



MCI Course Catalog

2023-2024

Maine Central Institute Academic Office

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2023-2024 COURSE OFFERINGS

MAINE CENTRAL INSTITUTE

HUMANITIES

Foundations English Seminar (En)
Foundations History Seminar (H)
World Studies & Global Issues English Seminar (En)
World Studies & Global Issue History Seminar (H)
Civic Engagement & The Founding of America English Seminar (En)
Civic Engagement & The Founding of America History Seminar (H)
English & History for Global Learners (E/H)

HUMANITIES PATHWAYS COURSES

Creative Writing (En)
Film Studies (En)
Personal Finance (H)
Maine Studies (En)
Bell Tower Media: Video Production (En or H)
Sports Journalism Workshop (En)
Design Heritage & Modern Consumerism (En)
Model UN (H)
Soft Skills for Agency & Social Ease (H)
The Melting Pot (En)
War. What is it Good For? (H)
Human Geography & Ecology (H)
Fallout (En)
Family Dynamics (En)
Law & Justice in the US (H)
Industry & Progress (H)
The Culture of Food (En)
US & Them: Modern Global Issues (H)
Leadership in the Professional Domain (En)
A Survey of Health Science in the Past, Present, & Future (En)
Gender Studies (En)
Architects of the Future (En)
Death & Dying (H)
History on the Big Screen (H)

Humanities AP Courses

AP Language & Composition (En)
AP Literature & Composition (En)
AP US History (H)
AP US Government & Politics (H)

HUMANITIES ELECTIVES

Psychology (E)
Sociology (E)
Economic Literacy (E)
Introduction to Philosophy & Ethics (E)
East Asian Influence on the US (E)
Faulkner & Mississippi (E)

ESOL

ESOL II Intermediate (EN)
ESOL III Advanced (EN)
ESOL US History I (SS/H)

MATHEMATICS

Pre-Algebra (M)
Algebra IA & Data Analysis (M)
Geometry A & Probability (M)
Geometry B (M)
Geometry B/CP (M)
Algebra IB (M)
Algebra IB/CP (M)
Algebra II A (M)
Algebra II/CP (M)
Intro to Data Science (M)
Discrete Mathematics CP (M)
Pre-Calculus CP (M)
AP Pre-Calculus (M)
AP Calculus AB (M)
AP Calculus BC (M)
AP Statistics (M)

SCIENCE

Earth & Space Science (S)
Earth & Space Science CP (S)
Biology (S)
Biology CP (S)
AP Biology (S/E)
Chemistry/Physics (S)
Chemistry CP (S)
AP Chemistry (S/E)

Physics CP (S/E)
AP Physics I (S/E)
AP Physics II (S/E)
Anatomy & Physiology CP (S/E)
Adv. Anatomy & Physiology (S/E)
Environmental Science (S/E)
AP Environmental Science (S/E)
Sustainable Living (S/E)
Botany (S/E)
Watershed Investigations –S2 (S/E)
Wildlife Forensics –S1 (S/E)
Forensic Science –S1 (S/E)
Diseases and Disorders –S2 (S/E)
Astronomy –S2 (S/E)

TECHNOLOGY & ENGINEERING

Intro to Design –S1 (S/E)(FA)
Intro to Engineering –S2 (S/E)(FA)
Physics in Sports (S/E)
Advanced Design S2 (S/E)(FA)
Robotics (S/E)
AP Computer Science A (S/CS)
AP CompSci Principles (S/CS)
CompSci Discoveries (CS/E)
Intro to Cyber Security (S/CS)
Intro to Game Design I (S/CS)(FA)
Intro to Game Design II (S/CS)(FA)
Intro to Web Design (S/CS)
Project Management (S/CS)

HUMAN DEVELOPMENT

Health I (HE)
PE 1 (PE)
PE 2 (PE)
PE 3 (E)
Intro to Medical Concepts (S/E)
Intro to Sports Medicine (E)
OutsideME (E)
JMG 9, 10, 11, 12 (E)

VISUAL & PERFORMING ARTS

Studio Foundations I (FA)
Studio Foundations II (FA)
Ceramics (FA)
Pottery (FA)
Drawing (FA)
Painting (FA)
Discovering Art History (FA)

Tech Theatre I (FA)
Tech Theatre II (FA)
Tech Theatre III/Adv. Tech Theatre (FA)
Stage/TV Makeup I (FA)
Stage/TV Makeup II (FA)
Social Theatre (FA)
Actor's Studio I (FA)
Intro to Costume Design (FA)
Play Production (FA)
Festival Theatre Ensemble (FA)
Concert Band (FA)
Concert Choir (FA)
Instrumental Jazz Ensemble (FA)
Vocal Jazz Ensemble (FA)
Beginning Guitar (FA)
Advanced Guitar (FA)
Ukulele (FA)
Piano I (FA)
Piano II (FA)
Modern Band (FA)
Music Theory and Comp & Digital Music (FA)
Bosssov Ballet (FA)

WORLD LANGUAGES

French I CP (WL)
French II CP (WL)
French III & IV CP (WL)
Spanish I CP (WL)
Spanish II CP (WL)
Spanish III CP (WL)
Spanish IV CP (WL)

OTHER ELECTIVES

Teaching Assistant[†] (E)

Dual/CONCURRENT ENROLLMENT

*Courses offered through ExploreEC, OnCourse & Husson ECAP

AP4ME

*See Course Catalog

SCTC COURSES

*See course catalog

NOTES:

All students must enroll for a minimum of seven (7) academic credit courses each semester.
All students must enroll in English, History/Social Studies, Math, and a Science course each semester.
9th grade students must enroll in PE 1.

Concurrent enrollment options:

- Juniors and Seniors are eligible for Dual Enrollment courses. Students enrolled in English and Social Studies dual credit courses will be required to complete a Senior Project.
- Students may be eligible to take up to 12 college credit hours per year
- Students may request to take additional 100-level college courses for Early College credit upon approval and acceptance by the college/university.
- Maine students may be eligible for Maine Aspirations funding for college courses; out-of-state or international students will be required to pay a reduced college/university tuition rate for each course through Maine Public Universities & Community Colleges..
- International students may be eligible to take up to 12 college credit hours per year through Husson University's Early College program. Online courses only.

ACADEMIC COUNSELORS

Mrs. Kirsten Pomeroy, kpomeroy@mci-school.org
Mrs. Pamela Smith, psmith@mci-school.org

DEAN OF ACADEMICS

Mr. Scott J. Giallombardo, sgiallombardo@mci-school.org

REGISTRAR

Mrs. Donna Cray, dcray@mci-school.org

CREDITS EARNED LEGEND

EN= English	M= Math
S= Science	HE= Health
FA= Fine Arts	E= Elective
SS= Social Studies	H=History
CS= Computer Science	
PE= Physical Education	
WL= World Language	

MCI GRADUATION REQUIREMENTS

English	4 credits (required)
Science	4 credits (required)
Math	4 credits (required)
Social Studies	3 credits (required)
Human Development	1 credit PE (required)
Health	.5 credit (required)
Fine Arts	2 credit (required)
Computer Science	.5 credit (required)
World Language	2 sequential credits (recommended)
Additional Courses	3-5 additional credits
Manson Essay--11th grade	
Senior Project--12th grade	
Total	24 credits

Recommended 9th Grade Classes

1 English	.5 PE 1
1 History / Social Science	1 Fine Art (Drama, Music, Art)
1 Math	.5 Computer Science
1 Science	.5 Computer Science
1 World Language	
Recommended Total Credits	7 credits

Recommended 10th Grade Classes

1 English	.5 PE 2
1 History / Social Science	1 Fine Art (Drama, Music, Art)
1 Math	.5 Health
1 Science	.5 Computer Science
1 World Language	
Recommended Total credits	7 credits

Recommended 11th Grade Classes

1 English	3 Other (Core/Non-Core/SCTC/CE Courses)
1 History / Social Science	1 Fine Art (Drama, Music, Art)
1 Math	
1 Science	
Recommended Total credits	7 credits

Recommended 12th Grade Classes

1 English	3 Other (Core/Non-Core/SCTC/CE Courses)
1 History	1 Fine Art (Drama, Music, Art)
1 Math	
1 Science	

AP: Advanced Placement courses offered through College Board
CP: College Preparatory courses
CE: Concurrent Enrollment courses offered through University of Maine, Husson University, and Kennebec Valley Community College
Gen: General-level courses
Voc: Vocational
Core: English, History, Math, Science courses
Non-Core: Fine Arts, Computer Science, World Language, PE, Health
SCTC: Somerset Career & Technical Center

International Student Curriculum Policy

MCI enjoys a high reputation for preparing international students for success at American universities. International students should use these guidelines to help plan their courses with his or her college counselor at MCI. The Academic and Admission Office staff will provide the final recommendation based on previous grades and earned credits. The students will also need to fulfill the community service and co-curricular requirements.

The following graduation plan is used for all international students at MCI:

4 year plan: Grade level 9

Students will be expected to follow the Graduation Requirements for students graduating from MCI.

3 year plan: Grade level 10*

3 credits in English, 3 credits in math, 3 credits in science (including one lab), 2 credits in history (including U.S. History), 1 fine art credit, 1 physical education credit, 1/2 credit in health, completion of the Manson Essay and Senior Project. A minimum of seven classes must be taken each semester, and twenty one (18) credits must be completed at MCI in order to graduate.

2 year plan: Grade level 11*

2 years of English, 2 credits in math, 2 credits in science (including one lab), 1 credit in history (including U.S. History), 1 fine art credit, 1/2 physical education credit, 1/2 credit in health, completion of the Manson Essay and Senior Project. A minimum of seven classes must be taken each semester, and fourteen (14) credits must be completed at MCI in order to graduate.

1 year plan - grade level 12*

One-year seniors and post-grads design individual academic programs with counselors in consultation with the Dean of Academics. The program will reflect consideration of the subjects studied at previous schools, the student's English proficiency, college admission requirements and the desirable breadth and depth of study. Required courses will include English (including completion of the Senior Project), social science, math, science (lab science if no previous lab courses have been taken), and electives to total the seven classes per semester minimum.

GPA will be calculated based on courses taken at MCI and other US high schools for international students. Class rank is awarded only after the completion of a minimum of three semesters at MCI. International students are eligible for any honors, advanced placement, or college courses as long as the prerequisites are satisfied.

***The Dean of Academics and ESL department may choose to design individual academic programs for students with intensive ESL needs.**

MCI COURSE DESCRIPTIONS

2023-2024

HUMANITIES

The Humanities curriculum was created with a grant from the National Endowment for the Humanities in 1982. The mission of MCI Humanities is to prepare students to be thinking members of a complex society who explore the human condition through interdisciplinary, rigorous, contextual discourse to achieve professional and personal goals and a sense of well-being while fostering sustainable and just societies. Students are required to demonstrate, both orally and in writing, a developmentally appropriate ability to analyze, synthesize, evaluate, and integrate historical, textual, and social science knowledge. All students are required to take notes, discuss cooperatively, debate, create, interact with media and technology, and present. Humanities courses are semester-long, and they each earn a half credit; AP courses are year-long and earn one credit. Students are expected to earn a minimum of four English and three History credits in order to fulfill graduation requirements.

Required Seminars

Freshmen, sophomores, and juniors will take a semester English and history course each year. There will be one capstone assessment per year: Service Learning Project (shared in freshman English and history seminars), Community History Project (in the sophomore history seminar), and The Manson Essay (in the junior English seminar). Seniors' capstone project is the Senior Project, but this assessment will be spread throughout the senior-level courses (either English or history), and it can occur in either semester (Spring or Fall) as negotiated with the instructor.

Foundations of English Seminar 2300

This required freshman seminar course is designed to be an introduction to high school literacy expectations, English language and rhetorical skills, reading and writing for various purposes, and Humanities best practices. Utilizing a thematic curriculum design, students will study a range of topics, connecting ancient texts from early civilizations to modern trends and practices accessed through current event articles, social sciences, and the arts. **This will only be offered in the fall semester**, and it will overlap with the freshman history seminar in content, skills, and the capstone service learning project. **For freshmen. (.5 English credit)**

Foundations of History Seminar 2400

This required freshman seminar course will provide students beginning high school with a social science and history foundation for future study. Students will understand the features of civilization, gain a basic outline of world religions and culture, and focus on physical geography knowledge and map skills. **This will only be offered in the fall semester**, and it will overlap with the freshman English seminar in content, skills, and the capstone service learning project. **For freshmen. (.5 History credit)**

WORLD STUDIES & GLOBAL ISSUES (ENGLISH SEMINAR) 2307

In this **required** sophomore, English course students will further develop their English and humanities skills while exploring the themes of conflict, peace, security, modern culture, identity, equality and inequality. Special focus will be the impact of rhetoric and applying research and citation strategies in narrative and argument pieces. This course will be offered in both the fall and spring semesters, and is **for sophomores. (.5 English credit)**

WORLD STUDIES & GLOBAL ISSUES (HISTORY SEMINAR) 2401

In this **required** sophomore history course students will further align the humanities skills of argument and critical thinking with social science topics connecting to the themes of conflict, peace, security, modern culture, identity, equality and inequality. Special focus will be the impact of the 19th and 20th century on the modern world. Students will also complete a community history project for their sophomore capstone project. This course will be offered in both the fall and spring semesters, and is **for sophomores**. (.5 History credit)

CIVIC ENGAGEMENT & THE FOUNDING OF AMERICA (ENGLISH SEMINAR) 2308

This is the **required** junior English seminar. In this course students will read and study texts and scenarios that outline the birth of the US and its government, challenges to individual and collective freedoms and wellbeing, and actions toward improving or resolving these issues of concern. The Manson Essay, a required assessment for an MCI diploma, will be the capstone project for this course requiring students to research an important civic concern, write a synthesis essay with citations, and deliver these findings in a speech. This course will be offered in both the fall and spring semesters and is **for juniors**. (.5 English credit)

CIVIC ENGAGEMENT & THE FOUNDING OF AMERICA (HISTORY SEMINAR) 2402

This is the **required** junior history seminar. In this course students will study the events that led up to and formation of the US government, its constitution, and the rights and responsibilities of citizenship. Students will gain political knowledge, identify social norms and values, and define civic behavior responsibilities for both individuals and groups to sustain our democratic republic. This course will be offered in both the fall and spring semesters, and is **for juniors**. (.5 History credit)

ENGLISH & HISTORY FOR GLOBAL LEARNERS 181

This course is intended for **international students/non-native speakers of English** who are approaching fluency in the language. In the first semester, students will thoroughly examine a series of global issues and also discuss the nature of English as a global language while honing their academic writing skills. In the second semester, students will learn about key historical concepts such as change, causation, and significance by examining the major events of the twentieth century. This class exposes students to a variety of academic and journalistic texts. By the end of the course, students will be fully prepared to enroll in mainstream humanities classes at MCI. **Open for sophomores, juniors, and seniors**. (1 credit per course: English or History)

Pathways Courses

These semester courses are more specialized by theme and based on student choice. Utilizing an interdisciplinary approach, the content will integrate topics outside the Humanities disciplines to earn English and history credits as indicated; however, these disciplines will remain the focal points to build upon the Humanities skills and knowledge laid out in the seminars.

CREATIVE WRITING 182

This class is designed to provide an overview of creative writing, and is specifically focused on short stories and poetry. We will be using children's books, young adult novels, short stories, and poetry as mentor texts to help us learn the various elements of a story so we can implement those techniques and skills into our own writing. Students will engage in group writing, in-class exercises, workshops, and peer review. Here are a few of the elements of creative writing we'll be focusing on in this class: characterization, figurative language, perspective, plot, setting, voice, and word choice.

Open to all students (.5 English credit)

FILM STUDIES 986

This course encourages students to explore films as texts. As a medium of presentation, films convey narrative and employ many of the same elements of literature and art in a beautiful combination that is enhanced by the dramatic performance and functional form and style. The artistic construction can be appreciated along the lines of its individual elements as well as its original medium. This course will involve various activities to explore film techniques and analysis of films, create original films, and enjoy watching films as a classroom community. Open to all students (.5 English credit)

PERSONAL FINANCE 239

This course will be focused on the financial literacy of the individual, preparing people for basic life events such as finding and applying for a job, managing a budget, buying a house, and planning for retirement. Students will focus on factors that go into deciding on careers, managing household finances (paying for rent, mortgages, managing debt, etc.), and buying and selling assets such as stocks and bonds. We will also dedicate a portion of the class to paying for college. Open to all students (.5 History credit)

MAINE STUDIES 2403

Learn all about our magnificent and multifaceted home in this semester course focused on the history, literature, art, and lifestyle of the greatest state in the union. Maine subjects will include statehood facts, war connections, Native American tribes, Maine industries such as tourism, pulp and paper, and fishing, Maine parks, natural resources, protected lands, ATVing, wildlife management, Maine norms and laws, and current events. Open to all students to earn credit in either English or history as negotiated with the instructor. (.5 English credit)

BELL TOWER MEDIA: VIDEO PRODUCTION 2309

The Bell Tower Media course is an introduction to video production. This is a semester course for students who enjoy film, television, and internet videos and want to learn how to create their own video projects. This course is designed to introduce students to the artistic and technical terms, techniques, and skills inherent in the visual medium of film. Students will study elements of composition and cinematic language, and apply these concepts effectively and purposefully to their own work. Students will gain valuable experience using video editing software and will write, plan, film, and edit short film projects of their choice to apply what they have learned. Incorporating a personalized learning approach for all students to earn credit in either English or history as negotiated with the instructor. (.5 credit)

SPORTS JOURNALISM WORKSHOP 2310

*In this semester course, students will study the principles of sports writing, learning to develop voice, pacing, tension, and movement, and continue to explore such elements as perspective and imagery, while implementing first-hand research and historical research. Students will study modern sports journalism through articles, nonfiction texts, documentaries, podcasts, and broadcast journalism. In addition to writing their own pieces, students will critically read, discuss, and respond to published sports writing and the articles of other students. Students will report on local sporting events. **Open to all students. (.5 English credit)***

DESIGN HERITAGE & MODERN CONSUMERISM 2311

*This semester course will examine history, culture, and economy through the lens of fashion and design (clothing, architecture, technology) and the purchase of goods and services related to it. This course will utilize articles in Vogue, Architectural Digest, and other major fashion publications, advertising and marketing strategies, sociology and psychology studies associated with fashion, fashion trends through the years, analyses of how design relates to consumerism, geographical studies with respect to fashion and architecture, human rights violations regarding consumption: trends and corporations, principles of design, sustainability concepts, festivals in Europe as seed of fashion industry, notable designers and architects, and artistic inspiration: art, literature and film that inspire fashion. **Open to all students. (.5 English credit)***

MODEL UN 248

*In this course, students will examine social, political, scientific, and economic issues and how they influence decision making on the global stage. Students will explore multiple perspectives on these diverse topics in order to generate solutions. Throughout the semester, students will cultivate research, writing, debate, and collaboration skills. This course will also serve as a preparatory time for the school's Model UN team, which will compete at a conference in the spring. This course is offered in the **Spring semester only, but open to all students. (.5 History credit)***

SOFT SKILLS FOR AGENCY & SOCIAL EASE 2405

*This semester course will offer strategies and information to promote agency, or personal and social ease. Subjects will include mind/body science, mental health, memoirs and inspirational articles about dealing with personal trauma and building resilience, healthy and unhealthy habit discussions, collaboration and team building, developing personal identity through responsible and purposeful social media practices, a sound work/life balance, and exploring resources to support personal and family wellness. **Open to freshmen and sophomores. (.5 History credit)***

THE MELTING POT 2312

*America has a rich multicultural history. This course will explore that history by studying race, religion, ethics, and culture in the US. Through analysis of diverse literary works, founding laws and documents, past and present social norms, and articles regarding important cultural issues and events, students will reflect, debate, and develop an understanding about African American, Native American, Asian American, Latino, Pacific Islander, Western, and European influences on the past, present, and future of American society. **Open to freshmen and sophomores. (.5 English credit)***

WAR. WHAT IS IT GOOD FOR? 2314

*War has had diverse effects throughout history. Despite the obvious negative costs of life and destruction of families, property, and communities, many advances in science and technology are related to war, and it has been the genesis for classic literary and art works, as well as global alliances and unions. Human lust for profit and power has made war a permanent element of the human condition. This semester course will focus on the major wars throughout history and their numerous impacts. Students will investigate military practices and the evolution of war tactics, the geography of war; the dichotomy of technological advancement and war, war for profit, economic impacts of wars, war and health, global policies and organizations, and war's influence on economies. **Open to freshmen, sophomores and juniors. (.5 History credit)***

HUMAN GEOGRAPHY & ECOLOGY 2315

*This semester course will merge the study of both social and scientific interaction of human beings and their environment. Utilizing human geography, students will study the factors that push/pull people from their homelands to another and the culture that is created, transferred, and transformed by diaspora, as well as the social, political, and environmental factors that prompt both cultural and more localized migration. Ecological impacts of these migrations will also be investigated through topical readings and discussions spanning environmental, social, and ethical topics. This course will promote civic engagement and ecological literacy by studying on-going trends through qualitative and quantitative research methods. **Open to freshmen, sophomores and juniors. (.5 History credit)***

FALLOUT 2316

*Are you interested in apocalyptic scenarios and human survival in the aftermath of a breakdown of social structures? This course will ponder human existence and evaluate the complex juxtaposition between a balanced, healthy biosphere and socioeconomic stability by learning about the pros and cons of energy sources, weapons and their long-term impacts, biodome farming and living, space travel and colonization, mutations and disease, and global ethics of war, pollution, and technology. Vehicles will include articles, scenarios in literature, film, and video games, and art and music topics. **Open to sophomores and juniors. (.5 English credit)***

FAMILY DYNAMICS 2317

*In this semester course, students will explore the history and evolution of the family. Those interested in jobs in daycares, schools, social services and homemaking are encouraged to enroll. Units will focus on family sociology, child development, developmental psychology, gender in the family, matriarchal and patriarchal cultures, family planning and economics, and a basic introduction to genetics. Students will polish literacy and communication skills and seek opportunities to explore certifications and careers connecting to the wellbeing of families. **Open to sophomores and juniors. (.5 English credit)***

LAW & JUSTICE IN THE US 2406

*This course offers an introduction that outlines the legal systems that exist in America. Both criminal and civil law will be taught, as well as the differences between adult and juvenile treatments under the law. Students will become familiar with the roles of citizen participation in the US legal system and research landmark court cases to identify significant legal decisions and precedence. **Open to sophomores and juniors. (.5 History credit)***

INDUSTRY & PROGRESS 2407

*The Industry and Progress course will highlight the progress and innovation that has built America and changed the world. Beginning with the Industrial Revolution, classroom topics will include important inventions, the impact and future of transportation advancement, energy sources of the past and future, the history of unions, manufacturing trends, global trade, personal finance and investment, insurance basics, law, compensation and retirement, urban and suburban development, gender issues, and communication strategies for the workplace. **Open to sophomores and juniors. (.5 History credit)***

THE CULTURE OF FOOD 2318

*This semester course is for anyone who plans to eat food in the future. With a spotlight on all topics food-related, students will explore how culture and food affect each other and the effects of these relationships in our communities around the globe. Students interested in culinary studies, hospitality, and tourism are encouraged to enroll to investigate the sociology and psychology of food, the importance of food in traditions and celebrations, nutrition, GMO science, antibiotics in our food, animal husbandry, factory farming, sustainability issues around food production, and the politics of food and water. **Open to sophomores, juniors, and seniors. (.5 English credit)***

US & THEM: MODERN GLOBAL ISSUES 2408

*This semester course focuses on contemporary world issues through the lenses of the US and various world nations. Issues include social change movements, the impact of technology on modern society, climate change, the future of democratic movements, the increasing intolerance for opposing points of view, terrorism around the world, global human rights issues, increasing rates of asylum-seeking and world health issues. These topics will be introduced and analyzed from the different perspectives of the nations involved. Discussion and participation in debates and simulations as well as student presentations will focus learning by making connections to sociological or psychological perspectives, art, music, and the media. **Open to sophomores, juniors, and seniors. (.5 History credit)***

LEADERSHIP IN THE PROFESSIONAL DOMAIN 2319

*This semester course will outline the introductory concepts of leadership in the workplace. As the world changes, so do the expectations and skills necessary to excel and manage within these changing power structures. Students will read and discuss the foundations of leadership and management, business psychology, social dynamics and communication in the workplace, gender and harassment, business ethics, marketing, law, and budgets and investments. Opportunities for job shadows in professional settings will be sought for practical application of skills building in leadership. The course will utilize a professional leadership portfolio to show mastery of leadership concepts and as an aid for future professional networking. **Open to juniors and seniors. (.5 English credit)***

A SURVEY OF HEALTH SCIENCES IN THE PAST, PRESENT, AND FUTURE 2320

Career projections for the next ten years list health science-related fields as making up thirty to fifty percent of the highest paying and fastest growing jobs. Thus, this semester course will utilize a truly interdisciplinary approach to the study of humanities by focusing on human health and professional careers in health science. Students will gain knowledge and insight through reading, writing, debating, and researching topics including the history of health sciences, healthcare & insurance, Pharma, medical advancements, viruses & pathogens of the past and future, vaccines and vaccinations, ethics and health, occupational health, and workplace safety. Students may journey outside the classroom for practical

application, and guest professionals will be sought to instruct or offer perspectives outside the limits of humanities instructors. **Open to juniors and seniors. (.5 English credit)**

GENDER STUDIES 2321

*This course is a multidisciplinary course designed to introduce students to contemporary gender issues in the U.S. and around the globe. Students will read articles, watch film documentaries, and research to examine diverse gender topics and connect them to identity, politics, economics, and society. Students will write journals, debate, discuss, develop blogs, or create on other media platforms to both discover for themselves and educate others. **Open to juniors and seniors. (.5 English credit)***

ARCHITECTS OF THE FUTURE 2322

*This semester course will explore the many facets of design and the diverse branches of engineering. With a basis in the historical, environmental, architectural, health, and ethical implications of these fields, students will read about new advances in aerospace, automotive, civil, biomedical, chemical, nuclear, computer, electrical, environmental, structural, industrial, and mechanical engineering. They will research, discuss, and debate the governance, moral, and environmental impact of engineering fields on humanity and their social systems, health, and future. Connections outside the classroom will be sought for practical connections. Students will learn and practice professional writing, and they will write argument and expository essays to prepare for post-secondary endeavors. **Open to juniors and seniors. (.5 English credit)***

Death & Dying 2409

*Memento Mori! This class examines human reactions to the inevitable. Death is a ubiquitous part of human life, art, and history. In this course, students will use multiple lenses to study infirmity, death, and beyond. This is an integrated study drawing from literature, arts, religion, ethics, psychology, sociology, medicine, and history. **Open to juniors and seniors. (.5 History credit)***

HISTORY ON THE BIG SCREEN 2410

This course will use film as a learning tool to form a better understanding of historical events. The students will use the historical background from the time periods and critically analyze the accuracy and efficacy of the films. Students will write essays that scrutinize and dissect the films with a view to whether the film romanticizes or demonizes the time period.

*Civil Rights - Mississippi Burning, In the Heat of the Night, and The Help are possible choices as well as short scenes from other films; World War II and Fascism - Saving Private Ryan, Enemies at the Gate, Schindler's List, Jo Jo Rabbit, and Hacksaw Ridge are possible choices for this topic; Cold War Tensions - The Bridge of Spies, The Hunt for Red October; The Great Depression - Places in the Heart, Modern Times, O Brother, Where Art Thou?; Evolution of Women's Rights - On the Basis of Sex, Little Women, Hidden Figures **Open to juniors and seniors. (.5 History credit)***

AP COURSES & TWO-SEMESTER/ 1 CREDIT CLASSES

AP LANGUAGE & COMPOSITION 2323

This college-level literature course emphasizes understanding and analysis of imaginative writing, the college essay, and the senior project. Students will read and write frequent lengthy works. Each student will initiate, develop, implement, and present the Senior Project during the fourth quarter. Taking the AP® exam (and payment of the AP exam fee by the student) is a requirement for successful completion of the course. Qualified students may receive AP exam fee assistance through The College Board. Prerequisite: academic contract with instructor, writing and reading proficiency (formally evaluated), teacher recommendations, evidence of academic success (grades), and ongoing evidence of scholarly habits. Open for juniors or seniors. (1 English credit)

AP LITERATURE & COMPOSITION 2324

This college-level literature course emphasizes understanding and analysis of imaginative writing, the college essay, and the senior project. Students will read and write frequent lengthy works. Each student will initiate, develop, implement, and present the Senior Project during the fourth quarter. Taking the AP® exam (and payment of the AP exam fee by the student) is a requirement for successful completion of the course. Qualified students may receive AP exam fee assistance through The College Board. Prerequisite: academic contract with instructor, writing and reading proficiency (formally evaluated), teacher recommendations, evidence of academic success (grades) and ongoing evidence of scholarly habits. Open for juniors and seniors. (1 English credit)

AP US HISTORY (APUSH)

Students will study American history from pre-European contact to the end of the twentieth century. Rhetoric and history will be integrated throughout this college-level course. Argumentation, synthesis, and analysis of non-fiction are emphasized in this course. There will be frequent writing assessments and demanding homework expectations. Students will research, write, and orally present the Manson Essay, a graduation requirement. Writing, reading, analysis, and discussion are emphasized. This course requires much independent work. Taking the AP® exam (and payment of the AP exam fee by the student) is a requirement for successful completion of each course. Qualified students may receive AP exam fee assistance through The College Board. Prerequisite: academic contract with instructor, writing and reading proficiency (formally evaluated), teacher recommendations, evidence of academic success (grades) and ongoing evidence of scholarly habits. Open for juniors or seniors. (1 History credit)

AP GOVERNMENT & POLITICS 2412

This introductory course to US Government and Politics will study constitutional underpinnings, civil liberties and civil rights, political culture, and socialization, citizen participation and influence, political institutions, and policy-making that are the foundation of modern U.S. government and politics. Students will interpret classic and contemporary political writings and apply pertinent Supreme Court rulings to enduring social and political issues in this country. This course prepares students to take the Advanced Placement United States Government and Politics exam. An AP® exam fee is required for students choosing to take the exam. Qualified students may receive AP exam fee assistance through The College Board. Prerequisite: academic contract with instructor, writing and reading proficiency (formally evaluated), teacher recommendations, evidence of academic success (grades), and ongoing evidence of scholarly habits. Open for juniors or seniors. (1 History credit)

ELECTIVES - SEMESTER COURSES FOR .5 CREDITS

PSYCHOLOGY 821

*CP Psychology is a discussion-based course in which students learn many psychological terms and theories and use them to analyze current events, life, and film. While much of the work for the course will be done in class, students will also write two formal film analysis papers which count for a significant portion of final grades. These papers are intended to prepare students for the rigors of college courses. **Open to juniors and seniors. (.5 credit)***

SOCIOLOGY 215

*MCI's CP Sociology course combines an introduction to sociology with the study of deviance and social psychology. Sociology examines social life, social change, and the social causes and consequences of human behavior. Sociologists investigate the structure of groups, organizations, and societies, and how people interact within them. This course is discussion based, with students leading discussions as often as possible. Students will use social theory to analyze their lives, society, current events, and film. **Open to juniors and seniors. (.5 credit)***

ECONOMIC LITERACY 280

*Macroeconomics uses the tools of economics to understand how an economy functions and to develop policies that promote economic growth. In this course students will learn about how a national economy works, and how various government policies affect the economy and, by extension, its citizens' lives. We will also explore the effect of government policies on businesses. Emphasis will also be placed on the economic indicators frequently quoted in the news. Lectures will progress toward more discussion as the class develops a base of knowledge. Participation will be an important determinant of your grade. The largest economy in the world is the United States; China is second and Japan is third, so the course will show some preference for examples and case studies from the Pacific Basin. **Open to juniors and seniors (.5 credit)***

INTRODUCTION TO PHILOSOPHY & ETHICS 281

*The field of Philosophy is divided into four categories. They are Logic, Metaphysics, Epistemology, and Ethics. This course will lay the groundwork of the basics of philosophy in order to then be able to intelligently engage the field of Ethics. It will introduce students to important traditional ethical theories, new directions in moral thinking, and contemporary ethical controversies. The discussion of those controversies will be a regular part of class interaction, especially so in the second half of the semester. The course focuses on ethics as the practice of informed dialogue and principled behavior in the diverse and ever-changing societies represented amongst the student body here at MCI. **Open to juniors and seniors (.5 credit)***

EAST ASIAN INFLUENCE ON THE US 249

*This course examines the influence of East Asia on the development of American history and culture. Almost from the nation's founding, the United States has been drawn to the lands of the Far East. Why is this, and how has it shaped the country we know today? Through readings, lectures, and class discussion, we will explore the lure of East Asia, America's interests there and how she has defended them, and ways in which East Asia and East Asian people have contributed to American society. This history elective is open to juniors and seniors. Active participation in class discussion is expected. **Open to juniors and seniors. (.5 credit)***

FAULKNER & MISSISSIPPI 90074

*Students will begin with a short story by William Faulkner set in his fictional Yoknapatawpha County, Mississippi, and then focus on at least three of Faulkner's most important novels, *Light in August*, *Absalom, Absalom!*, and *The Sound and the Fury*. In addition, we will look at some critical commentary and consider the political and social history of Mississippi and the American South in the times in which these stories take place. **Open to juniors and seniors**, but sophomores are welcome with permission of the instructor. (.5 credit)*

English for Speakers of Other Languages (ESL/ESOL)

ESL Intermediate 1008

This intensive daily class is designed for English Language Learners whose English is approaching the intermediate level of proficiency. Students will work intensively on building their academic reading, writing, speaking, and listening skills. (1 credit)

ESOL III Advanced 1009

This intensive daily class is designed for English Language Learners whose English is approaching the advanced level of proficiency. The main objective of this course is to develop academic writing skills and prepare students for college preparatory humanities classes. (1 credit)

ESOL US History 268

This two-semester course aims to introduce English Language Learners to the key events in American history while exploring the evolution of American culture and identity. Starting with Native American history and culminating with the Civil War, students will analyze historical events, participate in group discussions, and expand their English vocabulary. Additionally, the course will equip students with crucial skills such as note-taking, online research, critical thinking, and academic writing. (1 credit)

Mathematics

In all mathematics courses, there is a strong emphasis on problem solving, real-world applications and verbally communicating mathematical concepts. Students are active participants in their own learning as teachers aid them in making their own discoveries about mathematics. Algebra, geometry, statistics, probability and discrete math are integrated into all courses, thus connecting the traditional branches of mathematics as they are in the real world.

Placement in specific courses is always dependent on teacher recommendation. Students must earn a minimum of four math credits while at MCI. The courses are full-year unless otherwise noted.

Pre-Algebra 328

*The pre-algebra course is designed for students who find the study of mathematics to be extremely challenging. Students enrolled in this classes have historically experienced difficulty in mastering the concepts that are the foundation of mathematics, such as the computation of fractions and decimals. Though often very competent in other disciplines, students for whom math presents a unique challenge find this course helpful. Integrated throughout the curriculum are the basic concepts of algebra, geometry, probability, statistics and discrete math. The course is double-blocked and paced according to the needs of each individual group of students. **(1.5 credit)***

Algebra IA & Data Analysis 392

*This is a semester-long course that covers the introduction to Algebra standards. Topics include univariate and bivariate data, solving, graphing, and writing linear equations, inequalities, absolute values, and functions. Students will build on their knowledge of linear functions and learn regression techniques to describe approximate linear relationships between quantities. They'll use graphical representations and knowledge of the context to make judgments about the appropriateness of linear models. The use of hands-on activities, mini-projects and technology will be threaded throughout. **(0.75 credit)***

Geometry A & Probability 393

*This is a semester-long course that introduces the student to the introductory topics of Euclidean Geometry. Topics include the basic properties of plane and solid figures such as triangles, quadrilaterals, polygons, coordinate and transformational geometry. Students will use Geometric Constructions to deepen their understanding of shapes and figures throughout the semester. The concepts of deductive and inductive proofs are studied. GeoGebra, hands-on activities, projects and technology will be utilized throughout the semester. Additional topics in Probability will include sample spaces, uniform probability, the fundamental counting principle, Venn diagrams and independence. **(0.75 credit)***

Geometry B 351

*Topics build from the previous course and include the study of similarity, right triangles, circles, polyhedron, basic trigonometry, area, volume, coordinate geometry. Students will extend their understanding of probability through area applications. Students will continue to utilize Geometric Constructions and 3-D modeling to help deepen their understanding. GeoGebra, the use of hands-on activities, projects and technology will be threaded throughout the semester. **Prerequisite: Geometry A (0.5 credit)***

Geometry B/CP 319

Course material covers the same topics as general Geometry B, but with more emphasis on deep analysis and understanding. Topics will be explored in greater depth and detail. Students enrolling in this class must have strong critical thinking skills. **Prerequisite: Geometry A (0.5 credit)**

Algebra IB 352

This course is the second half that covers an introduction to Algebra standards. Topics include systems of equations, exponents and exponential functions, data analysis, radicals, polynomials and quadratic functions. Students will create and analyze data to construct and compare linear, quadratic, and exponential models and solve problems. The use of hands-on activities, mini-projects and technology will be threaded throughout the semester. **Prerequisite: Algebra IA & Data Analysis (0.5 credit)**

Algebra IB/CP 302

Course material covers the same topics as general Algebra IB, but with more emphasis on deep analysis and understanding. Topics will be explored in greater depth and detail. Students enrolling in this class must have strong critical thinking skills. **Prerequisite: Algebra IA & Data Analysis (0.5 credit)**

Algebra IIA 332

This course is designed to give students more time to develop and understand the same topics in Algebra II CP. Some topics are introduced to students and will be later developed in a College Algebra or PreCalculus course. Students begin the course with a study of sequences, which is also an opportunity to revisit linear and exponential functions. Students represent functions in a variety of ways while addressing some aspects of mathematical modeling. This work leads to looking at situations that are well modeled by polynomials before pivoting to a study of the structure of polynomial graphs and expressions. Students do arithmetic on polynomials and rational functions and identify end behavior. Next, students extend exponent rules to include rational exponents. They solve equations involving square and cube roots before expanding the number system to include complex numbers. Building on rational exponents, students return to their study of exponential functions. They will use logarithms to solve for unknown exponents, and are introduced to the number e and its use in modeling continuous growth. Logarithm functions and some situations they model well are also briefly addressed. **(1 credit)**

Algebra II/CP 331

Students begin the course with a study of sequences, which is also an opportunity to revisit linear and exponential functions. Students represent functions in a variety of ways while addressing some aspects of mathematical modeling. This work leads to looking at situations that are well modeled by polynomials before pivoting to a study of the structure of polynomial graphs and expressions. Students do arithmetic on polynomials and rational functions and use different forms to identify asymptotes and end behavior. Next, students extend exponent rules to include rational exponents. They solve equations involving square and cube roots before expanding the number system to include complex numbers. Building on rational exponents, students return to their study of exponential functions. They will use logarithms to solve for unknown exponents, and are introduced to the number e and its use in modeling continuous growth. Logarithm functions and some situations they model well are also briefly addressed. **(1 credit)**

Introduction to Data Science 324

*Introduction to Data Science (IDS) is designed to introduce students to the exciting opportunities available at the intersection of data analysis, computing, and mathematics through hands-on activities. Data are everywhere, and this curriculum will help prepare students to live in a world of data. The curriculum focuses on practical applications of data analysis to give students concrete and applicable skills. Instead of using small, tailored, curated data sets as in a traditional statistics curriculum, this curriculum engages students with a wider world of data that fall into the "Big Data" paradigm and are relevant to students' lives. In contrast to the traditional formula-based approach, in IDS, statistical inference is taught algorithmically, using modern randomization and simulation techniques. Students will learn to find and communicate meaning in data, and to think critically about arguments based on data. **Prerequisites: Algebra I and Geometry (1 credit)***

Discrete Mathematics/CP 325

*This course will provide an introduction to several discrete math topics and build to applications involving these ideas. The probability course will have several hands-on activities to enhance understanding, and the statistics unit will provide a basic working understanding with opportunities to analyze provided data sets and also collect data, as well. In the second semester, we will tackle basic financial ideas, with activities to prompt thinking using relevant ideas. We will finish the year with graph theory, which uses squiggle and dots to do such things as determining the most efficient path for snow-plowing a city, the order a salesperson visit several cities to minimize cost, how to place a power station to service many parts of a town, and how many work teams a business will need to facilitate a harmonious work environment. **Prerequisite: Algebra II (1 credit)***

Pre-Calculus/CP 397

*In this course students regularly employ a variety of problem-solving techniques and build skills using the TI-84 graphing calculator. Students study advanced functions and graphing, discrete mathematics, statistics and Trigonometry. Students will be expected to purchase their own TI-84 calculator or rent one from MCI. **Prerequisite: Algebra II (1 credit)***

Advanced Placement (AP[®]) Pre-calculus 338

*This course equips students with mathematical tools in real-world modeling situations in preparation for using these tools in higher-level math and science courses. Topics include Polynomial and Rational Functions, Exponential and Logarithmic Functions, Trigonometric and Polar Functions, and Functions involving Parameters, Vectors and Matrices. **Prerequisite: Algebra 2 (1 credit)***

Advanced Placement (AP[®]) Calculus AB 340

*This course covers the same material as the traditional Calculus course, but with more emphasis on analysis, application and the relationship between all representations of functions. The course prepares students to take the College Board's AP[®] Calculus AB exam in the spring. Taking the AP[®] exam (and payment of the AP exam fee by the student) is a requirement for successful completion of the course. Qualified students may receive AP exam fee assistance through The College Board. Students will be expected to purchase their own TI-84 calculator or rent one from MCI. **Prerequisite: Pre-Calculus and teacher recommendation. (1 credit)***

Advanced Placement (AP®) Calculus BC 342

*This course covers the equivalent of two semesters of college Calculus. Students will expand on knowledge from Calculus AB to further explore limits, derivatives and integrals and apply their understanding to challenging new concepts such as sequences, series, parametric curves and polar curves. The course is designed to prepare students to take the College Board's AP® Calculus BC exam in the spring. Taking the AP® exam (and payment of the AP exam fee by the student) is a requirement for successful completion of the course. Qualified students may receive AP exam fee assistance through The College Board. Students will be expected to purchase their own TI-84 calculator or rent one from MCI. **Prerequisite: AP® Calculus AB or teacher recommendation (1 credit)***

Advanced Placement (AP®) Statistics 349

*This course prepares students to take the College Board's AP® Statistics exam in the spring. Per the College Board course description, this AP Statistics course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes evident in the content, skills, and assessment in the AP Statistics course: exploring data, sampling and experimentation, probability and simulation, and statistical inference. Equivalent to a one-semester, introductory, non-calculus-based college course in statistics. Taking the AP® exam (and payment of the AP exam fee by the student) is a requirement for successful completion of the course. Qualified students may receive AP exam fee assistance through The CollegeBoard. **Prerequisite: Algebra 2 or teacher recommendation (1 credit)***

SAT Math 195

*This one-semester problem-based course focuses on mastering math questions presented on standardized tests. Topics include algebra, statistics, probability, and geometry, as well as problem-solving and test-taking strategies. **Prerequisite: Algebra 2 (.5 credit)***

Science

Science courses at MCI support students in learning to inquire, understand and solve problems using scientific methods. Our courses integrate the processes of investigation and communication about the natural world with a scientific body of knowledge that includes concepts, principles, facts, laws, and theories about how our world and universe work. The Science Department offers students a variety of courses and levels from Earth and Space Science in freshman year through AP® courses. All students must complete four credits in science. These must include an earned credit in each of the following: Earth and Space Science; Biology; and Chemistry, Physics or Engineering.

Earth and Space Science 418

*This course studies the four primary Earth Systems--the Atmosphere, Biosphere, Geosphere, and Hydrosphere--and the interconnections between each system. Through various methods of scientific inquiry, students will examine the interactions of air, water, and other physical processes that shape the physical world. Students will also explore the Earth and its place in space as part of the solar system, galaxy, and the universe. **(1 credit)***

Earth and Space Science/CP 419

Course material covers the same topics as General Earth Science, but with more emphasis on deep analysis and understanding. Topics will be explored in greater depth and detail. Students enrolling in this class must have good mathematical and strong critical thinking skills. (1 credit)

Biology 420

A systems approach to the important concepts and ideas of biology, this course is designed to lead students to an understanding and appreciation of the common characteristics of living systems. Topics include cells, genetics, organisms and ecosystems. This class includes many lab activities, which require analytical and communication skills. (1 credit)

Biology/CP 421

This course is an exploration of all life, from molecules to ecosystems. This course will study the structure and function and behavior of organisms on a changing planet. Students are required to solve problems using algebra, measure and compute accurately, research and write critically and design experiments. This class includes extensive lab work, which requires math and reporting skills. (1 credit)

Advanced Placement (AP®) Biology (2 periods) 415

*This is a college-level course designated as an official AP course by the College Board. This course addresses all areas of modern biology through extensive reading, writing, computation and lab work. Topics include the chemistry of life; cell structure and function; cellular energetics (respiration, photosynthesis, enzymes); cell communication and cell cycle; heredity; gene expression and regulation; natural selection; ecology. Qualified students may receive AP exam fee assistance through The College Board. Summer work is required for all students. **Prerequisites: Grades of 80 or above in Biology, Chemistry and Algebra. (1.5 credits)***

Chemistry/Physics 450

*This course is a broad overview of the physical sciences, chemistry and physics, with hands-on experiences to enhance understanding. The first semester of the course focuses on chemistry concepts, including matter and how it changes, understanding atomic structure, how atoms bond, and different types of chemical reactions. In the second semester, the focus turns to physics concepts, including forces, collisions and momentum, energy transfer, and mechanical waves. **Prerequisites: Junior/Senior standing or recommendation from a science teacher (1 credit)***

Chemistry/CP 473

This is a standard high school chemistry course in which students perform a variety of activities, lab experiments and research in order to explore and explain matter. Topics include classification and measurement of matter, atomic theory, structure of atoms, use of the periodic table, chemical bonding and formulas, the mole concept, and stoichiometry.

***Prerequisites:** Algebra I (completed with minimum grade of 80), Algebra II (may be taken concurrently); Junior/Senior standing or recommendation from a science teacher (1 credit)*

Advanced Placement (AP®) Chemistry (2 periods) 431

Learn about the fundamental concepts of chemistry including structure and states of matter, intermolecular forces, and reactions. Students will conduct hands-on lab investigations and use chemical calculations to solve problems. The skills students learn include designing experiments and procedures to test a prediction or theory; creating graphs, diagrams, and models that represent chemical phenomena; explaining how the microscopic structure of a substance determines its chemical properties; balancing a chemical equation; and making a scientific claim and supporting it with evidence.

*Qualified students may receive AP exam fee assistance through The College Board. **Prerequisites:** Chemistry CP and Algebra II (both completed with minimum grade of 80) (1.5 credit)*

Physics/CP 441

This is primarily a course in mechanics and teaches experimental design with graphical and numerical analysis. Experimental results are used to teach the fundamentals of linear motion and force and the analogous topics of rotational motion and torque. Students will also learn to solve problems using the conserved quantities of momentum and energy.

*Students must have good mathematical skills. **Prerequisite:** Algebra I (completed with minimum grade of 80), Algebra II or its equivalent (may be taken concurrently) (1 credit)*

Advanced Placement (AP®) Physics I 410

This course is an algebra-based, introductory college-level physics course. The course is intended as a first year physics course for high school students who have a strong interest in physical science. Students will develop critical thinking and reasoning skills through inquiry-based lab investigations, along with traditional classroom work. There will be an emphasis on student led discussions about experimental observations, and applying those ideas to answer real world questions. Topics covered in this course are those that are typical of a first semester introductory college-level course.

*Topics include: kinematics; Newton's laws of motion; rotational motion; work, energy, and power; linear momentum; oscillations; mechanical waves and sound; and simple circuits. Qualified students may receive AP exam fee assistance through The College Board. **Prerequisites:** Geometry and Algebra II (may be taken concurrently) (1 credit)*

Advanced Placement (AP®) Physics II 474

*This course is an algebra-based, introductory college-level physics course. The course is intended as a second year physics course for high school students who have a strong interest in physical science. Students will develop critical thinking and reasoning skills through inquiry-based lab investigations, along with traditional classroom work. There will be an emphasis on student led discussions about experimental observations, and applying those ideas to answer real world questions. Topics covered in this course are those that are typical of a second semester introductory college-level course. Topics include: fluids; thermodynamics; electric forces, fields, and potential; electric circuits; magnetism and electromagnetic induction; geometric and physical optics; quantum, atomic, and nuclear physics. Qualified students may receive AP exam fee assistance through The College Board. **Prerequisites: AP Physics 1, and Pre-calculus (may be taken concurrently) (1 credit)***

Anatomy and Physiology/CP 432

*Course material focuses on the structure and function of the major human body systems. Semester 1 includes the introduction, histology, skeletal, muscular and part 1 of the nervous system. Semester 2 is part 2 of the nervous system, cardiovascular, digestive and reproductive system. Labs for this class are integrated throughout each unit. An emphasis is placed on learning proper terminology, as well as the integration of body systems. **Prerequisite: Biology (1 credit)***

Advanced Anatomy & Physiology (with Concurrent Enrollment Anatomy & Physiology Option) 488

*Course material focuses on the structure and function of the eleven human body systems. It is a fast paced, content focused class with a small lab section. An emphasis is placed on learning proper terminology, as well as the integration of body systems. For an additional fee, this course may be taken as a concurrent enrollment course in which students earn both high school and university credits. Four college credits will be awarded by University of Maine at Fort Kent upon successful completion of each semester for a total of 8 college credits. **Prerequisite: Biology (1 credit)***

Environmental Science 496

*This course provides students with a foundation in the principles and concepts of environmental science. Topic selection is based on current environmental science issues and includes: sustainability, population, recycling, waste management, alternative energies, agricultural practices, and human relationships with environmental change. Students are required to work in the student garden and participate in the campus recycling program and greenhouse. **Prerequisite: Biology (1 credit)***

Advanced Placement (AP®) Environmental Science 460

*This course is a college-level, introductory environmental science course devoted to integrating our understanding of biological, physical and social sciences through the study of environmental interactions. Students will examine the causes, consequences, and potential solutions for both natural and human created environmental problems along with the interrelationships that living things have with each other and with their environment. These concepts are explored through laboratory activities, environmental case studies, and student projects. Considerable emphasis is placed on field investigations as well as on laboratory study. Qualified students may receive AP exam fee assistance through The College Board. **Prerequisite: Earth/Space Science and Biology (grade point average of 85 or above) (1 credit)***

Sustainable Living 481

*This course investigates the challenges of implementing sustainability in a variety of forms: home energy use, recycling/reusing/reducing/precycling, climate change and pollution, natural resource use, gardening and ecosystems/land use. This class is a hands-on approach to learning how to reduce the environmental impact of your living area, home, and here at MCI. Class size is limited, and enrollment is restricted to juniors and seniors. Prerequisites: **Biology or equivalent and instructor permission (.5 credit)***

Botany 492

*This course examines the vital role of plants on Earth along with plant anatomy, growth and development and the characteristics of major groups of plants. Students will engage in hands-on projects with plants. As a part of the class students will participate in the maintenance and growth of plants in the garden, around campus and in the greenhouse. Prerequisites: **Biology (may be concurrently taking) (.5 credit)***

Laboratory Science: Watershed Investigations 472

*This course explores how healthy water is by investigating local watersheds by land use, field work at the Sebasticook River and performing lab tests. The course also includes a survey of clean water laws, how cities and towns clean their water and careers in municipal water management. This course is offered in the **Spring semester only. Prerequisite: Biology (.5 credit)***

Laboratory Science: Wildlife Forensics 471

*This course covers the multi-billion dollar world of illegal wildlife trade and the efforts of wildlife forensic specialists to police it. You will learn how to conduct investigations using real-life cases of poaching and illegal trade. The course includes training in forensic lab techniques and a survey of current laws and job opportunities. This course is offered in the **Fall semester only. Prerequisite: Biology (.5 credit)***

Forensic Science 491

*This course explores the scientific aspect behind crime scene investigations. Major topics include fingerprint analysis, hair/fiber evidence, blood and DNA evidence, toxicology, handwriting and document analysis, ballistics and impressions. A focus will be on how this evidence is collected from a crime scene and its use in determining guilt or innocence. The class will have a heavy lab focus and end with a mock crime scene investigation. Prerequisite: **Concurrently taking Biology (.5 credit)***

Diseases and Disorders 482

*This course is an exploration into the various illnesses that affect the human body. There will be a large focus on infectious diseases which will include a history of various pandemics, current epidemics, the development and use of antibiotics, and the effects of vaccinations as well as the current controversy surrounding their use. The course will also look at different degenerative, autoimmune, deficiency and hereditary diseases. A study of mental disorders will also be included. This course is offered in the **Spring semester only. Prerequisite: Biology (.5 credit)***

Astronomy (2nd semester) 454

*This is a semester long course that will build upon the foundational Astronomy topics learned during Earth and Space Science. More specifically, students will study stars, galaxies, and Cosmology. Students will explore the nature of light, how we view our universe, and each student will learn about optics with a focus on using telescopes to view parts of the solar system. **Prerequisite: successful completion of Earth and Space Science. (.5 credit)***

Technology and Engineering

Introduction to Design 499

*This course is a semester long course for students interested in learning basic fundamentals of modeling, scaling, and 3D printing. This course will provide students with a foundation of designing and modeling skills that will be incorporated in future STEM classes here at Maine Central Institute. Students will learn the principles of design, how a 3D printer works, and how to successfully print models that can be tested in the lab setting. As students explore the capabilities of 3D printing, there will be a focus on real life application for the models they design and print. Tinkered is one platform that will be used to design models for 3D printing, but a variety of other printing app's will be introduced as well. This course is offered in the **Fall and Spring semesters. Students who are interested in taking Intro to Engineering and Physics of Sports will be given priority for the class. (.5 credit)***

Introduction to Engineering 470

*This is a first year engineering course intended to build upon the skills developed in Introduction to Design. Students will apply this knowledge into to design and creation of various civil, mechanical, and environmental engineering project. **Prerequisite: Pass Introduction to Design with above a 75 (.5 credit)***

Physics in Sports 438

*This is a semester long course intended for students interested in studying physics and its role in athletics. This course will cover introductory level physics concepts with a focus on conceptual understanding. Students will also explore the science behind sports equipment and how engineering has lead to advancements in sports over time. A major component of this course will be designing and testing 3D models. Topics covered in this course will include: kinematics; force and Newton's laws, work, energy, and power; momentum; rotational motion; mechanical waves; fluids; and simple circuits. **Prerequisite: Pass Introduction to Design with above a 75 (.5 credit)***

Advanced Design 478

*This course is a semester-long course for students interested in building upon their skills learned in Introduction to Design. Students will explore more advanced CAD programs such as Sketchup, Shapr3d, and Fusion 360. The use of Apple Pencils with the iPads will be incorporated as part of the process of design. As students develop their CAD abilities they will also work with Adobe Suite Apps to create 2D graphical designs. Throughout the course, students will be using a variety of 3D printers, 3D pens, and will be learning about Laser Engraving as a method of modeling. This course is offered in the Fall and Spring semesters. **Prerequisite: Pass Introduction to Design with above a 75 (.5 credit)***

Advanced Placement (AP®) Computer Science A 624

*This AP course teaches students to design and implement computer programs that solve problems relevant to today's society, including art, media, and engineering. AP Computer Science A teaches object-oriented programming using the Java language and is meant to be the equivalent of a first semester, college-level course in computer science. It will emphasize problem solving and algorithm development, and use hands-on experiences and examples so that students can apply programming tools and solve complex problems. Taking the AP® exam (and payment of the AP exam fee by the student) is a requirement for successful completion of the course. Qualified students may receive AP exam fee assistance through The College Board. **Prerequisite: if taking as a 4th year Math course, students must have successfully completed Algebra II. (1 Credit Science or Math)***

Advanced Placement (AP®) Computer Science Principles 621

*This course offers a multidisciplinary approach to teaching the underlying principles of computation. The year-long course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. AP Computer Science Principles will give students the opportunity to use technology to address real-world problems and build relevant solutions. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science. Taking the AP® exam (and payment of the AP exam fee by the student) is a requirement for successful completion of the course. Qualified students may receive AP exam fee assistance through The College Board. (1 credit Science OR Math) **Prerequisite: if taking as a 4th year Math course, students must have successfully completed Algebra II. (1 Credit Science or Math)***

Introduction to Web Design 709

Intro to Web Design will introduce students to basic and advanced concepts of HTML and CSS. Students will learn the languages and then create their own homepages. By the end of the course students will be able to explain how web pages work, analyze and fix errors that might occur on a website, understand the foundations of user centered design, and understand prototyping and user testing. By the end of the course, students will produce a professional, mobile responsive website. (.5 credit)

Computer Science Discoveries 618

This course introduces students to the basic concepts of computational thinking. This course will take students on an adventure examining the concepts of abstraction, algorithms, and basic programming. Along the way students will create games in Javascript, design functioning apps, learn the basics of web design, and build programs to control circuit boards. This course is designed for anyone who has ever wanted to peek inside a computer to understand just how it works. (.5 credit)

Introduction to Cyber Security 612

*This course will cover the fundamentals of cyber defense. The course will look into the fundamentals of networks and network security. It will discuss topics such as ethical hacking, encryption, phishing, and the use of cyber security software. It will look at the impact of cybersecurity from both a technical and business perspective. Contemporary issues related to cyber security will be covered in this course **Prerequisites - Junior Status or permission from the instructor (.5 credit)***

Robotics 475

*This one-semester, hands-on class will teach students the basics of robotics. Focusing on small-scale robots, students will learn basic coding, design and building techniques. **Prerequisites: 11th & 12th grade only (.5 credit)***

Introduction to Game Design I 627

*The Game Design in Unity course teaches the fundamentals of designing a game using the most widely accessed and preferred editing engine in the world. The intent of this course is to prepare high school students with the industry related skills needed for the workplace and higher learning environments. By the end of this course, they will understand the design planning process, be knowledgeable of industry related careers, and be able to navigate the Unity environment in order to create 3D games **Prerequisites - Taking Algebra 2 or Intro Data Science, AND not taking AP Computer Science A, or Instructor's permission (.5 Credit)***

Introduction to Game Design II 622

*The Game Design in Unity course teaches the fundamentals of designing a game using the most widely accessed and preferred editing engine in the world. The intent of this course is to prepare high school students with the industry related skills needed for the workplace and higher learning environments. By the end of this course, they will understand the design planning process, be knowledgeable of industry related careers, and be able to navigate the Unity environment in order to create 3D games **Prerequisites - Taking Algebra 2 or Intro Data Science, AND not taking AP Computer Science A, or Instructor's permission (.5 Credit)***

Project Management 616

*Students will explore the 10 knowledge areas and the 5 process groups outlined in the PMBOK® 6th Edition. Topics that will be covered in this class include Integration Management, Scope Management, Schedule Management, Cost Management, Quality Management, Resource Management, Communication Management, Risk Management, Procurement Management, and Stakeholder Management. The class also will be covering how to create and manage teams along with a focus on agile development techniques such as Scrum, XP (Extreme Programming), Lean, and Kanban. This is a great course for students who wish to pursue careers in software development, engineering, or business administration. **Prerequisites - Junior Status & a minimum of an 80 GPA or permission from the instructor.(1 credit)***

HUMAN DEVELOPMENT

Human development courses are built on the “Holistic Wellness” approach. This approach recognizes the symbiotic relationship among physical, mental / intellectual, emotional, social and spiritual health. Because health issues are so dynamic, HD courses strive to give students the skills, resources and knowledge to be healthy, happy, lifelong learners. Students are encouraged to think for themselves, be knowledgeable consumers and problem solvers and to make educated decisions.

Health I 905

*The Health education course acquaint students with attitudes, values, and practices surrounding the topics of health and wellness. Students learn to make positive, educated decisions associated with mental, physical, social and emotional wellness. Topics include (but are not limited to) drug use and abuse, conflict resolution, nutrition, reproductive health and disease prevention. Students develop the critical thinking skills required to make educated decisions surrounding health and wellness. Health is a semester-long course required of all students. **Prerequisite: None (.5 credit)***

Physical Education I 901

*This course introduces students to “lifetime” sports, recreation and games. The curriculum focuses on fitness education and motor skill development for the purpose of improved individual health and encouraging participation for a lifetime. Emphasis is placed on certain health-related fitness (HRF) areas known to have a great impact on one’s quality of life. Activities may include golf, archery, racquet sports and volleyball. PE I is a semester-long course required of all students. **Prerequisite: None (.5 credit)***

Physical Education II 900

*Good fitness habits as a youth translate to a healthier, more satisfying adulthood and higher overall quality of life. In PE II we will concentrate on fitness and being active. For lifelong fitness, it is important to find activities that you will enjoy and that will make you a healthier person. The course goal is to expose students to a wide variety of fitness activities such as aerobics, weight lifting, yoga, pilates, medicine ball, physioball and calisthenics, as well as active recreational activities such as mountain biking and canoeing. This introduction to activities, along with a strong knowledge base, will enable you to make individualized choices to improve your well-being based on your own strengths and weaknesses. PE II is a semester-long course required of all students. **Prerequisites: PE I (.5 Credit)***

Physical Education III 910

*This semester-long elective course engages students in a variety of lifelong activities. The curriculum focuses on sportsmanship, teamwork, cooperation, fitness education and motor skill development for the purpose of improving individual health and encouraging participation for a lifetime. **Prerequisites: PE I and PE II (.5 Credit)***

Introduction to Medical Concepts 908

*During this course, students will become acquainted with general medical concepts including, but not limited to, general medical illnesses and care, vital sign techniques and other biometric tests, common medical terminology as well as an introduction to blood pressure, heart and lung sounds. Students will have the opportunity to earn his/her First Aid/CPR/AED certification from the American Heart Association. Students will have the opportunity to job shadow with healthcare professionals at Northern Light Seabastcook Valley Hospital and gain clinical experience with patient assessment and treatment. This class requires vaccinations including flu, covid and a negative TB test in the last year. Should have documentation into the academic office by the end of November. This is a junior and senior level class. Special permission may be given to a sophomore that has met the prerequisites. **Prerequisite: PE II and Health (.5 Credit)***

Introduction to Sports Medicine 903

*During this course, students will get an introduction to the foundations of providing health care to athletes and physically active individuals. Students will learn the basics of prevention, assessment, and management of injuries, rehabilitation and emergency care. The course will cover basic anatomy, pathology and kinesiology. This course includes labs where students will have the opportunity to learn by doing the assessments, taping and various aspects of emergency care. The course will also look at the various emerging practice areas for the athletic trainer. **Prerequisite: PE II and Health (.5 Credit)***

Jobs for Maine's Graduates (JMG) 201 -Gr. 12 / 209 - Gr 9, 10, 11

*Initially created for high school seniors as a school-to-work program, JMG has evolved into an organization serving more than 5,000 students per year in more than 85 school-based sites. Through JMG programs, high-school and middle-school students discover their individual talents, develop skills, and seize opportunities to achieve their personal potential. JMG at MCI offers a venue for students to interact with employers, community-based organizations, and post high school opportunities. The JMG program teaches more than 37 core competencies comprised of six skill sets: personal skills, leadership skills, communication skills, job attainment skills, job success skills, and career development skills. JMG is successfully preparing Maine's young people to be responsible and productive employees, customers, and citizens. MCI offers JMG for grades 9-12. The JMG teacher will interview every student before acceptance to the program. **Prerequisite: None (1 Credit)***

Outside Maine 912

*OutdoorMe is a continuation of many of the outdoor activities introduced in PE2 as well as additional activities to get outside in Maine. Geocaching, orienteering, survival skills, fly tying as well as fly casting, fishing skills, bird ID and plant ID are all possible units depending on time and group interest. Our focus will be getting outside and moving in a state known for its natural beauty! All levels of outdoor experience are encouraged to join the class. **Prerequisite: PE II (.5 Credits)***

VISUAL AND PERFORMING ARTS

MCI offers a variety of instruction and opportunities within the fine arts. Art, music, drama, and dance all help to build a sense of community and contribute to understanding and appreciating diverse cultures. Beyond the classroom, students are able to develop their individual talents, participate in performances and displays and compete for regional awards.

Art

Studio Foundations I 807

*No prior art experience needed. In Studio in Foundations One students will explore the elements of art and principles of design, art techniques, different mediums, as well as strategies to improve artistic skills. Students will explore the history of art and design, while creating artwork that uses similar historical media and techniques. (.5 credit) **Prerequisite: None (.5 Credit)***

Studio Foundations II 808

This course is a continuation of Studio in Foundations One. Students will continue to explore the art elements and principles of design, art techniques, different mediums, as well as strategies to improve visual arts skills while furthering their knowledge of art history. Focus will be made on portfolio development for college bound art students, both physically and digitally. (.5 credit) **Prerequisite: Studio Foundations I (.5 Credit)**

Ceramics 866

This course is designed to meet the Maine Learning Results for the Visual Arts. A. Disciplinary Literacy, B. Creation, Performance and Expression, C. Creative Problem-Solving, D. Aesthetics and Criticism and E. Visual and Performing Arts Connections. Course content promotes the National Common Core Learning Standards while incorporating the Maine Learning Results for the Arts to ensure effective and meaningful learning experiences. Art units follow a historical pathway and are introduced sequentially. This gives us the opportunity to reinforce art content, to build visual/verbal literacy, and to introduce important art vocabulary. Art lessons have been designed to develop the student's ability to think creatively/critically, communicate effectively, and work collaboratively to solve creative problems. **Prerequisite: Studio Foundations I (.5 Credit)**

Pottery (Ceramics II) 858

This course is designed to meet the Maine Learning Results for the Visual Arts. A. Disciplinary Literacy, B. Creation, Performance and Expression, C. Creative Problem-Solving, D. Aesthetics and Criticism and E. Visual and Performing Arts Connections. Course content promotes the National Common Core Learning Standards while incorporating the Maine Learning Results for the Arts to ensure effective and meaningful learning experiences. Art units follow a historical pathway and are introduced sequentially. This gives us the opportunity to reinforce art content, to build visual/verbal literacy, and to introduce important art vocabulary. Art lessons have been designed to develop the student's ability to think creatively/critically, communicate effectively, and work collaboratively to solve creative problems. **Prerequisite: Ceramics I (.5 Credit)**

Drawing 704

This course is designed to meet the Maine Learning Results for the Visual Arts. A. Disciplinary Literacy, B. Creation, Performance and Expression, C. Creative Problem-Solving, D. Aesthetics and Criticism and E. Visual and Performing Arts Connections. Course content promotes the National Common Core Learning Standards while incorporating the Maine Learning Results for the Arts to ensure effective and meaningful learning experiences. Art units follow a historical pathway and are introduced sequentially. This gives us the opportunity to reinforce art content, to build visual/verbal literacy, and to introduce important art vocabulary. Art lessons have been designed to develop the student's ability to think creatively/critically, communicate effectively, and work collaboratively to solve creative problems. **Prerequisite: Studio Foundations I (.5 Credit)**

Painting 852

*This course is designed to meet the Maine Learning Results for the Visual Arts. A. Disciplinary Literacy, B. Creation, Performance and Expression, C. Creative Problem-Solving, D. Aesthetics and Criticism and E. Visual and Performing Arts Connections. Course content promotes the National Common Core Learning Standards while incorporating the Maine Learning Results for the Arts to ensure effective and meaningful learning experiences. Art units follow a historical pathway and are introduced sequentially. This gives us the opportunity to reinforce art content, to build visual/verbal literacy, and to introduce important art vocabulary. Art lessons have been designed to develop the student's ability to think creatively/critically, communicate effectively, and work collaboratively to solve creative problems. **Prerequisite: Studio Foundations I (.5 Credit)***

Discovering Art History 889

*This course is designed to meet the Maine Learning Results for the Visual Arts. A. Disciplinary Literacy, B. Creation, Performance and Expression, C. Creative Problem-Solving, D. Aesthetics and Criticism and E. Visual and Performing Arts Connections. Course content promotes the National Common Core Learning Standards while incorporating the Maine Learning Results for the Arts to ensure effective and meaningful learning experiences. Art units follow a historical pathway and are introduced sequentially. This gives us the opportunity to reinforce art content, to build visual/verbal literacy, and to introduce important art vocabulary. Art lessons have been designed to develop the student's ability to think creatively/critically, communicate effectively, and work collaboratively to solve creative problems. **Prerequisite: None (.5 Credit)***

Drama

Technical Theatre I 970

*This course provides students with a hands-on approach to stagecraft. Students will build sets, learn scenic painting techniques, and create properties, costumes and makeup designs for MCI Drama productions. Students will also serve as the run crew for MCI Drama productions and will learn stage management techniques, as well as lighting and sound design and operation. **Prerequisite: None (1 Credit)***

Technical Theatre II 873 , III 90408, & Advanced 872

*This course provides students with a hands-on approach to stagecraft. Students will build sets, learn scenic painting techniques, and create properties, costumes and makeup designs for MCI Drama productions. Students will also serve as the run crew for MCI Drama productions and will learn stage management techniques, as well as lighting and sound design and operation. **Prerequisite: Technical Theatre I or Instructor's Permission with successful completion of one of the following courses: Play Production, Actor's Studio, Stage and TV Makeup, Costume Design or Festival Theatre Ensemble. (1 Credit)***

Festival Theater Ensemble: Acting & Technical Theater 989,987

*An honors level course which advances all theatre techniques learned in previous coursework (audition process/set design/acting/play production). Participants will take part in the MPA Drama Festival. Individual pieces will also be prepared for college auditions. **Students must audition for placement in this course. (.5 credit)***

Stage and TV Makeup I 965

*What is makeup? When was it first used and for what reason? How has makeup evolved through history? This hands-on semester long course will cover the basic techniques of theatrical makeup by exploring makeup materials, color and light, and modeling techniques in the development of makeup designs for youth, middle and old age, historical persons, stylized faces, clowns, animals, and fantasy makeup. Through practical application on themselves, students will demonstrate skills and techniques of the various materials presented in the course, build resources and be able to complete character analysis for makeup design and technique. **Prerequisite: None (.5 Credit)***

Stage and TV Makeup II 976

*Building on the techniques and skills learned in Stage and TV Makeup I, students will further their skills in the use and application of make up for performance settings. **Prerequisite: Stage and TV Makeup I. (.5 Credit)***

Social Theater 974

*Social Theatre Class is an interactive exploration of local and global issues affecting today's high school students: bullying, cyber bullying, acceptance, risk-taking, school violence and discrimination. Student will build community, heal divisions and shatter stereotypes through class discussions, guest speakers, videos and selected play readings. **Prerequisite: None (.5 Credit)***

Actor's Studio I 931

*Have you ever wondered what an actor does? The mission of this semester-long class is to awaken the students' imagination, emotion and intellect while introducing fundamental skills and tools required for developing strong communication skills. Students will build self-awareness, develop imagination and concentration, learn the actor's vocabulary, and demonstrate the ability to be honest and committed in their acting. Coursework will include: Improvisation, Comedy Sketch Work, Mask Acting, Voice, and Movement. **Prerequisite: None (.5 Credit)***

Introduction to Costume Design 937

*This is a beginning course and workshop designed for students who are interested in learning the requirements, process and expectations for costume design. Using various techniques, students will develop designs and costumes through a process of character analysis, script analysis, research, budgeting and director's vision. Period research, design, and rendering skills will be fostered through practical exercises. Instruction will include: basic costume construction, including drafting and draping, how to use a straight stitch and serger machine. Other techniques offered will be dyeing, fabric selection, draping, flat pattern drafting, pattern manipulation, adaptation, fitting, and alteration. **Prerequisite: None (.5 Credit)***

Play Production 982

*Play production class is for the student who has a sincere interest in continuing to grow as a theatre artist. This class will incorporate technical production work, acting, and all aspects of a theatrical performance. Students must seek permission from the course instructor for permission to take this course. **Prerequisite: Technical Theatre, Stage and TV Makeup, or Festival Theatre Ensemble (.5 Credit)***

Festival Theatre Ensemble 988

*An honors level course which advances all theatre techniques learned in previous coursework (audition process/set design/acting/play production). Participants will take part in the MPA Drama Festival. Individual pieces will also be prepared for college auditions. **Students must audition for placement in this course. (.5 credit)***

Music

Concert Band 950 (Will share period w/ Concert Choir)

*Students are expected to have a rudimentary reading ability of sheet music to join this class. Students enrolled in Concert Band will have an opportunity to explore music on their chosen wind, percussion, or string instrument and further develop music performance practices. Students will perform music in a variety of styles and settings ranging from serious wind ensemble literature at concerts, to popular music for home football and basketball games, to contemporary music written for cinematic collaboration. Performances are given in the community as well as outside of the community. Extended trips are planned once every four years to areas such as New York City or Virginia. **Prerequisite: None (1 Credit)***

Concert Choir 960 (Will share period w/ Concert Band)

*Open to all students. Students enrolled in Concert Choir will perform music from a wide range of styles. Concert Choir encourages students to develop confidence in their own singing voice in a positive and welcoming space. Repertoire will balance traditional choral music, contemporary choral literature, and musical theater favorites. Fundamental singing techniques will be covered, including: sight singing, pitch-matching, diction, projection, rhythm, musicality, and interval recognition. Performances are given in the community as well as outside of the community. Extended trips are planned once every four years to areas such as New York City or Virginia. **Prerequisite: None (1 Credit)***

Instrumental Jazz Ensemble 951

*Students must audition for placement in this course. Students are encouraged to explore improvisation. Students will learn how to be multi-genre artists in this course, studying the principles of jazz, bebop, hip-hop, rock & roll, funk, and the blues. Along with class time there are practices scheduled once a week after school. **Students must be enrolled in Concert Band to be eligible for Instrumental Jazz. (1 credit)***

Vocal Jazz Ensemble 961

*Students must audition for placement in this extra-curricular course. Students are encouraged to explore improvisation. Students will learn how to sing over chord changes and how to sing in the harmonic progressions and rhythmic structures of multiple different jazz genres. Students will participate in local jazz festivals and will tour once every four years to other states. This class takes place before or after school hours. **Students must be enrolled in Concert Choir to be eligible for Vocal Jazz. (1 Credit)***

Beginning Guitar 966

*Open to all students. This course is designed to introduce beginning students to the guitar as well as develop growth for students that already have some experience with the guitar. By the end of this course, students will be able to read popular music, folk music, and lead sheets. Students will learn how to play melodies and chords and the basic principles of improvisation. Students will also study basic music theory and basic songwriting skills. Instruction is both group and individual. Students may sign up for successive semesters of this course; however, they must have approval from the instructor in order to sign up for the course after the first semester. **Prerequisite: None (.5 Credit)***

Advanced Guitar 962

*This class is for students that have experience playing guitar at a more advanced level. Beginning Guitar is a pre-requisite or meeting with the teacher individually to demonstrate a level and ability, including playing and recognizing chords, musical notation, and or tablature will suffice. Right hand strumming and fingerpicking technique will be assessed. We will use a variety of advanced guitar method books as well as tailoring your class experience based on particular interests with selections from the internet and dedicated guitar websites like Ultimate Guitar. **Prerequisite: Beginning Guitar (.5 Credit)***

Ukulele 959

*Ukulele is one of the world's most accessible instruments. You will instantly learn a few chords and be able to play thousands of songs! No prior musical experience is necessary, and through class you will have perfected a skill that you can use privately or in groups in just about every corner of the world. We will learn the history of the instrument, how and what to look for in purchasing ukuleles, and all the materials online that Ukulele players all over the world share for FREE that you can access. We will search for recordings or videos featuring the wide range of Ukulele repertoire and performers. **(.5 Credit)***

Piano I 953

This one-semester course is designed to stimulate student growth in music through the understanding of keyboard technique, basic theory and efficient practice methods. Everyone is welcome – from those without previous experience with music or piano to those who have previous experience. Students will be playing and progressing using the Piano Marvel app, which gives instant feedback, scores and virtual trophies for each level. Students learn to read music, play with accompaniment, and perform in a class recital.

Prerequisite: None (.5 Credit)

Piano II 949

This one-semester course is designed to stimulate student growth in music through the progression of keyboard technique, intermediate theory, sight-reading challenges and efficient practice methods. This course is for those who have reached level 3 or beyond in Piano Marvel. Students will be learning additional pieces in their preferred style to include classical, popular and soundtracks and will perform twice in class recitals.

Prerequisite: Piano I or Demonstration of Level (.5 Credit)

Music Theory and Composition & Digital Music 958

Music Theory and Composition is a hands-on Music class open to all students from beginner to expert level. Every student needs to bring their open mind, imagination and a desire to learn new and challenging things regarding musical composition and notational constructs. Music Theory and Composition takes you from a basic understanding of rhythm and sound patterns to the most complex usage of the Elements of Music: Rhythm, Dynamics, Melody, Harmony, Tone color, Texture, and Form. Both Sibelius notational software and Logic Pro digital music production will be utilized.

Prerequisite: None (.5 Credit)

Modern Band 990

Modern Band like its counterparts of: Concert Band, Jazz Band, Pep Band, and Chorus is a fun and productive music class that focuses on group collaboration, individual expression and skill building in a safe and low anxiety environment. The difference is that Modern Band is accessible to all students as it requires no prior musical experience. Students will learn aurally, physically, and collaboratively by immediately participating in a “Music as a second language” approach.

Prerequisite: None (.5 Credit)

Ballet

Members of the Bossov Ballet Theatre, MCI’s resident ballet company, teach ballet. The theatre is both a performing company and international ballet school. In addition to classes offered during the day for academic credit, students may train after school.

Bossov Ballet Theatre 968

Students enrolled in ballet study, practice and perform classical ballet at a pre-professional level. Ballet students may earn 1 credit in physical education upon successful completion of 2 semesters of ballet. **Prerequisite: Audition with Bossov Ballet Theatre (2 Credits)**

WORLD LANGUAGES

World Language offerings are full year, one-credit college preparatory courses. The courses are designed, both in content and academic experience, to prepare students for further study at the post-secondary level and/or the ability to use the language in real life experiences. Successful world language students build a strong knowledge base by being active learners in class and supplementing their class experience with nightly assignments and studying. Courses require students to demonstrate communication skills appropriate to the language they study. Also, students will learn about, reflect on, discuss and share information about the cultures and society of users of the language. A World Language credit is not required for graduation.

French I College Preparatory 511

French I students listen to, read, write and speak French through lessons built around the level I text (D'Accord) and supplemental materials. Level I students work to build the knowledge base of vocabulary and grammar structures and the skills for communication at a basic level. Students should expect to practice the communication skills each day in class and to regularly demonstrate what they've learned through performances of those skills and knowledge base. These assessment performances are through listening, reading, speaking, writing, knowledge base and cultural connections. There are nightly assignments, and in some units students do unit projects, reports and/or presentations. **Students wishing to advance to level II French must conclude the year with a 70 or higher or have permission from the teacher. (1 credit)**

French II College Preparatory 512

French II students increase their knowledge base of vocabulary and grammar and their listening, reading, writing and speaking skills through lessons built around the level II text (D'Accord) and supplemental materials. Students should expect to practice the communication skills each day in class, to complete nightly assignments, and to regularly demonstrate what they've learned through performances of those skills and knowledge base. These assessment performances are through listening, reading, speaking, writing, knowledge base and cultural connections. In some units students do unit projects, reports and/or presentations. **Students wishing to advance to level I French must conclude the year with a 70 or higher or have permission from the teacher. Prerequisite: 70 or higher in French I or permission from teacher (1 Credit)**

French III College Preparatory 513

This course seeks to improve and refine students skills and knowledge learned in French 1 and 2 as indicated by the American Council of Teachers of Foreign Language (ACTFL). Through daily practices in speaking, reading, writing and listening, students will be exposed to a higher degree of abstract concepts, vocabulary, and authentic materials presented in the target language. Through 90-100% target language instruction, interpretation of short films and short novels, analytical discussions, cultural comparisons and essays, students will see themselves immersed in the language which will provide the necessary exposure to gain more confidence as well as more authentic and spontaneous production than in the previous two levels. Students work from the D'accord level 3 text, the Thèmes AP level text, as well as a short novel that changes with each year. Students will be assessed through written exams, oral presentations, role plays, and daily participation. **Prerequisite: 70 or higher in French II or permission from teacher (1 Credit)**

French IV College Preparatory 514

*Combining two traditionally separate levels, this course seeks to improve and refine students' skills and knowledge learned in French 1, 2, and 3 as indicated by the American Council of Teachers of Foreign Language (ACTFL). Through daily practices in speaking, reading, writing and listening, students will be exposed to a higher degree of abstract concepts, vocabulary, and authentic materials presented in the target language. Through 90-100% target language instruction, interpretation of short films and short novels, analytical discussions, cultural comparisons and essays, students will see themselves immersed in the language which will provide the necessary exposure to gain more confidence as well as more authentic and spontaneous production than in the previous two levels. Students work from the D'accord level 3 text, the Thèmes AP level text, as well as a short novel that changes with each year. The course ends the year with a thematic focus on "The Other;" in the purpose of developing student awareness of the globalized world and the growing need for empathy in the 21st century. Students will be assessed through written exams, oral presentations, role plays, and daily participation. **Prerequisite: 70 or higher in French III or permission from teacher (1 Credit)***

Spanish I College Preparatory 521

*Level I Spanish focuses on building competency so that a student might successfully interact at a basic level to exchange information about individuals and interests. Our units of study are theme-based and include information, practice and performance of the communication skills each day in class, and information and practice to help students make cultural connections. There are nightly assignments. Assessment is in listening, reading, speaking, writing, knowledge base and cultural connections. In some units students do unit projects, reports and/or presentations. **(1 credit)***

Spanish II College Preparatory 522

*In level II Spanish, vocabulary is developed in theme-based units. Students develop an understanding of and the ability to use grammar, such as tenses and pronouns, that supports broader communication. Students should expect to practice the communication skills each day in class, to complete nightly assignments, and to regularly demonstrate what they've learned through performances of those skills and knowledge base. These assessment performances are through listening, reading, speaking, writing, knowledge base and cultural connections. In some units students do unit projects and/or presentations. **Students wishing to advance to level I Spanish must conclude the year with a 70 or higher or have permission from the teacher. (1 Credit)***

Spanish III College Preparatory 523

*In level III, vocabulary is developed in theme-based units; the history, geography, culture and people of Spain are the areas of study for the units in Spanish III. The grammar base is expanded to help students produce and comprehend more sophisticated communication. Students should expect to practice the communication skills each day in class, to complete nightly assignments, and to regularly demonstrate what they've learned through performances of those skills and knowledge base. These assessment performances are through listening, reading, speaking, writing, knowledge base and cultural connections. In some units students do unit projects and in others, reports and presentations. **Students wishing to advance to level II Spanish must conclude the year with a 70 or higher or have permission from the teacher. Prerequisite: 70 or higher in Spanish II or permission from teacher (1 Credit)***

Spanish IV College Preparatory 524

*Level IV units are built around investigation and discussion of social issues, and of cultural themes. Emphasis is placed on stating and supporting opinions. In level IV students continue to build upon their knowledge base of vocabulary and more advanced grammar structures. Students should expect to practice the communication skills each day in class, to complete nightly assignments, and to regularly demonstrate what they've learned through performances of those skills and knowledge base. These assessment performances are through listening, reading, speaking, writing, knowledge base and cultural connections. In some units students do unit projects, and in others, reports and presentations. **Prerequisite: 70 or higher in Spanish III or permission from teacher (1 Credit)***

OTHER

Teaching and Research Assistants

Teaching and Research Assistants are assigned by department and according to need. There is an application that must be filled out and submitted to the Academic Office for consideration by the associated Department Head. Students who wish to become teaching or research assistants are expected to behave responsibly, and to be of good character. Honesty and integrity are crucial to such positions. Teacher recommendation letters may be required. (.5 credit per semester)

HPER

Health, Physical Education and Recreation assistants, or HPER assistants, are upper level students who must have completed one full credit of Physical Education. The Human Development Department faculty may allow up to two HPER students in each class (PE I, PE II, Health). These students will be responsible for a variety of tasks including daily attendance, classroom setup and breakdown, fitness testing, and teaching small sections within activity units. Students are expected to model characteristics of leadership, responsibility, independence, morals, sportsmanship, and ethical behavior. Students wishing to pursue a career in teaching, or in the fields of health, wellness and/or fitness are encouraged to apply for this course. Applications for enrollment are required. (.5 credit)

Concurrent Enrollment Courses

*Concurrent enrollment courses are offered **for juniors and seniors only** through University of Maine, Kennebec Valley Community College, Husson University campus. Students may enroll in no more than 4 concurrent enrollment courses per year; students may concurrently take MCI-UMFK dual enrollment courses for an additional 4 courses. Students interested in enrolling in concurrent college courses **MUST** apply prior to the start of each semester. Enrollment is subject to available seats and courses in college courses and schedules. Applications to and acceptance into each college's program are required. See your Academic Counselor for an application and additional details.*

College Composition (online and in-person afternoon/evening) 2110

College Composition emphasizes critical reading and thinking as part of the process of clear and effective writing. Various writing skills will be practiced and applied through numerous writing assignments. Students will also be required to conduct research and write an essay based on that research. College Composition values the process of writing and students will actively engage the revision process. Students may be required to work in a computerized writing lab; therefore, word processing and keyboarding skills are required. **(.5 MCI credit)**

Introduction to Literature (online and in-person afternoon/evening) 2305

This humanities course will provide students with the opportunity for personal growth and an insight into social problems as revealed through literature. Students will read and discuss a selection of short stories, plays, poems and novels. Prerequisite: A grade of "C" in ENG101 College Composition, or permission of instructor. (.5 MCI credit)

Principles of Economics I (Macro) (online and in-person afternoon/evening) 2112

This course examines functions of the United States economy, economic security, supply and demand, causes of unemployment and inflation, the nature of money and monetary policy, government fiscal policy, the federal debt, and international money matters. Students will receive 3 college credits upon successful completion. (.5 MCI credit)

Principles of Economics II (Micro) (online and in-person afternoon/evening) 2113

Course content includes analysis of the interrelations of the individual consumer, the firm, and industry with regard to markets and pricing, monopoly power, the role of government, and income distribution. Prerequisite: ECO113. Students will receive 3 college credits. (.5 MCI credit)

Multicultural Nature of American Society (online and in-person afternoon/evening) 2115

This course will examine, through selected interdisciplinary readings, the experience of several ethnic groups in American society, specifically African Americans, Native Americans, Hispanic Americans, and Asian Americans. As appropriate, an individual instructor may elect to include other significant groups as time allows. Students will explore the historical and social experiences of these groups and their cultural contributions to the diversity of our American society. Students will receive 3 college credits. (.5 MCI credit)

Psychology (online and in-person afternoon/evening) 2116

This course is an introduction and overview of the study of human behaviors. Lectures and discussion topics will include motivation, perception, historical roots, biological basis of behavior, scientific methods, human development, psychopathology, and theory. Students will receive 3 college credits. (.5 MCI credit)

Sociology (online and in-person afternoon/evening) 2212

A general scientific study of people and the dynamics of society with an emphasis upon the nature of culture, social institutions, social interaction, social units, and their influence on the individual. An overview of sociological concepts and perspectives is also presented. Students will receive 3 college credits. (.5 MCI credit)

Quantitative Reasoning (online and in-person afternoon/evening) 2301

Quantitative Reasoning is a one-semester course that provides a foundation in critical thinking, problem solving, and mathematical skills aligned with citizenship, workforce and real-world applications. The goals of the course are to engage students in meaningful mathematical experiences that will increase their quantitative and logical reasoning abilities and to strengthen the mathematical abilities that they will encounter in other disciplines. Developing and supporting communication and collaboration skills when doing mathematics will be a focus of the course. This course is particularly designed as a gateway for students entering non-STEM degree programs. Must be taken in conjunction with Technical Math. (.5 MCI credit)

Technical Math (online and in-person afternoon/evening) 2303

This one-semester course will provide students with the concepts, principles, and problem solving techniques and skills needed in diverse occupational fields. Interactive techniques will be used which emphasize an understanding of the topics followed by applications of math concepts using problem solving computations. Topics covered include the numbering system, percents, charts, tables and graphs, calculations in both S. I. (metric) and the English systems, algebraic operations, simple equations, ratio and proportions, fundamentals of plane geometry, angular measure, triangles, area and volume calculations of various geometric shapes, introduction to right angle trigonometry. Must be taken in conjunction with Quantitative Reasoning. (.5 MCI credit)

Anatomy & Physiology (MCI-UMFK) 489

Course material focuses on the structure and function of the eleven human body systems. It is a fast paced, content focused class with a small lab section. An emphasis is placed on learning proper terminology, as well as the integration of body systems. Four college credits will be awarded by University of Maine at Fort Kent upon successful completion of each semester for a total of 8 college credits. Open to students who have fulfilled the necessary prerequisites for the course. *Prerequisite: Biology* (1 MCI credit)

College Algebra (MCI-UMFK) 334

DE College Algebra is a full year course that provides students with basic algebraic skills. Covers algebraic concepts including linear, fractional and quadratic and exponential equations and graphs. Also covers basic trigonometry for right triangles. This course is a partnership with the University of Maine at Fort Kent and carries a cost of approximately \$100 for Maine students. (Cost is approximately \$430 for non-Maine students). Students will receive 3 college credits from University of Maine Fort Kent upon successful completion. Course offered on MCI campus and is open to students who have fulfilled the necessary prerequisites. (1 MCI Math credit)

Prerequisite: Algebra II

Aviation 2800

Students enrolled in Aviation will enroll in a course curriculum outlined by AOPA for 1 semester, which will count as a Physics credit at MCI. The second semester course work is taken through University of Maine-Augusta. Students earn concurrent MCI science credit, as well as college credit hours. Students wishing to obtain their small craft private pilot's license will be eligible to earn licensure following the UM-A course. Most students will log flight hours over the summer. **(1 credit)**

Pre-requisites: open to junior and senior students in good standing. University of Maine acceptance and high school academic counselor recommendation required. The UM-A course has additional course fees, licensing fees, and flight time fees.

AP4ME

AP4ME offers Maine high school students throughout the state the opportunity to take Advanced Placement (AP) courses completely online, regardless of where they live or their school's ability to support AP courses. Should MCI not offer a particular AP Course, or if one does not fit into a students schedule, they will qualify for this offering.

AP Art History 889

AP Art History is a college-level Art History course. Students will explore the history of art across the globe from prehistory to the present. In addition, they will also analyze works of art through observation, discussion, reading, and research.

Prerequisites: There are no prerequisites for AP Art History. Students should be able to read a college-level textbook and write grammatically correct, complete sentences.

AP Biology (Offered on MCI Campus)

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore topics like evolution, energetics, information storage and transfer, and system interaction. Prerequisites: Students should have successfully completed high school courses in biology and chemistry

AP Calculus BC (Offered on MCI Campus)

AP Calculus BC is an introductory college-level calculus course. Students cultivate their understanding of differential and integral calculus through engaging with real-world problems represented graphically, numerically, analytically, and verbally and using definitions and theorems to build arguments and justify conclusions as they explore concepts like change, limits, and the analysis of functions.

Prerequisites: All students should have successfully completed courses in which they studied algebra, geometry, trigonometry, analytic geometry, and elementary functions. In particular, they should understand the properties of linear, polynomial, rational, exponential, logarithmic, trigonometric, inverse trigonometric, and piecewise-defined functions, as well as sequences, series, and polar equations. They should know how to graph these functions and solve equations involving them. They should also be familiar with algebraic transformations, combinations, compositions, and inverses for general functions.

AP Computer Science A (Offered on MCI Campus)

AP Computer Science A is an introductory college-level computer science course. Students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures. Recommended Prerequisites: High school courses in English and algebra, and familiarity with functions and the concepts found in the uses of function notation.

AP English Language & Composition (Offered on MCI Campus) 2323

AP English Language & Composition: AP English Language and Composition is designed to be a college-level academic experience, with the intellectual rigor and workload consistent with a typical introductory college composition course. Students will read and carefully analyze a broad and challenging range of literary and nonfiction prose selections, deepening their awareness of rhetoric and how language works. Through close reading and frequent writing, students develop their ability to work with language and text with a greater awareness of purpose and strategy, while strengthening their own composing abilities. Students frequently confer about reading and writing with their classmates and with the teacher. Due to the rigor of the course, students should expect to spend approximately ten hours per week on coursework, depending on an individual's reading speed. Prerequisites: There are no prerequisites for AP English Language Composition. Students should be able to read a college-level textbook and write grammatically correct, complete sentences.

AP Environmental Science 460

AP Environmental Science is an introductory college course in environmental science. Students will explore and investigate the interrelationships of the natural world and analyze environmental problems, both natural and human-made. In addition, they will also take part in laboratory investigations and field work.

Prerequisites: Students should have taken two years of high school laboratory science, including life science and physical science, along with at least one year of algebra before enrolling in AP Environmental Science.

AP European History

AP European History is an introductory level college survey of modern European history. Students will study the cultural, economic, political, and social developments that have shaped Europe from c. 1450 to the present. In addition, students will analyze texts, visual sources, and other historical evidence and write essays expressing historical arguments. Prerequisites: There are no prerequisites for AP European History. Students should be able to read a college-level textbook and write grammatically correct, complete sentences.

AP Human Geography

AP Human Geography introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. It is an excellent course for preparing students to become geo-literate youth and adults.

Prerequisites: There are no prerequisites for AP European History. Students should be able to read a college-level textbook and write grammatically correct, complete sentences.

AP Macroeconomics

AP Macroeconomics is an introductory college course in macroeconomics. Students will explore the principles of economics that apply to an economic system. Students will utilize graphs, charts, and data to analyze, describe, and explain economic concepts.

Prerequisites: There are no prerequisites for AP Macroeconomics. Students should be able to read a college-level textbook and write grammatically correct, complete sentences.

AP Music Theory

AP Music Theory is an introductory college-level music theory course. Students cultivate their understanding of music theory through analyzing performed and notated music as they explore concepts like pitch, rhythm, form, and musical design.

Prerequisites: Ability to read and write musical notation and basic voice or instrument performance skills.

AP Psychology

AP Psychology is an introductory college-level psychology course. Students cultivate their understanding of the systematic and scientific study of human behavior and mental processes through inquiry-based investigations as they explore concepts like the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology.

Prerequisites: There are no prerequisites for AP Psychology. Students should be able to read a college-level textbook and write grammatically correct, complete sentences.

AP Spanish Language & Culture

AP Spanish Language and Culture is an intermediate level (typically third or fourth semester) college course in Spanish language.

Prerequisites: There are no prerequisites, but students are typically in their fourth year of high-school-level study. In the case of native or heritage speakers, there may be a different pathway of study leading to this course.

AP Statistics (Offered on MCI Campus)

AP Statistics is an introductory college-level statistics course. Students cultivate their understanding of statistics using probability and simulation to describe probability distributions and define uncertainty in statistical inference. Students will also learn how to collect and analyze data using statistical reasoning to draw appropriate conclusions and justify claims.

AP US Government & Politics (Offered on MCI Campus)

AP U.S. Government and Politics is an introductory college-level course in U.S. government and politics. Students cultivate their understanding of U.S. government and politics through analysis of data and text-based sources as they explore topics like constitutionalism, liberty and order, civic participation in a representative democracy, competing policy-making interests, and methods of political analysis.

Prerequisites: There are no prerequisite courses for AP United States Government and Politics. Students should be able to read a college level textbook and write grammatically correct, complete sentences.

AP US History (Offered on MCI Campus)

AP U.S. History is an introductory college-level U.S. history course. Students cultivate their understanding of U.S. history from c. 1491 Common Era (CE) to the present through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like American and national identity; work, exchange, and technology; geography and the environment; migration and settlement; politics and power; America in the world; American and regional culture; and social structures.

Prerequisites: There are no prerequisites for AP U.S. History. Students should be able to read a college-level textbook and write grammatically correct, complete sentences.

AP World History

AP World History is an introductory college course in modern world history. Students will study the cultural, economic, political, and social developments that have shaped the world from c. 1200 Common Era (CE) to the present. Students will also analyze texts, visual sources, and other historical evidence and write essays expressing historical arguments.

Prerequisites: There are no prerequisites for AP World History. Students should be able to read a college-level textbook and write grammatically correct, complete sentences.

SOMERSET CAREER AND TECHNOLOGY CENTER (SCTC)

Courses at the Center are available to juniors, seniors, and some eligible sophomores from Somerset County school districts. Students must complete an application for the program and attend an interview with the program instructor.

Automotive Technology I & II 720 / 730

This ASE (Automotive Service Excellence) certified program is designed to teach students how to repair and service gasoline and diesel-powered cars and light duty trucks. First year Auto Technology students are taught general repair work in a safe manner. From there, they will learn vehicle service, engine cooling, brakes, suspension, steering, and front-end alignment. Second year students move on to the electrical aspects of the automobile, such as the Starting and Charging System, Computerized Engine Control, Anti-lock Brakes and Air Bag Systems, Ignition, Fuel Delivery, Suspension, and Drivetrain. Seniors are able to be ASE Certified, Snap-on Multimeter Certified, and obtain their Maine Motor Vehicle Inspection License after graduating.

Certified Nursing Assistant 728

Students in this program gain knowledge in multiple health care careers through job shadows, community service projects, and clinical experiences. Students learn CPR, first aid, basic anatomy and physiology, and study the concepts of health promotion and disease prevention. SCTC's CNA program uses the State of Maine Nursing Assistant Curriculum which is approved by the Maine State Board of Nursing. Students also have the opportunity to earn up to three college credits from KVCC with completion of the program.

Commercial Truck Driving 711

This program qualifies students to test for the State of Maine CDL Class B Commercial Driver's Permit and License. Instruction is based on state laws, industry regulations, and equipment inspection required for licensing. According to Federal Motor Carrier law, students in the Commercial Truck Driving program must hold a current Class C automobile driver's license. Students must be 16 years of age to enter the program and must have a clean driver's record.

Cooperative Education 741

The Cooperative Education Program provides an opportunity for students to participate in an occupational training program for which facilities and courses are not otherwise available at SCTC. This program is designed for the student to spend part of the day at their sending school and part of the day "on the job." Students attend class with their instructor where job seeking, workplace skills, and personal finance is taught. An arrangement between the school, employer, student, and parents will then be created. The goal is to find training stations that will meet the varying needs and interest and provide appropriate employment for the student.

Culinary I & II 724 /

The Culinary Arts program prepares students for a future in the food service industry. Students learn entry-level culinary skills as well as cooking and baking techniques. Students will learn by working in a professional kitchen environment at the high school. First year students focus on: Sanitation and Personal Hygiene; Kitchen Safety; Knife Skills; Standardizing Recipes; Basic Butchery; Mother Sauces; Proper Food Storage; Basic Cooking Methods; Working As A Team. Second year students focus on: Secondary Sauces; Advanced Butchery; Cost and Portion Control; Advanced Baking and Cooking Methods; International and Regional Cuisine. Second year students also have the opportunity to earn their ServSafe Manager certification.

Digital Graphics I & I 724 I / 727

Students in the Digital Graphics Program learn design concepts related to Graphic Design, Digital Photography, and Marketing. Students use professional software and equipment to design and produce a variety of projects including promotional displays, brochures, logos, signage, note pads, decals and custom clothing. In the second year, Digital Graphics students operate an in-house print shop, "DG Print Shop & Design Center." By aligning "live jobs" for a variety of clients, students are not only able to apply and develop the skills they've acquired in the previous year of class, but gain skills in professionalism through real world experience.

Early Childhood Education 738 / 739

The Early Childhood Education Program is a two year course for students who are interested in working with young children. Students learn about child development and theory, psychology, curriculum development, child guidance and professionalism. Early Childhood students have the opportunity to earn 6-9 college credits; receive the State of Maine Early Childhood Assistant certification; enroll in the Maine Roads to Quality registry and the ECE career lattice; job shadow; become CPR/First Aid certified; train in various settings, including: Infant/toddler classrooms; Family child care centers; Child care facilities; Preschool; K-8 Elementary classrooms; Special education programs.

Electrical Construction I & II 723 / 733

This course provides students with the knowledge and background that prepares them for a career in the electrical field. Students learn electrical safety, tools of the trade, wiring, conduit parts, and assembly. In the first year of this two-year program, students learn the basics of the National Electrical Code and the theory of electricity. Students work in the shop applying the six common wiring methods using industry required tools. During the second year, students continue to advance their studies of the National Electrical Code as well as learning to read blueprints. The students work outside of the shop on practical “live work” projects including, Service Entrance Equipment, Motor Starters, Motor Controls, Electric Heat, Solar Energy, and Programmable Logic Controllers (PLC’s). Seniors have the opportunity to receive a certification through the National Association of Home Builders.

Emergency Medical Technician 740

The EMT course is an introduction to patient assessment skills. Upon successful completion of the course, students will earn 5 credits from KVCC for EMS 111 and be prepared to sit for the EMS Basic Certification Exam. Content includes: Management of airway and respiratory problems; Cardiopulmonary resuscitation; Techniques of oxygen therapy; Bleeding control and treatment for shock; Soft tissue injuries and fracture care; Principles of spinal immobilization; Fundamentals of triage and transportation of the sick and injured; Treatment modalities for a range of medical, obstetrical, pediatric, environmental and behavioral emergencies.

Pre-Engineering 705

This class exposes students to a variety of engineering fields, such as: AP Computer Science Principles (Coding); Structures; 3D Design; Robotics. With numerous hands-on projects, students learn how to apply the engineering design process. Some of the activities include the design and build of: Cardboard boats; Concrete canoe; Balsa wood bridges / truss; VEX robots to compete in challenges; Scale model wind turbine blades; Various projects using Solidworks and 3D printers; Coding using HTML, CSS and Javascript.

Residential Construction 721

The Residential Construction Program is a two-year program that concentrates on the residential carpentry trade. Students learn to work cooperatively in groups to complete projects. They learn organizational and leadership skills that help them to be successful in the workplace. Throughout both years of the program, there is a strong focus on employability skills. In the first year, students receive instruction in the following units: Hand & Power Tools; Building Materials and Fasteners; Floor & Wall Framing; Roof Framing. During the second year, students receive instruction in: Construction Drawings; Energy Efficiency; Basic Stair Construction; Wall Systems; Career Opportunities; Practical Application of Skills.

Welding 737

The Welding Program is held at the Cianbro Training Facility in Pittsfield. Students learn the importance of workplace safety as they train next to Cianbro employees to become certified as a welder. The National Center of Construction Education and Research (NCCER) provides the curriculum students follow as they learn different types of welding techniques and positions. Students progress at their own pace which allows everyone the chance to become proficient before progressing. The Welding Program can be either a one or two year program depending on a student’s interests and ambitions. Students can earn the OSHA 10 Safety Certification, Cianbro Welding Certifications and NCCER credentials.

