A Message From The Principal

The Emmaus High School Program of Studies has been developed through a collaborative process involving your teachers and administrators. As times change, so must the Program of Studies to reflect our current programs and procedures. Regardless of the changes, our goal remains to meet the needs of each and every student while maintaining the organizational structure necessary for a 21st century high school. In order for us to properly identify our staffing, curricular, and instructional needs, it is critical that you follow the procedures and timelines outlined in this program.

Please take time to review the Program of Studies with your parents or guardians. Our counselors, teachers, and administrators will be happy to provide you the appropriate resources and support as you reflect on your future goals and make your final course selections. Regardless of your path following graduation, we urge you to select courses that will challenge you to learn and grow while meeting your needs and addressing your areas of interest.

When selecting courses for next school year, please keep the following in mind:

- It is required that all students take a minimum of five full-year (or the equivalent) courses, in addition to fitness education. Many students elect to take six or more full-year courses in order to balance their educational experience.
- Student course selections will be final as of July 1. If you wish to make a change from your initial course requests, you must meet with your counselor prior to that date.

Course selection can be an exciting and stressful process. Please communicate with your parents, teachers, and counselor as you finalize your selections and build your schedule. We are committed to providing you the support you need to have a great high school experience.

Sincerely,
David F. Piperato
Emmaus High School Principal

COUNSELING SERVICES

Counseling services are intended to help students. Students are urged to consult with a counselor to discuss any concerns they may experience, which may include individual career plans, occupational opportunities and current school work.

More specifically, the purpose of counseling services is to assist students in finding solutions to individual problems; adjusting to surroundings; making a vocational choice; securing information about various school courses and activities; planning post-high school education and opportunities; planning courses and electives to meet college entrance requirements; applying for admission to colleges, nursing schools, junior colleges, technical schools and preparatory schools, and securing information about these schools and their requirements.

FOR FURTHER INFORMATION

Contact Your Counselor

Dr. Diane Flisser, (Weihbrecht to Zukowski)	610-965-1664
Mrs. Jennifer Carolla (Klegarth to McGrath)	610-965-1667
Mrs. Colleen Demchak (Hahn to Klechner)	610-965-1689
Mr. Joseph Henrich (Erb to Hager)	610-965-1691
Ms. Ellen Malone (Cadden to Engelman)	610-965-1666
Mr. Mike McInerney (Podczasy to Shipe)	610-965-1527
Mr. Sean Seveland (McHale to Plocinik)	610-965-1663
Mrs. Heather Greene (Shoemaker to Weida)	610-965-1665
Mr. Paul Wood (Abel to Buxton)	610-965-1687

DEPARTMENT CHAIRS

Mr. Tom Warnke	Social Studies
Ms. Laura Leiby	Mathematics/Computer Science
Mr. Michael Seip	Wellness/Fitness/Driver Education
Ms. Regina Oster	Art
Mr. Brent Haley	Computer and Business Applications
Ms. Kimberly Kneller	Science
Ms. Deborah Swann	World Language
Ms. Diane DiDona	English
Mr. Andrew Moxey	Technology Education
Mrs. Heather Day	Family and Consumer Sciences
Ms. Rita Cortez	Music
Mrs. Mary Ellen Roberts	Special Education

Department Chairs can be reached through the Emmaus High School Main Office at 610- 965-1650.

Please visit our website: www.eastpennsd.org/ehs

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HIGH SCHOOL ADMINISTRATION

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Mrs. Sally Hanzlik, Assistant Principal, Class of 2013 and LTS
Mrs. Janine Mathesz, Assistant Principal, Class of 2012
Mr. Mark Caccavo, Assistant Principal, Class of 2011 & 2015
TBA, Assistant Principal, Class of 2014
Mrs. Kate Kieres, Assistant Principal for Academic Affairs
Mr. Dennis J. Ramella, Athletics/Activities Director
Mr. Shaun Murray, Assistant Athletics/Activities Director

The East Penn School District is an equal opportunity education institution and will not discriminate in its educational programs, activities or employment practices on the basis of race, color, national, origin, sex, age, religion, ancestry, disability, union membership or other legally protected classification. Announcement of this policy is in accordance with state and federal laws, including Title VI, Title IX, Section 504 and ADA.

For information regarding 1) civil rights, 2) grievance procedures, 3) services, activities and facilities that are accessible to and usable by handicapped persons, or 4) employee or participant complaints of harassment or discrimination, contact Noelle Keeler, Compliance Officer, 800 Pine Street, Emmaus, PA 18049. The Federal Drug-Free Workplace Act requires that your workplace be free of the illegal use of drugs and requires that we issue the following statement to you. No one is allowed to use, make, sell, distribute, or have in their possession any illegal drugs. Any violation of the act will lead to severe disciplinary action which will normally include dismissal.

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THE SCHEDULING PROCESS: A MESSAGE TO PARENTS

Each eighth, ninth, tenth and eleventh grade student receives a Program of Studies. The printed program is the result of meetings with teachers, counselors, department chairpersons, parents, the Superintendent and the Board of School Directors. The Program of Studies describes each course offered in the high school and should be reviewed carefully each year.

PRE-REGISTRATION

Students will discuss next year's course selections with their subject teachers on pre-registration day. All teachers will use the knowledge they have gained having your child in class to assist him/her in choosing an appropriate course for next year which best suits his/her abilities and aspirations.This process will provide a basis for the final course selection with the counselor.

REGISTRATION

During the second semester each student will finalize his or her course selections for next year. The counselor will review the pre-registration form and the student's record and his/her career objectives. After analyzing this information, the counselor will recommend a program which will best utilize your child's abilities and provide the academic background to further his/her career plans. Occasionally, the counselor's recommendation may not match yours or your child's selection. You are encouraged to contact the counselor if you have any questions concerning your child's course registration. The more we communicate throughout the process, the better the chance we have to make the best selection.

COURSE REQUESTS

Once the final selections are made, all the course requests are tallied. The number of sections of a particular course and the teachers' assignments are determined by the students' course requests. The schedule is developed over a period of two months with the objective of meeting every student's course requests. Although adjustments are often made, some students' requests cannot be honored. Because of the implications a few changes can have on the entire schedule, it is very important that each student's selections be made very carefully.

SCHEDULE CHANGES

If the selections have been carefully made, changes should not be necessary, except in very unusual situations. If you would like to request a change, please contact your counselor before July 1. A change is much more likely to occur while the schedules are still being developed. Once the schedules are developed, a change is highly unlikely. We will never be unreceptive to extenuating circumstances, but a change merely for convenience is not in the best interest of good school organization.

GRADUATION REQUIREMENTS

The East Penn School District requires that all students complete a minimum of twenty-one (21) credits as defined in the Program of Studies between grades 9 and 12 to graduate.

Credits must be completed in the following areas:

NUMBER OF CREDITS	SUBJECT AREA
4	English (one course each year)
4	Social Studies
3	Science (three full years)
3	Mathematics
2	Arts/ Humanities
1	Wellness/Fitness
.50	Health
.25	Driver Education
.50	Family and Consumer Science
.50	Computer Applications

Students must complete four (4) Wellness/Fitness courses (one each year). One of these must be aquatics.

Arts/Humanities: Any course offered in the following departments may be used to satisfy the Arts/Humanities requirements:

- Art
- Music (including band, orchestra and chorus when offered for credit)
- English
- Family and Consumer Science
- Social Studies
- World Language
- Technology Education

Since all students are required to complete a four-year Social Studies sequence, one of these courses could automatically fulfill one of the two Arts/ Humanities requirements.

Students must pass their current level, full-year English course in order to go to the next level, full-year English course. It is not possible to take two different levels of English in the same year.

Students must take three full years of science, at least one of which must include a lab.

All students must complete one semester of an individual computer applications course. Please see courses listed in the Computer and Business Applications and Computer Science departments for courses that fulfill this requirement.

Students shall demonstrate proficiency in reading and mathematics on either the state assessments administered in grade 11 or 12 or local assessment aligned with academic standards and state assessments at the proficient level or better to graduate. If necessary, special education students can graduate based upon IEP goals.

Students transferring into the East Penn School District who are in jeopardy of not satisfying local graduation requirements due to differences in requirements between the East Penn School District and the previous school(s) attended and/ or students enrolled in approved differentiated academic programs (ADAP) are entitled to an adjustment in the graduation requirements according to procedures established by the Superintendent/Principal.

KEYSTONE EXAMS

The Keystone Exams are end-of-course assessments designed to assess proficiency in the subject areas of Algebra I, Algebra II, Geometry, Literature, English Composition, Biology, Chemistry, U.S. History, World History, and Civics and Government. The Keystone Exams are one component of Pennsylvania's new system of high school graduation requirements.

Keystone Exams will help school districts guide students toward meeting state standards—standards aligned with expectations for success in college and the workplace. In order to receive a diploma, students must also meet local district graduation requirements. In addition, for the graduating class of 2015 and 2016, students must demonstrate successful completion of secondary-level course work in Algebra I, Biology, Literature, and English Composition, in which the Keystone Exam serves as the final course exam. We expect that by the year 2013, the Keystone Exams will replace the Pennsylvania System of School Assessment (PSSA) for high school students.

Detailed information about the Keystone Exams can be found at:

http://www.pdesas.org/Assessment/Keystone#

PREREQUISITES

Students are required to fulfill prerequisites before registering for any course. Students who have satisfied the prerequisite but do not meet the recommended grade contained therein and/or who are not recommended by their current teacher to take the desired course may submit a formal request to their counselor to over-ride the recommendation. This request will be reviewed by the student's school counselor and assistant principal and approved or denied based on the information presented. Students should see their school counselor for more information regarding this procedure.

GRADUATION PROJECT

The high school student project is a meaningful learning experience, which the East Penn School District feels should be a part of every student's educational career. The project provides students with the opportunity for in-depth learning of a self-selected career pathway, involving out-of-class research and development. For further information, please refer to the East Penn Graduation Project Booklet, available online at http://www.eastpennsd.org/ehs/Academics/Graduation%20Project.html

SEMESTERS, FULL TERMS

The Emmaus High School year is divided into four marking or rating periods. Report cards are issued at the end of each of these nine-week periods.

An eighteen-week course is referred to as a SEMESTER course. Other courses which have a duration of two semesters are referred to as FULL TERM courses. If a course is not designated as a semester course, assume the course's duration is a full term.

SIX-DAY CYCLE

Emmaus High School operates on a six-day cycle schedule. Each day is numbered (1-6) rather than identified by the traditional weekday name. This method aids in the scheduling of special classes such as science laboratories and wellness/fitness, and also provides for the continuity of days. In the past, when a holiday fell on a weekday and this was the day a student had a particular class, the student missed that part of the school program. Under the cycle schedule, holidays or days off do not affect the program since the next regular day is scheduled automatically. Example: If Monday (Day 2) is a holiday, Tuesday will become Day 2 in the student's schedule. The day within the cycle are announced each day in the EHS DAILY BULLETIN.

COURSE SELECTION

Course selection is regarded as an important function and should be given very serious consideration by students and parents. On the basis of both the wide variety of course offerings and the non-discrimination policy at Emmaus High School, the student is encouraged to extend career horizons beyond the traditional stereotypes and to select a program of studies which fits the student's unique interests, strengths, and abilities.

It is required that a student's academic program consist of a minimum of five full year courses or its equivalent (two semesters are equal to one full year course). Every student is required to take English, Social Studies, and Wellness/Fitness. LCTI students must meet as many of the requirements as their schedule allows. In addition, the student must meet the requirements listed under "Graduation Requirements." The scheduling process involves input from teachers and counselors during each academic year.

PLEASE NOTE: All course selection changes must be made before July 1. A listed course may not be offered because an insufficient number of students selected the course, a certified teacher is not available, or budgetary funds are not available.

CLASS TRANSFER AND WITHDRAWAL

No course changes will be made during the first six days of the semester. Exceptions will be made only if a student has been scheduled for a course that he or she did not request or, in rare cases, if an error exists on the student's schedule. Once the first six days of the semester have passed, transfers and/or withdrawals from scheduled classes will be made only in special circumstances. Requests for a transfer and/or withdrawal will be considered only after:

1. The request from parents and student has been presented to the counselor on the form available from the student's counselor. Verbal requests, email or other written notes will not be processed.
2. The teacher has signified his/her approval.
3. The committee comprised of counselors and administrator(s) has granted its approval. The validity of the request will be determined by the committee after analyzing the student's record and consulting with the teacher, parents and student involved.
4. Once interim progress report comments are entered by teachers in the first rating period of the course, course withdrawals will appear on student tran scripts as a WP or WF, based upon the student's performace at the time of withdrawal.

CLASS RANK

Class rank is determined by arranging the GPA's of all students being graduated in the same year in order from highest to lowest. The rank is reported as a percentile, for example 72% (ile). In the percentile reporting method, several students will occupy each percentile, and no distinction will be made among the students in each percentile.

COLLEGE COURSES, OUTSIDE COURSES, GRADE POINT AVERAGE (GPA) AND CLASS RANK

A number of local colleges and univiersities, including Lehigh University, Cedar Crest College and Lehigh Carbon Community College, provide affordable opportunities for Emmaus High School students to take college courses while still in high school. Students interested in such an opportunity should contact their school counselor. Prior written approval of the high school principal is required for all college courses. College courses and any other course exceptions (i.e. pass/fail, exam exempted courses, courses exempted by private tutoring and independent study) will receive grades and will be reflected on the transcript where appropriate but will not be counted as part of the GPA or class rank.

Any costs for courses outside of the regular high school program will be the responsibility of the student and his/her family.

HONORS AND ADVANCED PLACEMENT SEQUENCE

The Honors and Advanced Placement courses are intended for students who are interested in an enriched experience in a specific subject. Enrollment in the courses is open to all students, but they must have the ability and desire to handle the increased academic demands. To remain in the courses, students must continue to demonstrate ability and desire to do the type of assignments required by this program. Students who complete an AP course are encouraged to take the AP examination. All ninth grade honors courses need the approval of the teacher/counselor.

PASS/FAIL OPTION

A course may be taken on a Pass/Fail basis if the following requirements are satisfied. All arrangements for Pass/Fail courses must be completed by then end of the add/drop period.

1. Students must take five majors as graded courses. Major courses are at least a full year or its equivalent (1 full year = 2 semesters).
2. Students may not take graduation requirements pass/fail. This includes specific subject requirements and total course requirements.
3. Students can request any additional course as pass/fail.
4. The request must be approved by the parent, teacher, counselor, and principal.
5. The teacher may recommend withdrawal from the course if the student is not meeting the course responsibilities.

INDEPENDENT STUDY

Independent study programs are available in unusual situations when it is determined that a course is a necessary component of a student's program, but it cannot be scheduled.

The course must be in the Program of Studies. Courses taken in this manner will receive a grade and assigned course value, but the grade will not be included in GPA calculations. Independent Study arrangements must be approved by the teacher, parent, counselor, and principal in writing, and the agreement must be completed prior to the beginning of the semester for which the request is made.

EXEMPTING COURSES BY EXAM

The purpose of this exemption, whenever available, shall be to allow a student, in unusual circumstances, to exempt a particular course because of an existing knowledge base. All arrangements must be approved by the Principal or his/her designee. Exempting exams will be offered during midterm exams, final exams and during summer school session.

EXEMPTING COURSES BY TUTORING

The purpose of this exemption shall be to move students ahead of the district-adopted sequence of courses in a particular academic subject through private tutoring. All arrangements must be approved by the Principal.

GIFTED SUPPORT PROGRAM

Emmaus High School offers programming options for students enrolled in the Gifted Support Program. EHS utilizes a teacher of the gifted who maintains an office in the High School to develop and implement Gifted Individualized Education Plans (GIEPs), provide students with enrichment and acceleration when appropriate, and conduct consultations and collaborations for the differentiation of instruction. Finally, electives for ninth through twelfth grade students, as well as a seminar and media experience for eleventh and twelfth grade students, are also program options (see course listings for more details).

LEHIGH CAREER AND TECHNICAL INSTITUTE

The Lehigh Career and Technical Institute is an extension of the home school. The various programs offered are an integral part of the curriculum of the home high school. Students who take a Lehigh Career and Technical Institute program continue to take their required academic subjects and wellness/fitness at the home school during one-half of the school day and attend the Lehigh Career and Technical Institute the other half-day for their specialized career program. Students receive three credits for the successful completion of one year of vocational training.

An alternative to the half-day program, LCTI's Academic Center provides tenth through twelfth grade students the opportunity to attend LCTI for a full day. This program allows students to take both academic and technical classes at LCTI. The Academic Center also affords students the opportunity to take advanced coursework at Lehigh Carbon Community College in dual enrollment and middle college courses. Ask your school counselor for more information.

Diplomas awarded at graduation are given only by the home high school and not the Lehigh Career and Technical Institute. The Lehigh Career and Technical Institute does, however, present a certificate to each graduating student who has successfully met Lehigh Career and Technical Institute standards. Lehigh Career and Technical Institute graduates also receive a listing of competencies completed in their trade area.

Students who wish to enroll in LCTI during their ninth grade year must first meet specific academic eligibility requirements established by the East Penn School District. Students should see their school counselors for more information about these criteria.

LCCC DUAL ENROLLMENT PROGRAM

Lehigh Carbon Community College and Emmaus High School have partnered together to offer Dual Enrollment courses. This program enables students who have achieved certain academic standards to take one or more college courses while still in high school. Students participating in the Dual Enrollment Program can earn transferable college credits for each course taken and also work toward meeting high school graduation requirements. Courses are taught at the high school during the regular school day. Courses are taught

by qualified high school teachers serving as an LCCC adjunct instructor or by an LCCC faculty member. Faculty teaching Dual Enrollment courses are required to meet the hiring standards of LCCC's accrediting agency.

Taking advantage of this postsecondary experience will not only jump-start a student's college career, but also give him or her the opportunity to earn transferable college credits while he or she is still in high school. The cost for Dual Enrollment courses taught in sponsoring high schools by high school faculty is $30 per credit, or $90 for a three-credit course. There is no application fee for Dual Enrollment students.

PENNSYLVANIA ACADEMY

The PA Academy for Sciences, Arts and Advanced Technologies is a program offered through Lehigh Carbon Community College which gives those students who have, or will have completed their core academic courses in high school the opportunity to pursue their chosen career pathway while still in high school. Students must qualify to participate in the academy and in most cases must have completed the higest level courses in their chosen academic discipline. The academy course offerings are challenging college-level courses that require a dedicated commitment level by those students interested in advancing their careers. The rigor of the courses helps prepare students for the challenges of college beyond high school. A major thrust of the academy is to open opportunites for students to careers in science, technology, engineering and mathematics. Questions about the program may be directed to the Academy Director at 610-799-1968 or by contacting LCCC admissions at 610-799-1575.

PLANNING A PROGRAM

Students are encouraged to select a program with the following objectives in mind:

(1) Complete all graduation requirements.
(2) Select courses which will prepare the student for entrance into college or the world of work.
(a) A college preparation program should contain the following courses. (Variations are acceptable and individual goals and needs should be discussed with the counselor)
English - Four years at the college preparatory level or above.
Social Studies - Four years at the college preparatory level or above.
Sciences - Three years or more of sciences at the college preparatory level or above.
Mathematics - Three years or more of mathematics, preferably to include Algebra III and Trigonometry.
World Languages - Four consecutive years of the same language.
Arts and Humanities - Two full-year or four half-year courses.
(b) Other programs would include the following:
Vocational-Technical experiences which are offered at the LCTI, Computer and Business Applications, Technology, Family and Consumer Sciences, Art, and Music.
(3) Plan a program which is taught at the highest academic level which they can handle in each subject area.

Please Note:
Planning a program of studies should involve careful consideration by the student and the parents and should be made on the basis of student interests, abilities and vocational goals. It is advisable to work closely with the counselors in the selection of a program of studies.
It is strongly recommended that a student planning to take the second year of a continuing type course follow recommended prerequisites.

CAREER PATHWAYS

What is Career Pathways?
Career Pathways guides students of all ages through a process to prepare them realistically for a promising future. To help graduates compete in a job market that requires more and more technological knowledge, Career Pathways is designed to provide all students with the academic and technical skills they need to reach their career goals.
How does it work?
Step One: Career Awareness - Throughout the elementary school years, Career Pathways teaches students about a broad range of careers through guest speakers, videos, and field trips. Teachers, counselors and parents help their students develop an awareness of the importance of good work habits, the benefits of educational achievement and much more.

Step Two: Career Exploration - Middle school students are encouraged to explore their interests by gathering information about careers, including their requirements and the lifestyles they represent. Teachers, guidance counselors, and parents motivate the students to discover their abilities, to use decision-making skills and more.

Step Three: Career Preparation - Eighth and ninth graders, with the help of their parents, guidance counselors and choose one of four broad clusters of careers to pursue:
• Arts & Humanities
• Business & Communication Technology
• Engineering & Industrial Technology
• Health & Human Services
Then, they choose one of two pathways within that cluster:
• Traditional Academic, which leads to jobs that require four or more years of college OR
• Technical Academic, which lead to jobs that requires an associate's degree or advanced technical training.

High school students take both the standard required courses as well as courses recommended by their chosen cluster and pathway, which means some students get to take courses at the local career and technical institute. These courses build a foundation for education after high school, whether it is in college, business or trade school, the military services or the workforce. Career Pathways aims to prepare students for careers based on their specific interests and abilities, although after they choose a career cluster, they are not locked in. This flexibility, together with experiences such as job shadowing days and internships, helps students decide whether a certain career is right for them.

Step Four: Career Development - Based on the career goals they have chosen, students are advised to continue preparing for their careers through one or more of the following:
• Four-year college
• Two-year college
• Business or trade school
• Military
• Apprenticeship
• Entry-level employment

Step Five: Career & Lifelong Learning - After further readying themselves for the exciting world of careers through some form of higher education, Career Pathways students are set to pursue their goals. All students, no matter which cluster and pathway they have chosen, are encouraged to make learning a lifelong priority.

2011-2012 STANDARDIZED TESTS

The Emmaus High School Counseling Department suggests the following testing sequence for all students.

PSAT/NMSQT

Recommended for all juniors who plan on taking the SAT and/or wish to compete for the National Merit Scholarship.

SAT & SUBJECT TESTS

Emmaus High School will also offer the SAT & Subject Tests twice during the first semester of the 2011-2012 school year, as well as the SAT once during the second semester. Please see www.collegboard.com for specific dates and to register for a test. A student with a disability, whose condition substantially limits his or her ability to participate in College Board tests, may be eligible for accommodations. The request for accommodations is initiated by completing a Student Eligibility Form. This eligibility form has specific deadline dates and can be obtained through the Counseling Office.

PSSA

Please see the 2011-2012 district calendar for testing dates.

Students shall demonstrate proficiency in reading and mathematics on either the state assessments administered in grade 11 or 12 or local assessment aligned with academic standards and State assessments at the proficient level or better to graduate. Students who do not meet proficiency goals in 11th grade will take a mandatory remediation course in which they will prepare for the grade 12 retest and/or participate in the local assessment. This course may affect seniors' early release and late arrival privileges. If necessary, special education students can continue to graduate based upon IEP goals.

KEYSTONE EXAMS

Please see the 2011-2012 district calendar for testing dates, which are expected to be in early May. Please see also http://www.pdesas.org/Assessment/Keystone# for more information about these important graduation requirements.

COURSE DESCRIPTIONS

ART DEPARTMENT

The Art Department offers a variety of elective courses which include drawing, painting, ceramics, crafts, 2-D design, 3-D design, AP Art History and AP Art Studio. Before electing any of the aforementioned art studio courses, students are required to take two semester Foundations of Art courses.

The first course selection requirement is either:
* 2-D Foundations of Design/Computer Art

or

* 2-D Foundations of Drawing & Painting

The second course selection requirement is either:
* 3-D Foundations of Ceramics/3-D Design

or

* 3-D Foundations of Crafts/3-D Design

All foundation and Level 1 courses are one semester in duration and Levels 2,3 and AP courses require a yearlong commitment.

Any student wishing to test out of a prerequisite course must submit a comprehensive portfolio and be approved by the Art Department.

Students entering ninth grade must register for both a 2-D and a 3-D foundations course as together, they are viewed as a full-year foundational experience. Students will indicate their first choice for each. If first choices are not available, students will be automatically scheduled for an alternate.

A700 2-D FOUNDATIONS OF DRAWING AND PAINTING (Grades 9-12) Students will experience an introduction to drawing and painting techniques in the creation of 2-dimensional art works. Students will develop an awareness of the historical and cultural art traditions which influence contemporary art forms. This course, combined with one 3-D foundations selection, satisfies the prerequisite for any level I course.
6 periods per cycle
Semester Course .50 credit

A702 2-D FOUNDATIONS OF DESIGN/COMPUTER ART (Grades 9-12) Students will participate in various design projects that will reflect traditional 2-D and new computer techniques. Projects will include both functional and non-functional results. A variety of traditional and computer art media will be used to allow students to see and explore the many possible avenues of design such as: graphics, architecture, fashion, interior and product. This course, combined with one 3-D foundations selection, satisfies the prerequisite for any level I course.
Semester Course .50 credit

A701 3-D FOUNDATIONS OF CRAFTS/3-D DESIGN (Grades 9-12) Students will participate in various introductory craft 3-D design projects, which reflect the influence of specific cultural groups. Students will see and explore the possible 3-dimensional design avenues such as architecture, fashion, interior and product. This course, combined with one 2-D foundations selection, satisfies the prerequisite for any level Icourse.
6 periods per cycle
Semester Course .50 credit

A703 3-D FOUNDATIONS OF CERAMICS/3-D DESIGN (Grades 9-12) Students will use hand building techniques of clay and various other 3-D materials such as wood, paris craft and wire to create functional and nonfunctional forms. Using glazing and painting methods will enhance 3-D forms. The historical/cultural importance of ceramics and sculpture is explored. This course, combined with one 2-D foundations selection, satisfies the prerequisite for any level I course.
6 periods per cycle .
Semester course .50 credit

A704 DRAWING I (Grades 10-12) Students will solve visual arts problems using a variety of basic media and techniques. Experiences will include drawing with: graphite, charcoal, conte crayon, pastels, markers, ink, etc., along with relief and embossed printmaking.
Prerequisite: Completion of a 2-D AND a 3-D Foundations course (recommended 74% or better in both)
6 periods per cycle
Semester course .50 credit

A714 DRAWING II (Grades 11-12) Students will explore an individual approach in solving visual arts problems. Refinement of drawing techniques and a continuation or printmaking experiences provide the student with greater resources for personal expression.
Prerequisite: Drawing 1 (recommended 74% or better)
6 periods per cycle 1.0 credits

A724 DRAWING III (Grade 12) Students will continue to explore an individual approach using media and techniques. Experiences will include drawing, computer design, collage, etching and lithographic printmaking. Each student will elect to specialize in one drawing medium and one printmaking technique with the intent of developing one's personal style.
Prerequisite: Drawing 2 (recommended 84% or better)
6 periods per cycle 1.0 credits

A705 PAINTING I (Grades 10-12) Students will solve visual arts problems using a variety of basic media and techniques. Experiences will include drawing, acrylic and other water-based media painting.
Prerequisite: Completion of a 2-D AND a 3-D Foundations course (recommended 74% or better in both)
6 periods per cycle
Semester course .50 credits

A715 PAINTING II (Grades 11-12) Students will explore an individual approach to solving individual arts problems. Refinement of drawing and painting techniques, introduction to oil painting techniques, and variety of painting experiences provide the student with greater resources for personal expression.
Prerequisite: Painting I (recommended 74% or better)
6 periods per cycle 1.0 credits

A725 PAINTING III (Grade 12) Students will continue to explore an individual approach to solving visual arts problems. Experiences will include oil, acrylic, tempera, watercolor and gouache paint. Each student will elect to specialize in one painting medium and theme with the intent developing one's personal style.
Prerequisite: Painting II (recommended 84% or better)
6 periods per cycle 1.0 credits

A706 2-D DESIGN/COMPUTER ART I (Grades 10-12) Students will participate in learning approaches to solving problems using visual design principles. An emphasis will be placed on function, aesthetics and craftsmanship. Traditional media such as pencil, markers, inks, as well as computers will be utilized for this course to complete 2-dimensional designs.
Prerequisite: Completion of a 2-D AND a 3-D Foundations course (recommended 74% or better in both)
6 periods per cycle
Semester course .50 credits

A716 2-D DESIGN/COMPUTER ART II (Grades 11-12) Students will explore an individual approach to solving visual arts problems. Refinement of technique with a variety of media will provide the student with design experiences emphasizing function of the product in the competitive design world.
Prerequisite: 2-D Design/Computer Art I (recommended 74% or better)
6 periods per cycle 1.0 credits

A726 2-D DESIGN/COMPUTER ART III (Grade 12) Students will select and work independently in two areas of concentration (themes). They will work at a high level of effectiveness, creating a series of project(s) each quarter.
Prerequisite: 2-D Design/Computer Art II (recommended 84% or better)
6 periods per cycle 1.0 credits

A707 3-D DESIGN I (Grades 10-12) Students will participate in learning approaches to solving good design problems. An emphasis will be placed on function, aesthetics and craftsmanship. A variety of 3-D techniques will be explored through the use of clay, glass, found objects, etc.
Prerequisite: Completion of a 2-D AND a 3-D Foundations course (recommended 74% or better in both)
6 periods per cycle
Semester course .50 credits

A717 3-D DESIGN II (Grades 11-12) Students will explore an individual approach in solving visual arts problems. Refinement of technique with a variety of media will provide the student with design experiences that have an emphasis on function of the product in the competitive design world.
Prerequisite: 3-D Design I (recommended 74% or better)
6 periods per cycle 1.0 credits

A727 3-D DESIGN III (Grade 12) Students will select and work independently in two areas of concentration at a high level of effectiveness, creating one or more projects each quarter. Mixed media pieces may include papers, fabrics, mosaics, metals, found objects, clay, etc.
Prerequisite: 3-D Design II (recommended 84% or better)
6 periods per cycle 1.0 credits

A709 CRAFTS I (Grades 10-12) Students will participate in various craft projects, which reflect the influence of specific cultural groups. Students will make functional and non-functional objects using a variety of techniques and materials such as weaving, jewelry-making, and clay.
Prerequisite: Completion of a 2-D AND a 3-D Foundations course (recommended 74% or better in both)
6 periods per cycle
Semester course .50 credits

A719 CRAFTS II (Grades 11-12) Students will solve craft design problems that are influenced by specific cultural groups. Projects will be both functional and non-functional art works that will broaden the techniques and materials learned in prerequisite courses. Basketry, papermaking, fiber arts, clay and contemporary jewelry-making are media that will be explored throughout the course. Students will take a more individual approach to solving crafts design problems by doing research and design in a medium of their choice at times throughout the course.
Prerequisite: Crafts I (recommended 74% or better)
6 periods per cycle 1.0 credits

A729 CRAFTS III (Grade 12) Students will explore an individual approach to craft design problems influenced by specific cultural groups. Students will choose a concentration of interest, develop a theme, and complete a series of pieces per semester. Projects will be both functional and non-functional using a variety of materials.
Prerequisite: Crafts II (recommended 84% or better)
6 periods per cycle 1.0 credits

A708 CERAMICS I (Grades 10-12) Students will solve visual arts problems by using a variety of clay bodies and hand-building techniques. Wheel throwing experiences provide a beginning level of proficiency. Drawing, designing and making functional and non-functional objects, enhancing the clay surface with textures, glazes and paints will give students broad-based ceramic experiences.
Prerequisite: Completion of a 2-D AND a 3-D Foundations course (recommended 74% or better in both)
6 periods per cycle
Semester course .50 credits

A718/718D CERAMICS II (Grades 11-12) Students will continue to develop hand-building skills as a means of solving visual arts problems. Wheel-throwing skills will be advanced to an intermediate level. Refinement of drawing techniques, use of computer software as a design tool, alternate methods of surface decoration and glazing provide the student with a greater number of design options. Each student will choose a theme that will guide him or her through production of all projects.
Prerequisite: Ceramics I (recommended 74% or better)
6 periods per cycle 1.0 credits
A718D 11th and 12th grade students may elect to take this course for undergraduate college credits through Lehigh Carbon Community College's Dual Enrollment program.

Art Dep't, cont.

A728 CERAMICS III (Grade 12) Students will solve visual arts problems using a variety of clay bodies and techniques. Experiences will include drawing, wheel-throwing, hand-building, sculpting, surface decoration and glazing. Each student will elect to specialize in one hand-building technique as well as wheel-throwing. Each student will choose a theme to become a common thread in his or her work during the year.
Prerequisite: Ceramics II (recommended 84% or better)
6 periods per cycle 1.0 credit

762 STUDIO ART, ADVANCED PLACEMENT (Grades 11-12) AP Studio Art is an intensive course that addresses advanced concepts in one of the three areas of the student's choice: drawing/painting, 2-D or 3-D. This course has a strong emphasis on critical and analytical thinking. Students are expected to perform at an advanced skill level and take initiative to develop their own personal voice. Students are expected to produce portfolios consisting of a minimum of 24 pieces that can be used in the college admissions process and for advanced placement evaluation. Students are also required to complete summer assignments at levels that meet the art teachers' approval. Students taking this course whose schedule allows will be scheduled for an optional but encouraged studio period that will allow them additional time to complete course assignments.
Prerequisite: Completion of any level 2 course (recommended 84% or better) 6 periods per cycle 1.0 credit

764 ART HISTORY, ADVANCED PLACEMENT (Grades 11-12) This course has the same benefit and rigor as an introductory art history course at the college level. Students will gain an understanding and knowledge of architecture, sculpting, painting and other art forms within historical and cultural context. Students will understand the formal and contextual meaning of major art forms from past to present. Many colleges and universities offer credit to students who have performed successfully on the AP Art History exam. Students should be aware that this course requires college- level reading.
Prerequisite: Current enrollment in college preparatory social studies and college preparatory English courses (recommended 74% or better in both) or by petition
6 periods per cycle 1.0 credit

COMPUTER AND BUSINESS APPLICATIONS

The department's mission is to prepare students for lifelong learning through the use of 21st century skills in technology, business and economic concepts. The curriculum is designed, delivered, evaluated and updated to prepare students to enter the ever-changing global economy and job market.

628 DESKTOP PUBLISHING (Grades 9-12)This course will provide students with the knowledge required to create publications using Microsoft Word 2007 and Publisher 2007, along with Adobe Photoshop CS4 and Illustrator CS4. Students will learn how to create effective and interesting documents and publications using industry standard software. Students who previously took Desktop Publishing may also take this course. (Fulfills computer applications course requirement for graduation)
6 periods per cycle
Semester course .50 credit

627 MICROSOFT® EXCEL (Grades 9-12) This course will provide students with the knowledge required to create spreadsheets using Microsoft Excel 2007 and will include fundamental and advanced techniques. Upon successful completion of the course, students will be prepared to complete the Microsoft Certification Application Specialist Exam. In the business and education community, job applicants with this certification are recognized as proven experts using Microsoft Excel. Students who previously took Spreadsheet/Database may also take this course. (Fulfills computer applications course requirement for graduation)
6 periods per cycle
Semester course .50 credit

629 MICROSOFT® ACCESS (Grades 9-12) This course will provide students with the knowledge required to create databases using Microsoft Access 2007 and will include fundamental and advanced techniques. Upon successful completion of the course, students will be prepared to complete the Microsoft Certification Application Specialist Exam. In the business and education community, job applicants with this certification are recognized as proven experts using Microsoft Access. Students who previously took Spreadsheet/Database may also take this course. (Fulfills computer applications course requirement for graduation)
6 periods per cycle
Semester course .50 credit

625 MICROSOFT® WORD (Grades 9-12) This course will provide students with the knowledge required to create documents using Microsoft Word 2007 and will include fundamental and advanced techniques. Upon successful completion of the course, students will be prepared to complete the Microsoft Certification Application Specialist Exam. In the business and education community, job applicants with this certification are recognized as proven experts using Microsoft Word. Students who previously took Word Processing or Advanced Word Processing may also take this course. (Fulfills computer applications course requirement for graduation)
6 periods per cycle
Semester course .50 credit

623 MICROSOFT® OFFICE (Grades 9-12) This course will provide students with the knowledge required to create documents using Microsoft Word 2007, spreadsheets and databases using Microsoft Excel 2007 and Microsoft Access 2007, and multimedia presentations using Microsoft PowerPoint 2007 and will include fundamental techniques. Students who previously took any business computer class may also take this course. (Fulfills computer applications course requirement for graduation)
6 periods per cycle
Semester course .50 credit

631 MICROSOFT® POWERPOINT (Grades 9-12) This course will provide students with the knowledge required to create multimedia presentations using Microsoft PowerPoint 2007 and will include fundamental and advanced PowerPoint techniques. Upon successful completion of the course, students will be prepared to complete the Microsoft Certification Application Specialist Exam. In the business and education community, job applicants with this certification are recognized as proven experts using Microsoft PowerPoint. Students who previously took Web Creation/PowerPoint may also take this course. (Fulfills computer applications course requirement for graduation)
6 periods per cycle
Semester course .50 credit

635 WEB DESIGN I (Grades 9-12) This course will provide students with the knowledge required to create Web sites using Adobe Dreamweaver CS4 and will include fundamental and advanced Web creation techniques. Upon successful completion of the course, students will be prepared to complete the Adobe Certification Exams. In the business and education community, job applicants with these certifications are recognized as highly skilled users of Adobe software. Students who previously took Web Creation/PowerPoint may also take this course. (Fulfills computer applications course requirement for graduation)
6 periods per cycle
Semester course .50 credit

637 WEB DESIGN II (Grades 10-12) This course requires students to integrate Web design skills learned in Web Design I, Adobe Photoshop/Flash I and Adobe Photoshop/Flash II. Using Adobe Dreamweaver CS4, Flash CS4 and Photoshop CS4 knowledge, students will create state of the art Web sites. Individual and team projects will be incorporated into student assessment. (Fulfills computer applications course requirement for graduation)
Prerequisite: Web Design I, Adobe Photoshop I & II.
6 periods per cycle
Semester course .50 credit

638 ADOBE® PHOTOSHOP/FLASH I (Grades 9-12) This course will provide students with the knowledge required to apply design principles to the multimedia areas of graphics and animation. Professional quality software titles, Adobe Photoshop and Adobe Flash, will be utilized to prepare students for creating dynamic, interactive content to be used in both print and web based applications. (Fulfills computer applications course requirement for graduation)
6 periods per cycle
Semester course .50 credit

639 ADOBE® PHOTOSHOP/FLASH II (Grades 9-12) This course will provide students with the knowledge required to apply design principles to the multimedia areas of dynamic graphics and animation. Adobe Photoshop CS4 and Adobe Flash CS4, will be utilized to prepare students for creating dynamic, interactive content to be used in both print and web based applications. Upon successful completion of the course, students will be prepared to complete the Adobe Certification Tests. In the business and education community, job applicants with these certifications are recognized as highly skilled users of Adobe software. (Fulfills computer applications course requirement for graduation)
Prerequisite: Adobe Photoshop/Flash I.
6 periods per cycle
Semester course .50 credit

601 INTRODUCTION TO BUSINESS (Grades 9-12) This course will provide students with a broad understanding of how businesses operate. The informed student who understands our economic system and the business world will be better prepared as a consumer, employee, manager, and entrepreneur. Topics discussed include basic economic concepts, owning and operating a business, and influence on business.
6 periods per cycle
Semester course .50 credit

603 STUDY AND CAREER SKILLS (Grades 9-12) This course is beneficial for the student who is interested in improving his or her study habits and exploring possible career paths. It is self-reflective and asks students to evaluate personal habits and interests. Study skills topics include note-taking, time mangagement and test-taking strategies. Students then transition into career exploration and preparation, including intervewing skills and resume writing.
6 periods per cycle
Semester course .50 credit

608/608D PERSONAL FINANCIAL MANAGEMENT (Grades 9-12) In this course students will gain practical life skills and knowledge necessary to maintain the finances of a household. Topics include paychecks, budgeting, income taxes, checking accounts, saving and investing, credit, buying a car or home, and insurance.
6 periods per cycle 1.0 credit
608D 11th and 12th grade students may take this course for undergraduate college credits through Lehigh Carbon Community College's Dual Enrollment program.

606 ACCOUNTING I (Grades 9-12) In this course, students are introduced to accounting principles surrounding the basic accounting equation: Assets = Liabilities + Owner's Equity. Students will learn the steps of the accounting cycle and apply them to both a sole proprietorship and a partnership. Key areas of study include: analyzing transactions, creating journal entries, maintaining subsidiary ledgers, completing bank reconciliations and preparing financial statements. Automated accounting software will be used to complete a business simulation project at the end of the course.
6 periods per cycle 1.0 credit

616/616D ADVANCED ACCOUNTING (Grades 10-12) In this course, students will continue their study of accounting principles and develop a comprehensive understanding of the transactions learned in Accounting I. Key areas of study include: accounts payable, accounts receivable, inventory, plant assets, accrued/prepaid expenses, and accrued/unearned revenue. Automated accounting software and

Comp. & Bus. Applic. Dep't, cont.

Microsoft Excel will be used.
Prerequisite: Accounting I
6 periods per cycle 1.0 credit
616D 11th and 12th grade students may take this course for undergraduate college credits through LCCC's Dual Enrollment program.

621 INVESTING AND CORPORATE FINANCE (Grades 10-12) This course will give students an understanding of the way individuals, businesses, and organizations raise, manage, invest, and use monetary resources over time. Students will be engaged in using fundamental and technical analysis of company information to better understand the internal and external impact that economy and current market trends may have on the corporation. Students will get a hands-on understanding of investing basics and learn about the corporate world of finance by trading stocks online and creating a financial portfolio.
6 periods per cycle
Semester course .50 credit

614 BUSINESS LAW (Grades 10-12) This course engages students in legal issues and cases that involve the laws that govern business and commerce. Students will study torts and civil procedures involved with business contracts and the sale of goods and services, property law, consumer law, white-collar crimes, the UCC, equal employment opportunity commission, and federal agencies. Students will find this course relevant to the legal environment in which they live and better understand the legal methods and procedures to starting and running a business. This class implements real case studies, mock trials and guest speakers.
6 periods per cycle 1.0 credit

645 SCHOOL STORE (Grades 9-12) This course gives students the opportunity to gain experience in the world of retail and is designed to allow students to gain first-hand experience in running a small business in a school setting. Students learn useful skills associated with a retail business, including advertising, product design, inventory control, and customer service. The text allows for business theory to be taught in conjunction with the hands-on operation of the store. Not only will this course be practical and educational, but the experience is a unique opportunity and can serve as a reference for a potential job or career.
6 periods per cycle
Second semester only .50 credit
Note: *Admission into this class requires two teacher recommendations. The high school administration and the Computer and Business Applications Department reserve the right to deny any student the privilege of admission into the School Store courses.*

647 SCHOOL STORE II (Grades 10-12) Students of School Store 2 will run the store and will understand a managerial perspective to retail and potentially train the students of the School Store 1 class. Students will be responsible for the daily operations of a small retail store and specialize in school merchandise while incorporating entrepreneurial skills.
6 periods per cycle
Fall semester only .50 credit

634 BANKING I (Grades 10-12) Emmaus High School is fortunate to be one of the only high schools in the country to have a full-service bank located in-house. First Niagra Bank has a branch located near the cafeteria that is available for all of our student, faculty, and staff's banking needs. The Banking I class takes place in the bank and offers students a behind-the-scenes look at the bank's daily operations. The course centers around a teller training module in which students learn the fundamentals of banking transactions, customer service, bank security and the teller operating system.
6 periods per cycle
Semester course .50 credit
Note: *Admission into the class requires a student application and teacher recommendation. The high school administration and the Computer and Business Applications Department reserve the right to deny any student the privilege of admission into the banking courses.*

636 BANKING II (Grades 10-12) This course expands upon the applications and theories learned in Banking I. Students are provided with hands-on learning experiences within the bank and work closely with the First Niagra Bank staff. Advanced topics are also addressed including the history of banking, the Federal Reserve System, banking regulations, and personal finance skills. Prerequisite: Banking I
6 periods per cycle
Semester course .50 credit
Note: *Admission into the class requires successful completion (C or better) in Banking I. The high school administration and the Computer and Business Applications Department reserve the right to deny any student the privilege of admission into the banking courses.*

605 ADVANCED ENTREPRENEURSHIP (Grades 10-12) Entrepreneurial skills will be taught throughout making this class a perfect choice for students that are natural leaders that wish to become business owners and operators. This course will focus on a business that is created by the student and prepare them to enter college or straight into the competitive business world. This idea becomes a reality as it is developed further into a business plan that includes a company description, goals, marketing plans, financial statements, and a business layout, as well as creating a logo and slogan for the business. Prerequisite: Any business lecture course except Study and Career Skills.
6 periods per cycle
Semester course .50 credit

670 INTRODUCTION TO MARKETING (Grades 9-12) New this year, this course will introduce students to the fundamentals of business marketing. Topics include the role of marketing in a business, market research and segmentation, basic economics, developing a marketing plan, e-commerce, products, price strategies, placement of products and distribution, and promotional aspects of businesses. It is a basic intro course that allows students gain skill from one of the core areas of business and allows room to proceed to other marketing courses that are in a more specialized area.
6 periods per cycle
Semester course .50 credit

672 SPORTS & ENTERTAINMENT MARKETING (Grades 9-12) This course will take the basic skills of marketing and focus them onto the areas of sports and entertainment. Students will learn a variety of ways to market products, hold promotional events, and create advertising means related to all areas of sports and entertainment businesses. Prerequisite: Introduction to Marketing
6 periods per cycle
Semester course .50 credit

674 FASHION MARKETING (Grades 9-12) By taking a design or a product from concept to completion while using fashion sense, students will get a clear picture of what fashion marketing is all about. This course will put students on a fast track for an understanding what an entry-level position with a high fashion manufacturer or retailer would entail, while using the basics of promotions, advertising, and product pricing strategies. Students will learn great fashion marketing strategies and trend analysis.
Prerequisite: Introduction to Marketing
6 periods per cycle
Semester course .50 credit

676 HOSPITALITY & TOURISM MARKETING (Grades 9-12) Tourism and hotel/restaurant careers have a steady job growth and a job outlook that is increasingly booming. Students will study and focus on marketing in areas of travel, restaurants, casinos, spas, hotels and resorts. It will demonstrate to students that hospitality and tourism jobs are fast-paced and varied—a perfect combination for individuals with business sense and boundless energy while specifically concentrating on marketing and promotions.
Prerequisite: Introduction to Marketing
6 periods per cycle
Semester course .50 credit

COMPUTER SCIENCE DEPARTMENT

All of the computer science classes are electives and satisfy the computer applications part of the graduation requirement. Prerequisites are stated as recommendations for success by most students. Students who wish to take advanced courses without having satisfied the prerequisites should either exempt a course by exam or gain permission from a member of the computer science department via an interview and proof of student work.

321 COMPUTER SCIENCE FOUNDATIONS (Grades 9-12) This course is designed to introduce students to computer science concepts and simple programming techniques in a hands-on environment. Projects incorporate the use of Microsoft Office including Word, Excel, Access, and Power Point. Students will also use the Alice program to create 3-D animations using elementary programming concepts in a user-friendly environment. Other topics will include computer history, computer hardware and software, computer ethics, computer networking, and careers in computer science. Students who are interested in taking other computer science courses should take this course during their freshman year. Students with a strong math background, especially Honors students, should take Programming Foundations instead.
Prerequisite: Algebra I
6 periods per cycle
Semester course .50 credit

323 PROGRAMMING FOUNDATIONS (Grades 9-12) This course is designed to enable all students to develop better problem solving skills that will prepare them for many different fields of study and future computer science courses. By using the Visual BASIC programming language, students will learn to create a graphical user interface similar to a Windows-based environment. Students will learn how to write simple programs that include input, output, assignment, decisions, loops, strings, and possibly arrays. Programming assignments will relate to a variety of real-life applications.
Prerequisite: Computer Science Foundations (recommended 80% or better), Honors Algebra I, or Geometry CP
6 periods per cycle
Semester course .50 credit

355 ADVANCED COMPUTER SCIENCE TOPICS, HONORS (Grades 9-12) This is a project-based course where students will use and extend their prior programming knowledge in a language(s) of their choice. Students will be exposed to the Python programming language as well as a variety of applications in the field of computer science. Students will create and present projects that could include web-based applications, graphics and animation, 3-D game design, database processing, graph theory, GUI interfaces, artificial intelligence, simulations and learning new languages.
Prerequisite: Programming Foundations (recommended 84% or better)
6 periods per cycle
Semester course .50 credit

365 AP COMPUTER SCIENCE A (Grades 10-12) This course is designed for the college-bound student who wishes to pursue college-level studies while still in high school. This course will cover all of the curriculum as prescribed by the College Board for a one semester college course in computer science. This includes control structures, arrays, strings, classes, interfaces, files, and efficiency of algorithms. Upon completion of this course, students will be prepared to take the AP Computer Science A level exam. Students will be expected to engage in rigorous problem solving activities and utilize computer resources outside of class.
Prerequisite: Programming Foundations (recommended 84% or better)
6 periods per cycle 1.0 credit

367 ADVANCED DATA STRUCTURES (AP Weight) (Grades 11-12) This course will build on a solid foundation of computing methodology to introduce students to advanced representation and processing of data. Topics will include algorithm efficiency, recursion, inheritance, and dynamic memory allocation. Students will learn how to process data that is stored as strings, arrays, stacks, queues, linked lists, sets, maps, files, and tree structures to solve a variety of real life application problems. This course includes second semester college-level computer

Computer Sci. Dep't, cont.

science topics.
Prerequisite: AP Computer Science A (recommended 84% or better)
6 periods per cycle
Semester course .50 credit

369/369D C++ PROGRAMMING
(Grades 10-12) This course will provide students with a solid background in structured programming techniques and an introduction to object-oriented programming. It will be taught as a full year course with no expectation for prior programming experience. Data types, loop structures, decision making, user-defined functions, parameter passing, file input and output, string processing and arrays will all be covered. Programming assignments will relate to a large variety of real-life applications.
Prerequisite: None
6 periods per cycle 1.0 credit
369D 11th or 12th grade students may take this course for undergraduate college credits through Lehigh Carbon Community College's Dual Enrollment Program.

DRIVER EDUCATION DEPARTMENT

The Pennsylvania Department of Education requires that students must attend a minimum of thirty hours of classroom instruction in Driver Education. A student absent from class more than fifteen days, including minutes tardy, shall be required to repeat the entire Driver Education course.

DE2 DRIVER EDUCATION (Grades 10-12 only) is a required course usually taken in the sophomore year. Driver education emphasizes personal and social problems related to the safe and efficient movement of traffic. Major aims are to emphasize the desirable role of the pedestrian and driver in traffic and to develop the knowledge and attitudes needed for safe use of traffic facilities.
3 periods per cycle
Semester course 0.25 credit

DRIVER TRAINING (Ages 16,17,18) is an elective course offered to 16-year-old students. Each student must have parental permission to drive a motor vehicle. A learner's permit must be obtained by the student. Driver training consists of nine hours of simulation, and three hours of behind-the-wheel instruction. The purpose of the twelve-hour course is to develop, through the use of realistic situations, the knowledge, attitudes and skills necessary for safe and efficient operation of the automobile in urban, rural and superhighway traffic.
Prerequisite: Driver Education

PA DRIVER'S EXAMINATION

Emmaus High School has been certified by the Pennsylvania Department of Transportation to administer the PA Driver's Examination. We are able to test our students and determine whether they meet the state standards for driver licensing.
In order for a student to take the Driver's Examination, the following guidelines must be satisfied:
- Currently enrolled in Driver Training
- Attendance at simulation classes must be up-to-date
- Successfully completed Driver Education
- Registration fee for Driver Training has been paid
- Regular permit (not a temporary permit)
- Form 180C must be signed in the presence of an instructor or be notarized
- Recommended by the driving instructor
- Demonstrated the skills and maturity for a driver's license

ENGLISH DEPARTMENT

Each high school student must take and pass a ninth grade, a tenth grade, an eleventh grade, and a twelfth grade English course to graduate. Students must pass their current level full-year English course in order to go to the next level full-year English course. It is not possible to take two different level, full-year English courses in the same year. Students should choose, with the help of parents, teachers, and counselors, the program best suited to their abilities and future plans. Each student should choose the appropriate English course offered in a grade level. All non-elective English courses will require a summer reading component suitable to the level of study. In addition to a literature survey component, all non-elective English courses provide writing activities and research, vocabulary study, study skills and career awareness instruction. Those who are undecided about going to college should choose college preparatory English. Note that all elective courses will not be counted toward meeting English graduation requirements.

150 NINTH GRADE ENGLISH, HONORS The ninth grade English honors course has been developed as the first level of the secondary honors/advanced placement track in the language arts area. The course is built around several components including vocabulary, grammar, selected short stories, novels, drama, non-fiction and poetry, which provide the basis for concentrated study, composition and research, critical discussion and speech. Students are expected to enter into serious academic discussions and to produce a variety of in-depth writing assignments. Summer reading assignments are required.
Prerequisite: Recommendation of English department and counselor and recommended 90% or higher in 8th grade English
6 period per cycle 1.0 credit

109 NINTH GRADE ENGLISH, COLLEGE PREPARATORY This course emphasizes better communication and expression through the study of grammar, literature (novels, short stories, poetry, drama, and non-fiction), vocabulary development, research and writing. The goal of the English curriculum is to make the student sensitive to the way language reflects attitudes, emotions, and purposes. Summer reading assignments are required
6 periods per cycle 1.0 credit

108 NINTH GRADE ENGLISH, GENERAL PREPARATORY The general preparatory course offers students the opportunity to read various novels, poetry, drama, non-fiction and short stories. Activities focus on the students' ability to improve comprehension and respond to literature through discussion and composition. Basic research skills are developed through the writing of a research paper. Vocabulary, grammar, usage and composition skills are also presented in this course. Summer reading assignments are required
6 periods per cycle 1.0 credit

108SM NINTH GRADE ENGLISH, GENERAL PREPARATORY SEMINAR This course mirrors the Ninth Grade English, general preparatory course description, following the approved curriculum for that course. In addition, students in this seminar are given an additional instructional period daily, during which they will gain additional reading comprehension and literacy strategies and work with supplemental materials designed to aid them in developing these essential skills. Summer reading assignments are required. *Note: Students will be placed in this course based on academic need and specific eligibility criteria, including but not limited to counselor recommendation, previous course grades and standardized test and benchmark scores below proficiency.*
12 periods per cycle
1.0 credit English and 1.0 credit humanities

107SM NINTH GRADE GENERAL ENGLISH/READING This course addresses the needs of those students requiring concentrated instruction in reading and language arts. The course includes the study of literature, the study of grammar, the introduction to oral expression, the study of vocabulary, the study of writing, and an introduction to the research paper. Emphasis is placed upon higher-level comprehension skills and appropriate communication skills. Summer reading assignments are required.
Note: Students will be placed in this course based on academic need and specific eligibility criteria, including but not limited to counselor recommendation, previous course grades and standardized test and benchmark scores below proficiency.
12 periods per cycle 1.0 credit English and 1.0 credit humanities

151 TENTH GRADE ENGLISH, HONORS This American literature course is designed for the college-bound student who wishes to pursue college-level studies in the senior year. It includes all the content of the regular college preparatory courses as well as additional studies designed to increase skills in analysis, synthesis, and critical thinking. Much of the reading, writing and oral activity is the result of involvement with selected literature, some of which is assigned as summer reading. More information about this course may be obtained from the English department, a counselor, or the English Department head. Summer reading assignments are required. Prerequisite: Recommendation of the English department and counselor and recommended 84% or better in 9th grade English honors or 90% or better in 9th grade English CP
6 periods per cycle 1.0 credit

116 TENTH GRADE ENGLISH, COLLEGE PREPARATORY This course consists of literature units which include the basic forms and structures of the novel, the drama, non-fiction, the short story and several forms of poetry. Short compositions, with emphasis on the essay and its development, make up a part of the formal writing study. A research skills component is a required unit of study. A comprehensive review of grammar is the basis for understanding the structure and use of language. Studies in vocabulary with an emphasis on reading help to make this course one in which students acquire the necessary background in skills and concepts to organize, interpret, and communicate effectively. Summer reading assignments are required.
Prerequisite: 9th grade English
6 periods per cycle 1.0 credit

114 TENTH GRADE ENGLISH, GENERAL PREPARATORY This course offers insight and enrichment in literature and language activities which are part of daily life. The course, which includes a review of grammar, an introduction to oral expression, and appropriate study in vocabulary and writing, emphasizes critical inquiry as well as effective means of expression. The aim of the course is to present students with the background necessary to make accurate judgments and to organize valid comments. The practical aspects of research skills are emphasized. The literature components include novel, drama, poetry, non-fiction, and short stories. Summer reading assignments are required.
Prerequisite: 9th grade English
6 periods per cycle 1.0 credit

112 TENTH GRADE GENERAL ENGLISH/READING This course offers continued concentrated instruction in reading and language arts. The course includes literature, grammar, oral expression, vocabulary, writing, and research. Oral expression and formal writing are greatly emphasized in the research component. Summer reading assignments are required.
Prerequisites: Successful completion of ninth grade and recommendation of English teacher and guidance counselor
6 periods per cycle 1.0 credit

152 ELEVENTH GRADE ENGLISH, HONORS This course should be taken by the college-bound student who is serious about pursuing college-level studies in the senior year. It is designed to be high-level study requiring much initiative and ability. Analysis and critical thinking are expected in reading, writing, and oral activities which revolve around selected British literature, some of which is assigned in advance as summer reading. The student may seek additional information about this course from the English department, a counselor, or the English Department head. Students taking this course in the eleventh grade must choose from a list of three senior level courses the following year: Advanced Placement English, World Literature, or Humanities.
Summer reading assignments are required.
Prerequisite: Recommendation of the English department, counselor and recommended 84% or better in tenth grade English honors or 90% or better in 10th grade English CP
6 periods per cycle 1.0 credit

126 ELEVENTH GRADE ENGLISH, COLLEGE PREPARATORY This course develops an investigation of the philosophy, culture, and heritage of the United States through a survey of six major periods in American literature. In

English Dep't, cont.

support of this literary focus, students are expected to develop composition skills which embody the understanding and use of unity and coherence in longer, more comprehensive assignments - such as the research paper. In addition, much emphasis is placed on a separate vocabulary text which develops students' 'recognition' and 'use' vocabularies; further enrichment is achieved when students are introduced to literary terminology during the literature survey. Finally, the course provides activities that allow students to polish note-taking skills, library usage, and oral presentations which are necessary in helping each student become a more effective communicator. Summer reading assignments are required.
Prerequisite: 10th grade English
6 periods per cycle 1.0 credit

124 ELEVENTH GRADE ENGLISH, GENERAL PREPARATORY This course stresses the importance of reading by reviewing and reinforcing the basic reading skills for the high school student. Emphasis is placed on a separate vocabulary text which develops students' 'recognition' and 'use' vocabularies. The study of writing skills is based upon a 'reading context' whenever possible. Students will practice and develop their 'essay' skills with an emphasis on development and detail. Longer, more detailed writings will be more common. The traditional grammar, usage, and punctuation component found in other English courses offered by the department is also retained. Summer reading assignments are required.
Prerequisite: 10th grade English
6 periods per cycle 1.0 credit

122 ELEVENTH GRADE GENERAL ENGLISH/READING Students who continue to need concentrated instruction in reading and language skills should consider this course. The course seeks to develop an appreciation of self and the world through the study of literature, grammar, vocabulary, oral expression, writing, and research. Writing and higher level comprehension skills are stressed. Summer reading assignments are required.
Prerequisites: Successful completion of tenth grade and recommendation of English teacher and guidance counselor
6 periods per cycle 1.0 credit

160 TWELFTH GRADE ENGLISH, ADVANCED PLACEMENT LITERATURE AND COMPOSITION This course is designed for the college-bound senior who wishes to pursue college-level studies while still in high school. It will offer preparation for the Advanced Placement Examination, the successful completion of which could serve as the equivalent of one year of college work in English. The work is realistically demanding for the opportunity offered by the course. Entrance into this course is limited to those who have shown ability and commitment as determined by the English department and the counseling department. Summer readings are required.
Prerequisite: Recommendation of English department, counselor and recommended 84% or better in eleventh grade English honors
6 periods per cycle 1.0 credit

138 TWELFTH GRADE ENGLISH, COLLEGE PREPARATORY, WORLD LITERATURE While this course is an option for all twelfth grade students in the college preparation program, it is not recommended for those who have not taken eleventh grade English Honors, as it requires background knowledge of British Literature. This course is mandatory for the student who has completed tenth and eleventh grade English Honors but who does not select English Advanced Placement or Humanities. The course consists of a survey of world literature, readings of novels and plays to reflect structure, student-selected readings, strong emphasis on vocabulary, and instruction in advanced composition and the research paper. Students will become extensively involved with organizational and conceptual analysis and will demonstrate these skills as they engage in written and oral activities. Contemporary world authors writing in languages other than English will be used for outside readings and/or research. Selection should be made after consulting with the English department and counseling department. Summer reading assignments are required.
Prerequisite: Recommendation of the English department, counselor and eleventh grade CP or Honors English
6 periods per cycle 1.0 credit

136 TWELFTH GRADE ENGLISH, COLLEGE PREPARATORY, BRITISH LITERATURE This senior course consists of a survey of British literature, novel and play readings selected to reflect structure, student-selected readings, vocabulary studies, and instruction in advanced composition and the research paper. Students will become extensively involved with organizational and conceptual analysis and will demonstrate these skills as they engage in written and oral activities. Students should carefully select the course that is suited to their college plans. Summer reading assignments are required.
Prerequisite: 11th grade English
6 periods per cycle 1.0 credit

134 TWELFTH GRADE ENGLISH, GENERAL PREPARATORY The students will apply the basic elements of literature to a broad range of literary forms, including the novel, short story, drama and poetry. The study of literature will be directed toward self-awareness and an understanding and appreciation of the global community. Oral analysis and short essay responses will be part of the evaluation process in the literature units. The writing portion of the course will also include instruction on basic literature analysis and research skills that will help the students to write several book reports and a short research paper. The students are expected to know the basics of English grammar, including parts of speech, parts of the sentence, phrases and clauses, and sentence structure. The students will pursue a formal study of vocabulary. The language and literature activities will be directed toward practical, real-life situations and career awareness. Summer reading assignments are required.
Prerequisite: 11th grade English
6 periods per cycle 1.0 credit

132 TWELFTH GRADE GENERAL ENGLISH/READING This course is for those students in need of concentrated study in language arts and reading. All aspects of the English curriculum are included and geared toward practical application of English in work settings as well as in future academic settings. Students focus on developing high levels of comprehension skills and research skills. Special emphasis on freshman college/technical school reading and essay-writing. Summer reading assignments are required.
Prerequisite: Successful completion of eleventh grade and recommendation of English teacher and guidance counselor
6 periods per cycle 1.0 credit

950 SENIOR HUMANITIES, HONORS (Grade 12) This course will examine human endeavors from the perspectives of philosophy, culture, history and aesthetics. The course will be taught using a thematic approach that allows students an opportunity to integrate all the subject areas in relation to a theme or a problem, as they do in real life. The exploration of these themes will emphasize reading and expository writing, analytical thinking and problem-solving skills, and visual literacy. Academic advisors, panel discussions, student-directed curriculum, guest speakers, and field trips are all integral to the course. (Field trips are encouraged, but not compulsory.) Each student will be required to complete individual and group projects, including a research paper. The course will be scheduled for a double period each day Summer reading assignments are required.
Prerequisite: 11th grade English.
Admission by application.
Credits: English - 1.0; Social Studies - 1.0

The following elective courses are available to all students in any of the English programs:

100 JOURNALISM I (Grades 9-12) Through an emphasis on print journalism, students develop the traits typical and essential of all beginning reporters and writers as they develop an increasing awareness of their world. They achieve that goal through a mixture of instruction and writing of news, feature, and opinion pieces. This is a writing class, and students are expected to conduct interviews and write stories on an ongoing basis. On average, a new story is completed within three weeks. Public relations and advertising are also explored in the class. Upon completion of the course, students will have developed a writing portfolio of journalistic pieces.
6 periods per cycle 1.0 credit

110 JOURNALISM II (Grades 10-12) Through an emphasis on print journalism, students develop the traits typical and essential of all good reporters and writers as they develop an increasing awareness of their world. They achieve that goal through a mixture of instruction and production tied to the planning and writing of news, feature, sports, and opinion stories. The course is writing-project based. During the course, students jointly or independently plan and produce original stories of the following types: spot news (a press conference), round-up, poll, follow-up, sidebar, brief, meeting, district and community feature, trend story, review, speech, sport's advance, game story, and player profile, column, editorial perspective. Students are encouraged to develop articles suitable for publication in The Stinger.
Prerequisite: Journalism I (recommended 74% or better)
6 periods per cycle 1.0 credit

120 JOURNALISM III (Grades 11-12) This is largely a section editor's course for print journalism students. Page design and production is the core of the instruction and hands-on work. Students, who work on or lead editorial teams, thrive on planning, preparing, and contributing to each issue of The Stinger. Students are exposed formally and informally to career options for those interested in pursuing further study of working in the communications field. Students will submit numerous layouts and designs on school as well as community-based topics and are encouraged to develop articles suitable for publication in The Stinger.
Prerequisite: Journalism II (recommended 84% or better)
6 periods per cycle 1.0 credit

130 JOURNALISM IV (Grade 12) Students work more independently to lead publication teams in regular planning, editing, and production of The Stinger. It is a planning and editing course. Students also work to plan and produce independent, separate publications as well as electronic, new media initiatives based upon student interest and demand. Thus, additional media avenues are open because of the smaller corps of students.
Prerequisite: Journalism III (recommended 84% or better)
6 periods per cycle 1.0 credit

101 DRAMA I (Grades 9-12) This course will show students that drama is a vital and exciting art form. Students will explore and participate in pantomime, improvisation, acting, scene design, stagecraft, lighting, and costume design. The history, development and elements of theatre will be examined.
6 periods per cycle
Semester course .50 credit

102 DRAMA II (Grades 9-12) This course continues the study of the performance skills introduced in Drama I. Students will develop additional techniques of concentration, pantomime, improvisation, sense recall, emotional recall, stage movement and characterization. Students will then progress to comprehensive scene study with the emphasis on utilizing those skills mastered.
Prerequisite: Drama I
6 periods per cycle
Semester course .50 credit

103 DRAMA III - CHARACTER DEVELOPMENT AND SCENE STUDY (Grades 10-12) This course will continue the development of skills introduced in Drama I and Drama II. Drama III will focus on an intensive approach to character development and scene study with an emphasis on the Stanislavski approach to acting. Students will study a variety of acting and directing styles. Each student will develop a portfolio of monologues and scenes suitable for the audition process. The course will offer each student the opportunity to perform in the classroom and for public audiences.
Prerequisite: Drama II
6 periods per cycle
Semester course .50 credit

104 PUBLIC SPEAKING AND DEBATE (Grades 10-12) Students will experience and use techniques involved in both formal and informal speaking situations. They will be introduced to the various purposes of speaking to an audience:

to inform, to convince, to entertain, to impress, and to motivate. Methods of presentation will involve impromptu, extemporaneous, and scripted speeches as well as debate and panel discussions. Instruction will be provided in gathering material necessary for some of the speech situations.
Prerequisite: Successful completion of 9th grade English or completion of 8th grade Honors English in conjunction with guidance counselor's recommendation
6 periods per cycle
Semester course .50 credit

105 COMMUNICATIONS I (Grades 9-12) This course provides the foundation for future courses of in-depth study that will prepare our students to communicate more effectively in a world where media technologies - video, film, Internet, telephone, etc. - are converging into an inter-related digital mosaic. The course will begin with a study of the history of man's quest to communicate - from early cave drawings, moveable type, phonograph, and radio to early television, computers, and the Internet. Students will learn the basic pre-production skills of researching, writing scripts, and story boarding, and will advance to learning various production and post-production skills including the operation of audio, video and editing equipment. Students will display their knowledge in written papers, tests, and several hands-on group projects. Whether a student is interested in pursuing a career in media or just has an interest in the role of communications in man's life, this course will provide the necessary basics. An application process will be used for the selection of students.
6 periods per cycle 1.0 credit

115 COMMUNICATIONS II (Grades 10-12**)** Communications II focuses on film theory and practice. Course materials include (but are not limited to) lighting and sound studies, directing and editing techniques, and film and genre analysis. Students gain hands-on practical experience by creating both individual and group film projects. Students are also responsible for creating a portfolio of all work completed throughout the academic year. In addition to class assignments and the portfolio, students freelance their studies throughout the district. Films for faculty, staff, and administrators will be produced upon request (pending project approval by instructor).
Students interested in writing and/or creating imovies of their favorite works, film studies and advanced media production should take Communications II as preparation for advanced study. *Acceptance into this course is by audition only. Students who are accepted must arrive at school by 7:00 AM each day, as they produce the school's live morning broadcast.*
Prerequisite: Communications I
6 periods per cycle 1.0 credit

106 CREATIVE WRITING (Grades 10-12) This semester course provides students with the opportunity to experiment in the creative writing process, while also helping young writers accurately evaluate their own products. Students will read, critique, and write a variety of creative forms: short stories, poetry, one-act plays, personal narratives, to name a few. All students will be expected to share these writings with the entire class; some oral reading can be expected on occasion. Students may have the opportunity to explore various websites related to creative writing and/or create movies of their favorite works. Finally, students will submit one or two of their most promising creations to Collage, Emmaus High School's literary and fine arts magazine.
6 periods per cycle
Semester course .50 credit

FAMILY & CONSUMER SCIENCES

801 CREATIVE FOODS (Grades 10-12) This course gives students the opportunity to develop and enhance their basic cooking skills. Emphasis is placed on the fundamentals of preparing, cooking and serving food with consideration for nutrition and cost, safety and hygiene, consumer skills, and using small kitchen equipment wisely, in order to prepare meals for today's families. Course includes a theory and lab component.
6 periods per cycle
Semester course .50 credit

802 SKILLS for LIVING (Grades 9-10) This course is a survey course intended to develop the ability to manage the eventual need for a balance among family, work and other activities. This includes changing needs in the family, child development and parenting skills, and understanding and applying nutritional information to the family life span. Time management and decision-making skills will be used to complete selected projects.
6 periods per cycle
Semester course .50 credit

804 DESIGNER SEWING/FASHION DESIGN (Grade 10-12) This course brings the exciting world of fashion design and designer sewing to life through an in-depth look at how the apparel industry works. It is designed for students who have interests in the field of design, apparel, textiles and clothing construction. A comprehensive portfolio comprised of a series of individual projects will be completed using design principles learned in the class.
6 periods per cycle
Semester course .50 credit

805 INTERNATIONAL FOODS (Grades 10-12) In this course, students will prepare a selection of dishes from around the world. They will explore a variety of foods unique to different countries and use them in dishes that represent the cuisine of Europe, Africa, the Middle East, Asia, Australia and Russia. Students will understand the similarities and differences in global food choices, and, by studying the geography, climate, history and customs of a country, will develop an awareness, respect and acceptance of different cultural groups that represent the contributions and uniqueness of different parts of the world. Course includes a theory and lab component.
Prerequisite: Creative Foods (recommended 74% or better)
6 periods per cycle
Semester course .50 credit

812 ADVANCED FOOD PREPARATION (Grades 10-12) Students will prepare, cook and serve meals that demonstrate a knowledge and understanding of the principles that guide meal planning including organization and management of time and budget, creativity, nutrition and safe food handling practices. They will develop proficiency in the skills related to the preparation and service of foods for all occasions. Students will complete an in-depth study of foods and will analyze their food intake based on US dietary guidelines. Course includes a theory and lab component.
Prerequisites: Creative Foods (recommended 74% or better)
6 periods per cycle
Semester course .50 credit

800 CHILD DEVELOPMENT I (Grades 9-12) Students will learn about the developing child from the prenatal stage through age 6. They will be able to distinguish and understand the inter-relatedness of a child's development. Students will evaluate the roles and responsibilities of parenting and discuss the societal trends at different stages of the life cycle.
6 periods per cycle
Semester course .50 credit

810 CHILD DEVELOPMENT II (Grades 10-12) Child Development II comprises a practical early childhood experience based in the Emmaus High School Preschool program. Students develop, plan, teach, and evaluate activities for 3-5 year old and conduct observations to learn more about the cognitive, social, emotional, and physical development of young children.
Prerequisite: Child Development I (recommended 74% or better) **Teacher recommendation is preferred**
6 periods per cycle
Semester course .50 credit

820 CHILD DEVELOPMENT III (Grades 11-12) This course will expand on the knowledge and experience gained in Child Development II. Students will continue their interaction and participation in the on-site preschool for 3, 4 and 5 year old. Students will evaluate preschoolers' physical, intellectual, emotional and social development using NAEYC developmental norms. They will conduct a survey of the importance of reading and the development of language and literacy and will plan, teach and evaluate lessons in the preschool setting using State Guidelines and Developmentally Appropriate Practices (DAP's).
Prerequisite: Child Development II (recommended 74% or better) and **teacher recommendation**
6 periods per cycle
Semester course .50 credit

822 INDEPENDENT LIVING (Grades 11-12) This course explores the knowledge and skills necessary for living independently. Units include career choices and steps for college acceptance, including resume preparation, money management and budgeting, housing considerations, interior design and decoration, selecting and preparing nutritious meals, and making confident consumer decisions in work, home and leisure. The class provides a great opportunity for the student to learn skills, which will guide them in the transition from living at home to independence.
6 periods per cycle
Semester course .50 credit

GIFTED SUPPORT PROGRAM

Please note that priority for scheduling of all courses in this program will be given to students who have been identified as gifted. Additional seats, when available, will be filled by other interested students who have successfully completed other high school-level honors courses.

980 HISTORY OF WESTERN PHILOSOPHY, HONORS (Grades 9-12) This course explores the fundamentals of western philosophy. The course focuses on a systematic examination of the "great questions in the areas of truth, beauty, goodness, freedom, ethics and the nature of knowledge. Students will engage in directed discussions, do research and readings on great thinkers, plus make presentations and conduct symposiums about these concepts.
6 periods per cycle
Semester course .50 credit

983 ADVANCED PHILOSOPHY (Grades 9-12) This course facilitates the continued exploration of the important philodophical ideas developed in The History of Western Philosophy, Honors course that form the foundations of Western culture. Students will delve deeper into topics introduced in the previous course including metaphysics, aesthetics and ethics. Students will engage in readings, participate in discussions and engage teacher presentations. A research project and presentation are required as is the completion of essays and tests.
Prerequisite: History of Western Philosophy, Honors (recommended 88% or better)
6 periods per cycle
Semester course .50 credit

982 THE QUEST FOR THE DISTANT PAST, HONORS (Grades 9-12) This offering emphasizes an interdisciplinary approach to trace the development of human culture in the Paleolithic and Neolithic worlds. The fundamental concepts of archaeology and anthropology will be introduced. Topics include the emergence of humankind, important early archeological excavations, and new world pre-Columbian civilizations. An important emphasis will be on reducing ethnocentric cultural bias through an exploration of diverse early cultures and civilizations. Literature, archeology, science, and the arts are combined to create rich insight into the distant past.
6 periods per cycle
Semester course .50 credit

988 GIFTED SUPPORT MEDIA SEMINAR (Grades 11-12) This course facilitates the exploration of media based learning opportunities for gifted students that focuses on helping students discover distance learning, virtual field trips and video conferencing opportunities. Under the guidance of their instructor, students will select a career exploration area and research and plan distance learning opportunities available through our district media center. Students and the instructor will collaborate to create a 'theme' each year for the course and design projects that focus on each students' interest

Gifted Support Prog., Cont.

within that central theme.
3 days per cycle
First semester only .50 credit

989 GIFTED SUPPORT MEDIA EXPERIENCE (Grades 11-12) In this course, students will complete the work begun during the media seminar course. They will participate in their own meaningful distance learning opportunities, virtual field trips and video conferences, as well as those planned and executed by their peers. Finally, they will present the results of their media experiences in a culminating activity in May of each year.
Prerequisite: Successful completion of Gifted Support Media Seminar
3 days per cycle
Second semester only .50 credit

MATHEMATICS DEPARTMENT

The mathematics department, as guided by the Pennsylvania academic standards and anchors, is committed to mathematical literacy for all students at various levels of content depth. Students are strongly encouraged to take three full years of Algebra and Geometry by 11th grade. The concepts, college preparatory, and honors sequence of courses cover the breadth and depth of the PSSA assessments. Students should earn a 74% or higher in Algebra I before moving on to more advanced math courses.

305 ALGEBRA I SEMINAR (Grade 9) This course will teach Algebra I at a pace that is suitable to the enrolled students. The course will be enriched by real life applications and activities related to the course curriculum. It delivers the same content as the Algebra I, College Preparatory course, but two instructional periods are provided each day. The content includes solving equations and inequalities, linear graphs and functions, systems of equations and inequalities, exponents, polynomials, radicals and an introduction to data analysis. Note: Students will be placed in this course based on academic need and specific eligibility criteria, including but not limited to: counselor recommendation, previous course grades, and standardized test and benchmark scores below proficient.
12 periods per cycle
1.0 credit mathematics and 1.0 elective credit

301 ALGEBRA II CONCEPTS This course builds upon the skills learned in Algebra I. The course includes study of rational and irrational numbers, quadratic equations, polynomials, factoring, probability and statistics, systems of equations and inequalities and radical expressions and equations. An extra emphasis will be placed on preparing students for the PSSA math exam.
Prerequisites: Algebra I Seminar (recommended 74% to 83%) OR Algebra I CP (recommended 65% to 73%) AND successful completion of Geometry CP or Geometry Concepts. Note: Algebra II Concepts is intended to be a course following Geometry CP or Geometry Concepts
6 periods per cycle 1.0 credit

310 GEOMETRY CONCEPTS This course employs an interactive, workplace-centered approach to learning geometric concepts. It is ideal for contextual learners. Geometric concepts are introduced, practiced, and applied in the context of the workplace. Students are encouraged to become active learners as they interact with the text to discover how a concept works, while increasing their capacity for problem solving. This course does not include the rigor of the Geometry CP course, but covers many of the same concepts including points, lines, planes, angles, congruence, triangles, circles, area, volume, right angle relationships, and similarity.
Prerequisites: Algebra 1 Seminar OR Algebra I C P. (recommended 65% to 74%)
6 periods per cycle 1.0 credit

306 ALGEBRA I, COLLEGE PREPARATORY This course is recommended as the first course for high school students. The content includes solving equations and inequalities, linear graphs and functions, systems of equations and inequalities, exponents, polynomials, radicals and an introduction to data analysis.
Prerequisite: Counselor placement, completion of Pre-Algebra or Pre-Algebra B.
6 periods per cycle 1.0 credit

312 GEOMETRY, COLLEGE PREPARATORY This course gives considerable attention to developing an understanding of the nature of deductive proof, the role of definitions and the meanings and uses of assumptions in writing proofs. Students are encouraged to think of geometry as a system requiring logic of thought as opposed to a less precise system based only upon observation and measurement. This course includes the study of both plane and solid figures. It is recommended that students take Algebra I,
Geometry, and Algebra II in that order to ensure success on SAT's and upper level courses.
Prerequisites: Algebra I C.P (recommended 74% or better) OR Algebra 1 Seminar (recommended 84 % or better) OR Algebra I, Honors (recommended 74% or better)
6 periods per cycle 1.0 credit

350 GEOMETRY, HONORS This course is designed for those students with an exceptional background in mathematics. The course promotes spatial perception and provides a more challenging approach to Euclidean geometry. Topics are studied in depth. In addition to the topics covered in Plane and Solid geometry, units on analytic proof and logic are included.
Prerequisites: Algebra I, Honors AND Algebra II, Honors (recommended 84% or better)
6 periods per cycle 1.0 credit

314 ALGEBRA II, COLLEGE PREPARATORY This course builds upon the skills learned in Algebra I. The course includes study of real numbers and complex numbers, quadratic equations, polynomials, factoring, logarithmic and exponential functions, rational expressions and equations and radical expressions and equations.
Prerequisites: successful completion of Algebra I Honors OR Algebra I CP (recommended 74% or better) OR Algebra I Seminar (recommended 84% or better) Algebra II Concepts (recommended 65% to 74%) AND Geometry CP (recommended 74% or better). Note: Algebra II CP is intended to be a course following or taken concurrently with Geometry CP.
6 periods per cycle 1.0 credit

351 ALGEBRA II , HONORS This course is an extension of the Algebra II, College Preparatory course with inclusion of additional topics on polynomial functions, joint variations, rational zeros, systems of equations in three variables, rationalizing the denominator, probability and statistics and basic operations on matrices. An entire unit
on algebraic proofs is also included to adequately prepare the students for advanced mathematics courses.
Prerequisites: Algebra I Honors (recommended 84% or better) OR Algebra I, College Preparatory (recommended 90% or better)
6 period per cycle 1.0 credit

316 MATH ANALYSIS , COLLEGE PREPARATORY (Grades 11-12) This course is intended to be an alternative to Algebra III/Trigonometry CP. It includes the study and application of logic, set theory, logarithms, probability and statistics, and modeling with functions.
Prerequisites: Algebra II CP (recommended 74% or better) OR Algebra 11 Conepts (recommended 84% or better) AND any Geometry course (recommended 74% or better) OR Algebra III/ Trigonometry (recommended 65% or better)
6 periods per cycle 1.0 credit

317 TRIGONOMETRY, COLLEGE PREPARATORY (Grade 12) This one-semester course is designed primarily for seniors with average backgrounds in mathematics who wish to continue the study of mathematics for their fourth year of high school in preparation for college. It provides a study of trigonometric and circular functions, as well as graphing functions. A graphing calculator is recommended but not required.
Prerequisites: Geometry CP (recommended 74% or better) AND Algebra II (recommended 74% or better) OR Math Analysis (recommended 74% or better)
6 periods per cycle
Semester course .5 credit

318 INTRODUCTION TO PROBABILITY AND STATISTICS, COLLEGE PREPARATORY (Grades 10-12) This one-semester course is designed to introduce students to methods of collecting and analyzing data both graphically and numerically. Students will also use topics in probability that apply to those statistical methods. The course will utilize real-life situations in the scientific and business industries. Technological resources will be used regularly and it is recommended that students have their own graphing calculator.
Prerequisites: Algebra II (80% or better) AND Geometry CP (80% or better)
6 periods per cycle OR Algebra III/ Trigonometry (65% or better)
Semester Course .5 credit

330 ALGEBRA III/TRIGONOMETRY, COLLEGE PREPARATORY This course is designed primarily for those students with better-than-average backgrounds in mathematics who intend to continue their studies in the areas of science and mathematics. It provides a comprehensive study of real numbers, algebraic manipulations, trigonometric and circular functions, graphing functions, and sequences and series. This course proceeds at a much faster pace than Algebra II. It is strongly recommended that students review their Algebra II concepts and skills prior to taking this course. A summer review packet will be provided, with completion required. A graphing calculator is recommended, but not required.
Prerequisites: Geometry CP (84% or better) OR Geometry Honors (80% or better) AND Algebra II (84% or better) OR Algebra II Honors (80% or better)
6 periods per cycle 1.0 credit

352 ALGEBRA III/TRIGONOMETRY, HONORS This is designed for those students with an exceptional background in mathematics. The course provides a concentrated and in depth program including the study of real and complex numbers, trigonometric and circular functions, exponential and logarithmic functions, sequences and series, vectors and the conic sections. This course requires almost daily use of graphing calculators. It is strongly recommended that students have their own graphing calculator. It is trongly recommended that students review their Algebra II skills prior to taking this course. Summer review packet completion is required.
Prerequisites: Geometry Honors (recommended 84% or better) OR Geometry CP (recommended 92% or better) AND Algebra II Honors (recommended 84% or better)
6 periods per cycle 1.0 credit

340 CALCULUS , COLLEGE PREPARATORY This course is offered for a better-than-average student who plans to continue studying such fields as business, management, economics, or the life and social sciences in college. This is intended as an introductory course only, covering much of the material of a first semester college course, but at a much slower rate, to provide students with a deeper understanding of concepts and theories often misunderstood by college students. Fundamental concepts in differential calculus are presented, along with limits and an extensive study of the nature of functions. This course requires almost daily use of graphing calculators. It is strongly recommended that students have their own graphing calculator.
Prerequisites: Algebra III/Trigonometry, CP (recommended 84% or better) OR Algebra III Trigonometry, Honors (74% to 83%)
6 periods per cycle 1.0 credit

360 ANALYTIC GEOMETRY AND CALCULUS (AB), ADVANCED PLACEMENT is intended for students with thorough backgrounds in mathematics who plan to pursue higher mathematics or science in college. Students who satisfactorily complete this course will be prepared to take the College Board's A.P. Calculus (AB) exam. A full first semester college course will be presented including an extensive study of functions and graphs, limits, derivatives and methods of integration. Students who wish to take Advanced Calculus (Course #353) should plan to take AP Calc (BC). This course requires almost daily use of graphing calculators. It is strongly recommended that students have their own graphing calculator. **This course is not a prerequisite for Advanced Calculus, AP(weighted).
Prerequisites: Algebra III/Trigonometry Honors (recommended 84% or better) OR Algebra III/Trigonometry, CP (recommended 92% or better) OR Calculus CP (recommended 84% or better)
6 periods per cycle 1.0 credit

Mathematics Dep't, cont.

362/362D ANALYTIC GEOMETRY AND CALCULUS (BC), ADVANCED PLACEMENT is intended for students with a exceptional knowledge of analytic geometry, elementary functions, algebra, geometry and trigonometry. Students who satisfactorily complete this course will be eligible to take the Advanced Placement Mathematics (BC) examination for possible college credit. Calculus (BC) is considerably more extensive than Calculus (AB) and represents the equivalent of a full year of college calculus. Topics to be studied include differentiation and applications, integration and applications, transcendental functions, methods of integration, polar coordinates, vectors and equations, infinite series and differential equations. **This course is a prerequisite for Advanced Calculus AP(weighted). This course requires almost daily use of graphing calculators. It is strongly recommended that students have their own graphing calculator.
Prerequisites: Geometry Honors AND Algebra III/ Trigonometry Honors (recommended 92% or better)
6 periods per cycle 1.0 credit

362D 11th or 12th grade students may take this course for undergraduate college credits through Lehigh Carbon Community College's Dual Enrollment Program.

353 ADVANCED CALCULUS (AP weighted) This course is designed for those students who wish to study additional topics in Calculus but do not wish to matriculate to a local college. It is open to all students who have had AP Calculus BC . The C level topics of polar coordinates, infinite series, Taylor Polynomials, vectors (dot and cross products plus appropriate applications), vector valued functions, work, and length and surface area will be investigated in depth. Additional topics of hyperbolic functions, centroids, hydrostatic pressure, The Theorem of Pappus, rectangular and spherical coordinates, Partial Differentiation, directional derivatives, and multi-variable calculus will be studied. This course requires almost daily use of graphing calculators. It is strongly recommended that students have their own graphing calculator.
Prerequisite: AP Calculus BC ONLY, beginning with the 2011-2012 school year
6 periods per cycle 1.0 credit

364 STATISTICS, ADVANCED PLACEMENT This course is designed for those students who want a solid background in statistics prior to attending college. Many college majors require a course in statistics; especially engineering, business, and social sciences. Four main components of the course will be: exploring data to discover patterns or departures from patterns, planning a study and deciding what and how to measure, anticipating patterns and producing models using probability theory and simulation, and drawing statistical inferences in order to select and confirm appropriate models. The course will include almost daily use of technology and it is strongly recommended that students have their own graphing calculator and have a basic knowledge of Excel. Students who satisfactorily complete this course will be eligible to take the Advanced Placement Statistics exam for possible college credit.
Prerequisites: Algebra III/Trigonometry CP(recommended 84% or better OR Algebra III Trigonometry Honors (recommended 84% or better)
6 periods per cycle 1.0 credit

MUSIC DEPARTMENT

731 CONCERT CHOIR (Grades 9-12) Concert choir is a non-auditioned ensemble that provides a choral singing experience to any students in grade 9-12. Students are given the opportunity to develop individual singing abilities as well as contribute to the overall improvement of the choir. Music from many historical periods and styles will be studied. The Concert Choir will participate in regularly scheduled concerts. While the course is offered either three or six days per cycle, students are strongly encouraged to enroll in six-day choir.
3 periods per cycle(731A) .50 credit
6 periods per cycle (731) 1.0 credit

733/733A WOMEN'S CHOIR (Grade 9-12) In this course, students will learn the principles of good vocal technique, including diction, proper breathing, and tone production. There will be an emphasis on music literacy, including sight-singing skills. They will learn and perform challenging choral literature for the female voice. Acceptance into Women's Choir will be made after a successful audition in May of the previous year.
3 periods per cycle (733A) .50 credit
6 periods per cycle (733) 1.0 credit

732 JAZZ ENSEMBLE "ESQUIRES" (Grades 9-12) is comprised of instrumentalists who desire to perform jazz, rock, blues, swing, pop and various other forms of contemporary popular music. Besides performing in a variety of styles, improvisational skills are developed; all members are encouraged to improvise. The Jazz Ensemble affords students the opportunity to perform at concerts, travel to festivals and learn of career opportunities for contemporary musicians. Entrance into "Esquires" is based upon an audition. "Esquires" is a graded, scheduled course in the instrumental music curriculum. Any student who wishes to be placed in Jazz Ensemble must first select 6 day band.
6 periods per cycle 1.0 credit

734 CHORALE (Grades 9-12) Chorale is for the truly dedicated choral singer. Auditions are required and will be held in the spring of each school year. This group will perform in regularly scheduled concerts. Challenging choral literature from many historical periods and styles will be studied. Emphasis is placed on the development of individual and ensemble musicianship skills. Any student who wishes to be placed in Chorale must first select six-day concert choir. After a successful audition, the student will be placed into Chorale by the director.
Prerequisite: One year in Concert Choir or approval of director
6 periods per cycle 1.0 credit

735 PIANO CLASS (FOR BEGINNERS) (Grades 9-12) This class is designed for students with a strong interest in music but **little or no prior keyboard experience.** Students will learn basic keyboard skills as well as the fundamentals of music theory and music reading. The class includes individual and group experiences.
3 periods per cycle .50 credit

737/747 ORCHESTRA (Grades 9-12) The orchestra is comprised of students who play string instruments and desire to perform in an orchestra and improve their instrumental skills. Emphasis is placed on the development of individual instrumental technique as well as small ensemble practice and skills. The orchestra performs a variety of literature from many styles and periods.
3 periods per cycle (737) .50 credit
6 periods per cycle(747) 1.0 credit

String players are strongly encouraged to enroll in 6-day Orchestra (747)

745 SYMPHONIC BAND (Grade 9-12) This course is designed to continue the development of musical skills as an individual musician and as member of an ensemble. Enrollment in this ensemble is by audition and director recommendation, which is governed by a rigid consideration for balanced instrumentation. Students will learn intermediate to advanced technical and ensemble skills necessary for performance.. After school rehearsals and performances are required of all students as an integral part of the course. Any students interested in auditioning for Symphonic Band must pre-register for 6 day concert band (749).
6 periods per cycle 1.0 credit

748/749 CONCERT BAND (Grades 9-12) This course is designed for students who desire to continue their musical education or to start on a new musical instrument. Students will learn beginner to intermediate level technical and ensemble skills necessary for performance on a musical instrument. Music literacy and the ability to perform expressively on a musical instrument are the primary goals of this ensemble. Students will perform a wide variety of musical literature. Emphasis is placed on the development of ensemble skills and individual instrumental technique. Concert band is available in three or six days per cycle format. Students are strongly encouraged to enroll in 6-day Concert Band (749).
3 periods per cycle (748) .50 credit
6 periods per cycle (749) 1.0 credit

750/751 PERCUSSION ENSEMBLE (Grades 9-12) The objective of this lab is to develop the student rhythmically and melodically by emphasizing the fundamentals of melodic and battery percussion. The students will study the history of percussion, both in the U.S. and abroad. Students will continue to hone their abilities on the following instruments: Marching Percussion, Concert Percussion, Drum Set and Auxiliary Percussion. The lab will perform at both the winter and spring instrumental concerts. Some after-school rehearsals may be required.
Prerequisite: Audition
3 periods per cycle (750) .50 credit
6 periods per cycle (751) 1.0 credit

744 MUSIC THEORY I (Grades 9-12) is offered to students who have been introduced to the elements of music in general music course work, but who desire to continue their study of music in a detailed, comprehensive program. The materials and structure of music are defined and analyzed; the content of the course challenges the student/musician to demonstrate musical literacy in their listening, and performance skills. Activities include sight singing, melodic and rhythmic dictation and harmonic analysis. This course is the prerequisite for Music Theory AP. It is highly recommended that students with no keyboard experience take Piano Class before Music Theory I.
3 periods per cycle .50 credit

760 MUSIC THEORY, ADVANCED PLACEMENT (Grades 11-12) is designed to provide an intensified study of music. Music composition, listening skills and some music history will be included in this course. Students majoring in music, as well as students who have an interest in music study are encouraged to enroll. Although students who enroll in this course should have a strong interest in music, it is not necessary to have an instrumental or vocal background.
Prerequisite: Music Theory I or by petition
6 periods per cycle 1.0 credit

770/770D MUSIC APPRECIATION (Grades 9-12) This course surveys the great periods of music that parallel developments in the arts, religion, and philosophy. It emphases the study of representative composers in the important periods. It is designed to develop perceptive listening through the study of the basic elements of musical properties, form, and styles. Although students who enroll in this course should have a strong interest in music, it is not necessary to have an instrumental or vocal background. **This course will not run in 2010-2011.**
3 periods per cycle .50 credit

770D 11th or 12th grade students may take this course for undergraduate college credits through Lehigh Carbon Community College's dual enrollment program.

SCIENCE DEPARTMENT

The Emmaus High School Science Department, through a diversity of course offerings, provides students with the knowledge and skills base needed to meet the PA Academic Standards in the following areas:
Unifying Themes of Science
Inquiry and Design
Biological Sciences
Physical Science, Chemistry, and Physics
Science, Technology and Human Endeavors
Earth Sciences
Environment and Ecology
Technology Education
Technology Design

To meet the PA Academic Standards, each student should successfully complete at least one course in Biological Sciences and one course in Physical Sciences before the senior year at Emmaus High School.
The following pathways are recommended:
9th Grade - Biology, 10th Grade - Chemistry, 11th Grade - Physics or Level II Biological Science, 12th Grade - other science courses. Other courses may be taken concurrently with courses in this pathway.
or
9th Grade - Integrated Science, 10th Grade - Biology, 11th Grade - Chemistry, 12th Grade - Physics. Other courses can be taken concurrently with these courses.

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BIOLOGICAL SCIENCES

413 BIOLOGY I, APPLIED (Grade 10-12) This course is designed to acquaint the students who have limited math and science skills with the basic concepts of biology as they apply to everyday life. The course content will focus on the study of the unity and diversity of organisms, the interdependence of living and non-living world, and the development of species. This course will include the topics of biotechnology, cells, genetics, and natural selection.
6 periods per cycle 1.0 credits

401 BIOLOGY I, COLLEGE PREPARATORY (Grade 9-12) This course is designed for college preparatory students. Students will study the interrelationships between the living and non-living world. The topics will include cells (structure, function, reproduction, and interactions with environment) and ecology. The unity and diversity of organisms and development of species will be studied within the context of classification, based on heredity and molecular genetics.
7 periods per cycle 1.2 credits

402 BIOLOGY I, HONORS (Grade 9-12) This course is designed for students who have a strong interest in science and have demonstrated outstanding achievement in previous science courses. The students' understanding and appreciation for the living world will be enhanced through the study of the concepts involved in cell theory, classification, ecology, heredity, and molecular genetics. The development and applications of biotechnology will be discussed in the context of their impact on the living world. An in-depth research project is required. During the course, students are expected to develop the skills of an independent learner.
7 periods per cycle 1.2 credits

430 GENETICS-MICROBIOLOGY (Grades 11-12) The first semester of this course studies the general principles of genetics. The cell and transport are investigated with emphasis on selected genetic diseases. Mendelian principles of heredity are studied with emphasis on solving problems including monohybrid, dihybrid, intermediate dominance, probability, sex linked, epistasis and cross over inheritance. Other non-mendelian topics of blood genetics, human pedigrees, DNA, protein synthesis and DNA technology are also included. In the laboratory students will use the microscope, grow Fast plants to study the concept of genetic variety, cross fruit flies and statistically analyze the results. CATLAB (simulated computer program) will be used to study inheritance in a vertebrate organism. The microbiology portion of the course emphasizes microbes that affect human biology. Emphasis is given to the study of viruses and bacteria, methods of bacterial control, the immune system and infectious diseases such as TB, AIDS, botulism, food poisoning, anthrax and others. Laboratory work includes staining and investigations, and identification of unknown bacteria.
Prerequisite: Recommended 74% or better in Biology I CP, Chemistry I CP and Algebra 2.
8 periods per cycle 1.4 credits

432 BOTANY-ZOOLOGY (Grades 11-12) This course studies the history of life on earth. Students will learn how natural selection has enabled plants and animals to become adapted to their habitats.. The focus of the course is an evolutionary history of life on earth coinciding with the geological and environmental changes that have occurred over time. The course is laboratory based. Students will grow plants and raise fruitflies. Studies will include, but not be limited to flowers, insects, seeds, fish, fruits, frogs, algae, plants, protozoa, and mammals (including chimpanzees, and humans.) All students will conduct research on a pertinent topic, write a research paper and give an oral presentation to the class.
Prerequisite: Recommended 74% or better in Chemistry I C.P. and recommended 74% or better in Biology I-CP or by petition.
8 periods per cycle 1.4 credits

434 ANATOMY-PHYSIOLOGY (Grades 11-12) The first semester deals with an introduction to human anatomy including anatomical terminology, study of cells and tissues, DNA technologies, cancer, and immunity. The body systems to be taught are the integumentary (skin), respiratory, nervous, cardiovascular, and lymphatic systems. The second semester deals with the skeletal system and joints of the body, the muscular system and muscle contraction, and the reproductive system (including embryological and fetal development.) Labs will include, but not be limited to, those requiring extensive use of the microscope, examination of animal organs and models, the study of bones and skeletons, and the taking of blood pressures. In addition, throughout the year, the student will study disorders and diseases of the body and the current diagnostic techniques and treatments pertaining to them. All students will conduct research, write a research paper, and give a presentation to the class.
Prerequisite: Recommended 74% or better in Biology 1 CP and Chemistry 1 CP or teacher approval
8 periods per cycle 1.4 credits

460 BIOLOGY, ADVANCED PLACEMENT (Grade 11-12) This AP course is designed to be the equivalent of a college level Biology course and prepares the student to take the Advanced Placement exam in Biology for college credit. The course focuses on concentrated study of the following topics including biochemistry, cells, microbes, fungi, plants, photosynthesis, animal phyla, respiration, genetics, DNA, protein synthesis, evolution and ecology. Other topics studied include a survey of the systems of the body such as muscles, skeleton, integument, digestive, circulatory, endocrine, immune system, nervous, and excretory. Laboratory experiences include microscopic slide studies of plants and animals, osmosis of sugar solutions, transpiration in bean seedlings, photosynthesis of spinach leaves, respiration of pea seeds, enzymes in yeast, recombinant DNA and electrophoresis, genetics of fruit flies, habitat selection in brine shrimp and natural selection simulations. An adult cat will be dissected to study the systems of the body during the second semester. Independent summer readings are required in this course.
Prerequisites: 1) Recommended 74% or better in Biology I CP, Chemistry I CP and Algebra II and 84% or better in any Biology II course (Genetics/ Microbiology, Anatomy/Physiology or Botany/Zoology) or 2) 74% or better in Biology I Honors, Chemistry I Honors and Algebra II or 3) 74% or better in Environmental Science AP
8 periods per cycle 1.4 credits

PHYSICAL SCIENCES

403 CHEMISTRY I, APPLIED (Grades 9-12) This course is a program designed to popularize chemistry and to reach out to the large audience of students with a limited science and mathematics background. Students gain an understanding of the unifying concepts which relate to various areas of organic chemistry, inorganic chemistry, biochemistry, nuclear and physical chemistry and environmental chemistry. The relationship chemistry has to our everyday lives will be stressed.
6 periods per cycle 1.0 credit

420 CHEMISTRY I, COLLEGE PREPARATORY (Grades 9-12) The topics and concepts include: the atomic structure and the concept of energy; common elements, compounds and mixtures; the periodic arrangement of elements and its use in predicting chemical behavior; chemical reactions; chemical calculations and formulas, the kinetic molecular theory and gas laws and chemical bonding. Biochemical and environmental concepts are included within the above listed topics.
Prerequisite: Recommended 74% or better in Algebra I
8 periods per cycle 1.4 credits

450 CHEMISTRY I, HONORS (Grades 9-12) This course is designed for the student with a strong background and aptitude in science. The course involves an in-depth study of matter and energy, atomic structure, periodicity, chemical reactions, stoichiometry, bonding, kinetic molecular theory, thermodynamics and solution chemistry. Inquiry-based laboratory experiments will be used to explore these topics.
Prerequisite: Recommended 74% or better in Algebra II
8 periods per cycle 1.4 credits

452 CHEMISTRY II, HONORS (Grades 9-12) This course emphasizes the use of technology to explore scientific materials as a sequential course to Chemistry I. It will provide students with a background in modern chemistry that will be needed for specialized studies, including college-level chemistry courses. Basic concepts of Chemistry I are reviewed, and in-depth studies of advanced topics include analytical chemistry techniques, solutions, equilibria, thermochemistry, kinetics, electrochemistry, materials science, organic chemistry, and biochemistry. Outside reading and reference work are an integral part of the course. Much greater emphasis is placed on laboratory techniques and methods of analysis used in many experiments performed.
Prerequisite: Recommended 84% or better in Algebra II and in Chemistry I, CP or Honors.
8 periods per cycle 1.4 credits

462 CHEMISTRY, ADVANCED PLACEMENT (Grade 9-12) is designed to be the equivalent of a first-year college chemistry course. It differs from the usual secondary course with respect to the amount of topics studied, the depth of study, the emphasis on calculations and the type and variety of laboratory work completed by the student.
Laboratory work will include the use of sensitive balances, spectrophotometers, pH meters, and other analytical equipment. Unknown samples will be identified through analytical and qualitative chemistry. Each laboratory report will include a sophisticated analysis of the experiment. A summer assignment is required in this course. The course will prepare a student for the Advanced Placement Examination in Chemistry.
Prerequisites: Recommended 84% or better in Alg.II and Chemistry I C.P. or Honors. Concurrently taking Physics I, C.P. or Honors
8 periods per cycle 1.4 credits

406 APPLIED PHYSICS I (Grades 11-12) This course is designed to introduce students to a qualitative and quantitative description of matter and energy. Topics include mechanics, rotation, torque, waves, sound, light, electricity. Conceptual discussions of these topics will be expanded to mathematical analyses of real-world applications. Hands-on experimentation and mathematical calculations will be incorporated throughout the course. Algebraic applications are prevalent throughout this course.
Prerequisite: Recommended 74% or better in Applied Algebra IA or Algebra I Seminar and Applied Geometry AND concurrent enrollment in Applied Algebra IB or Algebra II, CP or by petition
6 periods per cycle 1.0 credit

424 PHYSICS I, COLLEGE PREPARATORY (Grades 9-12) This course is an introductory course in physics for the college bound student. Since this is a preparatory course, a thorough understanding of the fundamentals of motion with graphical representation will be stressed. Topics include motion, forces, momentum, energy, rotation, wave motion, optics, and electricity. Emphasis will be on mathematical concepts and their applications
Prerequisite: Concurrent enrollment in Algebra III/Trigonometry or Recommended 84% in Math Analysis or by petition
8 periods per cycle 1.4 credits

454 HONORS PHYSICS I (Grades 9-12) The content of this course is similar to that of CP Physics, but the scope and depth will be accelerated. This course is comparable to an algebra-trigonometric based, introductory college physics course. Trigonometric applications are prevalent throughout this course. If taken successfully with AP Physics B, Honors, the student will be prepared for the Advanced Placement Examination Level B in Physics.
Prerequisite: Recommended 84% or better in CP/Honors Algebra II and Geometry. Concurrent enrollment in Alg. III/Trig, C.P. or Honors
8 periods per cycle 1.4 credits

468 PHYSICS ADVANCED PLACEMENT B (9-12) This laboratory-based course will offer several topics that not only go into greater depth but also introduce new information. The course is intended for students who wish to major in medicine, engineering, and science. Electronics, Optics, Heat and Thermodynamics, Fluids, Solids, and Modern Physics are topics that will be included in the course. Students who have successfully completed Honors Physics I would be prepared to take the Level B (Algebra/Trig based) Advanced Placement Physics test.
Prerequisites: Recommended 84% or better in Algebra III/Trigonometry, CP or Honors and Recommended 84% or better in Honors Physics I. Students who were enrolled in CP Physics I and

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enroll in this course will be required to complete a summer assignment at the level that meets with the physics teacher approval.
8 periods per cycle 1.4 credits

469 PHYSICS ADVANCED PLACEMENT C (Grades 9-12) This course is for students who have a strong background in science and math. The topics are comparable to a first-year calculus based college physics course which includes mechanics and electricity/magnetism. This course will prepare the student for the Advanced Placement Level C Examination in Physics. This course includes a summer preparation in calculus to be completed by the start of school in September. Prerequisite: Recommended 84% or better in CP/ Honors Algebra III/Trigonometry with an Recommended 84% or better in CP/ Honors Physics AND concurrent enrollment in Calculus CP.
8 periods per cycle 1.4 credits
469D 11th or 12th grade students may take this course for undergraduate college credits through Lehigh Carbon Community College's Dual Enrollment program.

ENVIRONMENTAL SCIENCE

407 ENVIRONMENTAL SCIENCE, APPLIED (Grades 10-12) Ecological principles and sustainability will provide the basis for exploring numerous environmental issues. There is an emphasis on population growth, water pollution, decline of biodiversity, resource use, recycling, global warming, pesticide use, energy use and air pollution. Along with human impact on these environmental issue, their solutions will also be discussed. Topics of local environmental concerns are emphasized, including soil and water testing. Field trips to local sites of environmental interest are part of the course. Labs are conducted and lab reports submitted on many topics. Various career opportunities are discussed.
Prerequisite: Applied Biology
6 periods per cycle 1.0 credit

417 ENVIRONMENTAL SCIENCE, COLLEGE PREPARATORY (Grades 10-12) Ecological principles and sustainability will provide the basis for exploring numerous environmental issues. Human impacts on the air quality of air, water, and land will be discussed with the goal of helping students understand possible solutions to create a sustainable future world environment. The use of energy resources will include discussions of conversation and alternative energy source. The production of waste, and potential solutions to our ever-growing accumulation of waste will be explored. The impacts of world and local population growth on environmental quality will be integrated throughout the course. Both the speakers and technology will provide further learning opportunities. Field trips will provide opportunities to collect data at local sites (an example is stream monitoring) and to visit local sites relevant to environmental topics.
Prerequisite: Recommended 74% or better in Biology I CP or Honors
8 periods per cycle 1.4 credits

466 ENVIRONMENTAL SCIENCE, ADVANCED PLACEMENT (Grades 9-12) This college-level course focuses on understanding ecological principles of the natural world, and will examine environmental problems associated with human activities. There is an emphasis on lab and field investigations. Field trips to sites of environmental interest and to collect ecological data are integral to the course. Specific topics include population dynamics in natural populations, energy relationships in natural ecosystems, water pollution, air pollution, energy issues, resource use and consumption, recycling, toxic wastes, human population growth and global warming. Through consideration of these topics, students will discuss the necessary requirements for creating a sustainable world ecosystem. Students will also be exposed to numerous career possibilities in areas related to environmental issues. This course prepares students for the Advanced Placement Exam in Environmental Science.
Prerequisite : Biology I, C.P. and Chem I, C.P.
8 periods per cycle 1.4 credit

EARTH AND SPACE SCIENCE

405 INTEGRATED SCIENCE (Grade 9) This introductory course is designed for ninth graders. The emphasis is on matter, structure of compounds, physical and chemical changes as they relate to the physical structure of the Earth. Students will be involved in hands-on laboratory exercises that integrate the physical sciences with Geology, Oceanography, and Meteorology. In addition, students will learn mapping, measuring, computer, and computational skills that will build foundations for further science study in Biology and Chemistry.
7 periods per cycle 1.2 credits

408A ASTRONOMY (Grades 9-12) This course involves a study of the motion , composition and physical properties of the members of the universe. Topics include: observational astronomy, constellations, celestial motions, history of astronomy, solar systems, stars, lab exercises and planetarium visits.
6 periods per cycle
Semester course .50 credit

422 ADVANCED ASTRONOMY, COLLEGE PREPARATORY (Grades 9-12) This course is for college-bound students who desire a background in the physical sciences. Topics include: observational astronomy, physical laws of celestial motion, astrophysics, optics, general astronomy and cosmology. There will be a strong mathematical approach to the subject. Extensive use of the planetarium will be included.

Prerequisite: recommended 74% or better in Algebra II

6 periods per cycle 1.0 credit

410A OCEANOGRAPHY (Grades 9-12) This course is a study of the physical, chemical and geological processes at work in the oceans and their effect on marine plants and animals. The history of oceanographic research, instrumentation, seafloor topography, seafloor spreading, the chemistry of seawater, waves, currents, tides and life in the sea are topics included in this course.
6 periods per cycle
Semester course .50 credit

412B METEOROLOGY (Grades 9-12) This course is the study of the atmosphere. Included in this course will be a study of the Earth-Sun relations, atmosphere compositions, structure and circulation, elements and control of weather and air pollution. The use of meteorological instruments and the interpretation of weather maps will be an important part of this course.
6 periods per cycle
Semester course .50 credit

414B GEOLOGY (Grades 9-12) This course is a study of the earth, its history, composition and landforms. Topics include: continental drift, plate techtonics, earthquakes, volcanoes, rocks, minerals, topographic maps, landforms, and fossils.
6 periods per cycle
Semester course .50 credit

SOCIAL STUDIES DEPARTMENT

The Emmaus High School Social Studies program is based on the Pennsylvania Academic Standards for History, Civics and Government, Economics, and Geography. History is the unifying discipline and includes designated strands of geography, civics, government relations, economics, political science, and contemporary issues. These strands provide students with the skills and knowledge necessary to make informed decisions. Skills include critical thinking and problem solving techniques, which lead to negotiation and resolution of social conflicts. Each high school student must take and pass American Studies I and II, a World Studies course, and a twelfth grade Social Studies course to graduate. Students should choose, with the help of parents, teachers, and counselors, the program best suited to their abilities and future plans. Each student should choose the appropriate Social Studies course offered in a grade level. Those who are undecided about going to college should choose college preparatory Social Studies. Note that Psychology and Sociology will not be counted toward meeting Social Studies graduation requirements.

200 AMERICAN STUDIES I, G.P. (Grade 9) This is a full-year course designed to discover American History, using a chronological approach beginning with the Constitutional Era and ending with the Progressive Era. Constitutional development, the growth of democracy, westward expansion, secession, slavery, the Civil War, industrialization, immigration, and the Progressive Movement are some of the major historical themes addressed. The incorporation of minorities and their roles are studied in their historical context. The cause and effect relationships of historical events will be emphasized throughout the course through the applications of historical principles and concepts.
6 periods per cycle 1.0 credit

202 AMERICAN STUDIES I, C.P. (Grade 9) This is a full-year course designed to discover American History, using a chronological approach beginning with the Constitutional Era and ending with the Progressive Era. Constitutional development, the growth of democracy, westward expansion, secession, slavery, the Civil War, industrialization, immigration, and the Progressive Movement are some of the major historical themes addressed. The incorporation of minorities and their roles are studied in their historical context. The cause and effect relationships of historical events and students' projects will be emphasized throughout the year.
6 periods per cycle 1.0 credit

250 AMERICAN STUDIES I, HONORS (Grade 9) This course begins with a brief review of the major issues leading to the American Revolution. Subsequent units trace the development of the Unites States from the Constitutional Era to the Progressive Movement. The course emphasizes the development of federalism, sectionalism, nationalism, the Civil War, industrialization, imperialism, and progressivism. Cause and effect relationships will be emphasized in conjunction with research through the History Day project. Independent readings and research are a routine part of this course throughout the year.
6 periods per cycle 1.0 credit

210 AMERICAN STUDIES II, G.P. (Grade 10) This is a full year course and the second part of the American History curriculum. Through a chronological approach, students will examine the history and culture of modern American starting with the Election of Woodrow Wilson in 1912 to the present. The cause and effect relationships of historical events will be emphasized as well as the everyday application of historical principles and concepts.
Prerequisite: Students must have successfully completed American Studies I (9th grade).
6 periods per cycle 1.0 credit

212 AMERICAN STUDIES II, C.P. (Grade 10) This is the second of a two-part course in American History. Using the chronological approach, students will be studying the history, global interactions, and changing patterns in the culture and people of the Unites States from the Election of Woodrow Wilson in 1912 to the present.
Prerequisite: Students must have successfully completed American Studies I (9th grade).
6 periods per cycle 1.0 credit

251 AMERICAN STUDIES II, HONORS (Grade 10) This is a course for selected sophomores who wish to participate in an in-depth study of the history of the people and culture of the United States, starting with the Election of Woodrow Wilson in 1912 to the present. Students will investigate the changes in life and social patterns of Americans as a result of this country's search for freedom and maturity as a nation.
Prerequisite: Students must have successfully completed American Studies I (9th grade) and have the recommendation of their counselor and social studies teacher based on high academic achievement.
6 periods per cycle 1.0 credit

220 WORLD STUDIES, G.P. (Grade 11) This full year course covers world history from the Italian Renaissance to the present. Students will examine major world events from Europe, Africa, Asia, and Latin America. Students will examine major periods of world history, such as the age of exploration, the French revolution, the industrial revolution, and the independence movements of Africa and Latin American nations. Students will examine major social,

Social Studies Dep't, cont.

political, and economic events in the world from World War II to the present using current events to establish connections to the past..
6 periods per cycle 1.0 credit

222 WORLD STUDIES, C.P. (Grade 11) This full year course evaluates world history from the Italian Renaissance to the present. Students will examine major world events from Europe, Africa, Asia, and Latin America. Students will examine major periods of world history, such as the age of exploration, the French revolution, the industrial revolution, and the independence movements of Africa and Latin American nations, establishing connections between different regions of the world and between the past and present. Students will analyze major social, political, and economic events in the world from World War II to the present using current events to establish connections to the past.
6 periods per cycle 1.0 credit

252 WORLD STUDIES, HONORS (Grade 11) This full year course analyzes world history from the Italian Renaissance to the present. Students will evaluate major world events from Europe, Africa, Asia, and Latin America. Students will examine major periods of world history, such as the age of exploration, the French revolution, the industrial revolution, and independence movements of Africa and Latin American nations. Students will evaluate major social, political, and economic events in the world from World War II to the present using current events to establish connections to the past. Students will synthesize historic events to evaluate their impact on the society of the modern world. Students will have the opportunity to participate in oral presentations. This course is open to all juniors who have successfully completed American Studies, Honors or American Studies, C.P.
Prerequisite: Teacher and/or counselor recommendation.
6 periods per cycle 1.0 credit

230 GOVERNMENT AND ECONOMICS, G.P. (Grade 12) This is a course designed to enable newly-emerging citizens to understand and to participate in American society. For the government portion of the course, students obtain information on the function of government at the national, state and local levels. They also study the role of citizens in the political process. For economics, students study basic economic theory and practical applications in everyday life. Current issues are interwoven into the curriculum to relate theory to practice.
6 periods per cycle 1.0 credit

232 GOVERNMENT AND ECONOMICS, C.P. (Grade 12) This is a course designed to provide students with a basic knowledge of political and economic theory. The course relates the political and economic applications to American citizenry. Major emphasis will be given to a study of U.S. government, a citizen's role in government, macroeconomic theory, micro economic theory, and consumer affairs. Current issues will be interwoven into the curricular information to relate theory to practice.
6 periods per cycle 1.0 credit

236 PSYCHOLOGY (Grade 12) This is a course designed to introduce students to the basic concepts important to general psychology. Students will apply the experimental method to solve problems posed in class. Concepts such as history and systems of psychology, sensation and perception, memory, cognition, learning and common disorders will be introduced to students. Students are required to complete a semester-long research experiment to enhance their understanding of basic psychological concepts.
6 periods per cycle
Semester course .50 credit

238 SOCIOLOGY (Grade 12) This is an introductory course that examines our complex social environment with special emphasis on the problems of everyday group living. Students will gain a better knowledge of human relationships and an understanding of why we act the way we do in different situations; student interests are to be considered for more in-depth research of a particular social problem. This course is intended to give the student a broad understanding of culture and society.
6 periods per cycle
Semester course .50 credit

260 U.S. HISTORY, ADVANCED PLACEMENT (Recommended for Grade 12) This is a course intended for selected students who have successfully completed courses in American Studies, Honors, and World Studies, Honors, or who have shown evidence of superior academic ability. (Students who have not followed the Honors track must secure approval from their counselor.) Students will read, analyze and discuss selected documents and selections from the major 20th century historians. Students will pursue independent projects, both oral and written, with emphasis on writing and research. Students will review the major concepts of U.S. history and prepare for the Advanced Placement Examination in U.S. History.
Prerequisite: American Studies, Honors, World Studies, Honors.
6 periods per cycle 1.0 credit

262 AMERICAN GOVERNMENT AND POLITICS, ADVANCED PLACEMENT (Grade 12) This is a course intended for selected students who have successfully completed courses in American Studies, Honors; or World Studies, Honors; or who have demonstrated superior academic ability. (Students who have not followed the honors track must secure approval from their counselor.)

The Advanced Placement course in American Government and Politics is designed to give students a critical perspective on politics and government in the United States. This course involves both the study of general concepts used to interpret American politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that make up the American political reality. The acquisition of a thorough and systematic comprehension of American government and politics dictates that the student learn facts and concepts and understands typical political processes. Further, the student learns to use specific information critically to evaluate general propositions about politics and government. Students also learn to present basic data relevant to government and politics in sustained written arguments. Students will prepare for the Advanced Placement Examination in American Government.
6 periods per cycle 1.0 credit

264 EUROPEAN HISTORY, ADVANCED PLACEMENT (Recommended for Grade 11) This is a course intended for selected students who have successfully completed the course in World Studies, Honors, or who have shown evidence of superior academic ability. (Students who have not followed the Honors track must secure approval of their counselor.) Students will be expected to critically read, write, view and analyze European History from 1450 to present. Included in this course will be how the art, music, literary, economic, social and political aspects of the various periods interact and impact history. Students will pursue independent projects aimed at the critical analysis of historical writings. Students will prepare for the Advanced Placement Examination in European History.
6 periods per cycle 1.0 credit

266 ECONOMICS, ADVANCED PLACEMENT (Grade 12) This course is intended for selected students with a strong mathematical background, or who have shown evidence of superior academic ability. The purpose of this course is to give students a thorough understanding of the principles of economics that apply to our economic system. The course places particular emphasis on the study of national and international economic studies. It also places familiarity with both macro and microeconomics in developing a student's understanding of economic performance measures. Students will be expected to read, analyze, and discuss both the primary and supplemental sources in addition to independent projects involving problem-solving situations. Students will prepare for the Advanced Placement Examinations in both micro and macroeconomics.
6 periods per cycle 1.0 credit

950 SENIOR HUMANITIES, HONORS (Grade 12) This course will examine human endeavors from the perspectives of philosophy, culture, history, and aesthetics. The course will be taught using a thematic approach that allows students an opportunity to integrate all the subject areas in relation to a theme or a problem, as they do in real life. The exploration of these themes will emphasize reading and expository thinking and problem-solving skills, and visual literacy. Integral to the courses are: academic advisors, panel discussions, student directed curriculum, guest speakers, field trips and portfolio grading. Each student will be required to complete individual and group projects, including a research paper. The course will be scheduled for a double-period each day.
12 periods per cycle
Credits: Social Studies – 1.0;
English – 1.0

TECHNOLOGY EDUCATION DEPARTMENT

900 DRAFTING AND DESIGN I (Grades 9-12) This is an introductory course giving the student a basic understanding of mechanical drawing and CAD Drafting. Presented are: the use of drawing instruments, CAD drafting, and the theory of shape description as it applies to design. Emphasis will be placed on the importance of neatness and paying attention to detail. Process learning and problem solving are key points in this class. Drawings will be completed on the board and in CAD.
6 periods per cycle
Semester course .50 credit

910 DRAFTING AND DESIGN II (Grades 9-12) This course expands the skills of Drafting and Design I, giving the student a basic understanding of orthographic projection, isometric development, machine drawing, and scale drawings. Process learning and problem solving are key points in this class. Students will be given the assignments on the drawing board and in CAD.
Prerequisite: Drafting and Design I
6 periods per cycle
Semester course .50 credit

902 VISUAL COMMUNICATIONS (Grades 9-12) The students will be exposed to numerous areas of visual communication. They are:
Photography - This portion of the course introduces the student to the fundamentals of the 35mm camera, film developing, photographic enlargements, and presentation. 35mm SLR cameras will be supplied.
Graphics - This covers the fundamentals of printing technology. Topics of study include screen printing and offset technology. Additional printing techniques will be discussed.
Desktop / Computer Imagery - This portion of the course deals with basic design principles and how they are related to visual communications. Design problems will be solved using Adobe Creative Suite.
6 periods per cycle 1.0 credit

912 GRAPHIC ARTS (Grades 10-12) This course reviews the basic printing processes taught in Visual Communications. Emphasis is placed on screen printing and offset printing. Experiences include layout and design, computerized layout composition, line and halftone photography, platemaking, printing and design techniques.
Prerequisite: Visual Communications
6 periods per cycle 1.0 credit

922 ADVANCED GRAPHIC ARTS (Grades 11-12) This course is designed to provide the experienced student in Graphic Arts an opportunity to specialize in one area. Emphasis is placed on offset lithography, screen printing, and digital composition, prepress and post press production. Students will be responsible for producing various printed materials for the school.
Prerequisite: Graphic Arts
6 periods per cycle 1.0 credit

904 PHOTOGRAPHY (Grades 10-12) Students will be exposed to black and white photography, darkroom procedures and advanced camera techniques. Film concepts will be applied to the exciting new world of digital photography. Adobe Photoshop will make digital images come to life. Emphasis will be placed on lighting techniques and studio photography. Film and digital SLR cameras provided.
6 periods per cycle
Semester course .50 credit

906 ENGINEERING TECHNOLOGY I (Grades 9-12) This course is divided into two areas of study. The first area covers basic electricity and electronics. The topics covered will be electrical theories and practices, electrical and electronic experiments,

Technology Ed. Dep't, cont.

and the construction of electronic projects. The second area covers creative problem solving and experimentation. The topics may include kinetic energy projects, truss fabrication and analysis, robotics, flight, alternative energy, and a more in-depth study of electronics. The material is presented through lecture, demonstration, and hands-on activities. Careers and occupations in the various fields of technology are explored.
6 periods per cycle
Semester course .50 credit

907 ENGINEERING TECHNOLOGY II (Grades 9-12) In the first part of this course, students will learn how to operate a CNC lathe and milling machine. Emphasis will be placed on design, programming and running part programs. The second part of this course allows for greater exploration of engineering studied in Engineering Technology I. Self-directed study involving electricity/electronics, transportation systems, construction, manufacturing, robotics and computer integration will be presented with a "hands-on" problem-solving approach.
Prerequisite : Engineering Technology
6 periods per cycle
Semester course .50 credit

908 POWER TECHNOLOGY I (Grades 9-12) This course is divided into three basic areas of study. The first area is internal combustion engine theory and operation. A four cycle engine is disassembled, components and systems will be studied and evaluated, reassembled and test run. The second area covers self-directed study in the areas of mechanisms, simple machines, pneumatics, hydraulics, aerodynamics, and alternative forms of transportation. The third area covers the design, fabrication, racing, and evaluation of an electric powered dragster. The material is presented through lecture, demonstrations, and hands-on lab activities. Careers and occupations in related fields are explored.
6 periods per cycle
Semester course .50 credit

909 POWER TECHNOLOGY II (Grades 9-12) This course is an extension of Power Technology I. Self directed areas of study may include applied pneumatics and hydraulics, alternative forms of energy and transportation, electric motor theory and gear train analysis which will be presented in a hands-on problem solving approach. The final project involves engineering teams designing, fabricating and testing electric-powered pulling tractor or hill climb vehicle. Related careers and occupations will be explored.
Prerequisite: Power /Technology I
6 periods per cycle
Semester course .50 credit

924 ARCHITECTURAL AND CAD DRAFTING (Grades 11-12) This is a combined course of Technical drawing and Architecture. Process learning and problem solving are key points in this class. The course deals with the study of design and the relationship it has on buildings and machines. The concept of Form and function will be discussed throughout the course. Students will study residential and commercial Architecture. Students will also complete 2D and 3D CAD drawings as they relate to mechanical engineering. Site plans, elevations, isometric drawings, and plan view drawings will be created. Students will also design and build a scale model of a house.
Prerequisite: Drafting and Design I and II (tenth grade students with teacher recommendation)
6 periods per cycle 1.0 credit

WELLNESS/FITNESS DEPARTMENT

The WELLNESS/FITNESS PROGRAM will enable the students to personally improve upon their level of muscular strength, flexibility, and cardio-vascular endurance. All classes will be supplemented with lifetime activities.

LIFETIME ACTIVITIES

DANCE will expose students to social dancing.

FITNESS will expose the student to anaerobic and aerobic exercises. The course will give students an opportunity to improve aerobic capacity as well as muscle endurance.

RACKET SPORTS may include the following activities: Badminton, Pickle Ball, and Tennis. These activities demand quick thinking, hand-eye coordination, motor skills, and mastery of the direction through proper use of a racket.

TEAM SPORTS will afford a student an opportunity to learn team strategy and physical fitness that provides both anaerobic and aerobic exercise. These games include: Speedball, Team Handball, Ultimate Frisbee, Ultimate Ball, Racketball, Big Bases, Flag Football, Soccer, Basketball, and Volleyball.

WEIGHT TRAINING Weight training utilizes the Fitness Center to develop strength, endurance, and flexibility. Points of emphasis will be safety and proper technique while using the cardiovascular and weight training equipment. In 11th and 12th grade, each student will design and implement his or her own personal weight training program.

POLAR HEART MONITORS will be used to keep the students in the "Healthy Zone" during activities. The monitors will allow the students to better understand appropriate exercise and how it leads to a healthier life.

PARTICIPATION

The ultimate goals are maximum participation and enjoyment, and an understanding of the value of physical fitness in adult life. Each course meets three times per cycle for one semester for .25 credit.

Courses will be offered in the following combinations. *Students are required to select one semester of Wellness/ Fitness each year. During the 9th, 10th, 11th and 12th grades, students must pass a minimum of 3 semesters of fitness and 1 semester of aquatics, and a course in Health in order to graduate.*

Each student will participate in pre- and post-tests each semester in strength, flexibility, body composition, cardiovascular endurance and biometrics. Each time the testing is completed, each student will receive a computer-generated personal profile outlining his or her results.

A student will be excused from participating in wellness/fitness classes by a doctor's statement. Alternative education activities will then be assigned. Should a student become ill during the day and therefore not have a note from a parent or guardian, the school nurse may excuse a student from participating in these classes. The school nurse may also excuse a student for other physical conditions which in his/her professional judgment are valid reasons. Repeated or continuing requests will necessitate a doctor's statement. The student must make up missed classes. Each student will be allowed 2 absences (per marking period) before classes have to be made up. If a student participates in class without proper attire they can receive a maximum of 3 out of the possible 5 points for the day. All make-up work must be completed within 10 days of the original date work was due. The wearing of street clothing to participate in wellness/fitness classes, and street shoes on the gymnasium floor is strongly discouraged.

All Aquatic and Wellness/Fitness classes are graded on a rubric with a 5 point scale taking into account the student's effort, understanding, and participation. Aquatic classes also will have skill tests. Both Wellness/Fitness and Aquatic classes will have cognitive tests.

Students must furnish their own athletic attire and/or swim suits, towels, bathing caps, nose clips, ear plugs, and goggles as necessary. Appropriate athletic attire consists of a shirt and shorts that is neither drug related, sexually explicit or ethnically degrading. Appropriate bathing suits for females are one piece or a tank-ini.

The safety of our students is foremost in our teachers' minds. Therefore:

1. NO JEWELRY OF ANY KIND MAY BE WORN DURING PARTICIPATION IN CLASS.

2. FOOTWEAR IS TO BE SNEAKERS THAT ARE ATHLETIC IN NATURE WITH A CLOSED FRONT AND BACK. Sneakers must be tied and laced as designed by the manufacturer. No platform/elevated soles will be permitted.
Showers after classes are available. Students taking swimming are strongly encouraged to shower before and after entering the pool. All students are responsible for putting their equipment and valuables into their lockers and locking them. Each student will be issued a school combination lock. The replacement cost of a lost lock is $10.00.
All students are required to take and pass Aquatics in 10th grade or before graduation.

CO-ED COURSES

CE - 1 9th Grade - Wellness/Fitness
CE - 2 10th Grade - Aquatics
CE - 3 10th Grade - Aquatics, non-swimmers
CE - 4 10th Grade Aquatics, Adaptive
CE - 5 11th/12th Grade - Wellness/ Fitness
CE - 6 Modified Wellness/Fitness
CE - 7 Adaptive Wellness/Fitness
CE - 8 11th/12th Grade Advanced Wellness/Fitness

CE-2 10TH GRADE - AQUATICS This course is required by all students for one semester. The course consists of water survival, Red Cross Basic strokes, basic water safety, snorkeling and water games. Students selecting this course should be able to demonstrate the following: prone float, back float, tread water for one minute in deep water, "bob" ten times in water, swim 25 yards freestyle.

CE-3 10TH GRADE - AQUATICS, NON-SWIMMERS This course is a course for those students who cannot complete the pre-requisite test for the Aquatics course CE-2 successfully. They will learn basic water skills, basic water safety, snorkeling, and water games. The course goal is for students to gain confidence, comfort and proficient skills for survival while in the aquatic environment. Students will be placed in his class after a screening by the Wellness/Fitness staff during the 9th grade year.

CE-4 10TH GRADE AQUATICS, ADAPTIVE This course is offered to those students with aquatic fears and limitations, and in need of an individualized educational program (IEP). Students will be admitted to the program after screening by the staff and the student's IEP team.

CE-6 MODIFIED WELLNESS/ FITNESS This course is offered to those students with limitations and in need of an individualized physical education program. Students will be admitted to the program after a screening by the Wellness/Fitness staff and school counselor of appropriate documentation.

CE-7 ADAPTIVE WELLNESS/ FITNESS This course is for students who are disabled and currently have an Individualized Education Program (IEP) and may be eligible for this adaption. The IEP team would determine the appropriateness of this service.

CE-8 ADVANCED WELLNESS/ FITNESS This course provides an opportunity for qualified 11th and 12th grade students to participate in more comprehensive activity where individual interests and abilities can be developed in depth. **Selection to the course will be dependent upon the student's past achievements in wellness/fitness and a recommendation of the wellness/fitness staff.**
3 periods per cycle
Full year course .50 credit

HE-2 HEALTH This course is designed to provide students with the information and experiences needed to make healthy lifestyle choices. The units covered in this course include safety, nutrition, first aid/CPR, Drug/Alcohol/ Tobacco prevention and disease prevention. Students will be actively engaged in various methods of learning in order to develop the skills necessary to exhibit and maintain positive behaviors. The goal of the course is for the students to apply what they have learned in order to make healthy lifestyle choices. Note: Opportunities may be offered to gain American Red Cross certification in Adult CPR. Exceptions to grade level admittance may be made with a recommendation by a counselor.
6 periods per cycle
Semester course .50 credit

HE-4 APPLIED HEALTH This course is designed to provide students with the information and experiences necessary

Wellness/Fitness Dep't, cont.

to develop and maintain positive lifestyle choices. The units covered in this course include safety, nutrition, first aid/CPR, Drug/Alcohol/Tobacco prevention and disease prevention. Students will be actively engaged in various methods of learning in order to develop the skills necessary to exhibit and maintain positive behaviors. The goal of the course is for the students to apply what they learn therefore making healthy lifestyle choices. Note: Opportunities may be offered to gain American Red Cross certification in Adult CPR. Exceptions to grade level admittance may be made with a recommendation by a counselor.
6 periods per cycle
Semester course .50 credit

WORLD LANGUAGE DEPARTMENT

1. The World Language Department strongly recommends that a student study at least FOUR, preferably FIVE, years of the same World Language.

2. It is strongly recommended that a student achieve a 74% (C) average in one level of the language to go on to the next level. Students may NOT repeat a level of language if they have achieved an 80% (C+) or better average in that level during the previous school year.

3. With Level II World Language courses, instruction will move toward immersion in the target language.

4. The World Language Department strongly recommends that students who enroll in any level of a language should also be enrolled in CP English or higher, with the exception of those taking Spanish I for Native and Heritage Speakers (Course 514N)

FRENCH

500 FRENCH I This course focuses on speaking and listening in a communication-oriented program. Students will acquire a solid linguistic base on which to build more advanced communication skills. The use of textbooks, workbooks, transparencies, videos, dialogues, audio materials and computer activities will reinforce and supplement the learning experience. Basic oral expression will be emphasized. By combining language and culture, students will broaden their communication skills while at the same time deepen their appreciation of French cultures.
6 periods per cycle 1.0 credit

510 FRENCH II This course reinforces the French language through authentic speech patterns and continues to promote communication skills that apply in everyday situations. Visuals, practical application, videos, CD's and workbooks supplement the learning experience. The students continue to develop an appreciation of the arts and a cultural awareness of daily life in French-speaking countries. Students are expected to use French as much as possible in the classroom. Prerequisite: French I6 periods per cycle
1.0 credit

520 FRENCH III This course continues to reinforce and expand the four skills of listening, speaking, reading, and writing. Through textbooks and other components of the program, such as workbooks, videos, transparencies, reading selections, dialogues, computer activities, audio material and various supplemental materials, students will continue to build the communicative foundation that was established in French I and II. Students will be expected to use the French language as much as possible in all classroom activities. French culture will be integrated into all activities.
Prerequisite: French II
6 periods per cycle 1.0 credit

530 FRENCH IV This course continues the study of grammar and vocabulary, providing ample opportunity for oral-aural practice. In addition to the basic text, reading, writing, cultural and conversational texts will be used. Students will read and discuss short stories and/or novels written by selected French authors. Also, various magazine and newspaper articles are read. Compositions and written and oral reports are given in French.
Prerequisite: French III
6 periods per cycle 1.0 credit

550 FRENCH IV, HONORS This course is an accelerated course designed to prepare the student for the Advanced Placement program. There will be required readings and writing assignments. Students will make oral presentations and perform a variety of skits and/or plays. Magazines and novels will be used regularly.
Prerequisite: French III
6 periods per cycle 1.0 credit

540 FRENCH V This course will continue to improve the level of proficiency in the language. Areas of concentration will be speaking, reading and writing. Students will present French plays, write original materials and give oral presentations. There will be an emphasis on the works of at least one well-known French author.
Prerequisite: French IV or French IV, Honors
6 periods per cycle 1.0 credit

560/560D FRENCH, ADVANCED PLACEMENT (LANGUAGE) This course is designed to achieve the highest possible degree of language proficiency. Students interested in this course should already have a good command of grammar and considerable competency in listening, reading, writing and speaking. Emphasis will be placed on vocabulary and grammar to attain a high degree of proficiency in understanding spoken French, in both formal and conversational situations; in reading newspaper and magazine articles, contemporary fiction, and non-technical writings; and in expressing ideas orally, in writing and in speaking accurately and fluently.
Prerequisite; French IV or French IV, Honors and Teacher Recommendation
6 periods per cycle 1.0 credit
560 D 11th or 12th grade students may take this course for undergraduate college credits through Lehigh Carbon Community College's Dual Enrollment program.

GERMAN

502 GERMAN I This course will focus on speaking and listening within a grammar-supported, communication-oriented program. All activities will primarily develop speaking and listening skills with secondary emphasis on reading and writing skills. Through the textbook and other components of the program, students will acquire a solid linguistic base on which to build communication skills in everyday situations. At the same time, students will develop knowledge and appreciation of the diverse culture of the German speaking countries.

6 periods per cycle 1.0 credit

512 GERMAN II This course continues to reinforce and expand upon the four communicative language skills of listening, speaking, reading and writing introduced in German I. Through the textbook and other components of the program, such as transparencies, workbooks, videos, dialogues, audio materials, computer activities, and various supplemental materials, students will build on the communicative foundation established in German I. Students are expected to use German as much as possible in the classroom, and the students will also write paragraphs in German of personal interest. Up-to-date information on German culture will be presented throughout every phase of language learning.
Prerequisite: German I
6 periods per cycle 1.0 credit

522 GERMAN III This course continues to reinforce and expand the four skills of listening, speaking, reading, and writing. Through textbooks and other components of the program, such as workbooks, videos, transparencies, reading selections, dialogues, computer activities, audio material and various supplemental materials, students will continue to build the communicative foundation that was established in German I and II. Students will be expected to use the German language as much as possible in all classroom activities. German culture will be integrated into all activities.
Prerequisite: German II
6 periods per cycle 1.0 credit

532 GERMAN IV This course intensifies all four language skills; listening, speaking, reading, and writing. The student is encouraged to express her/his own ideas both orally and in writing through original dialogues and compositions. All classes are conducted exclusively in German and all papers are written in German.
Prerequisite: German III
6 periods per cycle 1.0 credit

552 GERMAN IV HONORS This course is an accelerated course designed to prepare the student for the Advanced Placement program. There are required readings and frequent writing assignments. Students make oral presentations. Articles from newspapers and magazines along with short stories are incorporated in the classroom.
Prerequisite: German III
6 periods per cycle 1.0 credit

542 GERMAN V This course continues proficiency in all four language skills: listening, speaking, reading, and writing. German is used exclusively in the classroom. All communicative functions, vocabulary, and grammar are presented in culturally authentic situations, and students are encouraged to apply what has been presented to their own situations, both orally, in original dialogues or monologues, and in written paragraphs and compositions.
Prerequisite: German IV or German IV Honors
6 periods per cycle 1.0 credit

562/562D GERMAN, ADVANCED PLACEMENT (LANGUAGE) This course is designed to achieve the highest possible degree of proficiency in preparation for the Advanced Placement Examination. Students interested in this course should already have a good command of grammar and considerable competency in listening, reading and writing. Emphasis is placed on using vocabulary, grammar and syntax, with a high degree of proficiency; on understanding spoken German in both formal and conversational situations; on reading newspaper and magazine articles, contemporary fiction and non-technical writings without the use of a dictionary; and on expressing ideas orally and in writing accurately and fluently.
Prerequisites: German IV or German IV Honors and Teacher recommendation
6 periods per cycle 1.0 credit
562D 11th or 12th grade students may take this course for undergraduate college credits through Lehigh Carbon Community College's Dual Enrollment program.

LATIN

506 LATIN I This course has as its objective the development of the student's ability to read and comprehend Latin through the systematic mastery of grammar and syntax. Set in the cultural framework of First Century Rome, stories are presented in Latin which give students the opportunity to learn relevant vocabulary and to become acquainted with Roman customs and a typical Roman family. By emphasizing the relationship between the original Latin roots and English, the course gives students a better knowledge and appreciation of their own language. Additional materials are provided on the topics of history, religion, and mythology that enhance the students' awareness of the contributions of the Romans.
6 periods per cycle 1.0 credit

516 LATIN II continues and reinforces the principles of grammar and syntax as well as vocabulary introduced in the first year of Latin. Students continue reading in Latin the narrative account of a typical family of the Roman Empire under Titus, thereby gaining cultural insights into such customs as the chariot races, gladiator fights, and Roman education. The same basic methodology is employed in mastering new words and in understanding their relationship with the English language. Students gain additional expertise by translating sentences from English to Latin, and by learning appropriate and common Latin phrases, inscriptions, and mottoes.
Prerequisite: Latin I
6 periods per cycle 1.0 credit

526 LATIN III This course focuses upon advanced grammar, vocabulary and syntax, culminating with the reading of ancient authors. Students will use the linguistic foundations already established in the earlier levels to translate demanding passages of poetry and prose, to analyze the content and format of the writing, and to appreciate their lasting value. Special emphasis will be placed on the relationship between the literature and the political and social events of

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Roman life.
Prerequisite: Latin II
6 periods per cycle 1.0 credit

536 LATIN IV Latin IV uses authentic Roman literature as a vehicle for learning new grammar concepts. After reviewing previously learned syntax, students will discover the exceptions and irregularities that often appear in ancient Latin texts. The focus of this course is to not only translate but interpret the works of ancient Romans as they apply to both the ancient and modern world. In addition to the language acquisition, students will make connections between the literature and sociopolitical climate of Rome's golden age. Such connections and additional cultural topics will foster a firm appreciation for ancient Mediterranean cultures and their influences on a global scale.
Prerequisite: Latin III
6 periods per cycle 1.0 credit

SPANISH

504 SPANISH I This course focuses on speaking and listening within a communication-oriented program. All activities will develop speaking, listening, reading and writing skills. Through these activities students will acquire a solid linguistic base on which to build more advanced communication skills. Use of textbooks, transparencies, videos, dialogues, audio materials and computer activities will be incorporated into this course. Basic oral expression will be emphasized. By combining language and culture, students will broaden their communication skills while at the same time deepen their appreciation of other cultures.

6 periods per cycle 1.0 credit

514N SPANISH I FOR NATIVE AND HERITAGE SPEAKERS This new course is designed for students who are being raised in homes where Spanish is spoken. While they may have never received any formal instruction in their heritage language, they have attained some level of oral proficiency and internalized some basic grammatical concepts. This course will expand upon the skills the heritage speakers already possess, as well as focus on challenging reading and writing assignments which will allow the students to explore their own cultures more fully. Admission to this course is flexible and can include LEP/ESL students as well as those enrolled in English GP or English/Reading. Eligible students should understand at least 80% of spoken Spanish.
6 periods per cycle 1.0 credit

514 SPANISH II This course continues to reinforce and expand upon the four communicative language skills of listening, speaking, reading, and writing introduced in Spanish I. Through the textbook and other components of the program, such as workbooks, transparencies, videos, dialogues, audio materials, computer activities, and various supplementary materials, students will continue to build on the communicative foundation established in Spanish I. Students are expected to use Spanish as much as possible in the classroom, and the students will also write paragraphs in Spanish of personal interest. Up-to-date information on Hispanic culture will be presented throughout every phase of language learning.
Prerequisite: Spanish I
6 periods per cycle 1.0 credit

524N SPANISH II FOR NATIVE AND HERITAGE SPEAKERS This course will continue to expand the skills learned in level one. More emphasis will be given to writing, listening and reading skills in Spanish, but expanding speaking skills beyond those learned in level 1 will be of great importance. Students will be challenged to think and express themselves in Spanish using the grammar and vocabulary learned through the use of the following instructional resources and activities: short films, movies, essays, wikis, blogs, readings, etc. Furthermore, students will explore topics that are relevant to the 21st century. Topics such as science and science fiction, TV and media, globalization and immigration will be discussed in Spanish. Spanish culture will also be an integral part of the course, allowing students to not only understand their own cultures, but also to examine the many cultural issues that affect the Spanish speaking world. Students who successfully complete this course will be eligible to take Spanish, Advanced Placement.
Prerequisite: Spanish I for Native and Heritage Speakers
6 periods per cycle 1.0 credit

524 SPANISH III This course continues to reinforce and expand the four skills of listening, speaking, reading and writing. Through textbooks and other components of the program, such as workbooks, transparencies, videos, reading selections, dialogues, computer activities, audio materials and various supplementary materials, students will continue to build the communicative foundation which was established in Spanish I and II. Students are expected to use the Spanish language as much as possible in all classroom situations. Spanish culture will be integrated into all activities.
Prerequisite: Spanish II
6 periods per cycle 1.0 credit

534 SPANISH IV This course stresses the four language skills of listening, reading, speaking and writing. Various short stories and magazine and newspaper articles are read. Compositions and written and oral reports are presented. All students will have the opportunity to improve their conversational skills, since discussions are an integral part of the class. All classes are conducted exclusively in Spanish, and all papers are written in the language.
Prerequisite: Spanish III
6 periods per cycle 1.0 credit

554 SPANISH IV, HONORS This course is an accelerated course designed to prepare the student for the Advanced Placement program. In addition to the material completed in the textbook, there will be required readings and frequent writing assignments. Students will make oral presentations. Articles from newspapers and magazines along with short stories will be incorporated in the classroom. All classes are conducted exclusively in Spanish.
Prerequisite: Spanish III
6 periods per cycle 1.0 credit

544 SPANISH V This course will continue the development of proficiency in speaking, listening, reading and writing the Spanish language. Emphasis will center on the exclusive use of the language in the classroom. Students will present original dialogues using relevant vocabulary, and they will write opinion compositions and personal journals. These speaking and writing assessments will require students to integrate previously-learned grammatical concepts. Additionally, students will read and discuss excerpts from informational readings and Spanish literature, incroporating the historical and geographical concepts fo these reading genres. Prerequisite: Spanish IV or Spanish IV, Honors
6 periods per cycle 1.0 credit

564/564D SPANISH, ADVANCED PLACEMENT (LANGUAGE) This course is designed to achieve the highest degree of language proficiency for students who choose to develop their abilities in Spanish for active communication, without special emphasis on literature. Students who enroll should have already attained a high degree of proficiency in listening comprehension, speaking, reading and writing. This course stresses oral skills, composition and grammar, and has the following objectives: the ability to comprehend formal and informal spoken Spanish; the acquisition of vocabulary, and a grasp of structure to allow the easy, accurate reading of newspaper and magazine articles, as well as modern Hispanic literature; the ability to compose expository passages; the ability to express orally with accuracy and fluency. This course prepares the students for the Advanced Placement Examination.
Prerequisite: Spanish IV or Spanish IV Hours and Teacher recommendation.
6 periods per cycle 1.0 credit
564D 11th or 12th grade students may take this course for undergraduate college credits through Lehigh Carbon Community College's Dual Enrollment program.

LEHIGH CAREER & TECHNICAL INSTITUTE (LCTI)

LCTI has a reputation as one of the top career & technical schools in the nation. With more than 40 programs, LCTI teaches students the skills needed to succeed in the job market, technical school or college. Our expert instructors have spent years training in their fields and provide students with a world-class education taught on state-of-the-art equipment. LCTI also has agreements with area colleges where students can begin earning college credits while still in high school.

As the job market changes, so does LCTI. We are constantly evolving--re-evaluating programs and adding new ones to respond to the needs of our students and area employers. Whether students want to pursue careers in health care, logistics, construction, engineering, or one of our other program areas, LCTI will help students gain the valuable skills and knowledge needed to stand out from the crowd in today's competitive job market. Take a few moments and read about all the exciting choices and enrollment options available at Lehigh Career & Technical Institute.

ENROLLMENT OPTIONS

ACADEMIC CENTER

The Academic Center provides students in tenth through twelfth grades with the option of taking both their academic and career & technical course work at LCTI as full-day students. These rigorous academic courses will satisfy graduation requirements as well as complement the career & technical major of each student. Students will still graduate from their resident school districts, and are encouraged to participate in extra-curricular activities back at their sending school. Students will be able to register for the full-day program during their school district's regular course registration time.

HALF-DAY ENROLLMENT

Students in grades nine through twelve may choose the half-day enrollment option. This option provides students with career & technical education at LCTI and the required academics at their respective school districts. Students are encouraged to take high-level course work at the sending district which will provide the academic background necessary to be successful in today's highly technical careers.

FLEX TIME ENROLLMENT

Another option that may suit students' individual needs is the flex-day program. The flex program is designed to provide students with technical coursework on a limited schedule. Students may choose to come to LCTI for one or more periods per day depending upon their needs. Students may attend one or both semesters and may attend for multiple years. Many students use this technical educational training as a jump start to a technical degree in a four-year institution. Both the half-day and flex-day options may be chosen during the regular course registration process.

FEATURED PROFESSIONAL PROGRAMS

EMERGING HEALTH PROFESSIONALS PROGRAM (EHPP)

This is a dual enrollment course involving Penn State and LCTI. The rogram is based at Lehigh Valley Hospital/Health Network and Penn State Lehigh Valley. Students gain real world experience in health careers by shadowing hospital personnel in several departments. This competitive program requires an application evaluation and committee review. This program is only available to senior students.

EMERGING ENGINEERING PROFESSIONALS PROGRAM (EEPP)

This program provides high school seniors with the opportunity to experience a variety of engineering careers in a classroom and business setting and take Penn State or Lehigh Carbon Community College math and/or engineering courses for college credit. Students spend three days a week in a state-of-the-art pre-engineering lab exploring different engineering fields for the first and third marking periods, and job shadow at local engineering firms the second and fourth marking periods. Students attend Penn State or Lehigh Carbon Community college 2 days a week for the entire school year.

NOTE : ADMISSION TO THE EMERGING HEALTH PROFESSIONALS AND EMERGING ENGINEERING PROFESSIONALS PROGRAMS IS HIGHLY COMPETITIVE AND THE APPLICATION DEADLINE IS FEBRUARY 1, 2011. SEE YOUR COUNSELOR IMMEDIATELY IF YOU ARE INTERESTED!

WHY ENROLL?

Lehigh Career & Technical Institute clearly has the potential to offer students many career opportunities. Students may pursue career & technical education starting with their freshman year or may start as a sophomore, junior, or even a senior. With the rising cost of post-secondary education, students need to make critical career decisions that result in a post-secondary plan that has the likelihood of being successful. LCTI can help students get the skills and knowledge to meet, and exceed, their career goals.

Equal Opportunity Statement:

Lehigh Career & Technical Institute has a policy not to discriminate on the basis of age, sex, handicap, national origin, color or race in its programs or employment as required by Title IX, Section 504 and Title VI, Age Discrimination Act, and Boy Scouts Act. Inquiries about this policy should be directed to Lehigh Career & Technical Institute's Compliance Officer at (610) 799-1357.The information contained in this booklet is subject to change. Questions, please call Student Services at 610-799-1358.

• • • Academic Center Course Offerings • • •

All courses in the LCTI Academic Center are college-preparatory and will meet graduation requirements. Courses are assigned based on classes completed at the sending district prior to attending LCTI. A graduation project is required for all students attending the Academic Center. The courses offered in the Academic Center are listed below. Full descriptions of course offerings can be found at www.lcti.org.

English	Mathematics	Science	Social Studies	Other
English II	Algebra II	Biology	Economics/Govt/ Civics	Wellness/ Fitness
Integrated American History & Literature	Algebra III/ Trigonometry	Chemistry	Integrated American History & Literature	PSSA Math & Science Seminar
Integrated British/World History & Literature	Geometry	Earth/Space	Integrated British/World History & Literature	Literacy Advantage
LCCC English course	Calculus	Environmental Science		Math Apprenticeship
	LCCC Math course	Intro. to Physics		
		Physics		

Lehigh Career & Technical Institute Academic Center Course Schedule 2010-2011

Grades	Semester 1	Semester 2
10th	Math	Math
	Science	Science
	English II	English II
	Literacy Advantage or Math Apprenticeship	Literacy Advantage or Math Apprenticeship
11th	Math	Math
	Science	Science
	Integrated American History & Literature	Integrated American History & Literature
	Wellness/Fitness	PSSA Math & Science Seminar
12th	Integrated British/World History & Literature	Integrated British/World History & Literature
	Government/Economics/Civics	Government/Economics/Civics
	Adv. CPR, First Aid	Wellness/Fitness
	Math or Science Elective*	Math or Science Elective*

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

LEHIGH CAREER & TECHNICAL INSTITUTE: Academic Offering for Half-Day Students

Lehigh Career & Technical Institute (LCTI) provides academic courses to some half-day students who attend the school. It is very important for students to be successful in both their academic and technical course work. The courses taken at LCTI are necessary to meet the student's graduation requirements. If a student does not complete an academic course with a passing grade, the course must be re-taken. LCTI does not offer a summer school; however, this option may be available at the high school. It may also be possible for a student to make up the course in the senior year at LCTI; however, courses scheduled in the senior year can cause the student to lose the opportunity for a Cooperative Education job placement. If the coursework is not made up, graduation from high school may be jeopardized. The following courses will be offered while attending LCTI.

10TH AND 11TH GRADES: WELLNESS & FITNESS
Course Overview: This course is designed to acquaint students with the benefits of physical activity in their lives and to promote life-long wellness and fitness. The course, held in the LCTI Fitness Center, will include a fitness component such as: cardiovascular endurance, strength and conditioning, weight training, flexibility, nutrition, body composition, and various technology-based exercises.

10TH GRADE: AMERICAN STUDIES II
Course Overview: This course begins with the 20th Century America and proceeds to the present day. Students study the nation's transformation into an industrial power and the impact of this change on the social, cultural, economic and political development of the country. The course also traces the foreign policy of the United States from isolationism to internationalism. Our program is based on history as the unifying discipline and includes designated strands of geography, history, people, economics, contemporary issues, and political science. These strands provide students with skills and knowledge necessary to make informed decisions. Skills include critical thinking and problem solving techniques which lead to negotiation and resolution of social conflicts.

ARTS & HUMANITIES CLUSTER

1019/2019 ADVERTISING DESIGN/ COMMERCIAL ART: Drawing, design layout, desktop publishing, graphic design and illustration media are just a few of the areas covered in this program. The course prepares students for careers as commercial and graphic artists and illustrators in the fields of advertising, marketing, and public relations. Students are also taught sign making, digital photography, and computer graphics using Adobe Creative Suite 3. **(TECH PREP)**

1016/2016 COMMERCIAL PHOTOGRAPHY/ELECTRONIC IMAGING: Students who select this specialty will receive training in photography both in the studio and on location using the latest digital camera techniques and digital computer technology for processing and printing images. The course includes professional lighting techniques and design elements for a wide variety of subjects including wedding and portraiture, products for advertising, as well as photojournalism and editorial markets.

1024/2024 DRAFTING/COMPUTER AIDED-DESIGN: Students combine their industrial and mechanical interests with creativity and work toward successfully moving into mechanical, architectural or civil engineering careers. Drawing techniques, architectural plans, advanced AutoCAD, engineering and more open the world of CAD to students. This solid foundation assists Drafting/CAD students who wish to pursue further education and professional careers. **(TECH PREP)**

1043/2043 PAINTING AND DECORATING: Stenciling, wallpaper hanging, furniture refinishing and decorative finishes are a few of the emphases in this program. Students learn to paint and maintain interiors and exteriors of homes, businesses and historical buildings. Included in the variety of projects students undertake is the LCTI House Project, a student-built house painted by the students.

BUSINESS AND COMMUNICATION TECHNOLOGY CLUSTER

1002/2002 ADMINISTRATIVE OFFICE TECHNOLOGY/ACCOUNTING: Word processing, spreadsheets, databases, accounting and presentations expose students to a typical office environment. They learn computer applications in Microsoft Word, Excel, PowerPoint, Money and more. Students also learn to create forms and reports and how to publish them to the Internet.

1008/2008 COMPUTER MAINTENANCE *TECHNOLOGY:* Learn the operating systems and hardware inside a computer while training for the industry's A+ Service Technician Certification. Students learn to manage the Windows environment, demonstrate proficiency with and understand spreadsheets, databases, microcomputer service and support, peripherals, the Internet, and administer and troubleshoot a network. **(TECH PREP)**

1025/2025 MARKETING AND BUSINESS EDUCATION: Students learn about finance, retail marketing, banking, entrepreneurship, promotions and other important aspects of marketing through virtual business software and retail experience in the school's store. They examine what is necessary to run a business, promote a product or manage a department. Practical experience is available through the student-managed school store and by participating in community internship opportunities. **(TECH PREP)**

1045/2045 PRINT TECHNOLOGY/ GRAPHIC IMAGING: Press operation, digital imaging, electronic page layout, offset press operation and bindery introduce students to the printing industry. Students design and layout books, magazines, signs, tablets, greeting cards and newspapers using the most current versions of Adobe Creative Suite 3, QuarkXpress and Photoshop software and learn press operation on a state-of-the-art five-color sheetfed offset press in our Heidelberg Technology Center. **(TECH PREP)**

1007/2007 WEB DESIGN/WEB PROGRAMMING: Students learn the fundamentals related to web page design and website development, graphics, multi-media and HTML coding. Students are taught the tools for rapid web page production and basic server-side programming techniques to handle everything from forms transmittal to building dynamic interactive web pages, to intranets, extranet and e-commerce applications.

ENGINEERING AND INDUSTRIAL TECHNOLOGY CLUSTER

1006/2006 AUTO BODY/COLLISION REPAIR TECHNOLOGY: Students learn alignment, trim, hardware, body fillers, damage analysis, welding, heating, and more in this program. There are forty-three areas of study in this course and the volume of exposure students receive allows them to step into the workforce immediately or they may continue their study at the post-secondary level. **(TECH PREP)**

1005/2005 AUTO TECHNOLOGY: Students in this program are prepared to diagnose and repair automobile systems including electrical systems, ignition and emission systems, engine cooling and lubrication, front ends, air conditioning, brakes, transmissions, engines and drive trains. Students participate in the nationally recognized Automotive Youth Education Systems (AYES) an industry partnership. The instructors of this program are Master Certified ASE Technicians who utilize state-of-the-art equipment to prepare students to become automotive technicians. **(TECH PREP)**

1014/2014 CABINETMAKING & MILLWORK: Cabinetry and wood products design and layout and construction open the world of cabinetmaking and millwork to students. Students are taught to read blueprints, make shop drawings and produce components with trade-related hand and power tools and machinery. The newly expanded lab and curriculum provides knowledge of lumber products adhesives, fastener, finishing, 32mm cabinets and counter top fabrication. Technology has entered this rewarding construction trade with the addition of CNC router technology.

1015/2015 CARPENTRY: Blueprints, site work, construction footings, framing floors/walls/ceilings/roofs, radon control, insulation and participation in the LCTI House Project teache students in carpentry and six other labs to construct a house that is sold at auction upon completion. Students learn how the building industry works, what its standards are and what is required to complete a project on time and at cost. **(TECH PREP)**

1009/2009 DIESEL/MEDIUM AND HEAVY TRUCK TECHNOLOGY: Students gain experience with drive trains, clutch assemblies, transmissions, diagnostics, steering and other aspects of this industry. Students also study suspension, diesel engines, gasoline engines, bearing and seals. The trucking industry needs professionals to service the truck fleet that keeps industry and commerce moving in the United States. LCTI can provide students with the necessary expertise they need to succeed in this industry. **(TECH PREP)**

1027/2027 ELECTRICAL TECHNOLOGY: Students learn residential, commercial, industrial electrical wiring, as well as fluid power technology planning and wiring. Students are taught to install duplex and split wired duplex receptacles, single pole switches, 3-way and 4-way switches and Ground Fault Circuit Interrupters (GFCI).

ELECTROMECHANICAL/ MECHATRONICS TECHNOLOGY: Students learn an innovative curriculum which combines hands-on training with real world industrial equipment and software. Students get a solid background in industrial, electrical and electronic systems, A.C. and D.C. motors, motor controls, power distribution systems, programmable controllers, hydraulics, pneumatics, mechanical drives, transformers, process control systems and troubleshooting. **(TECH PREP)**

1032/2032 ELECTRONICS TECHNOLOGY/NANOFABRICATION: Students are taught the principles of semiconductors and learn to design, build and test solid state devices. LCTI has a fully functioning Class 1000 fabrication room (clean room) where students create the silicon chips that are the foundation of

the information age and the heart and soul of modern electronics. **(TECH PREP)**

1039/2039 HEATING/AIR CONDITIONING AND REFRIGERATION: Students learn to install, troubleshoot and repair air conditioning, heat pumps, commercial refrigeration units and gas and oil heating equipment. Skilled technicians will become proficient in reading electrical diagrams, diagnosis of electrical problems, air distribution designs, copper and steel pipe cutting and soldering and fabricating fiberglass, and sheetmetal duct systems. Certifications include EPA Freon Handling and ICE. **(TECH PREP)**

1004/2004 HEAVY EQUIPMENT OPERATIONS & PREVENTATIVE MAINTENANCE: As a student in this fast-paced and diverse program you will learn the safety, maintenance and operating techniques for a wide variety of earthmoving equipment. Students will also receive instruction in soils, erosion and sediment control, site preparation, aggregate production, concrete and asphalt paving, surveys and grades and utility installation. In addition, students will have the opportunity to learn machine systems, parts identification and ordering, and preventative maintenance techniques in a state-of-the-art facility. **This program is not available to ninth grade students.**

1001/2001 LANDSCAPE CONSTRUCTION/ ENVIRONMENTAL DESIGN: Landscape technology, arbor culture, turf management, and safety and equipment operation are all part of this program. Students learn plant identification, nursery production, pest management, safe tractor operation, front-end loaders, soil augers, and tree digging equipment.

1050/2050 MASONRY: Students will learn various layouts and pattern designs using brick, concrete masonry units, stone, and ceramic tile. This comprehensive program teaches students how to correctly use the necessary tools and equipment to build simple wall structures, fireplaces and brick sculptures. Ceramic tile installation and thin stone veneer applications are also included in the curriculum. Students also participate in the student-built house project.

1051/2051 MATERIAL HANDLING/ LOGISTICS TECHNOLOGY: Students learn inventory control, purchasing, receiving, shipping, and equipment operation and maintenance in a state-of-the-art 17,000 square foot distribution center. Students train with current industry technology including; handle-held track pads and computers, vertical and horizontal carousels, a computer-controlled conveyor, and a computer-integrated warehouse management system. **(TECH PREP)**

PLUMBING AND HEATING: Students will learn to measure, cut, ream and thread steel, iron, copper, and plastic pipe and tubing. Students will also learn rough plumbing and study plumbing and heating unit codes. The class will design and construct the plumbing system for the student-built house project.

1041/2041 PRECISION MACHINE TOOL TECHNOLOGY: LCTI's precision machine lab is recognized as a Haas Technical Education Center and incorporates lessons and demonstrations, as well as extensive applications training in reading blueprints, operating a digital lathe, milling machine, drill press and other machine shop operations in the curriculum. Students train on state-of-the-art CNC machine tools placed in the lab by Haas Automation. **(TECH PREP)**

1059/2059 PRE-ENGINEERING AND ENGINEERING TECHNOLOGY: The Project Lead the Way engineering program is a sequence of courses, when combined with traditional mathematics and science courses introduces students to the world of engineering. Students study the principles of engineering, engineering design, digital electronics and computer integrated manufacturing. Students participating in the PLTW courses are better prepared for college engineering programs and are more likely to be successful. **(TECH PREP)**

1049/2049 SMALL ENGINES/ RECREATIONAL VEHICLE REPAIR: Students will learn to diagnose and repair lawn mowers, chain saws, jet skies, motorcycles, and go-karts. Students will learn about the small engine and the vital components to effectively make the engine perform to maximum efficiency. Students will also learn about brake systems, transmissions, hydraulics, hydrostatics, and drive systems. Students will learn skills that involve welding, cutting with a torch, cylinder honing, and boring.

1052/2052 WELDING TECHNOLOGY: This course teaches students shielded metal arc welding, gas metal arc welding, flux cord arc welding, welding inspection, testing, and safety/emergency procedures. The program operates under entry level certification authorization by the American Welding Society and a special arrangement with Lehigh Carbon Community College permits students to earn a national skills certificate and an associate degree. **(TECH PREP)**

HEALTH AND HUMAN SERVICES CLUSTER

1036/2036 COMMERCIAL BAKING: Cake decorating, breads, rolls, sweet goods, pastries, pies, doughnuts and nutrition are all part of this course. Students learn the fundamental principles and procedures of operating a fully functioning bakery and bake shop, including preparation, display and management. With attention to both theory and practice, this course is designed to prepare students for above entry-level positions in commercial baking.

1021/2021 COSMETOLOGY: Students learn hair styling, hair cutting, haircoloring, chemical texturizing, nail and skin care, and salon business operations. Students learn these skills through clinical practices offered at the school salon. Preparation for the Pennsylvania State Board Examination will enable students to become licensed as a cosmetologist and will allow them to work in a challenging and creative profession. **(TECH PREP)**

1035/2035 CULINARY ARTS: Stocks, soups, sauces, appetizer, desserts, main dishes, menu planning, and nutrition are just some of the aspects of this program. Students learn front of the house and back of the house skills working in the school restaurant. LCTI's program is certified by the American Culinary Federation and is nationally recognized as exemplary in all areas of the curriculum. **(TECH PREP)**

1003/2003 DENTAL TECHNOLOGY: Students who enroll in this program learn a variety of skills that will enable them to become a dental assistant, dental laboratory technician, and/or pursue a career as a dental hygienist. The major areas of study in the course include: dental radiology, oral pathology, chair-side dental assisting, anatomy and physiology, dental materials, sterilization, and dental office business procedures.

1038/2038 EARLY CARE & EDUCATION OF YOUNG CHILDREN: Students studying childcare will learn child and staff health, child development, early childhood education, special education, discipline and guidance of children, childcare program development, and professional development. **(TECH PREP) <u>This program is not available to ninth grade students.</u>**

1034/2034 FLORAL DESIGN/ GREENHOUSE MANAGEMENT: Processing cut flowers and greens, floral arrangements, silk and dry flowers, and the operation and maintenance of a state-of-the-art greenhouse are all part of this course. Students learn to stock, manage and market a retail floral shop. Students also learn plant identification, plant production, propagation, medium preparation, pest management, and environmental control.

1037/2037 HEALTH OCCUPATIONS/ HEALTH RELATED TECHNOLOGY: Students are taught about the patient's environment, nutrition, special treatments, care of the elderly, hospital procedures, and more. The world of medicine and science is growing and changing daily, creating an urgent need for well educated, skilled professionals. Students have the opportunity to train and test for their Health Assistant Certification. ***(TECH PREP)***

1040/2040 LAW ENFORCEMENT/ SECURITY SYSTEMS: Students learn Pennsylvania criminal and traffic laws, the legal use of force, search/seizure/evidence procedures, arrests and other aspects of law enforcement. Students also train in a fire arms simulator and conduct mock disaster drills to gain practical emergency skills. ***(TECH PREP)***

OTHER PROGRAM OPTIONS

1069/2069 SERVICE OCCUPATIONS: Six curricular areas are offered in this program: Building Trades Maintenance, Custodial Maintenance, Grounds Maintenance and Landscaping, Food Service, Material Handling and Hospitality Services. Each area is designed to help the student transition from basic entry-level skill development to more advanced technical training or directly into the workforce. A skills assessment will be done to determine the readiness and interest of the student. Results of the assessment will be provided to the student's IEP team.

3000 CAREER ACADEMY PROGRAM: Provides the nine participating school districts of Lehigh County an alternative for at-risk students to receive a high school diploma and work toward a career goal in their program of choice. Selected technical programs at LCTI are available to CAP students. Students receive academic instruction in English, mathematics, social studies, science, health/ wellness, physical education and enrichment coursework. A week of academic sessions rotate in the schedule with two weeks of technical education. Programs include: Auto Specialization Technology, Building Trades Maintenance, Carpentry, Early Care & Education of Young Children, Electrical Construction, Home Health Services and Office Systems Technology.

School-To-Career Opportunities

JOB SHADOW Students accompany employees through part of a typical day and learn about the varied aspects of their job and skills required to work in the field.

INTERNSHIP Students in grades ten and eleven participate in a business match program that allows them to spend a period of time working in their field of study.

1022/2022 COOPERATIVE EDUCATION: Students in grade twelve participate in a business match program that allows them to spend a portion of their senior year working in their field of study. Students pursue their academic coursework during the A.M. session and report to their place of employment for the P.M. session.

LCTI MIDDLE COLLEGE/DUAL ENROLLMENT PROGRAM

Did you know you can take college classes while attending LCTI?

DISCOVER IF YOU SHOULD BE GOING TO COLLEGE

LCTI and Lehigh Carbon Community College have created a dual enrollment program called “Middle College.” It’s designed for students who may or may not be sure whether they want to go on to college once they’ve finished high school. The Middle College program will allow you to test drive the college experience while still in high school. In fact, in just four years, hundreds of students have earned over 400 credits through the program. Along with your LCTI technical high school classes, students can take college courses during their junior and senior years.

You get to choose classes related to your career pathway. You’ll learn about some of the hottest job fields and whether you would want to pursue one of them. Plus you can earn an entire semester’s worth of credits toward an Associate’s or Bachelor’s degree and even more if you take summer courses. You won’t have to break the bank to attend. Each course credit at LCCC Middle College costs about half the regular tuition rate, less than a fourth of the cost for a comparable course credit at any one of Pennsylvania’s State universities.

WHAT IS THE COMPASS TEST?

The COMPASS Exam is a placement test for students who want to take college courses at LCCC. This exam score is used to determine the level of courses a student is academically prepared to take. The test is comprised of three sections: Reading, Writing, and Mathematics. If the students attain the minimum score, then they can take college courses at LCCC while attending LCTI. College credits earned at LCCC during high school qualify to fulfill both high school and college requirements.

MIDDLE COLLEGE REQUIREMENTS?

Students must be Level II or higher in their lab programs and maintain a minimum of a “C” average to participate in the Middle College program. Students must also have good attendance and no discipline referrals. The course costs for the Middle College program must be paid by the student/parent.

WHAT’S SO SPECIAL ABOUT LCCC MIDDLE COLLEGE?

The job market is incredibly competitive. Having more education will always help you. More education will help you advance in a career and make you more adaptable to changing job markets. In fact, attending LCCC Middle College is like getting a 25-lap head start at the Indy 500 or a 10-yard head start in a 100-yard dash. With Middle College under your belt, you can accelerate your post-high school education, already having credit for some introductory courses at a traditional community or four year college. Even if you decide not to pursue college once you graduate from high school, your Middle College experience still gives a boost to your earning potential.

COLLEGE IS YOUR BEST CHANCE OF EARNING MORE MONEY.

Attending college takes time and money, but statistics show its well worth the investment. According to the U.S. Census Bureau, workers with an Associate’s Degree will earn 31 percent more throughout their careers than high school graduates and workers with a Bachelor’s Degree will earn 62 percent more throughout their careers than high school graduates.

STILL NOT SURE IF MIDDLE COLLEGE IS RIGHT FOR YOU?

Find out whether you should go to college. Our one credit course called **“The College Experience”** helps you figure out if you should be pursuing a higher education. In **“The College Experience”** you’ll learn what to expect if you go to college, as well as what will be expected of you.

WHY NOT GIVE IT A TRY? YOU HAVE NOTHING TO LOSE AND EVERYTHING TO GAIN.