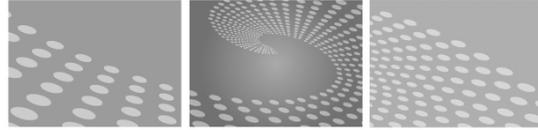


MERCER COUNTY



TECHNICAL SCHOOLS

Health Science Academy

2017 - 2018

Course Offerings

Grades 9—12

www.mcts.edu

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INTRODUCTION

ABOUT THE HEALTH SCIENCE ACADEMY

The Health Science Academy is a full-time, four-year program housed at Mercer County Technical Schools' Assunpink Center. The Health Science Academy offers self-motivated students a comprehensive preparation for careers in the health, medical, and biological sciences. Students work and study in a creative environment enhanced by contact with specialists in the health care fields. Personal and career counseling, coupled with field experiences, prepares each student for college and careers. The Health Science Academy is affiliated with colleges, universities, private practitioners, and research facilities in order to enhance a rigorous curriculum.

MISSION STATEMENT

It is the mission of the Health Science Academy to provide a highly specialized learning environment which promotes the development of a confident, well-rounded health care professional through unique academic experiences specific to the field of health care.

This will be achieved by:

- Implementing challenging cross-curricula experiences that promote critical thinking skills and foster opportunities for leadership
- Embracing high professional standards in ethics and character development
- Providing authentic clinical experiences and internships through professional and community partnerships
- Utilizing state-of-the-art equipment technology that will enhance employment and academic opportunities in an ever-changing environment

ADMISSIONS

Interested students and their families are encouraged to attend an information session to learn about the Health Science Academy. Students may apply online at www.mcts.edu during the fall of their 8th grade year. Students from all Mercer County sending districts are encouraged to apply.

The following criteria will be considered for admission:

- Grade Point Average/Attendance (7th and 8th grades)
- Standardized Test Scores—NJ ASK (7th grade)
- 2 Admissions Assessments (Math and Language Arts)
- Written recommendation from counselor or academic instructor (optional)

CURRICULUM SPECIFICS

The Health Science Academy provides students with a focused program in the medical and biological sciences. Students will receive a solid foundation in the core subject areas and a rigorous health sciences course of study. An important component of the program is the opportunity for students to attain practical experience in the workplace as well as in academic settings. Upon high school graduation, students may choose to continue their education at the college or university level or they may directly enter the workforce.

POSTSECONDARY PARTNERSHIPS

The Mercer County Technical School District has established postsecondary partnerships with Mercer County Community College and Rutgers. Through these partnerships, students can earn college credit at both institutions while enrolled with us. The intent of the program is to encourage entry into community colleges, state colleges and universities. Also, students receive a solid foundation in the health sciences which , helping retention in the chosen health related professions program. The high school students experience with college level course work enhances academic skill development.

NJ HIGH SCHOOL GRADUATION REQUIREMENTS

Below are descriptions of the academic expectations for what students should know and be able to do by the time they graduate from high school.

MCTS Board Policy 5460 regarding high school graduation is located online at:
http://www.mcts.edu/filelibrary/MCTS_5460.pdf

N.J. Department of Education Required Assessments for High School Graduation

For more information about New Jersey's high school graduation assessment requirements, visit <http://www.nj.gov/education/assessment/parents/GradReq.pdf>

N.J. Department of Education Required Credits for High School Graduation

English/Language Arts Literacy	20 credits - including English I-IV
Health & Physical Education	At least 3.75 credits per year in physical education, health & safety during each year of enrollment, distributed as 150 minutes per week
Mathematics	15 credits - including Algebra I, Geometry
Science	15 credits - including Lab Biology; Lab Chemistry and/or Physics and/or Environmental Science; plus a third laboratory/inquiry-based science
Social Studies	15 credits - including Modern World History/Geography, U.S. History I & II
World Languages	5 credits
21st Century Life & Careers (Family/Consumer Science, Business Administration & Technology, Technology Education)	5 credits
Financial, Economic, and Entrepreneurial Literacy	2.5 credits
Visual and Performing Arts (Art, Music, Drama, Dance)	5 credits
Electives	15 credits
Total number of required credits	120 Credits

NOTE: Code 6A:8-5.1 ix: Technological literacy consistent with the CCCS is integrated throughout the curriculum.

INDUSTRY CERTIFICATIONS

- 9th Grade - First Aid
- 10th Grade - CPR

SCOPE & SEQUENCE

Core	Grade 9	Grade 10	Grade 11	Grade 12
English	English I	English II	English III	English IV Or ENG 101 MCCC
	World Literature	American Literature	American Literature II	
			Creative Writing (1/2 year)	
Social Studies	World History	US History I (US History to 1865)	US History II (US History Since 1865)	Introduction to Sociology SOC 101 (MCCC)
				Introduction to Psychology PSY101 (MCCC)
World Language and Internship	Spanish I	Spanish II	Spanish III	MCCC Elective
Physical Education	Fitness & Health I	Fitness & Health II and Drivers Education	Fitness & Health III Intro to Personal Fitness	Fitness & Health IV Concepts of Health Fitness or HPE 110 (MCCC) (Option 2)
Interdisciplinary Studies and Health Sciences	Art Elective	Dynamics of Health Care (Rutgers)	Personal Financial Literacy (1/2 year)	Medical Terminology
				Senior Internship
	Personal Health & Nutrition			Career Prep (MCCC)
Mathematics	Algebra I or Geometry	Algebra II or Geometry	Algebra II or Pre-Calculus (MCCC)	Pre-Calculus (MCCC) or Calculus (MCCC)
Biological and Physical Sciences	Biology BIO113 (MCCC)	Microbiology BIO115 (MCCC)	Anatomy and Physiology I (Rutgers)	Anatomy and Physiology II (Rutgers)
		Chemistry	Physics	Organic Chemistry

ENGLISH

English I – Grade 9

Course: 01001 G 5.00 11

This course builds upon prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and includes the four aspects of language use: reading, writing, speaking, and listening. The course introduces and defines various genres of literature, with writing exercises linked to reading selections.

Students are exposed to a variety of genres, including novels, novellas, drama, short stories, poetry, and nonfiction articles. Students work both independently and in small groups to explore and master concepts and complete a variety of learning activities. Students begin to learn the skills necessary to perform well on a variety of health science–based assessments.

English II - Grade 10

Course: 01002 G 5.00 11

This course focuses upon commonly known American authors and their work. Students improve their critical thinking skills as they determine the underlying assumptions and values within the selected works and as they understand how the literature reflects the society of the time. Oral discussion is an integral part of the course, and written compositions are required.

Students further explore concepts relating to grammar, writing, vocabulary, literary analysis, reflection and research. Students work independently and in small groups to master various concepts and complete a variety of learning activities, including a major research project.

Creative Writing – Grade 11

Course: 01104 G 2.50 11

This half-year course offers students the opportunity to develop and improve their technique and individual style in poetry, short stories, drama, essays, and other forms of prose. The emphasis of the course is on writing; however, students may study exemplary representations and authors to obtain a fuller appreciation of form and craft. Creative writing covers several expressive forms of writing.

English III - Grade 11

Course: 01003 G 5.00 11

This course is a survey of British Literature. Works include epic poetry, sonnets, plays, novels, historical texts, and other genres. Students continue to use literary analysis to identify thematic elements and make connections between texts and the real world. The course contains reinforcement of writing skills. In addition, students will continue to develop their research and technology-assisted oral presentation skills, building upon the previous two courses and further preparing them for college and the workforce.

British Literature provides a survey of British literature that focuses on a selected timeframe of England's history. Students improve their critical-thinking skills as they determine the underlying assumptions and values within the selected works and as they understand how the literature reflects the society of the time. Oral discussion is an integral part of literature courses, and written compositions are required.

ENGLISH (continued)

English IV (Humanities) - Grade 12

Course: 01004 G 5.00 11

This course is designed to raise awareness of world events and the human condition. Students read and analyze a variety of texts and genres from various parts of the world and use information gleaned from these texts to form conclusions regarding disparities and similarities between cultures. Students associate literature from various parts of the world with corresponding art forms such as music and visual art and relate this art to cultural norms and beliefs. This course encourages students to experience literature and art from different cultures and relate them to those studied in other courses.

Humanities provides an overview of major expressions of the cultural heritage of selected western and eastern civilizations. Content typically includes, but is not limited to, the examination of selected examples of art, music, literature, technology, philosophy, and religion of the cultures studied.

MCCC ENG 101 - English Composition I—Grade 12

Course: 01004 C

Prerequisite: placement test or minimum C grade in ENG 024 and ENG 034

College-level composition course designed to assist students in writing 750- to 1500-word essays on topics in various academic disciplines. Focuses on development and support of ideas, essay structure, critical thinking, analysis of readings, and other aspects of writing. Students are introduced to research techniques and documentation. (MCCC—3 credits)

Acellus College Prep – English IV—Grade 12

Course: 01054 O

Prerequisite: Survey of American Literature

As students transition from High School to College or into the work force, their ability to apply language arts skills in real-world scenarios becomes essential. In Acellus College Prep English, students learn practical strategies for effective writing in college or on the job, including how to write scholarly essays, concise technical reports, compelling resumes, and professional business emails. Grammar, vocabulary, and spelling tips round out the course to empower college/employment-bound students for success in their post-high school endeavors.

FINE ARTS

Video Production

Course: 500602 G

This course prepares individuals to communicate dramatic information, ideas, moods, and feelings through the making and producing of films and video. Includes instruction in theory of film, film technology and equipment operation, film production, film directing, film editing, cinematographic art, film audio, techniques for making specific types of films and/or video, media technologies, computer image making, multi-media production, and planning and management of film/video operations.

HEALTH & PHYSICAL EDUCATION

Fitness and Health I - Grade 9

Course: 08201 G 5.00 11

This course starts with an emphasis on the basic five components of health-related fitness while concentrating on flexibility and body composition. This first year of Physical Education is all about developing a fundamental set of skills for a variety of sports, as well as for life, with a concentration on physical fitness all-year-round. The health classes help to build a base understanding of nutrition, diet fads, human sexuality, relationships and drug awareness. Students also study basic anatomy and how it relates to becoming a physically fit person.

Fitness and Health II - Grade 10

Course: 08201 G 5.00 11

This course builds on those skills that were taught in the 9th grade. Students learn how the muscular and cardiovascular systems work together during exercise. The health class will consist primarily of driver's education. Additional coverage of sexuality and drug awareness is also included. Students take part in projects that allow them to study, in more depth, how certain components of fitness are used to make one's body more physically fit.

Driver's Education - Grade 10

Driver Education Theory, New Jersey State Driver's Manual, Understanding the Automobile and the Highway Transportation System, Insurance, Traffic Laws, Buying, Selling, Insuring a Vehicle, Detrimental Substances, and First Aid.

Fitness and Health III - Grade 11

Course: 08201 G 5.00 11

This course builds on those skills that were taught in 10th grade. Students develop a level of mastery of a variety of skills including basics of biomechanics, kinesiology, and exercise physiology. They will also take part in fundamental sports medicine concepts like splinting and taping. All of these concepts are covered to help the students understand how their body is designed to work during exercise. The health class portion focuses on personal health care throughout their life, becoming an informed consumer and how physical activity helps to manage or maintain a healthy weight.

Fitness and Health IV - Grade 12

Course: 08201 G 5.00 11

This course is aimed at life-long fitness. Finishing the second half of biomechanics, kinesiology, and exercise physiology concepts, the students will learn how to properly use resistance training to design a long-term fitness strategy, which can be based on different personal goals they can set for themselves. They will also design a basic exercise regimen. The health class portion of the course will focus on family life living with an emphasis on dealing with marriage, starting a family and discussing real-life societal issues they will face as they graduate.

MCCC HPE 110 - Concepts of Health and Fitness

Course: 08201 C 5.00 11

Prerequisite: ENG 033 or equivalent

Through lectures and laboratories, essential knowledge and skills in health and all dimensions of wellness are explored. Through self-assessments, students develop a wellness profile and program designed to achieve and/or maintain optimal lifelong health and wellness. Physical activity is required. 1 lecture/2 laboratory hours (MCCC—2 credits)

MATHEMATICS

Algebra I – Grade 9

Course: 02052 G 5.00 11

This course is the connection from the concrete to the abstract study of mathematics. Topics include functions; linear functions and relations; nonlinear expressions, equations, and functions; advanced functions and equations and data analysis. Students will investigate concepts in order to build conceptual understanding; develop, reinforce and master computational and procedural skills, and apply mathematics in problem-solving. Students will also participate in real-world problem solving using multiple representations including the use of technology and hands-on labs. Frequent, meaningful assessment of progress is offered within the curriculum structure.

Algebra II - Grade 9,10,11

Course: 02056 G 5.00 11

This course provides advanced skills in algebraic operations and builds a foundation for students who will be taking Pre-Calculus and students planning to attend college. Fundamental skills of mathematics will be applied to linear relations and functions; quadratic, polynomial and radical functions and relations; advanced functions and relations; discrete mathematics and trigonometry. Students will conceptualize, analyze and identify relationships among functions and develop proficiency in analyzing situations verbally, mathematically, graphically and symbolically. Students will also learn to apply these concepts to real-world situations. Students use technology to discover course content.

Geometry – Grade 9,10

Course: 02072 G 5.00 11

This course focuses on preparation for Algebra II and Pre-Calculus. This course uncovers concepts from higher-level mathematics courses. The course provides mathematical tools for complex reasoning and solving problems in the sciences and technology. Topics include geometric structure, congruence, similarity, and measurement. This course also includes an in-depth analysis of solid, plane, and coordinate geometry as they relate to abstract and real-world problems. Students will develop a geometric structure and apply theorems and formulas to real-life problems. Students use technology to discover course content.

Calculus - 11, 12

Course: 02123 G

This courses includes the study of derivatives, differentiation, integration, the definite and indefinite integral, and applications of calculus. Typically, students have previously attained knowledge of pre-calculus topics (some combination of trigonometry, elementary functions, analytic geometry, and math analysis).

MATHEMATICS (continued)

Pre-Calculus– Grade 10,11,12

Course: 02110 G 5.00 11

This course promotes an in-depth understanding of the concepts and mathematical thinking necessary for AP Calculus and AP Statistics. It is an extension of Algebra II, with an emphasis on Trigonometry, limits and introductory calculus topics. The course uses meaningful real-world problems and technology to build upon concepts and uncovers all topics necessary for success in a college-level calculus course. Students will learn functions, identities and equations, conic sections, vectors, polar coordinates, limits, and inferential statistics.

Acellus Pre-Calculus – Grade Level: 9, 10, 11, 12

Course: 02110 O

Prerequisite: Trigonometry

Acellus Pre-Calculus covers topics that students must understand to tackle the rigorous Acellus AP Calculus AB course. Course topics include functions, parallel and perpendicular lines, analytic trigonometry, vectors, parametric, and polar, systems and matrices, conics, binomial theorem, regression, finding limits, tangent lines and area under a curve.

Acellus AP Calculus AB – Grade Level: 9, 10, 11, 12

Course: 02124 O

Prerequisite: Pre-Calculus

Acellus AP Calculus is a two-part advanced placement course providing students with the curriculum required by the College Board for AP Calculus AB and BC. Students completing this course will be able to take the AP Calculus exam, enabling them to earn college credit for taking this course while still in high school. Besides learning how to use the basic tools of Calculus, students completing this course learn on a deeper level what they are really doing and why it works. This provides insight few students experience in more conventional Calculus courses, empowering them with the knowledge required to solve real world problems.

Acellus AP Calculus BC – Grade Level: 9, 10, 11, 12

Course: 02125 O

Prerequisite: AP Calculus AB

Acellus AP Calculus is a two-part advanced placement course providing students with the curriculum required by the College Board for AP Calculus AB and BC. Students completing this course will be able to take the AP Calculus exam, enabling them to earn college credit for taking this course while still in high school. Besides learning how to use the basic tools of Calculus, students completing this course learn on a deeper level what they are really doing and why it works. This provides insight few students experience in more conventional Calculus courses, empowering them with the knowledge required to solve real world problems.

MCCC MAT 125 - Elementary Statistics I

Course: 02201 C

Prerequisite: MAT 037 (or MAT 037A and 037B) or MAT 042 or appropriate placement test score

A basic introduction to statistical concepts and methods. Topics include descriptive statistics, basic probability concepts, discrete and normal probability distributions, hypothesis testing and confidence intervals with one sample mean and one sample proportion, as well as regression and correlation. Studies include the use of statistical software. 3 lecture hours (MCCC—3 credits)

MATHEMATICS

MCCC MAT 146 - Pre-Calculus

Course: 02110 C

Prerequisite: MAT 135 with a minimum C grade or appropriate College Level Math placement test score

In-depth study of polynomial, rational, exponential, logarithmic, trigonometric and inverse trigonometric functions, equations, and identities; systems of equations including matrices; extensive use of graphing calculators. [grade of B- or better is strongly recommended to proceed to MAT 151] 4 lecture hours (MCCC—4 credits)

MCCC MAT 151 - Calculus I

Course: 02121 C 5.00 11

Prerequisite: MAT 146 with a minimum C grade or appropriate College Level Math placement test score

First course in the standard integrated calculus sequence. Topics include differentiation of algebraic, exponential, logarithmic, trigonometric, hyperbolic, and inverse trigonometric functions. Applications include curve sketching, related rates, maxima, minima, and approximations as well as integration and applications of the definite integral. 4 lecture hours. (MCCC—4 credits)

MCCC MAT 152 - Calculus II

Course: 02123 C 5.00 11

Prerequisite: MAT 151 with a minimum C grade and consultation with mathematics faculty member

Continuation of MAT 151. Topics include techniques of integration, areas, volumes, arc length, surface area, improper integrals, Simpson's Rule, infinite sequences, MacLaurin and Taylor series, differentiation of polar and parametric equations, conic sections in rectangular and polar form, and rotation of axes. 4 lecture hours. (MCCC—4 credits)

MCCC MAT 200 - Statistics for Social and Health Sciences I **Course: 02209 C**

Prerequisite: MAT 135 with a minimum C grade or appropriate College Level Math placement test score or permission of department

An applied statistics course for the social sciences, nursing, etc. Topics include data production and access, one-variable data analysis, correlation and regression, normal and binomial distributions, sampling distributions, estimation and tests of hypotheses for a single sample. MINITAB statistical software is used to calculate statistics and generate graphs. 3 lecture hours. (MCCC—3 credits)

MCCC MAT 251 - Calculus III

Course: 02126 C

Prerequisite: MAT 152 with a minimum C grade and consultation with mathematics faculty member

Continuation of MAT 152. Includes parametric equations, vectors, solid analytic geometry, partial derivatives, multiple integrals, and topics in vector calculus including Green's theorem and Stoke's theorem. 4 lecture hours. (MCCC—4 credits)

SCIENCE/HEALTH SCIENCE

Biology — Grade 9

Course: 03051 G 5.00 11

This course is designed to give students a basic understanding of modern biology with an emphasis on chemical biology, cell biology, and plant biology. Laboratory exercises stress the development of skills in basic lab techniques, reinforce lecture topics, and introduce supplemental topics. Experiments involve careful observations, measurements, data collection and analysis. This course is intended to give students a strong background in biology while integrating health science. *Upon successful completion of this course, students earn 3 MCCC college credits for BIO113.*

Personal Health and Nutrition — Grade 9

Course: 08051 G 5.00 11

This course covers the dynamics of health and the affect of one's decisions on wellness. It encourages students to take responsibility for their own personal health and develop life skills. This course entails a great emphasis on science, professionalism, and mastering of technical skills. These essential fundamentals form the foundation of a successful professional in the health and science career path. An overview of careers in the health science industry will be explored during this course. *This course meets the high school graduation requirement for 21st Century Life & Careers (Family/Consumer Science, Business Administration & Technology, Technology Education).*

Chemistry-Grade 10

Course: 03101 G 5.00 11

This course presents basic principles of chemistry and fosters an appreciation of chemistry as a creative human endeavor. It develops analytical and critical thinking skills in all students, especially that which involves logical and quantitative relationships among physical properties. Topics include chemical reactions and stoichiometry; atomic theory and the structure of matter; periodic table; chemical bonding; kinetic-molecular theory and the states of matter; gas laws; solutions; oxidation-reduction; and acid-base systems. Lab work introduces data collection and analysis.

Dynamics of Health Care in Society — Grade 10

Course: 14001 G 5.00 11

Dynamics of Health Care in Society is an orientation to health care and delivery, from an interdisciplinary perspective, with a focus on process skills to include critical thinking, ethical reasoning, effective communication, and self-directed learning abilities. The professional competencies stress application to general issues and topics common to all health care providers. Emphasis is placed on the role of the health care practitioner as both provider and consumer of health care services. *Upon successful completion of this course, students earn 3 Rutgers college credits for IDST2250.*

Microbiology — Grade 10

Course: 03060 G 5.00 11

This course introduces students to topics in modern Microbiology including microbial cell biology, biotechnological uses of microbes, and microbial evolution and ecosystems. The course also explores the control of microorganisms and relationships between microbes and higher organisms. This is a non-laboratory course. This course gives students a strong background in Microbiology while integrating the theme of the school. Aspects of problem-based learning and higher-order thinking skills are integrated in the course. Employing research related to learning styles and multiple intelligences will further ensure an active engagement of students. *Upon successful completion of this course, students earn 3 MCCC college credits for BIO115.*

SCIENCES/HEALTH SCIENCES (continued)

Anatomy and Physiology I - Grade 11

Course: 03053 G 5.00 12

Prerequisite: Biology, Microbiology

This course provides an in-depth study of the human body with an emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. The essential principles that will be presented include: basic anatomical and directional terminology, principles of cell biology and a survey of all body systems. As the course progresses, students integrate all parts into the whole, reflecting on the unifying themes of homeostasis, structure relating to functions, and evolution. (Rutgers—4 Credits)

MCCC HPE 113 - Medical Terminology

Course: 14154 C

Prerequisite: ENG 101 placement

This course will introduce students to the language of the medical profession. This foundation is necessary for establishing a career in healthcare. Students will learn how to analyze a medical term by dividing it into its component parts to obtain a definition. Basic anatomy will be introduced as each body system is studied. Each chapter contains multiple exercises to be completed in the included workbook to aid and reinforce the learning process. A CD ROM is also included with additional exercises to be used as study aids. (MCCC—3 credits)

Physics—Grade 11

Course: 03151 G 5.00 11

This course focuses on physical properties and their interactions, physical processes and the study of the natural or material world. The students' knowledge of the principles and theories of physics are developed based on direct observation, authentic experience, laboratory experimentation, mathematical modeling, and inquiry-based learning. The laboratory is an integral part of this course. This course is designed to foster an appreciation of physics as a creative human endeavor, and to develop analytical and critical thinking skills in every student.

Anatomy and Physiology II - Grade 12

Course: 03053 G 5.00 22

Prerequisite: Anatomy and Physiology I

This course provides an in-depth study of the human body with an emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. The essential principles that will be presented include: basic anatomical and directional terminology, principles of cell biology and a survey of all body systems. As the course progresses, students integrate all parts into the whole, reflecting on the unifying themes of homeostasis, structure relating to functions, and evolution (Rutgers—4 credits)

Organic Chemistry—Grade 12

Course: 03103 G 5.00 11

This course is a sub-discipline within chemistry involving the scientific study of the structure, properties, composition, reactions, and preparation (by synthesis or by other means) of carbon-based compounds, hydrocarbons, and their derivatives. Students will learn how organic compounds form the basis of, or are important constituents of many products such as plastics, drugs, petrochemicals, food, explosives and paints.

SCIENCE/HEALTH SCIENCE (continued)

Rutgers -IDST 1000—Medical Terminology

Course: 14154 S

Medical Terminology is the study of words that pertain to body systems, anatomy, physiology, medical processes and procedures and a variety of diseases. It provides specialized language for the health care team, enabling health care workers to communicate in an accurate, articulate and concise manner. This course is designed to give the students a comprehensive knowledge of word construction, definition and use of terms related to all areas of medical science. The course includes but is not limited to terms related to anatomy of the human body, functions of health and disease, and the use of language in processing medical/dental records and claim forms.

Included with the Medical Terminology curricula is additional information on various CD-ROMs available to supplement the current curricula or to use as a student-centered teaching tool. The CD-ROMS offer an interactive modality of teaching which enhances learning. (Rutgers—3 credits)

SENIOR INTERNSHIP

Senior Internship - Grade 12

Course: 14298 G 10.00 11

This course provides students with direct work experience in careers related to health support services. Goals are typically set cooperatively by the student, teacher and employer. (Students may participate in paid or unpaid internships). Students will learn intricate components of a healthcare office, legal and ethical considerations of science, medicine, employment and management. Units will expand medical terminology and reinforcement of previously learned material in their coursework.

SOCIAL STUDIES

World History - Grade 9

Course: 04052 G 5.00 11

This course offers an in-depth study of history, geography and cultures of civilizations from the Western and non-Western worlds. The course emphasizes major turning points in the shaping of the modern world. This course provides students opportunities to compare and contrast Western and non-Western cultures and to become knowledgeable about historical events as they relate to their respective geo-political settings.

US History I - Grade 10

Course: 04102 G 5.00 11

This course develops an appreciation for the social, cultural, political, and economic heritage of our nation and New Jersey. Included is an examination of America's emergence as a pluralistic and multi-dimensional society, democratic system, and world power. Emphasis will be placed upon the modern era coupled with the appropriate comparisons to earlier periods.

SOCIAL STUDIES (continued)

Personal Financial Literacy - Grade 11

Course: 22210 G 2.50 11

This half-year, 2.5 credit course provides students with an exploration of personal finance. Topics include budgeting, credit, investing, risk-management and estate planning. The curriculum provides a solid foundation for students to build their financial future. Students will learn how to manage money, explore investment opportunities and understand the terms and conditions associated with credit cards and other types of loans.

The course engages students in a variety of critical thinking skills while using the internet as a resource. Students participate in a Stock Market investment simulation and learn money management by creating a personal budget. They also engage in a variety of banking activities such as writing checks, CD rate comparisons, using ATM cards and electronic banking. The course also provides an understanding and application of purchasing appropriate types of insurance, tax preparation skills, buying or renting a home and preparation for financial stability of their family.

US History II - Grade 11

Course: 04103 G 5.00 11

This course covers America from 1865 to the present. Students learn about the United States in the 20th Century and its worldwide influences including key events, concepts and individuals that shaped the United States. Students will interpret history as a meaningful and important facet of their lives. Political institutions, public policy, social developments, economic developments, cultural and intellectual developments, diplomacy and international relations, military conflicts, current events are themes reflected in this comprehensive course.

WORLD LANGUAGE

Spanish I - Grade 9

Course: 06101 G 5.00 11

This course teaches students to become accustomed to the Spanish language through oral, written, and auditorial exercises. Students will develop skills to communicate basic concepts and topics such as greetings, telling time, dates, weather, describing their favorite pastimes, family life, and school day. Students will also explore the cultural side of the language by comparing and contrasting their lives with those in Spanish-speaking countries.

WORLD LANGUAGE (continued)

Spanish II - Grades 9, 10

Course: 06102 G 5.00 11

This course allows students to apply the knowledge learned in Spanish I. Students explore other cultures and increase their ability to speak, read and write Spanish. More emphasis will be placed on the fluency of speaking the language through increased cultural assignments.

Spanish III - Grades 10, 11

Course: 06103 G 5.00 11

This course allows students to apply the knowledge learned in Spanish I and II. Students continue to develop their proficiency in speaking, listening and writing. Students will continue interacting with other speakers of Spanish. Students communicate on a variety of topics using complex structures, moving from concrete to more abstract concepts. Students comprehend the main ideas of authentic materials that they read and hear, and are able to identify significant details when the topics are familiar. Spanish is used almost exclusively in the class as students develop the ability to discuss topics related to historical and contemporary events and issues.

ELECTIVES

MCCC PSY 101 - Introduction to Psychology Grade 12

Course: 04256 C 5.00 11

The scientific study of human nature -- facts, principles, and theories concerning the mental, emotional, neurological, and social dimensions of human experience. Topics include consciousness, learning, thinking, memory, brain structure and function, motivation and emotion, development, personality, mental illness and its treatment, relationships, and social influence. 3 lecture hours (MCCC—3 credits)

MCCC-SOC101—Introductory to Sociology Grade 12

Course: 04258 C 5.00 11

An introduction to the sociological analysis of society and culture, including the origin and design of political, economic, and social institutions such as religion, the family, class and caste, education, values, norms, roles, and socio-cultural change. Students learn to analyze, evaluate, and critique social structures. 3 lecture hours (MCCC—3 credits)

CAREER PREP

Career Prep is an elective program of the Mercer County Technical Schools in partnership with Mercer County Community College. The program offers high school seniors an opportunity to enroll in courses at Mercer County Community College. This is an exceptional elective opportunity for students to simultaneously earn high school and college credits. College credits can be applied toward MCCC associate degree programs or transferred to four-year colleges and universities.

WHO IS ELIGIBLE TO APPLY?

Mercer County high school students who:

- earned a recommended GPA of 3.25 or higher in current high school classes
- maintained an excellent attendance record with no (X) Absence grades
- completed the appropriate number of high school credits for high school graduation
- have a strong interest in the program of study
- have a thorough understanding of the program requirements
- have a strong counselor recommendation

WHEN DOES THE PROGRAM TAKE PLACE?

Career Prep courses are offered from approximately 11:45AM to 2:30PM daily on the grounds of Mercer County Community College, West Windsor campus with the exception of Fire Science Technology, which is located at the Dempster Fire Training Center in Lawrenceville. Sometimes, there are classes that may take place after 2:30PM. The college schedule is followed- therefore students must attend classes based on the MCCC calendar which may differ from the high school calendar.

PROGRAM BENEFITS

Students can earn up to 13 college credits, tuition-free. Students completing Career Prep programs will receive transferable college credits upon graduation from their high school.

STUDENT RESPONSIBILITIES

- Students must purchase books and any uniform requirements (tuition is provided)
- Students must attend all scheduled class meetings – 3 absences (regardless of reason) permitted per course before withdrawn from program entirely
- Students must earn passing grades, according to MCCC policy (C and above), in all classes during the 1st semester in order to advance to the 2nd semester courses
- Students must adhere to college procedures, code of conduct and college rules and regulations according to the Mercer County Community College Handbook or face withdrawal from the program

CAREER PREP (continued)

ADVERTISING AND DESIGN - 12 CREDITS

The Advertising and Design program prepares students for positions as designers, graphic communicators, and assistant art directors. These positions are most often found in advertising agencies, design firms, corporate communication departments, interactive multimedia studios, and the television industry. It also prepares students for advanced study in graphic design, advertising design, web design, or visual communication.

- ART 102 Basic Drawing – 3 CREDITS
- ART 105 Two Dimensional Design – 3 CREDITS
- ADV110 Typography I: Basics of Graphic Design – 3 CREDITS
- DMA 105 Introduction to Computer Art – 3 CREDITS

BUSINESS STUDIES – 12 CREDITS

This program is designed for the student who plans to earn a business-related degree at a four-year college or university.

- IST 101 – Computer Concepts with Applications – 3 CREDITS
- CMN 111 – Speech: Human Communication – 3 CREDITS
- ECO 103 – Basic Economics – 3 CREDITS
- BUS 209 – Business Letter/Report Writing – 3 CREDITS

COMMUNICATION - 12 CREDITS

The Communication program prepares students to transfer into a baccalaureate degree program. Designed to explore both theory and the development of practical skills, the core curriculum includes courses in oral communication, mass media, and media ethics. The General Communication concentration is designed to provide experience in a variety of areas associated with communication careers. Students then select from one of four concentrations to complete their degree.

- CMN 101 Mass Media – 3 CREDITS
- CMN 102 Media Issues & Ethics – 3 CREDITS
- CMN 111 Speech: Human Communication – 3 CREDITS
- CMN 151 Introduction to Radio – 3 CREDITS

CRIMINAL JUSTICE – 12 CREDITS

This program is designed for students interested in a career in the field of law enforcement or those preparing for advanced study in law, criminology, social welfare or criminal justice.

- CRJ 101 – Introduction to the Criminal Justice System – 3 CREDITS
- CRJ 103 – Introduction to Corrections – 3 CREDITS
- CRJ 105 – Criminology – 3 CREDITS
- CRJ 212 – Juvenile Justice – 3 CREDITS

CAREER PREP (continued)

CULINARY & PASTRY ARTS – 12 CREDITS

This program is designed to provide students with the opportunity to jump-start their career in the food service industry as a professional chef or pastry chef.

HOS 100 – Hospitality Success Skills – 1 CREDIT

HOS 101 – Food Preparation I – 3 CREDITS

HOS 115 – Food and Culture – 3 CREDITS

HOS 118 – Sanitation and Safety in Food Service Operations – 2 CREDITS

HOS 217 – Professional Baking I – 3 CREDITS

DANCE– 12 CREDITS

This program offers an intensive study of jazz, ballet and modern technique. Students also receive training in choreography and perform in student-driven projects as well as the Mercer Dance Ensemble (MDE), Mercer County's own dance company.

- DAN 101 – Introduction to Dance and Culture – 3 CREDITS
- DAN 116 – Studio Dance Technique I – 3 CREDITS
- DAN 117 – Studio Dance Technique II – 3 CREDITS
- DAN 120 – Choreography I – 3 CREDITS

ENTERTAINMENT TECHNOLOGY: MUSIC TECHNOLOGY - 12 CREDITS

The Entertainment Technology program prepares students for careers in the entertainment industry. The Music Technology concentration integrates music theory and performance with a comprehensive array of technical and business skills that enable the graduate to pursue a variety of career tracks in the music industry such as record producer, recording engineer, remix engineer, sound technician for live shows and concerts, as well as careers in the field of film scoring and film music editing.

- ETT 102 Introduction to Entertainment Industry – 3 CREDITS
- MUS 103 Introduction to Music – 3 CREDITS
- CMN 111 Speech: Human Communication - 3 CREDITS
- CMN 153 Digital Audio Production I – 3 CREDITS

ENTERTAINMENT TECHNOLOGY: TECHNICAL THEATER - 12 CREDITS

The Entertainment Technology program prepares students for careers in the entertainment industry. The Technical Theatre concentration prepares graduates for careers as lighting and sound technicians, technical managers, equipment marketing representatives, and technical personnel for distributors and rental houses.

- ETT 102 Introduction to Entertainment Industry – 3 CREDITS
- THR 101 Introduction to Theater – 3 CREDITS
- THR 152 Lighting Technology (Prerequisite: ETT 102) – 3 CREDITS
- CMN 153 Digital Audio Production 1 – 3 CREDITS

CAREER PREP (continued)

EXERCISE SCIENCE – 11 CREDITS

This program provides the opportunity for students to acquire the skills, knowledge and experience necessary to enter the continually evolving field of exercise science and to transfer into related baccalaureate programs.

- HPE 101 – Basic Concepts of Nutrition – 3 CREDITS
- HPE 105 – First Aid, CPR, and AED – 3 CREDITS
- HPE 110 – Concepts of Health and Fitness – 2 CREDITS
- HPE 151 – Introduction to Exercise Science – 1 CREDIT
- HPE 163 – Team Sport Management – 2 CREDITS

FASHION/APPAREL DESIGN - 12 CREDITS

The Fashion/Apparel Design program is highly interdisciplinary, providing a strong foundation in art, design, and technical studies while developing a perspective on both the creative and business aspects of the industry. The program also prepares students for advanced study at four-year colleges by paralleling the first two years of course requirements at several institutions. While the design sequence emphasizes core creative art skills, technical training focuses on computer applications used in the industry and sewing labs structured to mirror those of actual fashion/ apparel studios.

- FAS 150 Technical Skills for Apparel Production I – 3 CREDITS
- FAS 105 Fashion: The Global Market Place (Kerney Campus) – 3 CREDITS
- FAS 250 Technical Skills for Apparel Production II – 3 CREDITS
- FAS 120 Introduction to Fashion Design I – 3 CREDITS

FASHION MERCHANDISING - 12 CREDITS

The Fashion Merchandising program prepares students for careers in fashion/apparel sales, marketing, buying, and merchandising. The program also prepares students for advanced study in business or marketing in a fashion/apparel-related program. The MCCC Fashion Merchandising curriculum parallels the first two years of education at a majority of undergraduate universities and art colleges, with an emphasis on career training for gainful employment.

- FAS 130 Introduction to Textiles for Fashion (Kerney Campus) – 3 CREDITS
- FAS 105 Fashion: The Global Market Place (Kerney Campus) – 3 CREDITS
- CMN 112 Public Speaking – 3 CREDITS
- MKT 101 Principles of Marketing – 3 CREDITS

FIRE SCIENCE TECHNOLOGY – 12 CREDITS

LOCATED AT DEMPSTER FIRE TRAINING CENTER

This program provides students with skills and knowledge to become candidates for entry and/or advancement as professional and volunteer fire personnel.

- FIR 101 – Introduction to Fire Science – 3 CREDITS
- FIR 104 – Building Construction – 3 CREDITS
- FIR 204 – Fire Fighting Tactics – 3 CREDITS
- FIR 205 – Fire Department Organization – 3 CREDITS

CAREER PREP (continued)

GAMING - 12 CREDITS

The Gaming program prepares students for careers in the video game software industry, a relatively new and rapidly expanding industry. The New York City / northern New Jersey metro region is one of the ten largest in the country for video game design and development. Game Design is a highly interdisciplinary field drawing from a number of diverse areas such as art, writing, sound design, sociology, anthropology, computer technology, and programming. The computer is the primary tool of expression in the program; however, emphasis is placed on the development of creative thinking as well as art and design skills.

- ART 102 Basic Drawing (Kerney Campus) – 3 CREDITS
- ART 105 Two Dimensional Design – 3 CREDITS
- DMA 105 Introduction to Computer Art – 3 CREDITS
- GAM 120 Game Theory and Culture – 3 CREDITS

HOSPITALITY MANAGEMENT – 12 CREDITS

This program prepares students for employment in various entry-level management careers in the food service and lodging industries.

- HOS 100 – Hospitality Success Skills – 1 CREDIT
- HOS 101 – Food Preparation I – 3 CREDITS
- HOS 115 – Food and Culture – 3 CREDITS
- HOS 118 – Sanitation and Safety in Food Service Operations – 2 CREDITS
- HOS 104 – Hotel Management/Lodging Operations I – 3 CREDITS

INFORMATION TECHNOLOGY – 12 CREDITS

This program prepares students for work in the Information Technology field. Students may pursue entry-level jobs such as network technician, network administrator, help desk specialist, customer service representative and/or any computer support specialist position.

- NET 102 – Introduction to PC Hardware & Software – 3 CREDITS
- NET 103 – IT Essentials – 3 CREDITS
- NET 104 – Fundamentals of Computer Networks – 3 CREDITS
- NET 120 – Windows Desktop Operating Systems Administration – 3 CREDITS

NEW MEDIA AND JOURNALISM - 12 CREDITS

The New Media program prepares students for the rapidly developing field that combines traditional media such as photography, film, music, and spoken and written word with the interactive power of computer and communications technology. Students who have traditionally pursued courses of study in journalism, public relations, advertising, and communications will find that this program substantially prepares them to enter the work force or transfer to communications programs at four-year universities.

- PHO 103 Introduction to Digital Photography – 3 CREDITS
- CMN 131 Journalism I – 3 CREDITS
- CMN146 Social Media Technologies – 3 CREDITS
- CMN 231 Journalism II – 3 CREDITS

CAREER PREP (continued)

PHOTOGRAPHY - 12 CREDITS

The Photography and Digital Imaging program provides graduates with entry-level employment skills in the rapidly changing professional photography field. The program includes foundation courses in basic photography, digital photography, digital imaging, studio and documentary photography.

- PHO 103 - Introduction to Digital Photography - 3 CREDITS
- PHO 110 - History of Photography - 3 CREDITS
- PHO 203 - Digital Photography - 3 CREDITS
- PHO 206 - Alternative Photography Processes - 3 CREDITS

PRE-ENGINEERING – 13 CREDITS

This program offers high school students the opportunity to study pre-engineering as it relates to structural and civil engineering skills. All students must have taken High School Physics to be accepted to the program.

- CIV 230 - Mechanics of Solids – 4 CREDITS
- CIV 227 - Structural Steel Design – 3 CREDITS
- CIV 103 – Statics – 3 CREDITS
- CIV 228 - Reinforced Concrete Design – 3 CREDITS

RADIO AND TELEVISION PRODUCTION – 12 CREDITS

This program provides practical hands-on work with state-of-the-art production studio equipment. In addition, the program emphasizes and develops communication skills.

- CMN 141 – Introduction to TV Production – 3 CREDITS
- CMN 142 - Intermediate TV Production – 3 CREDITS
- CMN 151 – Introduction to Radio – 3 CREDITS
- CMN 153 – Digital Audio Production – 3 CREDITS

THEATRE – 12 CREDITS

The Theatre program combines intensive classroom study and performance to challenge the serious student who aspires to a career in the entertainment industry.

- THR 101 – Introduction to Theatre – 3 CREDITS
- THR 104 – Fundamentals of Acting – 3 CREDITS
- THR 105 – Acting II: Principles of Characterization – 3 CREDITS
- THR 210 – Theatre History: Classical to Elizabethan – 3 CREDITS

VISUAL ARTS - 12 CREDITS

The Visual Arts program provides students with an understanding of the arts of both western and non-western societies, including so-called primitive cultures. There is an emphasis on drawing, painting, and printmaking courses, develops students' technical skills and personal expression, and provides a deeper knowledge and appreciation of art history.

- ART 102 Basic Drawing (Kerney Campus) – 3 CREDITS
- ART 104 Life Drawing – 3 CREDITS
- ART 105 Two-Dimensional Design – 3 CREDITS
- ART 121 History of Art I – 3 CREDITS

MERCER COUNTY

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