Striving for Excellence

COURSE DESCRIPTION GUIDE

2017-2018

Revised July 21, 2017

TECHNICAL EDUCATION

CORE VALUES

Integrity	We maintain an open, honest environment.
Teamwork	We collaborate with parents, students, partner districts, and industry to provide programs that fulfill the needs of our communities.
Quality	We meet or exceed expectations in fulfilling our communities technical education needs to become a valued resource.
Innovation	We implement new methods and technologies.
Clarity	We communicate our mission in a clear and timely manner.

PURPOSE

Our purpose is to provide quality technical and academic education, which prepares students for entry into post-secondary education and/or the workforce.

MISSION

In collaboration with partner districts, we provide technical education and a wide variety of individualized educational and support services designed to ensure the student's successful contribution to our community.

TECHNICAL EDUCATION DIVISION
SPECIAL SCHOOL DISTRICT

CENTRAL OFFICE

12110 Clayton Road
Town and Country, Missouri 63131
Phone: (314) 989-8100
FAX: (314) 989-8387

NORTH TECHNICAL HIGH SCHOOL

1700 Derhake
Florissant, Missouri 63033
Phone: (314) 989-7600
FAX: (314) 989-7665

SOUTH TECHNICAL HIGH SCOOL

12721 West Watson Road
Sunset Hills, Missouri 63127
Phone: (314) 989-7400
FAX: (314) 989-7503

HIGH SCHOOL COURSE DESCRIPTION BOOK
TECHNICAL EDUCATION

2017 - 2018

CENTRAL OFFICE ADMINISTRATION

Executive Director of Schools ……..… Ms. Wendi Pendergrass
(314) 989-8267

Director's Secretary ……..…Ms. Katie Castiaux
(314) 989-8486

Assistant Superintendent of College & Career Readiness ……... Dr. David Baker
(314) 989-8243

Assistant Superintendent's Secretary ……..…. Ms. Mehgan Little
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Administrator, Curriculum & Instruction (Technical Education) ……Ms. Mary P. Braun
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Admissions Specialist ……..……..……. Ms. Mary Kozeny
(314)-989-8521

NORTH TECHNICAL HIGH SCHOOL

ADMINISTRATION AND STAFF

Principal ……..…..Mr. Jim Hieger
(314)-989-7771

Principal's Secretary ……..Ms. Kenedra Gibbons
(314)-989-7603

Assistant Principal ……....Mr. Kevin Edson
(314)-989-7605

Assistant Principal …….. Ms. Esthere Scott
(314)-989-7608

Assistant Principal ……... Ms. Ronda Wallace
(314)-989-7604

Career and College Placement Counselor…….. Mr. Jeff Chandler
(314)-989-7609

Lead Counselor ……...Mr. Jeff Chandler
(314)-989-7609

Counselor .....Ms. Melissa Merry
(314)-989-7610

Counselor …….. Ms. Davina Reid
(314)-989-7611

Counselor…….. Ms. Dee Jones
(314)-989-7672

Registrar ……..….. Ms. Mary Schmidt
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SOUTH TECHNICAL HIGH SCHOOL

ADMINISTRATION AND STAFF

Principal ..... Mr. Jacob Lohse
(314)-989-7490

Principal's Secretary ……..…. Ms. Kathy Kummer
(314)-989-7403

Assistant Principal ……. Ms. Karista Koehler
(314)-989-7402

Career and College Placement Counselor …… Ms. Sally Difani
(314)-989-7470

Lead Counselor …….. Mr. Russ Andrews
(314)-989-7412

Counselor ……. Ms. Carla Shaughnessy
(314)-989-7476

Guidance Secretary ……..... Ms. Marilyn Montibeller
(314)-989-7416

MINIMUM HIGH SCHOOL GRADUATION REQUIREMENTS

Language Arts	4 units
Social Studies	3 units
Mathematics	3 units
Science	3 units
Fine Arts	1 unit
Practical Arts	1 unit
Physical Education	1 unit
Health Education	½ unit
Personal Finance	½ unit
Electives	7 units

TOTAL 24

COLLEGE ADMISSION REQUIREMENTS

Requirements for admission to college will depend on the college to which you are applying, and the kind of program you expect to pursue. For example, a student planning to enter one of the most highly competitive colleges in the country will need to meet more demanding entrance requirements than a student planning to enter a state school or a community college. The more selective or competitive colleges may require specific numbers of credits in specific courses as well as relatively high class rank and college admission test scores.

The best approach to college planning is to strive to keep options open by taking a good distribution of academic coursework all four years of high school, with as much preparation in each area as possible. You should begin planning early for college so you will have the necessary requirements when it is time to apply to the college of your choice. Many colleges and universities are increasing admission requirements.

Technical Education counselors recommend that college-bound students, whenever appropriate, consider the following:

Language Arts	4 units
Mathematics	4 units - Algebra I and above
Science	3 units
Social Studies	3 units
Foreign Language	2 to 4 units of a single language
Fine Arts	1 unit

Following these guidelines will help prepare the student for entrance requirements at the vast majority of colleges and universities throughout the country. Some of the most competitive schools in the country will adhere to higher entrance requirements, and some programs within those universities will have their own additional requirements, conversely some universities will not require all of the above. In all scenarios, students must also meet the Technical Education requirements for graduation.

HONORS COURSES

Honors courses are designed for students who are both proficient and capable in their reading and writing skills. The courses are designed to be rigorous and to help students be prepared for the rigor of post-secondary courses.

The Technical Education Division of Special School District provides weighted grades for the following courses:

- American History (Advanced Placement)
- Anatomy and Physiology (Missouri Baptist University: BIO-213, BIO-211)
- Anatomy and Physiology (Missouri Baptist University: BIO-223, BIO-221)
- Biology 104: Principles of Biology (St. Louis University) 1818 (ACC-Dual Credit)
- Chemistry (Honors)
- English 1900: Advanced Strategies of Rhetoric and Research (ACC-Dual Credit) St. Louis U.
- Math 142: Calculus (St. Louis University) 1818 (ACC- Dual Credit)
- Math 154: PreCalculus (Missouri Baptist University)
- Math 243: Probability and Statistics (Missouri Baptist University)
- CISCO Networking Academy

Prior to selection of a weighted grade course, students should review the course description for requirements.

GRADING SCALE FOR WEIGHTED CLASSES

weighted courses receive weighted grades according to the following scale:

			Non-Honors Courses
A	=	5	A = 4
B	=	4	B = 3
C	=	3	C = 2
D	=	1	D = 1
F	=	0	F = 0

(Students will not receive weighted grades below a “C”)

St. Louis University Advanced College Credit Program

Students who meet registration requirements, course prerequisites, timely tuition payment, and successfully complete the course receive transcripted course credit toward a degree at St. Louis University. Specific guidelines appear in the Student Handbook. St. Louis University's 1818 Advanced College Credit Program complies with Missouri Coordinating Board of Higher Education (CBHE), "Policy Guidelines for the Delivery and Transferability of Credit Obtained in Dual Credit Programs Offered in High Schools," Adopted June 10, 1999.

St. Louis University Advanced College Credit

COURSES OFFERED:	CREDIT HOURS
English 1900: Advanced Strategies of Rhetoric and Research	3 Sem. Hrs.
Biology 104: Principles of Biology	4 Sem. Hrs.
Math 142: Calculus	4 Sem. Hrs.

Missouri Baptist University EXCEL-Dual Credit

Students who meet registration requirements, course requirements, tuition payments and successfully complete the course will receive a Missouri Baptist University Transferable College Transcript. Missouri Baptist University's EXCEL Program is accredited by the National Alliance of Concurrent Enrollment Partnerships (NACEP).

COURSES OFFERED:

BIO-213:	Anatomy and Physiology	3 Sem. Hrs.
BIO-111:	General Biology Lab	1 Sem. Hr.
BIO-223:	Anatomy and Physiology	3 Sem. Hrs.
BIO-221:	Anatomy and Physiology Lab	1 Sem. Hr.
MATH 154:	PreCalculus	3 Sem. Hrs.
MATH 164:	Calculus I	4 Sem. Hrs.
MATH 243:	Probability and Statistics	3 Sem. Hrs.

St. Louis Community College – Dual Credit

Students who meet registration requirements, course requirements, tuition payments and successfully complete the course will receive transcripted course credit.

COURSES OFFERED:

MATH 140: Intermediate College Algebra	3 Sem. Hrs.

ARTICULATED COLLEGE CREDIT

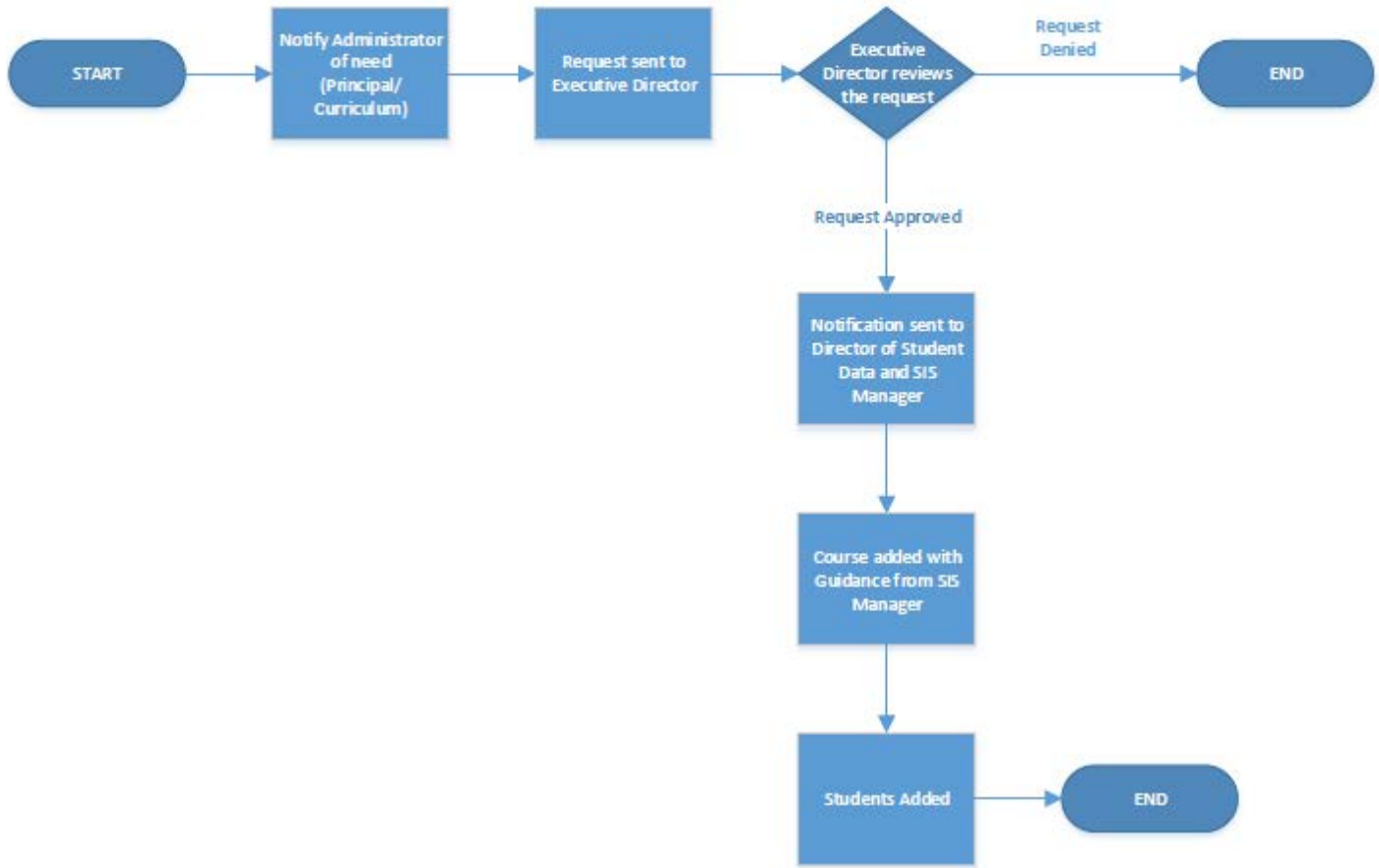
Articulation offers a coordinated sequence of instruction, jointly designed by secondary and post-secondary instructors, to link high school and college education. Because the program links high school and college studies, students can earn college credit for work they complete in high school. Students will receive the articulated credit after enrolling and participation in the post-secondary program. Usually the articulated credit is not transcripted until the student completes a minimum number of hours in their post-secondary program.

SSD — Technical schools have articulation agreements with:

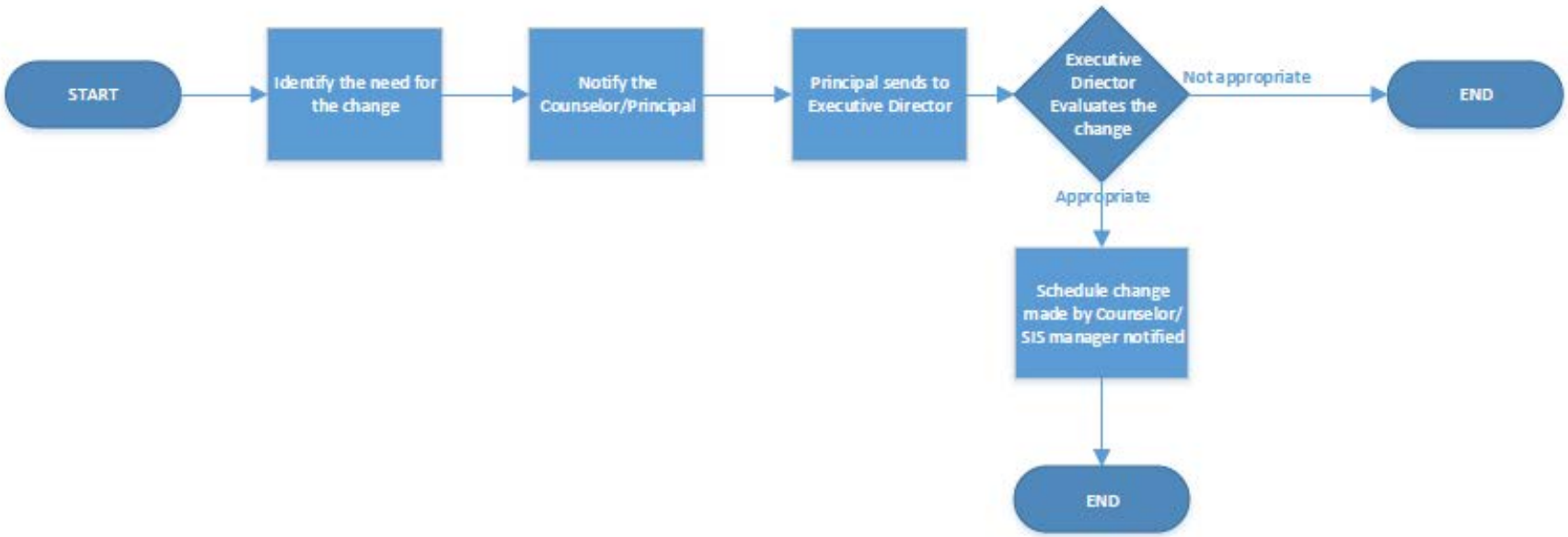
- American Trade School
- Carpenter's Apprenticeship Training Program
- Construction Craft Laborer's Apprenticeship Training Program
- Floor Layer's Apprenticeship Training Program
- Illinois Institute of Art
- Jefferson College
- Johnson & Wales University
- Missouri Baptist University (Dual Credit - Science)
- Missouri State University
- Pennsylvania Culinary Institute
- Robert Morris University
- St. Charles Community College
- St. Louis Community College
- St. Louis County Department of Public Works
- Southwestern Illinois College
- State Technical College of Missouri
- Sullivan University
- Universal Technical Institute
- University of Central Missouri (Dual Credit – Law Enforcement)

Process for Creating a New Course

NOTE: Except in rare cases, classes will not be created once the school year has started. If courses are created after the school year has started, no courses will be added after September 1st for the Fall Semester and December 1st for the Spring Semester

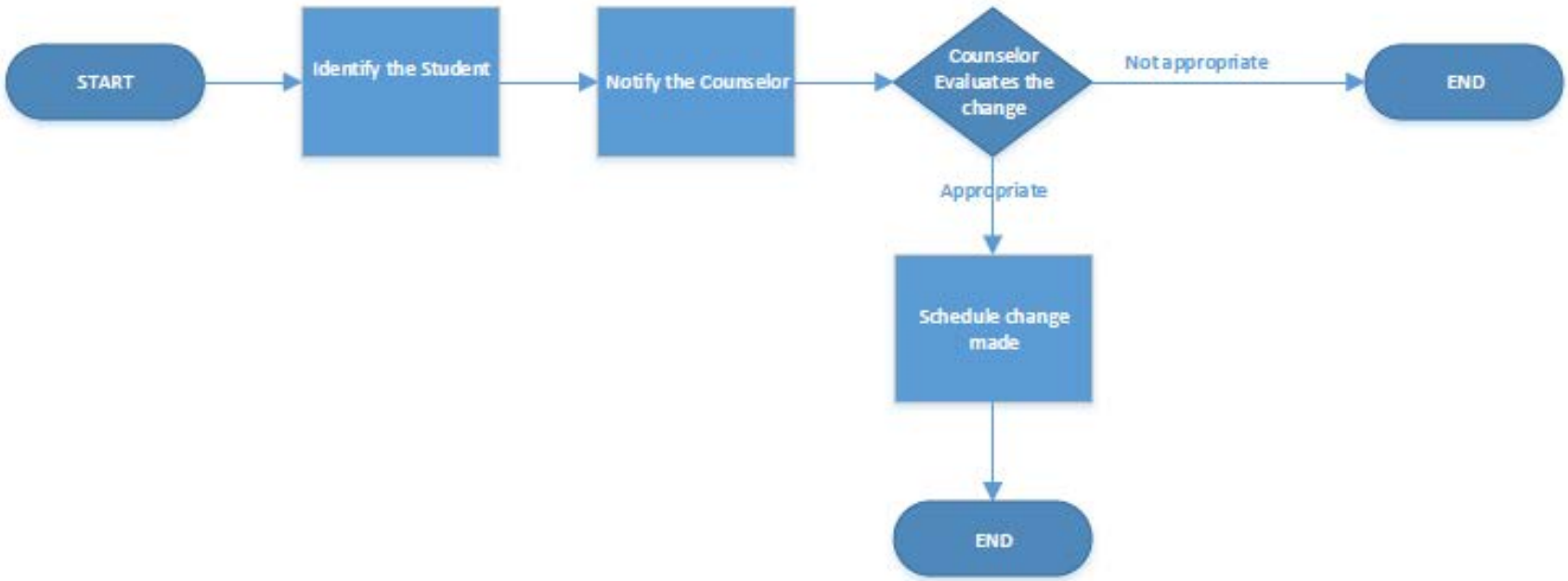


Process for Changing a Schedule for the Same Course



Process for Changing a Class for Academic Classes

NOTE: Course change should occur after September 1st for the Fall Semester and January 20th for the Spring Semester – if course is needing to be changed after these dates, it should be considered a dropped course



DESCRIPTION OF TESTS

The Technical Education Division of Special School District offers testing sites within the district for the tests listed on this page. Please contact the Guidance Department at each high school to obtain information regarding testing dates, sites and costs.

AMERICAN COLLEGE TESTING PROGRAM (ACT)

The ACT is a battery of four examinations in English, Math Reading, and Science reasoning, each of which yields separate scores measuring developed abilities in those areas. The test is required by some colleges as part of the application process for admission. Check with your counselor about taking this test. For school year 2014-15, all 11th graders will be administered an ACT as part of DESE requirements.

KEYTRAIN

This is a complete interactive learning tool for career readiness skills. At its foundation, it is a targeted curriculum written specifically to help people master the applied workplace skills as defined by the WorkKeys® system. This core curriculum is complemented by diagnostic tools, soft skills curriculum, and a powerful reporting system to form a robust career readiness learning system.

MISSOURI ASSESSMENT – END OF COURSE EXAMS

End of Course Exams – State Approved Final Exams – will be given in English II, Algebra, American Government and Biology. Scores from the subject-area exams will be used for State accreditation purposes and Federal accountability requirements. The scores of the End of Course Exams may be used in determining a student's final grade.

MISSOURI CONNECTIONS

This is a web-based resource to help Technical High School students determine their career interests explore occupations, establish education plans, develop job search strategies, and create resumes'. Sponsored by the Department of Elementary and Secondary Education and the Department of Economic Development, Missouri Connections is available to students, parents, guidance counselors, educators, and job seekers at no charge.

STAR – READING AND MATH ASSESSMENTS (North Tech. full-day only)

STAR – Reading and Math Assessments are computer-adaptive assessments that help teachers identify students' strengths and weaknesses. The assessments enable teachers to measure individual or class growth, determine placement for new students, and forecast results on major high-stakes tests. Assessments can be administered multiple times throughout the school year.

TECHNICAL SKILLS ASSESSMENTS/INDUSTRY RECOGNIZED CREDENTIALS

Technical Skill Assessments (TSAs) are an accountability requirement of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV). A TSA is given to students who are concentrators and have completed an approved Career Technical Education (CTE) Program. Most students taking the skill assessment are seniors who have completed a program (or those anticipated to complete a program at the end of the enrolled course) and are scheduled to graduate in the reporting year. However, skill assessments can be administered at any grade level 9 – 12 as long as the student meets the criteria of CTE concentrator and program completion. Approved Industry Recognized Credentials (IRC) are administered to students to move them to certifications in their program. Districts are awarded points on MSIP 5 state reporting for these IRC's.

WORKKEYS

WorkKeys helps ensure that individuals are ready for work – and for life. If students are going to be adequately prepared for the workforce, they need to understand the requirements for jobs they are considering. WorkKeys assessment and tutorials help students prepare for the industry determined skill levels required for various jobs. Levels in Reading, Math, and Locating Information are assessed for students and they progress in these areas on an individual basis.

The system enables educators to identify gaps between skills and employment needs, helps economic and workforce developers match employers with skilled communities, and links education and workforce partners within a community.

LANGUAGE ARTS

LANGUAGE ARTS COURSE SEQUENCE		
	Technical Pathway Suggested	Option 2
10	Literature and Composition II	Reading Development
11	Literature and Composition III	Literature and Composition II
12	Creative Writing English 1900: Advanced Strategies of Rhetoric & Research Oral Communications Senior English Short Stories Survey of Literature	Literature and Composition III Oral Communications Senior English Short Stories Survey of Literature

LANGUAGE ARTS

CREATIVE WRITING

Prerequisite:	Literature and Composition III
Length:	One Semester
Credit:	½ Unit
Grade:	12

Description: The goal of this course is to encourage and nurture the student's innate creativity. Students will study techniques used by professional writers and will be motivated with enticing writing activities designed to help them improve their skills while experiencing the pleasure of success. Each student will write a play and a short story, poems, and a personal narrative. Student must have a mastery of basic language skills and grammar, spelling, sentence structure, and paragraph organization.

LITERATURE AND COMPOSITION II

Prerequisite:	None
Length:	One Year
Credit:	1 Unit
Grade:	10

Description: This course integrates vocabulary, parts of speech, and sentence structure as well as paragraph and essay writing. Elements of literature and specific technical areas are explored through writing, critical thinking, and information gathering.

LITERATURE AND COMPOSITION III

Prerequisite:	Literature and Composition II
Length:	One Year
Credit:	1 Unit
Grade:	11, 12

Description: Work will continue in sentence structure, paragraph writing, and essay writing. A research paper that may be related to the student's selected technology area will be written. This will include bibliography cards, note cards, outline, rough draft, and final copy. Emphasis will be placed on effective use of outlining, analysis, and organization of definitive and descriptive writing. Elements of literature will be explored through writing and critical thinking.

ORAL COMMUNICATION

Prerequisite:	Literature and Composition III
Length:	One Semester
Credit:	½ Unit
Grade	12

Description: This course is designed to familiarize students with the basic communication process. Students will learn to research, prepare and present various types of speeches (i.e. demonstrative, informative, and persuasive), and will also be introduced to oral interpretation and drama. Job interviews and business phone calls will be stressed as one type of interpersonal communication.

READING DEVELOPMENT

Prerequisite:	Teacher Recommendation
Length:	One Semester
Credit:	½ Unit
Grade:	10, 11, 12

Description: This course is designed for students who are experiencing difficulty in maintaining a reading level commensurate with the level expected for their grade.

SENIOR ENGLISH

Prerequisite:	Literature and Composition III
Length:	One Semester
Credit:	½ Unit
Grade:	12

Description: This course will stress related paragraph writing, outlining formats, and major report writing. Each student will complete a professional portfolio which includes a resume, business correspondence, letters of recommendation, and one research paper or project. Students will compose well-developed text and write effectively in various forms and types of writing. Students will read, critique, and discuss a variety of periodicals pertaining to employment, non-fiction material, and works of fiction with an emphasis on reading comprehension skills: specifically vocabulary, main ideas, supporting details, structural patterns, and textual clues. The students will engage in critical thinking with a focus on making inferences and conclusions, establishing purpose, recognizing bias and tone, and evaluating to support fact vs. opinion.

SHORT STORIES

Prerequisite:	Literature and Composition III
Length:	One Year
Credit:	1 Unit
Grade:	12

Description: This course is designed to develop vocabulary and reading skills. After course completion, the student will be able to recognize elements of a short story.

SURVEY OF LITERATURE

Prerequisite:	Literature and Composition III (with a grade of B)
Length:	One Semester
Credit:	½ Unit
Grade:	12

Description: This course introduces the students to the various elements of multicultural literature. Reading Comprehension and writing skills are strengthened through oral discussions, writing assignments, analysis, and writing poetry. A novel or play is also read and discussed during the semester.

ENGLISH 1900: ADVANCED STRATEGIES
1818 Advanced College Credit Program (Dual Credit/St. Louis University)

Prerequisite:	3.0 Accumulative Grade Average, Interview, Writing Sample, and Departmental Recommendation
Length:	One Year
Credit:	1 Unit, plus 3 Semester Hours English College Credit
Grade:	12

Description: English 1900: Advanced Strategies of Rhetoric and Research. (One year)
This course develops skills in writing effective personal and expository prose, as well as research. The course achieves this by instructing students in methods of invention, organization, audience analysis, and style. Emphasis is on the compositional process; significant attention is given to generating, shaping, and editing of the written word in its preliminary stages. The course seeks to integrate the personal experiences of students with the academic knowledge they gain throughout a college curriculum.

Students are introduced to the exploratory nature of the research process necessary to develop a "knowledge base" for writing effective persuasive discourse. This course introduces the rhetorical strategies necessary for persuasion and argument, as well as the use of information and methods of proof necessary to develop well-substantiated persuasive papers. A weighted grade will be given.

PUBLICATIONS (Communication Arts)

Prerequisite:	None
Length:	One Year
Credit:	1 Elective Course Credit
Grade(s):	10 - 12

Description: This course allows students to learn the fundamentals of journalism. This program of study will focus on media literacy, rules of journalism and (types of articles, roles on journalism and forms of journalism). Course work will include a variety of journalism-related assignments with an emphasis on increasing understanding and application of writing skills.

MATHEMATICS

MATHEMATICS COURSE SEQUENCE

	Technical Pathway Suggested	Option 2	Option 3
10	Geometry	Algebra I	Essentials of Algebra
11	Algebra II Math 140: Intermediate College Algebra (Dual Credit/St. Louis Com. Col.) Precalculus	Geometry	Algebra I
12	Math 154: Precalculus (Dual Credit/Mo Bap Univ.) Math 164: Calculus I (Dual Credit/Mo Bap Univ.) Math 142: Calculus (1818 ACC) (Dual Credit/St. Louis Univ.) Math 243: Probability & Statistics (Dual Credit/Mo Bap Univ.)	Algebra II Statistics Precalculus (Dual Credit/Mo Bap Univ.) College Prep Math	Geometry College Prep Math

MATHEMATICS

ESSENTIALS OF ALGEBRA

Prerequisite: None
Length: One Year
Credit: 1 Unit
Grade: 10, 11, 12

Description: Essentials of Algebra is a course designed to provide students with a smooth transition from arithmetic to algebra and geometry. Application, problem solving and critical thinking are integrated throughout the course. The course will offer the following: real-life mathematics, computation and application of rational numbers, algebraic relationships, multi-step equations, inequalities, graphs of linear functions, geometric concepts, right triangles, the application of the Pythagorean Theorem, surface area, volume, data analysis, probability and graphing. Technology including the use of computers and calculators will be embedded throughout the course.

ALGEBRA I

Prerequisite: None
Length: One Year
Credit: 1 Unit
Grade: 10, 11, 12

Description: In this course, the basic skills of arithmetic are reviewed as related to the study of Algebra. Simple addition, subtraction, multiplication, and division are taught in early lessons. Equations, open sentences, and inequalities are also studied. During the second semester, emphasis will be placed on factoring, rational and irrational numbers, and quadratic functioning. Graphs, linear equations, and systems of equations are also studied.

ALGEBRA II

Prerequisite: Algebra I
Length: One Year
Credit: 1 Unit
Grade: 10, 11, 12

Description: This course is designed for the college-bound student and is a continuation of the basic algebraic concepts presented in the first year of Algebra. Topics studied include graphing, analyzing, and polynomial functions; systems of equations and inequalities; exponents, radicals, and complex numbers; the study of number systems, and problem solving. One quarter of the second semester is devoted to the study of Trigonometry. Algebraic skills will be enhanced as students manipulate the six basic Trigonometric functions.

COLLEGE PREP MATH

Prerequisite:	Algebra I
Length:	One Year
Credit:	1 Unit
Grade:	11, 12

Description: This course includes topics on precision, accuracy, and tolerance, graphing data, and working with statistics and probabilities. Students will be introduced to algebraic concepts including solving problems involving linear and nonlinear equations, factoring, functions, quadratics, and systems of equations. Right triangle relationships will also be explored and trigonometry functions introduced. Instruction is also targeted to A.C.T. and COMPASS testing.

GEOMETRY

Prerequisite:	Algebra I
Length:	One Year
Credit:	1 Unit
Grade:	10, 11, 12

Description: This course is a study of geometric functions and stresses deductive reasoning. Concepts of algebra are used during the study of measurements. Activities will focus on formulas involving a circle, triangle, parallelogram, and trapezoid. Second semester will include an introduction to trigonometry applications.

MATH 140: INTERMEDIATE COLLEGE ALGEBRA

Prerequisite:	Algebra I and Geometry and a 3.0 overall GPA (overall 2.5 GPA with a letter of recommendation)
Length:	One Year
Credit:	1 Unit
Grade:	11,12

Description: This course will provide the transition for elementary algebra into college-level math courses. Operations on rational expressions, operations on radicals, solving quadratic equations and the rectangular coordinate system are among the topics covered. In addition to high school credit, students may earn three (3) hours of college credit from St. Louis Community College. Successful completion of this course would allow students to enter College Algebra at SLCC.

PRECALCULUS

Prerequisite:	Two Years of Algebra and One year of Geometry
Length:	One Year
Credit:	1 Unit
Grade:	11, 12

Description: This one year course is recommended for the college-bound student and is a unified study of college Algebra and Trigonometry. Emphasis is placed on the development of algebraic and trigonometric concepts. This course provides a review of basic and intermediate algebra, introduces functions and their graphs, discusses properties of polynomial and rational functions, and introduces exponential and logarithmic functions. In addition, the following trigonometric topics are incorporated: the six trigonometric functions and solving right triangles in applications; graphs of trigonometric functions; radian measure with applications dealing with angular velocity; trigonometric identities, and the Law of Sines and Cosines. Use of graphing calculators is incorporated into the curriculum. Weighted grade will be given.

MATH 154: PRECALCULUS
(DUAL CREDIT/MISSOURI BAPTIST UNIV.)

Prerequisite:	2 years Algebra, 1 year Geometry 3.0 GPA in Math and Dept. Recommend. (for Dual Credit)
Length:	1 Year
Credit:	1 Unit
Grade:	11, 12

Description: This one-year course is recommended for the college bound student and is a unified study of college Algebra and Trigonometry. Emphasis is placed on the development of algebraic and trigonometric concepts. This course provides a review of basic and intermediate algebra, introduces functions and their graphs, discusses properties of polynomial and rational functions, and introduces exponential and logarithmic functions. In addition, the following trigonometric topics are incorporated: the six trigonometric functions and solving right triangles in applications; graphs of trigonometric functions; radian measure with applications dealing with angular velocity; trigonometric identities, and the Law of Sines and Cosines. Use of graphing calculators is incorporated into the curriculum. A weighted grade will be given. In addition to high school credit, students may earn three (3) hours of college credit from Missouri Baptist University.

MATH 142: **CALCULUS 1818 ADVANCED COLLEGE CREDIT PROGRAM (DUAL CREDIT/ST. LOUIS UNIVERSITY)**

MATH 164: CALCULUS (DUAL CREDIT/MISSOURI BAPTIST UNIVERSITY)

Prerequisite:	Pre-Calculus
Length:	One Year
Credit:	1 Unit plus 4 semester hours math college credit
Grade:	11, 12

Description: This course is intended for students who have a thorough knowledge of college preparatory mathematics including Algebra, Geometry and Trigonometry. In this course, limits and continuity of functions of a single variable, derivatives and antiderivatives of algebraic functions and trigonometric functions will be studied and applied. The use of graphing calculators is incorporated throughout the course. A weighted grade will be given. In addition to high school credit, students may earn four hours of college credit from either St. Louis University or other accepting universities.

MATH 243: **PROBABILITY AND STATISTICS (DUAL CREDIT/MISSOURI BAPTIST UNIVERSITY)**

Prerequisite:	One year each of Algebra, Algebra II, and Geometry
Length:	One Year
Credit:	1 Unit plus 3 hours math college credit
Grade:	11, 12

Description: This course uses a non-theoretical approach to the study of statistics. Topics studied include an introduction to descriptive and inferential statistics, types of data, data collection and sampling techniques, frequency distributions and graphs, measures of central tendency, measures of variation, measure of position, exploratory data analysis, counting techniques, including the tree diagrams and the multiplication rule, and sample spaces and probability, with the addition and multiplication rules for probability and conditional probability. Second semester topics will include probability distributions with mean, variance and expectation, the binomial distribution, properties of the normal distribution, the central limit theorem, confidence intervals for different sample sizes, hypothesis testing and testing the difference among means, variance, and proportions. A weighted grade will be given. In addition to high school credit, students may earn 3 hours of college credit from Missouri Baptist University.

MACHINING MATH (MATHEMATICS INTEGRATION)

Description: This is a full year, one-credit math integration course for junior level students in the **Precision Machining** Technical Education program. The course is designed to familiarize and reinforce mathematical concepts that must be understood and applied in the machine trades and manufacturing fields. Fundamental mathematical knowledge is reinforced. Concepts from algebra and geometry are taught and integrated with trigonometry and applied to realistic, industry-related applications. Theory to application is the focus of the concepts in this course. Prerequisites are the same as those needed to enter the Precision Machining Program.

SOCIAL STUDIES

SOCIAL STUDIES COURSE SEQUENCE

Technical Pathway Suggested	Option 2
Geography	American History Geography
American History (1818) Contemporary Issues Personal Finance World History Geography	American Government Personal Finance Contemporary Issues Geography
American History (1818) Contemporary Issues Personal Finance Sociology 110 World History Geography	American History Contemporary Issues Geography World History

SOCIAL STUDIES

AMERICAN GOVERNMENT

Prerequisite: None
Length: One Semester
Credit: ½ Unit
Grade: 11, 12

Description: This course is a study of the American governmental system and its political process. It includes the study of democratic government from its conception in ancient Greece through its evolution into current trends. The role of the United States government in world affairs will also be discussed. The course culminates in the study of both Federal and Missouri constitutions. Students must pass a test on each of these documents in order to earn a high school diploma. Course completion is required for graduation.

AMERICAN HISTORY

Prerequisite: None
Length: One Year
Credit: 1 Unit
Grade: 10, 11, 12

Description: During the first semester, this course examines the history of our country, as we become a participant on the world stage. Units are alternated between domestic events and foreign affairs. Domestically, the major topics include the closing of the frontier, the technological changes of the late 19th and early 20th centuries, the era of progressive reform, and the post-WWI events of the 1920's culminating in the stock market crash and the great depression. America's role in foreign affairs looks at our development as an imperialistic power in Latin America, the Pacific, and Asia; the U.S. role in WWI, and our isolationism in the 1920's are explored. During the second semester, this course covers the most recent period of our nation's history. Emphasis is placed on the changes wrought in the U.S. by our development as a world over and on the domestic changes that occurred at the same time. WW II is the initial event studied, and it is covered thoroughly. The Cold War and the conflicts it generated in Korea, Cuba, Vietnam, and Southwestern Asia will be examined. An analysis of the 50's includes an examination of the McCarthy Era, the civil rights movement, and the general mood of the 50’s. The tumultuous 60's are examined in depth as the Vietnam war is analyzed; an overview of the presidencies of Nixon through Obama is the final element of the course.

AMERICAN HISTORY 1818

Prerequisite: Grade of B or higher in Eng. II
Length: One Year
Credit: 1 Unit
Grade: 11, 12

This is a college survey course in American history. The course is an in-depth study of the United States politically, economically and culturally. Students will read documents and primary sources. This two-semester course is approved by the 1818 program at Saint Louis University. Six college credits in History are offered. HIST2600 History of US to 1865 (1st Semester - 3 credits) and HIST2610 History of US Since 1865 (2nd Semester - 3 credits). The student will learn to think like an historian as he begins to analyze and interpret primary documents in addition to mastering a survey understanding of American History through his reading from the text and its accompanying reader, The American Pageant. Daily lectures and discussions on the assigned readings will be supplemented with document readings from several sources. Emphasis is placed on critical and evaluative thinking skills, essay writing, interpretation of original documents, and historiography.

The survey course examines the development of the United States in two parts: from its pre-Columbian origins through the Civil War during the Fall Semester. This second half of the survey course examines the U.S. history from the Reconstruction Era through the present. The primary focus of the course will be to provide students with an opportunity to develop an understanding of some of the major themes in American history, to train students to analyze historical evidence, and to develop in students the ability to analyze and express historical understanding in writing. This class will emphasize certain themes: political institutions and behavior and public policy, social and economic change, diplomacy and international relations, and cultural and intellectual developments. The course will be conducted in a lecture/discussion format. Students will often be responsible for presenting information and opinions in class. All students are expected to keep up with the reading assignments and demonstrate their preparedness by active participation in class discussions.

PERSONAL FINANCE

Prerequisite: None
Length: One Semester
Credit: ½ Unit
Grade: 10, 11, 12

Description: This course emphasizes basic skills needed for independent living. Topics for study include: personal taxes, credit, budgeting, consumer law, insurance, banking, personal investment, and consumer help agencies. Students will investigate automobile purchasing, apartment leasing, and home purchasing. **This course satisfies the ½ unit graduation requirement of personal finance.**

CONTEMPORARY ISSUES

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit
Grade:	11, 12

Description: This semester course is designed to foster an awareness of contemporary issues, both domestic and worldwide. Analyzing issues will be expected in order to understand their significance, purpose, and impact on the people they affect. With the use of newspapers, magazines, and the Internet, the focus will be on political views that impact both social issues and foreign affairs. Students will explore their own learning by gathering and organizing such information. Through the use of critical thinking skills, students will engage in class discussion, written expression, and debate.

GEOGRAPHY

Prerequisite:	None
Length:	One Year
Credit:	1 Unit
Grade:	10, 11, 12

Description: This course introduces/reviews the major themes of geography and covers basic map reading skills. In this course students receive a better understanding and awareness of the world in which they live through a study of the physical, economic, and cultural aspects of countries. A major focus of the course is the interaction between other countries and the United States. This course will also include topics concerning globalization, climate change, world trade, energy, natural and technological hazards as well as other current developments around the world.

NORTH AMERICAN GEOGRAPHY

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit
Grade:	10, 11, 12

Description: This course introduces/reviews the major themes of geography and covers basic map reading skills. Emphasis is placed on understanding geography, with specific emphasis upon the United States, Canada, and Latin America. The course introduces/ reviews geographic themes and map-reading skills.

WORLD GEOGRAPHY

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit
Grade:	10, 11, 12

Description: This course is designed to give students a better understanding and awareness of the world in which they live through a study of the physical, economic, and cultural aspects of countries located outside of North America. A major focus of the course is the interaction between other countries and the United States. This course will also include topics concerning globalization, climate change, world trade, energy, natural and technological hazards as well as other current developments around the world.

SOCIOLOGY 110

Prerequisite:	None
Length:	One Year
Credit:	1 Unit
Grade:	11, 12

This course is a college-level introduction to the sociological study of society. Major themes discussed in this course include the relationship between the individual and society, how society is both stable and continuously evolving, the causes and consequences of social inequality, and the social construction of human life. Dual credit is offered through St. Louis University. A weighted grade will be given

WORLD HISTORY

Prerequisite:	None
Length:	One Year
Credit:	1 Unit
Grade:	10, 11, 12

Description: Recommended for sophomores and others that have already completed geography and civics. Students study the development of western civilization from its classical origins to the middle ages. Students develop an understanding of political, social, geographic, economic, and cultural themes of western and non-western civilizations. Specific periods, persons, and events of greatest significance to western development are stressed. Topics include Ancient Greece, the Roman Empire, African kingdoms, Islam, and Early American cultures. During second semester, students will study the development of the modern world outside the United States beginning with the French revolution moving through the 19th and 20th centuries. Topics including security concerns and Contemporary Global Policy Issues will also be studied. Specific periods, persons, and events of greatest significance to western development are stressed.

ANCIENT WORLD HISTORY

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit
Grade:	10, 11, 12

Description: Recommended for sophomores and others that have already completed geography and civics. Students study the development of western civilization from its classical origins to the middle ages. Students develop an understanding of political, social, geographic, economic, and cultural themes of western and non-western civilizations. Specific periods, persons, and events of greatest significance to western development are stressed. Topics include Ancient Greece, the Roman Empire, African kingdoms, Islam, and Early American cultures.

MODERN WAR HISTORY

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit
Grade:	10, 11, 12

Description: Students will study the development of the modern world outside the United States beginning with the French revolution moving through the 19th and 20th centuries. Topics including security concerns and Contemporary Global Policy Issues will also be studied. Specific periods, persons, and events of greatest significance to western development are stressed.

SCIENCE

SCIENCE COURSE SEQUENCE

Technical Pathway Suggested	Option 2	Option 3
Biology Chemistry Chemistry Honors	Applied Biology/Chemistry	Applied Biology/Chemistry
Anatomy and Physiology (Biology 213, 211, 223, 221) (Dual Credit/Missouri Baptist Univ.) Chemistry Physics Forensic Science	Biology Concepts of Chemistry Chemistry	Biology Concepts of Chemistry Chemistry
Anatomy and Physiology (Biology 213, 211, 223, 221) (Dual Credit/Missouri Baptist Univ.) Biology 104: Principles of Biology 1818 (Advanced College Credit) (Dual Credit/Missouri Baptist Univ.) Physics Forensic Science	Anatomy and Physiology (Biology 213, 211, 223, 221) (Dual Credit/Missouri Baptist Univ.) Chemistry Physics Forensic Science	Biology Chemistry Forensic Science

SCIENCE

INTRODUCTION TO ANATOMY AND PHYSIOLOGY

Prerequisite: Biology
Length: One Year
Credit: 1 Unit
Grade: 11, and 12

The first semester of this course deals with Human Anatomy and Physiology, specifically with the structure of function of the body systems. Topics covered are: organization of the body, skeleton, muscles, nervous system, sensory system, and the endocrine system. Topics covered during the second semester are: blood, heart, lymphatic system, immunity, respiration, digestion, metabolism, urinary system, and reproduction. This course may be taught as an integrated course for the Veterinary Science majors.

ANATOMY AND PHYSIOLOGY
(BIOLOGY 213, 211, 223, 221)
(Dual Credit/Missouri Baptist University)

Prerequisite: Biology (or concurrently)
Length: One Year
Credit: 1 Unit
Grade: 11, and 12

This course has been approved to satisfy the requirements for the Dual Enrollment Program at Missouri Baptist University and allows students to obtain both a high school credit and up to eight (8) transferable college credits. It provides a comprehensive study of the anatomy and physiology of the human body. The level of rigorousness is designed for students who are considering allied health as career path, but can also be beneficial to students who wish to enrich and enhance their biological background.
The first of the two-semester sequence includes the study of the organization of cells into tissues, organs, and organ systems, with special in-depth study of the integumentary, skeletal, muscular, nervous and endocrine system, and the sensory receptors. Second semester is a continuation with consideration given to the cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. Laboratory work includes dissection of preserved specimens, microscopic study, physiological experiments, computer simulations, and multimedia presentations. A weighted grade will be given. This class may be offered as an integrated science credit for Health Sciences, Lab & Pharmacy Sciences, and Dental Sciences Programs.

BIOLOGY

Prerequisite: None
Length: One Year
Credit: 1 Unit
Grade: 10, 11

Description: This two-semester course is a study of life on Earth and its origins. Topics covered during the first semester are: scientific method, chemistry of life, cell structure and function, photosynthesis, cellular respiration, and cell growth and division. The second semester is a continuation of topics such as classical and molecular genetics, evolution, ecology, invertebrates, vertebrates, and human biology.

BIOLOGY 104-PRINCIPLES OF BIOLOGY 1818
(ADVANCED COLLEGE CREDIT)
(Dual Credit/St. Louis University)

Prerequisite:	Biology, Grade "B" or better, Department Recommendation
Length:	One Year
Credit:	One Unit, plus 4 Semester Hours Science College Credit
Grade:	12

Description: This is a two-semester course covering the essential principles of biology at a freshman college level. The course will emphasize the origin and definition of life; cells, their organization, chemical composition and metabolic activity; the basis of heredity; plant and animal phylogeny. A weighted grade will be given.

APPLIED BIOLOGY/CHEMISTRY

Prerequisite:	None
Length:	One Year
Credit:	1 Unit
Grade:	10, 11, 12

Description: This two-semester course is a hands-on approach to Biology and Chemistry. These applications are designed to support materials taught in many of the technical shops. During the first semester, topics include natural resources, air, and other gases, and water and waste management. The second semester of this course is an extension of the first. Additional topics include continuity of life, disease and wellness, and nutrition.

CHEMISTRY

Prerequisite:	Algebra I and Biology
Length:	One Year
Credit:	1 Unit
Grade:	11, 12 (10 with departmental approval)

Description: Students are introduced to the operation of the chemistry lab and basic chemical techniques, with emphasis on mathematical applications. Students study the classes and properties of matter, learn about the historical development of atomic theory. Students will study the principle and behavior of matter and explore chemistry involvement in the real world. They will also study physical and chemical changes, phase changes, the periodic table of elements, law of conservation of mass, chemical formulas, balancing equations, chemical reactions, stoichiometry, kinetic theory, and acid/base chemistry. This course contains laboratory work with emphasis on the development of critical thinking and observational techniques.

CHEMISTRY (HONORS)

Prerequisite:	Algebra I, Biology, Grade "B" or better and Dept. Recommendation
Length:	One Year
Credit:	1 Unit
Grade:	10, 11, 12

Description: Honors Chemistry is a college preparatory class that challenges students who have been successful in past science and math courses to work at an advanced level. With an emphasis on inquiry-based learning, students will solve problems in classroom activities as well as laboratory exercises. As students develop higher-level critical thinking skills, they will establish a deep understanding of chemical concepts as well as the practical mathematical applications that support them. Topics to be covered include the scientific method, the metric system, the properties of matter and the changes it undergoes, the historical development of atomic theory, the organization of the periodic table, principles of chemical bonding and chemical reactions, the concept of the mole, stoichiometric calculations, the properties of solutions, gas laws, and acid/base chemistry. Independent research and formal laboratory reports will be required. Students who take this course will receive a weighted grade.

CONCEPTS OF CHEMISTRY

Prerequisite:	None
Length:	One Year
Credit:	1 Unit
Grade:	10, 11, 12

Description: Concepts of Chemistry is designed to introduce students to a basic chemistry. The course is introduced in a clear, understandable manner, with minor emphasis given to mathematical applications. Students will gain understanding of properties, principle and behavior of matters, and explore chemistry involvement in the real world. They will also study physical and chemical changes, classification of matter, phase changes, the periodic table of elements, law of conservation of mass, chemical formulas, chemical reactions, balancing of equations, and acid/base chemistry. Metric measurements will be an integral part of this lab course.

PHYSICS

Prerequisite:	Algebra I, Geometry, and Chemistry
Length:	One Year
Credit:	1 Unit
Grade:	11, 12

Description: Students will be introduced to the fundamental principles of science that govern the interaction of matter, energy, force, and motion. Students will study how our world works in terms of mathematics, and directly observe the concepts of physics through hands on laboratory experiments and demonstrations. This course integrates mathematical analysis of our environment with laboratory work designed to emphasize critical thinking, data collection and analysis, and concept application to the real world. First semester focuses on mechanics and includes the topics of motion, force, energy, dynamics, and gravitation. Second semester explores the properties of matter and shifts focus to the topics of heat, light, sound, and magnetism.

FORENSIC SCIENCE

Prerequisite:	None
Length:	One Year
Credit:	One Unit
Grade:	11, 12

Description: This course is designed to introduce the student to the world of forensic science as it is incorporated by a diverse group of professionals, from pathologists to toxicologists. The subject matter includes chemistry, biology, physics, geology, and computer technology, which are all useful for determining the legal value of crime-scene and related evidence. The focus for secondary students is on the services of what has popularly become known as the crime laboratory. This laboratory is where the principles and techniques of the physical sciences are practiced and applied to the analysis of crime-scene evidence. Students will study how to examine a secure physical evidence at a crime scene, learn the significance of forensic databases and crime-scene reconstruction, and study types of drugs and drug-control laws. Other topics of importance are forensic toxicology, forensics serology, DNA, trace evidence, forensic aspects of fire and explosion investigations, fingerprinting, and firearms impressions.

Fine Arts

FINE ARTS COURSE SEQUENCE

	Technical Pathway Suggested
10	Art Advanced Art Chorus Music Basics
11	Art Advanced Art Chorus Music Basics
12	Art Advanced Art Chorus Music Basics

FINE ARTS

ART

Prerequisite: None
Length: One Year
Credit: 1 Unit

Description: This course is designed to introduce students to the basic elements of design including line, shape, value, color, space, and texture as they apply to creating works of art. Students will also be introduced to a variety of art media. Observational skills and cognitive applications are developed.

ADVANCED ART

Prerequisite: One Unit Fine Art
Length: One Semester
Credit: ½ Unit

Description: In this course, students will apply skills and techniques earned in the first semester of Art to more challenging projects. Possible areas of study may include figure drawing, landscapes, still-life, and three-dimensional work. Also, craft projects may be included.

CHORUS

Prerequisite: None
Length: One Year
Credit: 1 Credit

Description: This course continues to develop music reading, music vocabulary and singing skills while the students learn and perform advanced choral literature of various styles, periods, and cultures. There are regularly scheduled performances throughout the year as well as participation in festivals and special events.

MUSIC BASICS

Prerequisite: None
Length: One Year
Credit: 1 Credit

Description: Music Basics provides an opportunity for students to study numerous aspects of music. The areas of study include: basic fundamentals of music notation and music theory, composers and their music, various facets of the music business and music careers, and basic instruction on guitar and keyboard.

PHOTOGRAPHY

Prerequisite:	Basic Art or NT Graphic Design
Length:	One Semester
Credit:	½ Credit

Description: This course will help students become well rounded in the field of digital photography. Students will explore the history of photography as well as visionaries of the field; understand the basic operations and functions of a digital camera; and apply basic digital editing.

FOREIGN LANGUAGE COURSE SEQUENCE

	Technical Pathway Suggested
10	Spanish 1 Spanish 2
11	Spanish 1 Spanish 2
12	Spanish 1 Spanish 2

FOREIGN LANGUAGE

SPANISH I

Prerequisite:	None
Length:	One Year
Credit:	1 Unit
Grade:	10, 11, 12

Description: This beginning level class emphasizes the basic understanding, listening, speaking, reading, and writing of elementary Spanish. Basic grammatical concepts are taught and reinforced by written and oral exercises. Emphasis is placed on the building of vocabulary development and correct pronunciation.

SPANISH II

Prerequisite:	Spanish I
Length:	One Year
Credit:	1 Unit
Grade:	10, 11, 12

Description: Listening and speaking continue to play an important role in the instruction on this level. More emphasis is placed on grammar, and simple reading selections are assigned. Classroom exercises allow concepts to be practiced intensively. The knowledge of the life and culture of the Spanish speaking countries are further developed.

PHYSICAL EDUCATION COURSE SEQUENCE

	Technical Pathway Suggested
10	Physical Education Health Health and Wellness Sports Officiating
11	Physical Education Health Health and Wellness Sports Officiating
12	Physical Education Health Health and Wellness Sports Officiating

PHYSICAL EDUCATION

HEALTH

Prerequisite: None
Length: One Semester
Credit: ½ Unit
Grade: 10, 11, 12

Description: This course provides various information to students in regard to their well-being: nutrition, life management skills, disease prevention and control, health maintenance and enhancement, tobacco, alcohol and other drugs, positive self-confidence, making good choices, and consumer health.

HEALTH AND WELLNESS

Prerequisite: None
Length: One Semester
Credit: ½ Unit
Grade: 10, 11, 12

Description: This course is designed to develop health, wellness, and first aid skills for living. The main focus of the curriculum is defining health and wellness and learning to develop and maintain good health and wellness in the areas of fitness, nutrition, medicines, drugs, and disease. First aid and C.P.R. training will be emphasized.

HEALTH AND CHILD DEVELOPMENT (Health and P.E. Integration)

This is a one semester, one-half credit integration, offered in the junior year of the Early Childhood Education Program. This course provides information and instruction on the following topics: the basic principles of child development; understanding infants, toddlers, preschoolers, and school-aged children; keeping children safe; promoting good health; making good food choices for children; anatomy; family life/sex education; and first aid.

PHYSICAL EDUCATION

Prerequisite: None
Length: One Semester
Credit: ½ Unit (may be repeated)
Grade: 10, 11, 12

Description: This course allows the students to select and participate in physical activities from a variety of team and individual sports. Emphasis is placed on physical health and emotional adjustments for daily living.

Sports Officiating

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit (may be repeated)
Grade:	10, 11, 12

Description: This semester course will prepare students to obtain certification for officiating various sports. Students will have the opportunity to become certified officials in basketball, baseball/softball, football, soccer, and volleyball. Students will learn the mechanics of officiating and the rules of each sport. Students will learn the potential to officiate throughout their academic career and on into their adult life.

Weight Training

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit (may be repeated)
Grade:	10, 11, 12

Description: Weight lifting will allow all students the opportunity to develop strength, speed, and flexibility. The student will develop safety skills through proper use of equipment, lifting techniques, and correct spotting techniques. Students will also will gain knowledge of life time activities and cardiovascular training.

INTERDISCIPLINARY COURSE SEQUENCE

	Technical Pathway Suggested	Option 2
10	Computer Applications Entrepreneurship Keyboarding	Intermediate Keyboarding
11	Computer Applications Entrepreneurship Keyboarding	Intermediate Keyboarding
12	Computer Applications Entrepreneurship Keyboarding	Intermediate Keyboarding

INTERDISCIPLINARY
(Practical Arts)

These are one period elective classes, which complement the technical education programs. Not all courses will be offered each semester.

COMPUTER APPLICATIONS

Prerequisite:	Keyboarding I
Length:	One Semester
Credit:	½ Unit
Grade:	11, 12

Description: This course is designed to provide students with an understanding of personal computer operations. Students will be introduced to word processing, spreadsheet, desktop publishing, and database management software.

ENTREPRENEURSHIP

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit
Grade:	10, 11, 12

Description: This course is designed to teach students how to operate a small business within a market economy. Students examine legal requirements, business implementation, and the undertaking of risks involved in operating a small business.

KEYBOARDING

Prerequisite:	None
Length:	One Semester
Credit:	½ Unit
Grade:	10, 11

Description: In this course, students will learn to control the keyboard by touch. Emphasis is placed on the development of the fundamental skills necessary to type a minimum of 25 words per minute using the touch system. The basis of business communication, memorandums, letters, and tables are introduced.

INTERMEDIATE KEYBOARDING

Prerequisite:	Keyboarding
Length:	One Semester
Credit:	½ Unit
Grade:	10, 11, 12

Description: This course will enhance the student's skills necessary to type with speed and accuracy at a minimum of 40 words per minute using the touch system and use of the numeric keypad keying 40 keystrokes per minute with satisfactory accuracy. Emphasis will be placed on proofreading and correct formatting of various business correspondence and reports.

Technical Programs

AUTO BODY

Recommended Academic Course of Study

Students will learn to repair and restore vehicles to "like new" condition. Instruction is provided in body straightening and alignment to meet factory specifications, repair of damaged panels, and replacement of component parts, welding, refinishing and painting, estimating damage costs, and preparation of damage reports. Emphasis is placed on a workshop environment and a good work ethic.			
SUBJECT	**10**	**11**	**12**
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Geometry *or* Algebra II *College Prep Math *or* Algebra	*Algebra II *or* *Precalculus *or* *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry *or* *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding		
ARTICULATED CREDIT	State Technical College of Missouri MPT 165 Basic Welding, 3 Credit Hours Universal Technical Institute (UTI), Houston & Sacramento CRRT 103 Exterior Panels, 4 Units CRRT 105 Welding & Cutting, 4 Units CRRT 108 Intro to Refinishing, 4 Units		

AUTOMOTIVE TECHNOLOGY

Recommended Academic Course of Study

Students will follow the Automotive Service Excellence (ASE) Certification curriculum. They will learn to diagnose and repair the advanced computerized control systems on today's vehicles. Instruction is provided in tire, wheel and alignment service, brakes, steering and suspension, electronic systems, engine performance, transmissions, vehicle safety and emissions inspection, heating and air conditioning.

SUBJECT	10	11	12
LANGUAGE ARTS ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Geometry *or** Algebra II *College Prep Math *or* Algebra	*Algebra II *or* *Precalculus *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Welding Lab		
ARTICULATED CREDIT	State Technical College of Missouri: MPT 165 Basic Welding, 3 Credit hours Universal Technical Institute: ADTC 101 Automotive Engines and Repair, 6 Units of Credit ADTC 117 Electronics Fundamentals, 5.0 Units of Credit ADTC 107 Brakes, 5.0 Units of Credit		

CARPENTRY

Recommended Academic Course of Study

Students will follow the Pre Apprenticeship Certificate Training curriculum through the National Association of Home Builders. They will learn to follow local building codes and blueprints to cut fit, assemble, form, frame and finish a wide variety of construction projects. Graduates may qualify for apprenticeship training credit with the Carpenters, Floor Layers and Construction Craft Laborers apprenticeship programs.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature & Composition II	*Literature & Composition III	*Senior English *and* *Short Stories *or* *Literature Appreciation
MATH	*Algebra	*Geometry *or* *Algebra II or *Algebra	*Algebra *or* * Precalculus *or** Algebra or Geometry
SCIENCE	*Applied Biology-Chemistry Or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Health and Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Entrepreneurship		
ARTICULATED CREDIT	St. Louis Community College: CE 116 — Construction Blueprint Reading, 3 Credit Hours CE 130 — Introduction to Construction, 3 Credit Hours		
APPRENTICESHIP PROGRAMS	Carpenter's Apprentice Credit: Credit for 1 to 3 days of Pre-Employment Class Credit for one specialty or elective unit of training Advanced placement testing in other related carpentry areas to be determined on an individual basis by joint agreement between St. Louis CJAP and the technical school carpentry instructor. Construction Craft Laborer's Credit: 40 Hours of Apprentice Training and 500 Hours of On-the-Job Training		

CISCO NETWORKING ACADEMY

Recommended Academic Course of Study

This program is certified as a Cisco Networking Academy. Students have the opportunity to learn Cisco Certified Entry Networking Technician (CCENT) certification. CCENT validates the ability to install, operate and troubleshoot a small enterprise branch network, including basic network security. With a CCENT certification, a network professional demonstrates the skills required for entry-level network support positions- the starting point for many successful careers in networking. The curriculum covers networking fundamentals, WAN technologies, basic security and wireless concepts, routing and switching fundamentals, and configuring simple networks. CCENT is the first step toward achieving CCNA, which covers medium-size enterprise branch networks with more complex connections.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communication
MATH	*Algebra	*Geometry *or* * Algebra II	*Algebra II *or* *Precalculus
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or Advanced Placement American History	*Geography
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications *and* *Entrepreneurship		
FINE ARTS	*Art		
ARTICULATED CREDIT	St. Louis Community College – IT: 101 – Cisco Networking Academy – 5 Credit Hrs IT: 201 – Cisco Networking Academy II – 5 Credit Hrs St. Charles Community College: CPT 107- Intro to A+ - 5 Credit Hours CPC 170, 171, 172, 173 Cisco Net Academy I-IV - 5 Credit Hrs each State Technical College of Missouri: A+ Certification NST 105 Systems Maintenance / NST 115 Operating Platforms, 3 Credit Hrs. CISCO Certification-Network Associate / CNT 113, 120, 210, 220, 3 Cr Hrs. each Jefferson College: CIS 147 Networking 1 (Granted with CCENT Certification)		

CONSTRUCTION TRADES

Recommended Academic Course of Study

This program provides an overview of various aspects of the construction field. Students will engage in individual projects as well as team projects to promote work ethics, communication skills and leadership abilities. Students will learn basic blueprint reading, plumbing, residential electricity, concrete flat work, residential carpentry framing, basic roofing skills, drywall installation, basic flooring skills, and various finishing procedures.
Graduates have the opportunity to earn the PACT certification and possibly join one of the construction-based apprenticeship programs. The Construction Trades program has many opportunities such as the Ameren/Laclede program, interactions with several construction companies, and preparation for post-secondary education.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Short Stories or *Survey of Literature
MATH	*Algebra *or* *Applied Math I	*Geometry *or* *Algebra *or* *College Prep Math *or* *Algebra	*Algebra II *or* *Precalculus *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding / Entrepreneurship		
ARTICULATED CRECIT	St. Louis Community College CE 116 – Construction Blueprint Reading – 3 Credit Hours CE 130 – Introduction to Construction – 3 Credit Hours		
APPRENTICESHIP PROGRAMS	Construction Craft Laborers: 40 hours of Apprentice Training and 500 hours of on-the- job training Carpenter's Apprentice: Credit for 1-3 days of pre-employment class. Credit for one specialty or elective unit of training.		

COSMETOLOGY

Recommended Academic Course of Study

The curriculum is the same as those used by private cosmetology schools, following Missouri State Board of Cosmetology guidelines. Students will learn theory and gain practical experience with customers in a salon environment. Instruction is provided in hair analysis, treatment, coloring, cutting and styling techniques. Facials, nail care, anatomy, physiology, and salon management are also covered. Upon completion of this curriculum and attainment of the required 1500 hours of instruction, **students will take the state board's comprehensive licensure examination.**

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English and *Oral Communication
MATH	*Algebra	*Geometry *or* *Algebra *or* *College Prep Math or *Algebra	*Algebra *or* *Precalculus *Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Physical Education *or* *Health *and* Health &		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art *and* *Advanced Art		
PRACTICAL ARTS			
ARTICULATED CREDIT	None		

CULINARY ARTS

Recommended Academic Course of Study

Accredited by the prestigious American Culinary Federation, this program enables students to earn the ACF Culinary Secondary Graduate Certificate, as well as the ServSafe and ProManagement Professional Cooking Certificates from the Educational Foundation of the National Restaurant Association. Students will train in a full size state-of-the-art restaurant kitchen and dining facility.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communication
MATH	*Algebra	*Geometry *or* *Algebra II *College Prep Math	*Algebra II *or*Precalculus *Algebra *or*Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art *and* *Advanced Art		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications *and* *Entrepreneurship		
ARTICULATED CREDIT	Illinois Institute of Art CULA 100, 105, 115, 120, 240 = 20 quarter hours Johnson and Wales University CUL 1345, 1355, 1385, FSM 2085 = 13.5 quarter hours Pennsylvania Culinary Institute Culinary Arts - One Semester of Credit Robert Morris University: CUL 110: Sanitation and Safety, CUL125: The Fundamentals of Cooking and CUL130: Culinary Skills II. = 9 Qtr. Hrs. Sullivan University: CAM 134 - Food Service Sanitation, 3 Credit Hours St. Louis Community College: HTM 100 – Intro. To Hospitality Industry, 3 Credit Hours HTM 105 – Prof. in the Hospitality Industry, 1 Credit Hour CUL 101 – Safety & Sanitation, 1 Credit Hour CUL 110 – Food Preparation Theory/Practical I, 3 Credit Hours CUL 150 – Culinary Essential for Pastry Arts, 3 Credit Hours		

DENTAL SCIENCES

Recommended Academic Course of Study

Students will learn dental examination, treatment, radiographic and laboratory procedures, patient scheduling and record maintenance. Instruction is also provided in infection control and hazards management, chair-side assistance, emergency and preventive procedures, dental specialties, and office administration. Seniors become CPR certified and take the Missouri Basic Skills exam, and may participate in a clinical internship. Upon completion of the program, and two years of full-time work experience, students may take the National Board Exam to become a certified dental assistant.			
SUBJECT	**10**	**11**	**12**
LANGUAGE ARTS	*Literature & Composition II	*Literature & Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra *or* *Geometry	*Geometry *or* *Algebra II	*Algebra II *or* *Precalculus
SCIENCE	*Applied Biology-Chemistry *Biology	*Biology *or* *Concepts of Chemistry *or* *Chemistry	*Physics *or* *Biology 1818
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History Or *Advanced Placement American History	*Geography *Sociology
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art *and* *Advanced Art		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications		
ACADEMIC INTEGRATION	Anatomy and Physiology, 1 Science Credit, 8 dual credit hours **Prerequisite: Biology (or concurrently)**		
DUAL CREDIT	Missouri Baptist University: BIO-213 Anatomy & Physiology I, 3 Credit Hours BIO-211 Anatomy & Physiology I Lab, 1 Credit Hour BIO-223 Anatomy & Physiology II, 3 Credit Hours BIO-221 Anatomy & Physiology II Lab, 1 Credit Hour		

DIESEL TECHNOLOGY

Recommended Academic Course or Study

Students will specialize in the diagnosis, repair, and preventive maintenance of diesel-powered trucks, buses, trains, and heavy construction equipment. Instruction is provided in computerized testing equipment, welding, brakes, steering, suspension, power train and fluid power, heating and air conditioning. Electronic, engine, air induction, exhaust, fuel, lubrication, and cooling systems are also covered.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Geometry *or* *Algebra II *College Prep Math	*Algebra II *or* *Precalculus *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Welding Lab		
ARTICULATED CREDIT	St. Louis Community College: DIE: 101 Diesel Engine Operation & Repair, 3 Credit Hours DIE: 103 Medium/Heavy Truck Electricity, 3 Credit Hours DIE: 201 Preventive Maintenance Inspection, 3 Credit Hours		

EARLY CHILDHOOD EDUCATION

Recommended Academic Course of Study

Students will study teaching in a preschool setting for 2-5 year old children, rotating through curriculum development, lesson preparation, teaching, and supervisory duties. Instruction includes child development, guidance and discipline techniques, health and safety procedures, licensing, program evaluation, professionalism, and relating to families. Students also learn to provide an enriched, safe and appropriate environment to meet the physical, social, emotional and intellectual needs of small children. Seniors will work on portfolio preparation for Child Development Association (CDA) certification.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communication *or* *Literature Appreciation
MATH	*Algebra	*Geometry *or* *Algebra II *or* *College Prep Math	*Algebra II *or* *Precalculus *Geometry or *Algebra
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography *Sociology
PE/HEALTH	*Physical Education *or* *Health *or* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art *and* *Advanced Art		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications *and* Entrepreneurship		
ARTICULATED CREDIT	St. Louis Community College ECE: 101 Introduction to Early Care and Education, 3 Credit Hours ECE: 125 Child Growth and Development, 3 Credit Hours		

ELECTRICAL TRADES

Recommended Academic Course of Study

The curriculum adheres to the National Electrical Code and models electrical apprenticeship programs. Students will learn to install, connect, test, and maintain wiring systems for residential and commercial settings. Instruction includes electrical theory, interpreting schematics and blueprints, AC circuits and wiring methods, conductors, low voltage wiring, conduit bending, load centers and safety switches, service entrance construction, rough-in and trim out, transformers, lighting, motors and controllers, and more. Graduates may test out of one year of the Independent Electrical Contractors apprenticeship program.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Short Stories *or* *Survey of Literature
MATH	*Algebra	*Geometry *or* *Algebra *or* *College Prep Math	*Algebra II *or* *Precalculus *or* *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Welding Lab		
ARTICULATED CREDIT	American Trade School: $2750.00 Scholarship on completion of high school two–year program		
APPRENTICESHIP PROGRAMS	Construction Craft Laborer's Agreement: Credit for 40 hours of Apprentice Training and 500 hours of on-the-job training		

ELECTRONICS & ROBOTICS ENGINEERING

Recommended Academic Course of Study

This program provides students with a foundation in electronics and robotics engineering. Coursework for the electronics is divided into four major categories that include direct current, alternating current, digital circuits and semiconductors. Students will be working with the ISCET (International Society of Certified Electronics Technicians) curriculum and have the opportunity for industry certification. Students will also explore mechanical projects leading to participation in the FIRST Robotics competition. (For Inspiration and Recognition of Science and Technology). The use of precision machining techniques and computer aided design (CAD) are incorporated. Programming microprocessors for robotic control are also explored. This course is designed to prepare students for a university-level degree in Engineering.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature & Composition II	* Literature & Composition III	*Senior English *and* *Oral Communication
MATH	*Algebra *or* *Geometry	*Geometry *or* *Algebra II	*Algebra II *or* *Precalculus
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Physical Education *or* *Health *and* *Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Computer Art		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications		
ARTICULATED CREDIT			

EMERGENCY MEDICAL TECHNICIAN

Recommended Academic Course of Study

Instruction includes EMT preparation, basic life support, patient assessment, medical emergencies, trauma, ambulance service, and 32 hours of clinical observation at local fire and hospital emergency departments. The program adheres to the National EMT-Basic and American Heart Association curriculums, as well as Occupational Safety and Health Administration (OSHA) standards. Students will earn EMT, AHA, CPR, and automated external defibrillator, OSHA hazardous materials and outreach training certifications.			
SUBJECT	**10**	**11**	**12**
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Geometry *or* Algebra II *College Prep Math *Algebra	*Algebra II or *Precalculus *Algebra/Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography *Sociology
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
PRACTICAL ARTS	*Keyboarding *and* *Intermediate Keyboarding		
ARTICULATED CREDIT	St. Louis Community College at Forest Park: EMT: 121 Emergency Care, Principles and Techniques , 10 Credit Hours Southwestern Illinois College: EMT Basic, 6 Credit Hours		

FASHION DESIGN

Recommended Academic Course of Study

Students will explore the world of fashion. Activities are directed toward garment construction, fashion illustration, color and textiles, design and embellishment of fashion, and exploration of career opportunities in the apparel industry. Project selections are based on individual skills from beginning to advanced levels. Areas of study include selection and coordination of clothing and accessories; construction techniques through a variety of projects; specialty projects (appliqué, decorative stitches, fabric painting and dying, embellishments); use and care of modern sewing equipment; and career opportunities within the fashion industry.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature & Composition II	*Literature & Composition III	*Senior English *and* *Oral Communication
MATH	*Algebra	*Geometry *or* *Algebra II	*Algebra II *or* *Precalculus *or* *Geometry *or* *Algebra
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography *Sociology
PE/HEALTH	*Physical Education *and* *Health		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art *and* *Advanced Art		
PRACTICAL ARTS	*Keyboarding *and* *Entrepreneurship *and* *Computer Applications		
ARTICULATED CREDIT	Illinois Institute of Art: (Chicago, Schaumberg), Art Institute of Michigan - Detroit FADB111 Survey of the Fashion Industry 4 Qtr Hr. FADB101 Elements of Garment Construction 4 Qtr Hr.		

FIRE FIGHTING

Recommended Academic Course of Study

Instruction includes EMT preparation, basic life support, patient assessment, medical emergencies, trauma, ambulance service and 32 hours of clinical observation at local fire and hospital emergency departments. The program adheres to the National EMT-Basic and American Heart Association curriculums, as well as Occupational Safety and Health Administration (OSHA) standards. Students can earn EMT, AHA, CPR and automated external defibrillator. Students will learn rescue procedures, firefighting and suppression techniques, including fire combat experience in the fire tower. Qualified juniors have the option of moving into the EMT program.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Geometry *or* Algebra II *College Prep Math *or* Algebra	*Algebra II *or* *Precalculus *or* *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Intermediate Keyboarding		
ARTICULATED CREDIT	St. Louis Community College: FIR 208 Hazardous Materials, 3 Credit Hours Lindenwood University – (nonarticulation) Credit hours with State certifications toward B.S. Fire Science		

GRAPHIC DESIGN

Recommended Academic Course of Study

Students will learn to design for advertising, publishing, and display purposes. Instruction is provided in design, typography, production and camera-ready art, computer graphics and personal portfolio preparation. One quarter is spent in printing technology cross-training to develop an understanding of the interaction required between design and production in the graphic communications industry. This program is Print ED Certified and nationally accredited by the Graphic Arts Education and Research Foundation.

SUBJECT	10	11	12
LANGUATE ARTS	*Literature & Composition II	*Literature & Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Geometry *or* *Algebra II *or* * College Prep Math *or* Algebra	*Algebra II *or* Pre Calculus *or* *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry *or* *Biology	*Biology *or* *Concepts of Chemistry *or* *Chemistry	*Physics *or* *Biology 1818 *or* *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government *or* *Contemporary Issues	*American History *or* *Advanced Placement American History	*Geography *Sociology
PE/HEALTH	*Physical Education *and* Health		
FOREIGN LANGUAGE	*Spanish I *and* Spanish II		
FINE ARTS	*Art *and* *Advanced Art *and* *Computer Art		
PRACTICAL ARTS	*Keyboarding		
DUAL CREDIT	ART – 131 Computer Art Studio, 3 Credits Hr.		

HEALTH SCIENCES

Recommended Academic Course of Study

The Health Sciences program teaches the skills necessary for a foundation in healthcare. Through a combination of classroom activities and actual on-the-job clinical experiences in nursing homes, hospitals, and physician's offices, students learn human anatomy and physiology, medical terminology, disease processes, CPR, first aid, vital signs, human relation skills and basic healthcare skills. It is imperative to be able to think and reason for this career field. Upon completion of the program, students may have the opportunity to take the Missouri State Test as a Certified Nurse's Assistant exam. If the student passes the exam with an 80 percent and has completed all clinical requirements, he or she may be certified as a nurse's assistant by the State of Missouri. Seniors may qualify to attend an off-campus program in a nearby acute care hospital or nursing home. Graduates may qualify for advanced standing at the college level.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition I	*Literature *and* Composition II	*Senior English *and* *Oral Communication
MATH	* Geometry *or* *Algebra	*Algebra II *or* *Geometry	*Precalculus *or* *Statistics & Data Analysis
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics *or* *Biology 1818
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography * Sociology
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications		
ACADEMIC INTEGRATION	Anatomy and Physiology, 1 Science Credit, 8 dual credit hours **Prerequisite: Biology (or concurrently)**		
ARTICULATED CREDIT	St. Louis Community College: (NT, ST, Parkway & Pattonville) HIT 101 Medical Terminology, 4 Credit Hours		
DUAL CREDIT	Missouri Baptist University: (NT & ST – not satellites) BIO 213 Anatomy and Physiology I, 3 Credit Hours BIO 211 Anatomy & Physiology Lab I, 1 Credit Hour BIO 223 Anatomy & Physiology II, 3 Credit Hours BIO 221 Anatomy & Physiology II Lab, 1 Credit Hour		

HEATING, VENTILATION, & AIR CONDITIONING

Recommended Academic Course of Study

This program follows HVAC Excellence guidelines, enabling students to earn electrical, gas heat and electrical heat certifications. Students will learn to install, maintain, diagnose and repair indoor environmental systems controlling temperature, humidity and air quality. Instruction includes basic refrigeration, service and diagnostic techniques, heating and cooling systems, electrical operations, control circuitry, soldering and brazing.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Short Stories *or* *Survey of Literature
MATH	*Algebra	*College Prep Math *or* Algebra *Algebra II *or* *Geometry	*Algebra *or* *Geometry *Algebra II *or* Precalculus
SCIENCE	*Applied Biology – Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Physical Education *or* *Health *and* Health &		
FOREIGN LANGUAGE	*Spanish I *and S*panish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Welding Lab *and* *****Entrepreneurship		
ARTICULATED CREDIT	American Trade School: $2750.00 Scholarship on completion of high school two–year program		
APPRENTICESHIP PROGRAM	Construction Craft Laborers: Credit for 40 hours of Apprentice Training and 500 hours of on-the-job training.		

HOSPITALITY AND HOTEL MANAGEMENT

Recommended Academic Course of Study

The objective of this program is to provide students with broad learning on the knowledge, tasks, and skills required to build a career within the hospitality industry. The Year 1 contents deal specifically with the information required for operational level employee positions and responsibilities. The topics include an introduction to hospitality and hotel management program, hospitality soft skills, operational areas, sales and marketing, and safety and security. The Year 2 contents focus on the leadership and managerial aspects, responsibilities, knowledge, and skills required by an entry-level leader in the hospitality industry. The topics for the Year 2 includes an introduction to leadership and management, hospitality leadership skills, operational leadership, managing food and beverage operations, managing business operations, sales and marketing, and safety and security. Students have the opportunity to earn the Certified Hospitality and Tourism Management Professional (CHTMP) designation by passing both the HTMP Year 1 and Year 2 final exams and by gaining one hundred hours of work experience in a qualifying position.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communication
MATH	*Algebra *or* *Geometry	*Geometry or *Algebra II	*Algebra II *or* *Precalculus
SCIENCE	*Applied Biology-Chemistry Or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography *Sociology
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Intermediate Keyboarding *and* *Computer Applications		
ARTICULATED CREDIT	St. Louis Community College: HTM 100 – Intro. To Hospitality Industry, 3 Credit Hrs. HTM 105 – Prof. in the Hospitality Industry, 1 Credit Hrs. HTM 220 – Hotel Facilities Management, 3 Credits Hrs. HTM 225 – Hotel Operation, 3 Credit Hrs.		
DUAL CREDIT			

LAW ENFORCEMENT

Recommended Academic Course of Study

Students will earn national First Responder, American Heart Association First Aid and CPR certifications. They will learn criminal and juvenile justice, problem resolution, defense tactics, emergency response and enforcement procedures, preparation of police reports, investigation, patrol, and traffic control procedures. Physical fitness, human relations, cultural diversity, ethics training and communication skills are also covered. Seniors may participate in an internship with the police department.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communication
MATH	*Algebra	*Geometry *or* *Algebra II *College Prep Math *or* *Algebra	*Algebra II *or* Precalculus *or* *Algebra *or* *Geometry
SCIENCE	*Applied Biology – Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography *Sociology
PE/HEALTH	*Physical Education *or* *Health *or* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications		
ARTICULATED CREDIT			
DUAL CREDIT	University of Central Missouri: (South Tech Only) CJ1000 – Introduction to Criminal Justice, 3 Credit Hours		

MOTORCYCLE & SMALL ENGINE TECHNOLOGY

Recommended Academic Course of Study

Students will learn to diagnose, maintain, and repair lawn equipment, chain saws, motorcycles, personal watercraft, boat engines, all terrain vehicles (ATVs) and other two and four-stroke cycle engine powered equipment. Instruction includes utilization of diagnostic equipment, engine overhauls, tune-ups, drive trains, wheel, tire and safety inspection. Starter, fuel, governor/ throttle, ignition, electrical, carburetion, cooling, lubrication and brake systems are also covered.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Geometry *or* *Algebra II *or* *Algebra *or* *College Prep Math	*Algebra II *or* *Precalculus *or* *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	* Physical Education *and* Health		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Entrepreneurship *and* *Welding Lab		
Dual Enrollment			

PHARMACY SCIENCES

Recommended Academic Course of Study

Students will be immersed in learning the skills necessary to become a pharmacy technician. They will explore pharmacy law/ethics, pharmaceutical terminology and calculations, pharmacy computer systems, drug classifications, prescription processing, and become familiar with over-the-counter medications. The Missouri Baptist course, "Anatomy and Physiology" will be integrated daily into the Pharmacy Sciences instruction; students will earn one science credit as well as the possibility of earning dual credit status for this class. Career opportunities include pharmacist, pharmacy technician, and pharmaceutical sales.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communication
MATH	*Geometry *or* *Algebra	*Algebra II *or* *Geometry	*Precalculus *or* *Algebra II
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography *Sociology
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications		
ACADEMIC INTEGRATION	Anatomy and Physiology, 1 science credit, 8 dual credit hours **Prerequisite: Biology (or concurrently)**		
ARTICULATED CREDIT			
DUAL-CREDIT	Missouri Baptist University BIO 213 Anatomy and Physiology, 3 Credit Hours BIO 211 Anatomy & Physiology I, 1 Credit Hour BIO 223 Anatomy & Physiology II, 3 Credit Hours BIO 221 Anatomy & Physiology II Lab, 1 Credit Hour,		

PRECISION MACHINING

Recommended Academic Course of Study

Instruction includes precision measurement and inspection techniques, blueprint reading and drawing, quality control, and the operation of lathes, grinders, drill presses and milling machines to manufacture metal parts to meet precise specifications. Students will also learn computer aided design (CAD), computer aided manufacturing (CAM) technology, computer numerically controlled (CNC) precision machine operation and programming in an apprenticeship setting.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Short Stories *or* * Survey of Literature
MATH	*Algebra	*Algebra *or* *College Prep Math *or* Algebra	*Algebra II *or* Precalculus *or**Algebra *or**Geometry
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding		
ACADEMIC INTEGRATION	Machining Math, 1 Credit		
ARTICULATED CREDIT	St. Louis Community College: ME 100: Materials & Safety – 3 Credit Hours ME 154: Blueprint Reading – 2 Credit Hours State Technical College of Missouri: MTT 100 - Precision Machinery I - 6 Credit Hours		

PRE-PROFESSIONAL HEALTH SCIENCES ACADEMY

Recommended Academic Course of Study

This one-year course is designed to increase interest in healthcare and biomedical careers by introducing students to the variety of opportunities available in the healthcare industry. The didactic portion of this course consists of foundation curriculum which will prepare students to function safely in clinical settings. Basic health care skills such as vital signs, CPR, and first aid will also be taught. Students will have clinical rotations in area hospitals consisting of job shadowing and informational presentations. Together with classroom learning, these experiences will help students understand the importance of academic achievement and provide them with information on the educational requirements for various careers.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition I	*Literature *and* Composition II	*Senior English *and* *Oral Communication
MATH	* Geometry *or* *Algebra	*Algebra II *or* *Geometry	*Precalculus *or* *Statistics & Data Analysis
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics *or* *Biology 1818
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography * Sociology
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Computer Applications		
ACADEMIC INTEGRATION	Anatomy and Physiology, 1 Science Credit, 8 dual credit hours **Prerequisite: Biology (or concurrently)**		
ARTICULATED CREDIT	St. Louis Community College: (NT, ST, Parkway & Pattonville) HIT 101 Medical Terminology, 4 Credit Hours		

VETERINARY ASSISTANT

Recommended Academic Course of Study

Students will learn animal handling, diagnostics, examination and treatment procedures in a simulated clinical, boarding and grooming facility. Instruction is provided in medical terminology, anatomy and physiology, nutrition, and behavior, diseases and parasites, sterilization, handling and restraining, grooming and bathing, patient examination, surgical and treatment procedures. Emphasis is placed on the physical care of animals. Office procedures, patient scheduling, and records maintenance are also covered.

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Algebra II *or* * Geometry *Algebra *or* *College Prep Math	*Algebra II *or* *Precalculus *or* *Algebra *or* *Geometry
SCIENCE	*Applied Biology-Chemistry American Government or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Physical		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Entrepreneurship		
ACADEMIC INTEGRATION	Introduction to Anatomy and Physiology, 1 science credit, 8 dual credit hours (North Tech only) **Prerequisite: Biology (or concurrently) strongly recommended**		
ARTICULATED CREDIT	Jefferson College: VAT 101 Introduction to Veterinary Tech., 2 Credit Hours		

WEB AND COMPUTER PROGRAMMING

Recommended Academic Course of Study

The curriculum parallels computer programming courses taught at the college level. Students will learn program logic and design, analysis of program goals, and problem-solving skills. They will test programs and maintain a variety of operating and information systems. Coding assignments will be constructed in C+, C++, HTML, JavaScript, and Visual Basic. Students can earn a Microsoft Certification for HTMLD Application Development Fundamentals (MTA 98 375)

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature & Composition II	*Literature & Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra *or* *Geometry	*Geometry *or* *Algebra II	*Algebra II *or* *Precalculus *Statistics & Data Analysis
SCIENCE	*Applied Biology-Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Physical Education *or* *Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Intermediate Keyboarding		
ARTICULATED CREDIT	St. Louis Community College: IS: 129 HTML – 1 Credit Hour IS: 136 Internet Fundamentals (South Tech Only) – 1 Credit Hour IS: 139 Web Publishing – 3 Credit Hours		

WELDING

Recommended Academic Course of Study

Students will learn a wide range of skill applicable to many metal fabrication industries, including aerospace, construction, automotive and diesel manufacturing and repair, machining and shop safety. Instruction is provided in blueprint reading, metal fabrication, cutting, layout and fit up, metallurgy and heat treatment, inspection and testing techniques, Gas Metal Arc Welding and Flux Cored Arc Welding. Oxy-fuel, shielded metal arc, general pipe, gas tungsten-arc and metal arc, plasma and carbon-arc welding procedures are covered. Students have the option to become certified with the American Welding Society (AWS).

SUBJECT	10	11	12
LANGUAGE ARTS	*Literature *and* Composition II	*Literature *and* Composition III	*Senior English *and* *Oral Communications
MATH	*Algebra	*Geometry *or* *Algebra II *or* Calculus *College Prep Math *or* Algebra	*Algebra II *or* *Precalculus *Algebra *or* *Geometry
SCIENCE	*Applied Biology – Chemistry or *Biology	*Biology or *Concepts of Chemistry or *Chemistry	*Physics or *Biology 1818 or *Anatomy & Physiology
SOCIAL STUDIES	*Consumer Economics & American Government or *Contemporary Issues	*American History or *Advanced Placement American History	*Geography
PE/HEALTH	*Health *and* Health & Wellness		
FOREIGN LANGUAGE	*Spanish I *and* *Spanish II		
FINE ARTS	*Art		
PRACTICAL ARTS	*Keyboarding *and* *Entrepreneurship		
ARTICULATED CREDIT	State Technical College of Missouri: (Up to 15 hrs. total credit) MPT 165, WLT 160, WLT 100, WLT 110, WLT 115, WLT 120, WLT 130, WLT 140, WLT 150 – 1 to 3 Credit Hours each		
APPRENTICESHIP PROGRAMS	Construction Craft Laborers: 40 hours of Apprentice Training and 500 hours of on-the-job training.		