

Table of Contents:

Academic Center Bell Schedule..... 8

Academic Center Course Offerings and Descriptions..... 16 – 22

Academic Center Course Schedule..... 15

Academic Center Departments and Professional Staff..... 12

Academic Center Honor Roll..... 6

Academic Center Information 3

Academic Center Student Assistance Program (SAP)..... 4

Academic Center Tardy, Make-up Work, and Attendance Mentor Program..... 5

LCTI Administration..... 9

LCTI Calendar..... 23

LCTI Education/Family Trip Request Form..... 7

LCTI Guidance Department.....10 – 11

Staff Expectations..... 13

Student Expectations..... 14

Welcome Letter..... 2

WELCOME TO THE LEHIGH CAREER AND TECHNICAL INSTITUTE (LCTI) ACADEMIC CENTER

I would like to personally welcome everyone to the Academic Center. The purpose of the Academic Center is to provide the students with a satisfying and productive experience. The Academic Center's philosophy is to provide the students with the necessary skills for careers, college, and life-long learning. Writing, reading, speaking, listening, and mathematics skills will be developed and emphasized throughout the school year. State-of-the-art science labs and a fitness center are part of the curriculum offered to the students. In addition, soft skills (getting along well with others, working as a team, being flexible, time-management, effectively communicating with others, developing a work ethic) will be addressed throughout the school year. The students will become independent thinkers and learners with the ability to ask questions in regards to difficult concepts, be able to solve problems, and be able to use their critical and analytical thinking skills.

The professional staff is committed to being innovative and using a variety of teaching methods, strategies, and assessments to increase student achievement. They will actively engage the students throughout their lessons in a safe learning environment unified by common goals. Active learning will occur through varied, student-centered lessons. Lesson plans are related to, and integrated into, the technical programs which are offered at LCTI. The professional staff believes in being active, caring listeners who respect all of our students. They believe in helping each other through professional collaboration and encouraging parental involvement through continual contact. The use of technology will be incorporated into the instructional lesson plans to accentuate learning.

An inviting classroom environment is emphasized, communicating high, positive expectations. The Academic Center staff is committed to creating an environment for all students to succeed. A priority is to meet the needs of each student and present an environment which is conducive to learning.

We, at LCTI, are continually striving towards improving the quality of education and to assist the people who really count - **our students** - in fulfilling their goals, dreams and potential.

Sincerely,



PHILIP C. BERTOLINO II
ACADEMIC CENTER PRINCIPAL

Lehigh Career & Technical Institute has a policy not to discriminate on the basis of race, color, national origin, sex, disability, or age in its programs or activities and provides equal access to the Boy Scouts and other designated youth groups. Inquiries may be directed to LCTI's Title IX and Section 504 Coordinator for students at 4500 Education Park Drive, Schnecksville PA, 18078 or 610-799-1357 or LCTI's Compliance Officer for personnel at 610-799-1385.

ACADEMIC CENTER INFORMATION:

In September 2006, students from the nine participating school districts in Lehigh County were able to attend the new Academic Center at Lehigh Career & Technical Institute (LCTI). Tenth through twelfth grade students from the nine participating districts have the opportunity to take both their academic and technical classes at LCTI. The Academic Center is housed in 33 brand new classrooms and offers state-of-the-art science labs. Parents and students are encouraged to speak with their high school guidance counselors to determine the options available at the Academic Center and at LCTI.

Approved joint district graduation requirements have been established. When requirements are met, students will graduate and receive their diplomas from the participating districts. Students can participate in all activities such as sports, clubs, assemblies, dances, and other school events at the sending districts' high schools. All courses are aligned with the Pennsylvania Core Standards. These standards are also being addressed in the technical programs.

Students may have an opportunity to take advanced coursework at Lehigh Carbon Community College (LCCC) in dual enrollment courses and in middle college courses. These courses may be used to meet graduation requirements and will begin the students' college careers at the same time. Students will be required to take the college placement exam to determine whether college courses in high school are a viable choice. Tuition is offered at a reduced rate and is the responsibility of the student.

ACADEMIC CENTER STUDENT ASSISTANT PROGRAM (SAP)

What is the Student Assistance Program?

The Student Assistance Program (SAP) identifies students who are having problems that create a barrier to learning and refers them for help. SAP utilizes a professionally trained team, which includes school staff and liaisons from community agencies, to examine student issues such as:

- Divorce, separation and step-family issues
- Stressful situations and life pressures
- Death and grief issues
- Absence of coping skills due to poor communication or low self-image
- Establishing and maintaining friendships and getting along with others
- Alcohol/drug abuse or experimentation
- Depression or other mental health problems

It is the parents' right to be involved in all phases of the Student Assistance process. The Student Assistance Program is designed to help students and parents by making in-school resources available and providing information about community resources. The Student Assistance program does not provide therapy or implement disciplinary consequences.

Who Refers to the SAP team?

Staff members may notice a decline in school performance (attendance, grades, conduct) which may indicate that a student is having difficulty. These behavior changes are reported to a SAP team member.

*Self-referrals are accepted. Students may seek information or help by contacting a SAP team member.

*Peers who are concerned about a friend's problems are encouraged to discuss their concerns with a SAP team member.

*Family members are encouraged to communicate with the SAP team for information or assistance.

*Community agencies and institutions (church, social services, criminal justice systems and counseling agencies) who deal with students and their families. Community referrals should be directed to the SAP team.

Community resources include: **Lehigh Valley Drug & Alcohol Intake Unit 610-432-2228**; Lehigh County Mental Health/Mental Retardation 610-782-3200

What Happens to Referrals?

The SAP team collects information about the student's performance and behavior from a variety of sources: teachers, counselors, school nurse, administrators and other staff members as needed. The information is then reviewed by the team. If a SAP referral is appropriate, parental consent is requested. The team analyzes the information gathered and seeks input from the student and parent in order to determine the best course of action for the student. Intervention alternatives include: educational support groups, individual counseling, referral to other school professionals and/or referral to outside agencies. For more information about the **Student Assistance Program**, please contact anyone of the following SAP LCTI Team members: James Bennett, Philip Bertolino, Martha Figueroa, Elizabeth Kennedy, Sue Laputka, Regina Naradko, Corey Schnauffer, or Josh Zimmerman. Please call 610-799-1344 for more information.

**ACADEMIC CENTER TARDY, MAKE-UP WORK, AND
ATTENDANCE MENTOR PROGRAMS**

Procedures for handling tardiness:

Under the tardy procedure, students who arrive late to school without proper documentation will receive an unexcused absence for time missed. Missing the bus and car trouble are examples of an unexcused tardy. After so many unexcused days tardy, a student will receive consequences. Students will have their tardiness tracked for the year. Tardy consequences are as follows: four days tardy results in a warning, five days tardy results in three (3) days of restricted lunch, six days tardy results in five (5) days of restricted lunch, seven days tardy results in ten (10) days of restricted lunch, eight days tardy results in fifteen (15) days of restricted lunch, and nine (9) or more days tardy can result in ALC or out-of-school suspension.

Procedure for making up work:

If a student does miss school, they are expected to make up their work. The Student/Parent Handbook outlines the students' expectations to make up work depending upon the type of absence and the number of days missed. If a student has five (5) or more unexcused absences during a marking period, the student will NOT be able to make up any more work for unexcused absences thereafter for that marking period.

Attendance Mentor Program:

To ensure our students' success, excused and unexcused absences will be tracked throughout a marking period, semester, and the year. After five (5) days of unexcused absences or twenty (20) total days missed (excused/unexcused), a student will be assigned an attendance mentor. The role of the attendance mentor is to encourage students to improve their daily attendance. A student could be removed from the Academic Center after the first semester and/or not allowed to re-enroll for the next school year due to excessive absences.

ACADEMIC CENTER HONOR ROLL:

The honor roll will be published at the end of each quarterly marking period. This listing is made up of those students who achieve a quality-point average of 3.25 or higher. The students will be identified according to the following categories:

Executive Director's Academic Excellence List:

4.00 or higher
No grade < 90
No incompletes, failures and/or withdraws
Students need a grade of 90 or higher in their technical lab

Principal's High Honors List:

3.75 to 3.99
No grade < 85
No incompletes, failures and/or withdraws
Students need a grade of 85 or higher in their technical lab

Academic Center Honors List:

3.25 to 3.74
No grade < 80
No incompletes, failures and/or withdraws
Students need a grade of 80 or higher in their technical lab

**Lehigh Career & Technical Institute
Educational / Family Trip Request Form**

Student's Name _____ Home School _____

Student's Address _____

Lab _____ Grade ____ Program (CAP, Academic Center, etc.) _____

Name of Parent/Guardian _____

Dates of absence requested for approval _____

Date of return to school _____

Please describe the educational merit of the trip in the box provided below.

Policy according to the LCTI Student / Parent Handbook:

- ⑩ Administration will consider the individual student's attendance history, academic standing, and disciplinary record as well as the educational merit of the trip.

- ⑩ Administration has the right to deny approval for the trip based on this criterion.

- ⑩ Unapproved trips will result in the absences being declared unexcused, and where appropriate, unlawful.

- ⑩ All assignments, quizzes, and tests missed during an approved trip shall be made up at the initiation of the student and the reasonable convenience of the teacher.

- ⑩ Approved trips are limited to two (2) per school year and cannot exceed a total of ten (10) school days. This form must be submitted at least (5) days before the trip.

Signature of Parent/Guardian _____ Date _____

APPROVED: Supervisor's Signature _____ Date _____

DENIED: Supervisor's Signature _____ Date _____

Reason(s) for trip denial / comments:

BELL SCHEDULE FOR ALL ACADEMIC CLASSES
2016-2017

STUDENT ARRIVAL AND HOMEROOM
8:00 a.m. – 8:15 a.m.

Period 1: 8:16 a.m. – 8:58 a.m. (42 Minutes)

Period 2: 9:00 a.m. – 9:42 a.m. (42 Minutes)

Period 3: 9:44 a.m. – 10:26 a.m. (42 Minutes)

Period 4: 10:27 a.m. – 10:57 a.m. (30 Minutes)
(LUNCH FOR AM ACADEMIC CENTER STUDENTS)

*Period 5: 10:59 a.m. – 11:59 a.m. (60 Minutes)

Period 6: 12:01 p.m. – 12:31 p.m. (30 Minutes)
(LUNCH FOR PM ACADEMIC CENTER STUDENTS)

Period 7: 12:33 p.m. – 1:15 p.m. (42 Minutes)

Period 8: 1:17 p.m. – 1:59 p.m. (42 Minutes)

Period 9: 2:01 p.m. – 2:45 p.m. (44 Minutes)

***PM Academic Center students should be released from their technical lab at 10:54 a.m. to report to the Academic Center for their period 5A class.**

***AM Academic Center students will be released from the Academic Center at 11:59 a.m. and should report to their technical lab by 12:04 p.m.**

LCTI ADMINISTRATION:

Dr. Thomas Rushton 610-799-1323	Executive Director rushtont@lcti.org
Mr. Kurt Adam 610-799-1348	Director Career and Technical Education adamk@lcti.org
Mrs. Grace Loeffler-Guldin 610-799-1357	Director Academic and Special Programs guldingl@lcti.org
Dr. Lisa Greenawalt 610-799-1436	Director Curriculum and Instruction greenawaltl@lcti.org
Ms. Patricia Bader 610-799-1313	Business Administrator baderp@lcti.org
Mrs. Gretchen Boyer 610-799-1385	Human Resource/Benefits Manager boyerg@lcti.org
Mrs. Jan Klevis 610-799-1318	Director of Postsecondary and Workforce Education klevisj@lcti.org
Mr. Daniel Kotran 610-799-1320	Supervisor Facilities Engineer kotrand@lcti.org
Ms. Kristin Jachowicz 610-799-1326	Supervisor Special Education jachowiczk@lcti.org
Mr. Philip Bertolino II 610-799-1364	Principal of the Academic Center bertolinop@lcti.org
Mr. Darin VanNorman 610-799-1353	Supervisor Career and Technical Education - CAP vannormand@lcti.org
Mr. Stan Nestor 610-799-1304	Supervisor of Technology nestors@lcti.org
Mr. Dana Torok 610-799-1396	Supervisor Career and Technical Education torokd@lcti.org
Dr. Rita Tatusko 610-799-1326	Supervisor Career and Technical Education/ Special Projects Cordinator tatuskor@lcti.org
Mr. Sean Will 610-799-1352	Supervisor Career and Technical Education wills@lcti.org
Ms. Pamela Hittinger 610-799-1349	Cafeteria Supervisor hittingerp@lcti.org

“Our mission at Lehigh Career & Technical Institute is to
prepare all students for successful careers and lifelong learning.”

“Lehigh Career & Technical Institute is committed to fostering continuous improvement in curriculum, staff and student performance through a disciplined and structured quality system that solicits stakeholder input and drives strategic and operational planning.”

**LEHIGH CAREER & TECHNICAL INSTITUTE
2015-2016 COUNSELOR ASSIGNMENTS**

DAN SNYDER 610-799-1355 snyderdan@lcti.org

Rotation Assignment A - C

CAP Auto Specialization Technology
CAP Building Trades Maintenance
CAP Early Care & Education of Young Children
CAP Electrical Technology
CAP Home Health Services
CAP Office Systems Technology
Electronics Technology/Nanofabrication
Precision Machine Tool Technology
Pre-engineering & Engineering Technology
Welding Technology

CORY SCHNAUFER 610-799-1369 schnauferc@lcti.org

Rotation Assignment D - H

Auto Body/Collision Repair Technology
Auto Technology
Criminal Justice
Diesel/Medium & Heavy Truck Technology
Electromechanical Mechatronics Technology
Heavy Equipment Operations & Preventive Maintenance
Small Engines/Recreational Vehicle Repair

Service Occupations
 Building Trades
 Foods
 Hospitality
 Indoor/Outdoor Maintenance
 Supply Chain Management/Logistics Technology

REGINA NARADKO 610-799-1344 naradkor@lcti.org

Rotation Assignment I -M

All New Enrollments
Administrative Office Technology/Accounting
Advertising Design/Commercial Art
Commercial Photography/Electronic Imaging
Computer & Networking Technology
Drafting/Computer Aided Design
Marketing & Business Education
Painting and Decorating
Print Technology/Graphic Imaging
Web Design/Web Programming

CHRISTINA LUEY 610-799-1339 lueyc@lcti.org

Rotation Assignment N - R

Cabinetmaking & Millwork
Carpentry
Commercial Baking
Culinary Arts
Electrical Technology
Emerging Health Professionals
Heating/Air Conditioning and Refrigeration
Masonry
Plumbing and Heating

KATRINA SPAROZIC 610-799-1370 sparozick@lcti.org

Rotation Assignment S - Z

Applied Horticulture
Cosmetology
Dental Technology
Early Care & Education of Young Children
Health Occupations/Health Related Technology
Supply Chain Management & Logistics Technology

GUIDANCE SECRETARY: Gail Moyer 610-799-1366 moverg@lcti.org

Director of Academic and Special Programs:

Grace Loeffler-Guldin 610-799-1357 guldin1@lcti.org

Secretary: Renee Kuzma 610-799-1358 kuzmar1@lcti.org

Supervisor of Special Education: Kristin Jachowicz 610-799-1326 jachowiczk@lcti.org

Secretary: Sheila Gehman 610-799-1340 gehman1@lcti.org

Bilingual Coordinator: Martha Figueroa 610-799-1367 figueroam@lcti.org

Career Pathways Advisor Colleen Fahey 610-799-1324 faheyc@lcti.org

Data Manager Joshua Herzog 610-799-1368 herzogj@lcti.org

Guidance Fax # - 610-799-1392

ACADEMIC CENTER DEPARTMENTS AND PROFESSIONAL STAFF

ADMINISTRATION:

Mr. Philip C. Bertolino II, Principal: 610-799-1364, bertolinop@lcti.org
Ms. Shirley Chanitz, Intervention Assistant to the Principal: 610-799-1365, chanitzs@lcti.org
Mrs. Ellen Reichling, Secretary: 610-799-1363, reichlinge@lcti.org

ENGLISH:

Mrs. Kathy Khanuja: 610-799-1457, khanujak1@lcti.org
Ms. Donna Miller: 610-799-1454, millerd@lcti.org
Mrs. Amanda Ressler: 610-799-1475, resslera@lcti.org
Mr. Douglas Troxell: 610-799-1444, troxellld1@lcti.org

MATHEMATICS:

Mrs. Karen Amate: 610-799-1802, amatek@lcti.org
Mrs. Stacy Sommer: 610-799-1421, sommers@lcti.org
Ms. Kelly Wagner: 610-799-1477, wagnerk@lcti.org

SCIENCE:

Mr. James Bennett: 610-799-1410, bennettj@lcti.org
Mrs. Marina Busuek: 610-799-1478, busuekm@lcti.org
Ms. Laura McGrath: 610-799-1466, mcgrathl2@lcti.org
Ms. Kelly Wagner: 610-799-1477, wagnerk@lcti.org

SOCIAL STUDIES:

Mr. James Bennett: 610-799-1410, bennettj@lcti.org
Mr. James Dawson, Jr.: 610-799-1431, dawsonj@lcti.org
Mrs. Valerie Hoyer, Instructional Assistant: 610-799-1470, hoyerv@cliu.org
Mr. Sean Thomsons: 610-799-1483, thomsons@lcti.org
Mr. Ryan VanNorman: 610-799-1439, vannormanr@lcti.org
Mr. John Loeper: 610-799-1434, loeperj@lcti.org
Mr. Josh Zimmerman: 610-799-1476, zimmermanj3@lcti.org

SPECIAL EDUCATION:

Mrs. Patricia Eckert: 610-799-1470, eckertp@cliu.org
Ms. Amber Feist: 610-799-1470, feista@cliu.org
Mr. Joe Nestor: 610-799-1382, nestorj@lcti.org
Ms. Leslie Schoeniger: 610-799-1470, schoenigerl@cliu.org

WELLNESS/FITNESS:

Mrs. Kelly Bracetty: 610-799-1426, bracettyk@lcti.org
Mr. Donald Brensinger: 610-799-1315, brensingerd@lcti.org
Mr. David Houck: 610-799-1423, houckd1@lcti.org
Mrs. Susan Laputka: 610-799-1448, laputkas@lcti.org
Ms. Deborah Schleicher, Instructional Assistant: 610-799-1470, schleicherd@cliu.org

STAFF EXPECTATIONS

Teaching, facilitating, learning, and innovating

Engaging students in a safe learning environment unified by common goals

Active learning through varied, student-centered lessons

Caring, listening, and respecting our learning community

Helping each other through professional collaboration

Encouraging parental involvement through continual contact

Raising expectations to prepare students for career, college, and life-long learning

STUDENT EXPECTATIONS

Strive To Do Your Best!

Treat Everybody With Respect!

Use Appropriate Language!

Determination Is Needed To Succeed!

Excellence Always!

Never Give Up!

Turn All Work In On Time!

Sharpen Your Mind and Your Pencil!

Lehigh Career & Technical Institute
Academic Course Schedule
2016 - 2017

Grade	Semester I	Semester II
10 th	Math	
	Science	
	English Language Arts II	
	American Studies II	
11 th	Math	
	Science	
	English Language Arts III	
	*World Cultures or Heath & Wellness	*Health & Wellness or World Cultures
12 th	English Language Arts IV	
	American Government/Civics/Economics	
	Health & Wellness	
	Math or Science Elective**	

*Semester Courses

**Science, Math, Credit Recovery, Distance/Online Learning, LCCC Courses

ACADEMIC CENTER COURSE OFFERINGS AND COURSE DESCRIPTIONS
FOR THE 2016 - 2017 SCHOOL YEAR:

ENGLISH LANGUAGE ARTS:

ENGLISH LANGUAGE ARTS II

ELA II is a course in literacy in which students master the Pennsylvania Core Standards and prepare for the Keystone Literature exam. Throughout the school year, students continue their in-depth study of a variety of literature. Students also continue to develop their vocabulary and writing skills. Literature study covers a wide variety of genres to improve comprehension and appreciation through a range of reading assignments. Students further develop composition skills through the writing process. Career and Technical Lab textbooks are used for supplemental readings as are various works of classic and contemporary non-fiction. Instruction is delivered in the domains of focus, content, organization, and style.

ENGLISH LANGUAGE ARTS III

This course focuses on classical and contemporary American literature. There is an emphasis on students' communication skills in reading, writing, speaking, and listening; increase comprehension strategies; evaluate historical and social influences which impact American literature; develop test-taking strategies; and prepare various types of writing according to MLA guidelines. Non-fiction works from scholarly and popular periodicals are used in every unit to aid in connecting the literary canon to real-world concerns. Students use Career and Technical Lab-based texts and trade publications to complete research and reinforce career information comprehension. This course is aligned to the Pennsylvania Core Standards.

ACCELERATED ENGLISH LANGUAGE ARTS III

This course focuses on classical and contemporary American literature as well as non-fiction works from scholarly and popular periodicals. The student will improve communication skills in reading, writing, speaking, and listening; increase comprehension strategies; evaluate historical, cultural and social influences which impact American literature; develop test-taking strategies; and prepare various types of writing according to MLA guidelines. Students will use Career and Technical Lab-based texts and trade publications to complete research and reinforce career information comprehension. This course is aligned to the Pennsylvania Core Standards and will assist students in preparing for the SAT/ACT exams.

While the accelerated class is not an honors or AP course, it does provide a more rigorous workload than the traditional senior class offering. A primary difference between the classes is in the instructional approach. Accelerated ELA III (ELA III) provides more of a college experience with less of an emphasis on daily assignments and more of an emphasis on authentic learning, inquiry-based and project-based learning. Students in the accelerated course engage in more independent reading and write more essays. There is also a greater emphasis on class discussions, debates, higher-level critical thinking skills, and 21st century skills. Students will be able to use these skills in many post-high school options in college and the work force.

Prerequisite: Grade of "B" or higher in 10th grade ELA.

ENGLISH LANGUAGE ARTS IV

This course focuses on the study and interpretation of British, American, and World Literature, research-based oral and written presentations, communications skill refinement, expository and creative writing, and

vocabulary study. Literature choices, both fiction and non-fiction, focus on the year-long theme Become the Hero of Your Own Life Journey. Students will examine the concept of the hero/heroine by exploring the choices, conflicts, relationships, and consequences of characters in the literature under study and relating this to their own lives through authentic learning and inquiry-based and project-based learning. Additionally, they will complete oral and written presentations related to practical communication skills required for post-secondary education and careers. Students continue to use Career and Technical Lab-based texts, technology, and print media to complete research and reinforce career information comprehension. Students use online data bases and periodicals to read and write critically about literature read, student career readiness, modern social problems, and technical skills, as well as their life-long philosophies and goals in preparation for college and/or career.

ACCELERATED ENGLISH LANGUAGE ARTS IV

Accelerated ELA IV is an alternative to the regular ELA IV course offering. While the accelerated class is not an honors or AP course, it does provide a rigorous workload for students whom enroll in this course. A primary difference between the classes is in the instructional approach. Accelerated ELA IV provides more of a college experience with less of an emphasis on daily assignments and more of an emphasis on authentic learning, inquiry-based and project-based learning.

Like ELA IV, the class focuses on the Pennsylvania Core Standards of reading, writing, listening, and speaking. The class content centers on the study and interpretation of British and World Literature and makes use of oral and written presentations, communication skills, expository and creative writing, and college-level vocabulary enrichment to enhance student learning. Oral and written presentations are related to practical communication skills needed for post-secondary education. Students will continue to use Career and Technical Lab-based texts and trade publications to complete research and reinforce career information comprehension.

Prerequisite: Grade of “B” or higher in 11th grade ELA.

MATHEMATICS:

ALGEBRA II

Algebra II is the study of the complex number systems, symbolic manipulation, and functions. Students discuss, represent, and solve increasingly sophisticated real-world problems using advanced algebraic and data analysis techniques incorporating technology. They also study the properties of functions and the algebra of functions. Linear, quadratic, exponential, logarithmic, polynomial, and rational functions are studied with an emphasis on making connections to other content areas and real life applications. The applications are related to the students’ Career and Technical Labs. Mathematical communication and problem-solving skills play an important role in this course to prepare students for life-long learning. This course is designed for students who have completed Algebra I and Geometry and is aligned to the Pennsylvania Core Mathematics Standards and the Pennsylvania Core Standards in reading and writing for Science and Technical Subjects.

GEOMETRY

Geometry is the study of the mathematics of the physical world. This course emphasizes the connection between theory and the practical/technical application with the inclusion of formal proofs and the use of algebra in problem-solving. Creating graphic organizers, word sorts, and measuring stations are included to discover and apply the concepts that are taught during the course. This course is aligned to the Pennsylvania Core Mathematics Standards and the Pennsylvania Core Standards in reading and writing for Science and Technical Subjects. Relationships are made between geometric concepts and various Career and Technical Labs.

PRE-CALCULUS

Pre-Calculus is designed for Academic Center students who have successfully completed Algebra I, Algebra II and Geometry. This course focuses on real-life applications of Linear Relations and Functions, Systems of Equations and Inequalities, Nature of Graphs, Polynomial and Rational Functions, Trigonometric Functions, Graphs of Trigonometric Functions, and Trigonometric Identities and Equations. Incorporated within the course is the use of technology, authentic learning, and problem solving strategies. This course is aligned to the Pennsylvania Core Mathematics Standards and the Pennsylvania Core Standards in reading and writing for Science and Technical Subjects. Relationships are made between course content and various Career and Technical Labs.

CALCULUS

Calculus is the study of change. Unlike previous math courses Calculus is concerned with what is happening at this instant in time rather than change over a period of time. During this course students study a variety of functions and their applications which lead into the study of a function's limit and derivative. The limit and derivative allows students to study instantaneous change of function in order to make accurate real-life interpretations. After the study of derivatives and their applications students study anti-derivatives and integrals which have their own unique real-life applications. This course is aligned to the Pennsylvania Core Mathematics Standards and the Pennsylvania Core Standards in reading and writing for Science and Technical Subjects. Relationships are made between course content and various Career and Technical Labs.

SCIENCE:

BIOLOGY

The Biology course meets the requirements for Keystone Standards and eligible content. Students engage, learn, and master core concepts of biological principles throughout nine major units from the first organisms and their classifications to their complexities at the cellular level. Organisms are explored and investigated at the anatomical and physiological level. There is also an emphasis on interactions with the environment and ecology. Students experience hands-on learning with various laboratory activities, group work, projects, and technological assignments. This biology course functions at the college preparatory level, enabling students to gain the skills and knowledge for future biological sciences at a post-secondary institution. The Pennsylvania Core Standards in reading and writing for Science and Technical subjects are emphasized to gain important skills necessary for a post secondary education. This course is aligned to the Pennsylvania Academic Standards for Science and Technology and Engineering Education. The activities within the course are related to the students' Career and Technical Labs.

CHEMISTRY

The Chemistry course has been developed to meet the Pennsylvania Academic Standards for Science and Technology and Engineering Education. The Pennsylvania Core Standards in reading and writing for Science and Technical subjects are emphasized. Chemistry is a lab-based course designed to incorporate the discussion of measurements, the periodic table, equations, reactions, phases of matter, and other essential Chemistry concepts. Students perform several hands-on applications of course concepts and experiments. Students are required to display mastery of these concepts in informal and formal assessments; i.e. lab reports, group activities, classroom assignments, a midterm, and a comprehensive final exam. Students also use various math and literacy strategies to aid in their success in Chemistry. The Chemistry assignments also include the integrated concepts between this science lab and various Career and Technical Labs.

ENVIRONMENTAL SCIENCE

Environmental Science provides an opportunity for students to study man's interaction with the environment. Topics include pollution, conservation of natural resources, environmental management and planning, and society's impact on the environment. The students are also provided with an opportunity to study the mutual relationships between living organisms and physical factors in their environments. Topics include but are not limited to: biotic and abiotic factors, energy relationships, bio-geologic cycles, population dynamics, ecosystems, and biogeography. Laboratory activities are an integral part of this course. This course is aligned with the Pennsylvania Core Standards for listening, reading, writing, and speaking including the Pennsylvania Academic Standards for Environment and Ecology to enhance student learning and achievement. Relationships are made between the concepts covered in this course and various Career and Technical Labs.

PHYSICS I

This course is aligned to meet the Pennsylvania Academic Standards for Science and Technology and Engineering Education. The Pennsylvania Core Standards in reading and writing for Science and Technical subjects are emphasized to enhance student learning and achievement. Physics I is a lab-based course designed to incorporate the discussion of motion, vectors, forces, momentum, energy, circular motion, gravitation, heat, simple harmonic motion, sound, reflection, circuits, magnetism, and other essential Physics concepts. Students perform several hands-on applications of course concepts and experiments. Students are required to display mastery of these concepts in formal assessments, lab reports, group activities and classroom assignments. Students also use various math and literacy strategies to aid in their success in Physics I. The Physics I assignments also include the integrated concepts between this science lab and various Career and Technical Labs.

Prerequisite: Recommended grade of “C” or higher in Algebra I with concurrent enrollment in Algebra II.

PHYSICS II

This course is aligned to meet the Pennsylvania Academic Standards for Science and Technology and Engineering Education. The Pennsylvania Core Standards in reading and writing for Science and Technical subjects are emphasized to enhance student learning and achievement. Physics II is a lab-based course designed to incorporate the discussion of force, work, rate, resistance, energy, power, force transformers, momentum, waves and vibrations, energy converters, transducers, radiation, light and optical systems, time constants, and other essential Physics concepts. Students build upon their previous knowledge from Physics I to make authentic connections to their own Career & Technical Lab. Students perform several hands-on applications of course concepts and experiments. Students are required to display mastery of these concepts in formal assessments, lab reports, group activities and classroom assignments. Students also use various math and literacy strategies to aid in their success in Physics II. The Physics II assignments also include the integrated concepts between this science lab and various Career and Technical Labs.

Prerequisite: Grade of “C” or higher in Physics I.

SOCIAL STUDIES:

AMERICAN STUDIES II

The American Studies II course is designed for tenth grade Academic Center students. The American Studies II course addresses the development of the United States throughout the twentieth century. This course is aligned to the Pennsylvania Academic Standards for History and the Pennsylvania Core Standards in reading and writing for History and Social Studies. Through various activities and lessons, these standards guide

understanding of the development of the United States as a world power; focusing on economic and industrial development, political trends, and society and cultural problems and achievements. The students develop an understanding of the progress of technology and social groups. They are expected to evaluate the changes of culture in society and analyze the political contributions of individuals and events of the periods studied. Students also use various math and literacy strategies to aid in their success in the course. American Studies assignments also include the integrated concepts between this history course and various Career and Technical Labs. Students are assessed formally and informally to determine mastery of the content for the duration of the academic year.

WORLD CULTURES

World Cultures is a required one semester long course that can be taken during a student's junior year. This class is a people-centered study involving an in-depth look at the world's major cultures. The study of each of these cultures focuses upon historical and present-day culture and geography. There is a focus on family life and structure, social organizations, attitude on education, religious beliefs and institutions, economic life and political trends. Students investigate the intellectual and artistic accomplishments of men and women within a given culture. The study of each culture is supplemented by the development of reading, writing, research, geography, critical thinking, study skills/note-taking, technology use and presentation skills. Additionally, the World Culture Course is aligned to the Pennsylvania Academic Standards for Geography and the Pennsylvania Core Standards in reading and writing for History and Social Studies. Assignments also include the integrated concepts between this course and various Career and Technical Labs.

AMERICAN GOVERNMENT/CIVICS/ECONOMICS

The American Government/Civics segment of this course has been developed to meet the Pennsylvania Academic Standards for Civics and Government and the Pennsylvania Core Standards in reading and writing for History and Social Studies. This course gives the student a basic understanding of the functions and services of our democratic system. To facilitate such understanding, the students engage in a topical study of our government. First, the students examine how our democratic system developed. Second, the students explain the election process and the party system. Third, the students investigate the specific rights guaranteed to each citizen by our Constitution. Finally, the fourth area involves the three branches of the Federal Government, their functions in the democratic system, and their responsibilities in the country. Students also achieve success in this course by utilizing research based best practices and a variety of math and literacy strategies. Many of the government projects and assignments in this course integrate concepts that are related to various Career and Technical Labs.

The Economic segment of this course has been developed to meet the Pennsylvania Academic Standards for Economics and the Pennsylvania Core Standards in reading and writing for History and Social Studies. The allocation of scarce resources and the implication of choices that people make are studied. The capacity of society to produce goods and markets used for distribution of goods are examined. National issues such as GNP, unemployment, and inflation are studied. The appropriate levels of government involvement in the economy as well as taxes and spending are analyzed. Financial markets, capital formation, and international trade are discussed in this course. Relationships are made between economic concepts and various Career and Technical Labs.

ACCELERATED AMERICAN GOVERNMENT/CIVICS/ECONOMICS

The Accelerated American Government/Civics/Economics course has been developed to meet the Pennsylvania Academic Standards for Civics and Government, the Pennsylvania Academic Standards for Economics and the

Pennsylvania Core Standards in reading and writing for History and Social Studies. Current events readings from leading periodicals from across the political spectrum occur throughout the course and there is an emphasis on independent and critical reading. Students are required to engage in regular and thoughtful, in-depth classroom discussions and debates on pertinent government and economic topics. Writing is emphasized as students complete journal entries, blogs, and a research paper. The course is designed to prepare students for careers and post secondary education. Course assignments integrate concepts from the students' Career and Technical Labs.

The Accelerated American Government/Civics segment of this course is a course that provides seniors an understanding of the functions and the services of our democratic system. Areas of study include the development of our democratic system, the election process and the three branches of the Federal Government, their functions in the democratic system, and their responsibilities in the country.

The Economic segment of this course presents introductory concepts of economics such as supply and demand, measuring of economic performance, monetary policy, tax and fiscal policy, all within the framework of the US democracy.

Prerequisite: Grade of "B" or higher in 11th grade Social Studies.

WELLNESS/FITNESS 11 & 12:

WELLNESS/FITNESS 11

The 11th grade Wellness/Fitness course is designed for students to acquire and apply the knowledge and skills necessary to promote wellness in their lives. Students rotate in and out of the fitness center and the classroom exploring fitness components, such as cardiovascular endurance, muscular strength and endurance, flexibility, body composition, and nutrition. Knowledge learned in the classroom is applied in the fitness center to increase their personal fitness levels. The Pennsylvania Core Standards in reading and writing for Science and Technical Subjects and the Pennsylvania Academic Standards for Health, Safety, and Physical Education are applied within the course via research projects based on focused questions, summarizing the key supporting details and ideas, using technology and participating in a range of conversations, collaborations, and debates with diverse partners.

The wellness portion of the course focuses on Health Literacy, Decision-Making, Goal-Setting, Interpersonal Communication, Stress, Body Systems, and Nutrition. Within these units, students analyze how health concepts are essential for wellness and a health-enhancing lifestyle, distinguish community well-being as dependent upon a balance of personal and social responsibility, and investigate how safety impacts individual and community well-being. This course focuses on concepts to improve the students' current knowledge and level of emotional/mental health, physical health, and social health. The essential question surrounding this course portion is 'What are the outcomes of various safe and unsafe practices and what impact can the outcomes have on my life and the lives of others around me?'

During the fitness portion of this course, students are introduced to a variety of exercise options that promote health and well-being. Using technology, such as heart rate monitors and pedometers, along with state of the art fitness equipment, students are introduced to the components of fitness- cardio-respiratory endurance, strength and conditioning, flexibility and body composition. This course is designed for students to become familiar with the fitness center and to introduce basic concepts and principles associated with physical fitness to successfully prepare them for the full year Wellness/Fitness 12 course. The essential question for this course portion is 'What criteria will you use to determine if your health behaviors are responsible now and in the future?'

WELLNESS/FITNESS 12

The 12th grade Wellness/Fitness course is designed to acquaint students with the benefits of physical activity so they may pursue a healthy lifestyle. Students rotate in and out of the fitness center and the classroom exploring fitness components, such as cardiovascular endurance, muscular strength and endurance, flexibility, body composition, and nutrition. Knowledge learned in the classroom is applied in the fitness center to increase their personal fitness levels. The Pennsylvania Core Standards in reading and writing for Science and Technical Subjects and the Pennsylvania Academic Standards for Health, Safety, and Physical Education are addressed within the course via research projects based on focused questions, summarizing the key supporting details and ideas, using technology and reference materials to determine meaning of multiple meaning words and phrases and preparing for, and participating in a range of conversations, collaborations, and debates with diverse partners. During the third and fourth marking periods, students work towards their certification in CPR, First Aid, and AED through the American Heart Association.

The wellness portion of the course focuses on Health Literacy, Addictions (Legal & Illegal Drugs/Tobacco/Alcohol, Texting, and Internet), Human Sexuality/Diseases/Reproduction and CPR/First Aid/AED. Within these units, students analyze how health concepts are essential for wellness and a health-enhancing lifestyle, distinguish community well-being as dependent upon a balance of personal and social responsibility, and investigate how safety impacts individual and community well-being. The essential question surrounding this course portion is ‘What are the outcomes of various safe and unsafe practices and what impact can the outcomes have on my life and the lives of others around me?’

During the fitness portion of this course, students are exposed to a variety of lifetime activities that promote health and well-being. Using technology, such as heart rate monitors and pedometers, along with state of the art fitness equipment, students create their own Individualized Fitness Program based upon the components of fitness- cardio-respiratory endurance, strength and conditioning, weight training, flexibility, body composition. The essential question for this course portion is ‘What criteria will you use to determine if your health behaviors are responsible now and in the future?’

This course is required for graduation.

