of basic chemistry. Students will be taught the concept of atoms, molecules and compounds; the arrangement of atoms within the periodic table; balanced chemical equations; stoichiometry; the ideal gas law and solutions.

MCH 201 **Statics & Strength of Materials** **3**

This course is an examination of coplanar force systems, analysis of trusses, axial stress and strain, material properties, centroids, moment of inertia, stresses in beams, beam design, and torsion.

PHY 101 **Introductory Physics** **3**

This course covers the fundamentals of basic physics. Students will understand the concepts of technical measurement, energy, force and vectors, equilibrium and friction, and uniform acceleration. *Prerequisite:* MAT 101

SBS 201 **Social/Behavioral Science** **3**

This course examines the factors that govern the interactions of people, especially in the workplace. The course discusses communications, motivation, implementing change, problem solving, social development, and human organizational/team concepts.

VAN 101 **Small Animal Nutrition** **2**

This is an introductory course for students accepted in the Veterinary Technology program, providing identification and function of nutrients, understanding pet food labels, and applications for wellness, life stage, and therapeutic nutrition (prescription foods) for dogs and cats. The course will be a synchronous, interactive Internet course with simultaneous audio in the classroom.

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(as of September 7th, 2012)

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Ann L. Pipinski, Ed.D.	President & CEO, Johnson College
Richard Scheller	President, Geo-Science Company Inc.
Robert P. Sheils, III	Associate Attorney, Sheils Law Associates, P.C.
Alex Stark	Director of Marketing/Kane is Able, Inc.
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Vincent J. Vanston, M.D.	Program Director, Institute of Palliative Medicine PC

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Faculty

A.S. Degree

Computer Information Technology
Department Chairperson

Joseph J. Polinsky
A.E., Pennsylvania State University
Certified Cisco Network Associate (CCNA)
Microsoft Certified Systems Engineer Windows (MCSE)
Microsoft Certified Data Base Administrator SQL 7.0 (MCDBA)

Radiologic Technology
Program Director / Chair

Joan M. Bonczek R.T. (R)
M.S., Marywood University
B.S., Misericordia University
A.A.S., Misericordia University
American Registry of Radiologic Technologists

Clinical Coordinator

Barbara Byrne, B.S.R.T. (R) (MR)
B.S., Misericordia University
American Registry of Radiologic Technologists

Clinical Instructor

Roxanne M. Caswell, R.T. (R) (M)
A.A.S., Broome Community College
American Registry of Radiologic Technologists

Health Sciences Division Chairperson
Veterinary Technology
Department Chairperson

Rosemary M. Cook, CVT, Ph.D
Ph.D., State University of New York, Buffalo
B.S., Medaille College
A.S., Medaille College

Veterinarian / Instructor

Matthew Panarella, DVM
DVM with Honors, Ross University
B.S., Rutgers University

Veterinary Instructor

Kimberly Konopka, CVT
B.S., Wilkes University
A.S., Johnson College

Veterinary Instructor (P/T)

Kendra Lapsansky, CVT
B.S., Marywood University
A.S., Johnson College

Veterinary Instructor (P/T)

Allene Taylor, LVT
A.S., Johnson College

Physical Therapist Assistant **(Pending all approvals)** — **Melissa Cencetti, PT, DPT**
Department Chairperson — DPT & MS, Arcadia University
BS, King's College
Pediatric Specialty Certificate, Misericordia University

A.A.S. Degree

Architectural Drafting & Design Technology — **John F. DeAngelis**
Department Chairperson — B.S., Temple University
A.S., Pennsylvania State University
NICET Certified Engineering Technician
(National Institute of Certified Engineering Technicians)
Associate Member American Institute of Architects
Certified Member of the ADDA International

Automotive Technology — **Mark Kozemko**
Instructor — A.S.T.. Johnson College
ASE Cert. Master Auto. Tech.

Biomedical Equipment Technology — **Douglas D. Hampton**
Department Chairperson — A.S., Community College of the Finger Lakes
Sustainability Coordinator — A.A.S., Auburn Community College

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Carpentry & Cabinetmaking Technology — B.S., Temple University
Department Chairperson — A.S.T., Johnson College
Licensed General Contractor

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Diesel Truck Technology — A.S.T., Pennsylvania College of Technology
Department Chairperson — Certified Forklift Operator Safety Trainer
Certified OSHA 1910 General Industry Outreach Trainer
Certified Original Equipment Manufacturers (OEM) Technician
Certified Penn DOT Vehicle Safety Inspection Mechanic Instructor

Electrical Construction & Maintenance — **Kevin Sterowski**
Technology Instructor — A.A.S. degree's, Luzerne Co. Com. College
HVAC EPA Universal Certification, Epsco Institute
Rockwell Automation Certification
Journeyman & Master Electrician
Master Plumber

Industrial & Electronics Division Chairperson — **Richard P. Fornes**
Electronic Technology Department Chairperson
B.S. State University of New York, Binghamton
A.S., Broome Community College
A.S.T., Johnson College

Heating Ventilation & Air-Conditioning Technology Instructor — **Pedro Santiago**
A.A.S., Technical Career Institute
EPA Approved Universal Technician

Business Division Chairperson — **Linda Falcone**
Logistics & Supply Chain Management Department Chairperson
M.B.A, Kutztown University
B.A., University of Pittsburgh

Precision Machining Technology Department Chairperson — **Andrew V. Zwanch**
B.S., State University of New York, Oswego
A.S.T., Johnson College

Faculty
General Education

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Ed.D., Temple University
M.S., Marywood University
B.A., St. Bonaventure University
A.A., Keystone College

Library & Resource Specialist — **Michele M. Srebro**
M.L.S., State University of New York, Albany
B.S., East Stroudsburg University

Mathematics Department Chairperson Coordinator of Adjuncts — **Richard R. Mishura**
M.S., Marywood University
B.S., Florida Institute of Technology
A.A., Keystone College

Mathematics Instructor — **Barbara Ann Senapedis, Ph.D.**
Ph.D., Pennsylvania State University
M.S., Marywood University
B.S., Bloomsburg University

Technical Generalist — **Matthew P. Sleboda**
A.S.T., Johnson College
Certified American Welding Society (AWS) Inspector

Certificate

Welding Instructor — **Jeffrey Roughgarden**
*ASME Certified Pipe Welder
*AWS D1.1 Certified Welder
AWS Certified Welding Inspector
AWS Certified Welding Educator
*(American Society of Mechanical Engineers / American Welding Society)

Staff

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B.S., Indiana University of Pennsylvania

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B.S., Pennsylvania State University

Admissions Representative — **Angela Caputo**
B.S., Pennsylvania State University

Admissions Representative — **Jeremy White**
B.A., Marywood University

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B.S., Misericordia University

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A.A.S., Lackawanna College

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B.F.A., Long Island University

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