



DES MOINES PUBLIC SCHOOLS

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# COURSE CATALOG

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2022-2023



# Foreword

*This handbook was designed as a guide for counselors, school staff, students, and families on Des Moines Public Schools policies and procedures. As with any handbook, it is intended to be a common guide – not a regulatory manual. The purpose of this document is to help to counsel students on their personal pathway to academic achievement.*

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# Educational Philosophy

## **Vision**

Becoming the model for urban education in the United States.

## **Mission Statement**

The Des Moines Public Schools Exist So That Graduates Possess the Knowledge, Skills and Abilities to Be Successful at the Next Stage of Their Lives.

## Student Expectations

### **Students demonstrate proficiency and understanding of a rigorous core curriculum:**

- They demonstrate proficiency in reading, writing, speaking and listening
- They demonstrate proficiency in mathematics, including algebra and geometry
- They demonstrate financial and economic literacy
- They demonstrate an understanding of the value of fine and performing arts in society
- They demonstrate proficiency in technological and information literacy
- They demonstrate proficiency in science, including life, earth and physical science

### **Students possess the knowledge and skills to be self-directed and autonomous:**

- They demonstrate critical thinking and problem-solving skills
- They exercise sound reasoning in making complex choices
- They exhibit creative, innovative and entrepreneurial thinking
- They understand the attributes of physical and mental well-being

### **Students have world awareness:**

- They learn from and work with individuals representing diverse cultures and religions in a spirit of mutual respect in school, work and community
- They understand the rights and obligations of citizenship at local, state, national, and global levels
- They are actively engaged in community life
- They will be exposed to languages and cultures of the world

# District Contact Information

## Teaching and Learning

Role/Content	Name
Executive Director of Teaching and Learning	Noelle Nelson
Director of Secondary Teaching and Learning	Sarah Dougherty
Director of ELL	Pablo Ortega
Director of Advanced Learner Programs	Jessica Gogerty
Director of Career and Technical Education	Tascha Brown
T & L Executive Assistant	Carla Miller
T & L Executive Assistant	Gwen Abbington Robbins
High School Math Curriculum Coordinator	Isaac Rodenberg
K-12 Visual Art Curriculum Coordinator	Kathleen Davenport
K-12 World Languages Curriculum Coordinator	Sam Finneseth
Advanced Placement	Jessica Gogerty
6-12 Science Curriculum Coordinator	Alida Acosta
K-12 Performing Arts Curriculum Coordinator	Kelly Schnackenberg
K-12 Physical Education and Health Curriculum Coordinator	Carlye Satterwhite
Secondary Literacy Curriculum Coordinator	Elizabeth Sheridan
Career and Technical Education (CTE) Curriculum Coordinator	Kerry Manus
6-12 Social Studies Curriculum Coordinator	McKenzie Kennedy
ELL Accountability and Assessment Support	Vinh Nguyen
ELL Executive Assistant	Sarahi Nieto
High School ELL Coordinator	Susanna Sieren
Middle School ELL Coordinator	Celeste Stirgus Rojas
Supervisor of Gifted and Talented Education	Jolene Teske

## Additional Support

Role/Content	Name
Director of Climate & Culture	Jake Troja
Counseling Coordinator	Mike Huguélet
High School Director of Student Services	Susan Hope
Student & Family Services PLF, ELA	Shannon Hilleson
Student & Family Services PLF, Math	Stephanie Krob
Info System & Security, Research & Data Management	Margi Neve
Data Systems Analyst, Research & Data Management	Jeff Panek
District Registrar	Natalie Coffey
Scheduling Specialist	Kaitlyn Evans

# Graduation Requirements and Planning

## Required Credits for Graduation

For students in the Classes of 2021-2024, the following credits must be fulfilled to graduate and earn a diploma.

REQUIREMENTS	UNITS OF CREDIT
<b>Social Studies</b> REQUIRED: US History, US Government, Personal Economics, and 1.0 additional credit in social studies	<b>3.0</b>
<b>English</b> REQUIRED: English I, II, and English III or AP Lang and Comp, and 1.0 additional credit in English	<b>4.0</b>
<b>Mathematics</b> REQUIRED: Semester 1 and 2 of Algebra I (or higher-level math course)	<b>3.0</b>
<b>Science</b> HIGHLY RECOMMENDED: Biology, Chemistry, Physics, Earth Science	<b>3.0</b>
<b>Applied/Fine Arts</b>	<b>1.5</b>
<b>Physical Education</b> REQUIRED: In compliance with Iowa law, students must be enrolled in physical education at least one semester each year while in high school and must complete CPR training.	<b>1.0</b>
<b>Electives</b>	<b>7.5</b>
<b>TOTAL</b>	<b>23.0</b>

# Post-Secondary Readiness Requirements

There are several paths that students can choose from for success after completing high school. The guide below can help students and their families have conversations with school counselors as they make decisions about their goals for after graduation and the choices they need to make in high school to reach those goals.

## High School Diploma

<b>English</b>	English I, II, and English III or AP Lang and Comp, and 1.0 additional credit in English
<b>Math</b>	Semester 1 and 2 of Algebra I (or higher-level math course), and 2.0 additional credits in Math.
<b>Science</b>	3.0 credits in Science.
<b>Social Studies</b>	US History, US Government, Personal Economics, and 1.0 additional credit in social studies
<b>Applied/Fine Arts</b>	1.5 credits in the Applied or Fine Arts.
<b>World Languages</b>	World Languages count toward the 7.5 required elective credits.
<b>Physical Education</b>	At least one semester each year of high school and must complete CPR training.
<b>Personal Finance</b>	0.5 credits

## Career & Technical, Apprenticeship, and Industry Certification Programs

<b>English</b>	English I, II, and English III or AP Lang and Comp, and 1.0 additional credit in English
<b>Math</b>	Semester 1 and 2 of Algebra I (or higher-level math course), and 2.0 additional credits in Math.
<b>Science</b>	3.0 credits in Science.
<b>Social Studies</b>	US History, US Government, Personal Economics, and 1.0 additional credit in social studies
<b>Applied/Fine Arts</b>	1.5 credits in the Applied or Fine Arts.
<b>World Languages</b>	World Languages count toward the 7.5 required elective credits.
<b>Physical Education</b>	At least one semester each year of high school and must complete CPR training.

# Post-Secondary Readiness Requirements (cont.)

## Regents Institutions (U of I, UNI, ISU)

<b>English</b>	Four years with an emphasis on the communication skills of writing, reading and listening, and the analysis and interpretation of literature. In addition, courses in journalism and media literacy will be valuable.
<b>Math</b>	Four years, one in each year of high school, including Geometry and Algebra 2. Reference <a href="https://www.dmschools.org/ready-for-algebra/dmps-secondary-math-pathway/">https://www.dmschools.org/ready-for-algebra/dmps-secondary-math-pathway/</a> for additional guidance.
<b>Science</b>	Three years, one in each year of high school. To be really prepared, take at least one year each of biology, chemistry, and physics.
<b>Social Studies</b>	Three years are essential, but four is better. Take at least one year each of U.S. history and world history. Additional courses in anthropology, economics, political sci., psychology, and sociology provide important understandings.
<b>Applied/Fine Arts</b>	1.5 credits in the Applied or Fine Arts.
<b>World Languages</b>	Varies by program. Standard expectation: Two consecutive years of a single world language for admittance. Many require an additional semester or year study upon university enrollment. Three or four consecutive years in one world language to prevent mandatory enrollment at the university.
<b>Physical Education</b>	At least one semester each year of high school and must complete CPR training.

## Highly Selective Colleges & Universities

<b>English</b>	Four years with an emphasis on the communication skills of writing, reading and listening, and the analysis and interpretation of literature, including AP credit. In addition, courses in journalism and media literacy will be valuable. Extracurricular activities in debate, speech, newspaper, and yearbook will further develop essential competencies.
<b>Math</b>	Four years, one in each year of high school, including advanced placement math courses like calculus and statistics. Reference <a href="https://www.dmschools.org/ready-for-algebra/dmps-secondary-math-pathway/">https://www.dmschools.org/ready-for-algebra/dmps-secondary-math-pathway/</a> for additional guidance.
<b>Science</b>	Four years, one in each year of high school. To be really prepared, take at least one year each of biology, chemistry, and physics, and an AP Science course.
<b>Social Studies</b>	Four years, one in each year of high school. Take at least one year each of U.S. history and world history, and an AP Social Studies course. Additional courses in anthropology, economics, political sci., psychology, and sociology provide important understandings.
<b>Applied/Fine Arts</b>	1.5 credits in the Applied or Fine Arts.
<b>World Languages</b>	Varies by program. Standard expectation: Three or four consecutive years of a single world language or demonstration of proficiency for admittance.
<b>Physical Education</b>	At least one semester each year of high school and must complete CPR training.

# Ready-To-Graduate Course Planner

All students must complete a set of required courses in English, Social Sciences, Mathematics, Science, Applied/Fine Arts and Physical Education, plus elective credits. The planner below is designed to help students, families and counselors determine a plan of study with the goal of graduation.

		9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade
<b>English</b>	4.0 credits	English I <input type="checkbox"/> completed	English II <input type="checkbox"/> completed	English III or AP Lang <input type="checkbox"/> completed	Choose from an additional English credit course. <input type="checkbox"/> completed
<b>Math</b>	3.0 credits	Algebra I <input type="checkbox"/> completed	Math Course: <input type="checkbox"/> completed	Math Course: <input type="checkbox"/> completed	Math Course (if less than 3.0 credits are earned) <input type="checkbox"/> completed
<b>Science</b>	3.0 credits	Science Course (Biology recommended): <input type="checkbox"/> completed	Science Course (Chemistry recommended): <input type="checkbox"/> completed	Science Course (Conceptual Physics or AP Physics recommended): <input type="checkbox"/> completed	Science Course (if less than 3.0 credits are earned): <input type="checkbox"/> completed
<b>Social Studies</b>	3.0 credits	Modern US History <input type="checkbox"/> completed	AP Human Geo or SS Elective <input type="checkbox"/> completed	AP SS Course or SS Elective <input type="checkbox"/> completed	US Government and Personal Economics <input type="checkbox"/> completed
<b>Physical Education</b>	1.0 credit	At least one semester each year: 9 <sup>th</sup> <input type="checkbox"/> 10 <sup>th</sup> <input type="checkbox"/> 11 <sup>th</sup> <input type="checkbox"/> 12 <sup>th</sup> <input type="checkbox"/> <input type="checkbox"/> completed CPR training			
<b>Fine/Applied Arts</b>	1.5 credits	Courses: <input type="checkbox"/> completed	Courses: <input type="checkbox"/> completed	Courses: <input type="checkbox"/> completed	Courses: <input type="checkbox"/> completed
<b>Electives</b>	7.5 credits	Additional Electives to reach 7.5 credits: _____ <input type="checkbox"/> completed      _____ <input type="checkbox"/> completed _____ <input type="checkbox"/> completed      _____ <input type="checkbox"/> completed _____ <input type="checkbox"/> completed      _____ <input type="checkbox"/> completed			



## Course Listings

The courses listed in this catalog represent the entire selection offered across the district. Not all courses are available at every high school building. A variety of factors, including student interest, staffing, and space & equipment, determine which courses are offered and taught in which buildings. Students and families are encouraged to work with their school counselor to determine their academic plans while considering availability of courses in their home high school and their eligibility for educational programs. The course catalog is updated annually. The most current version of this document can be accessed on the district website at [www.dmschools.org](http://www.dmschools.org).

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## English and Language Arts

To prepare our students for 21st century literacy skills to be used in post-secondary education and the workplace, Des Moines Public Schools provides a guaranteed and viable curriculum at the appropriate developmental level.

The Des Moines Public Schools is committed to offering courses that present a wide range of genres, cultures, and time periods. Close reading of both fiction and non-fiction allow our students an opportunity explore multiple viewpoints and life experiences. Our teachers believe these works offer insight into the human-condition and should be a model for our students' thinking, writing, and problem-solving.

Our goal is to steadily increase the complexity and sophistication of the content and the structure of our analysis to grow our students into critical readers and writers.

### Curriculum Coordinator:

Elizabeth Sheridan

[elizabeth.sheridan@dmschools.org](mailto:elizabeth.sheridan@dmschools.org)

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### English I S1 (LA103)

PREREQUISITE: NONE | Offered: Fall | .5 English credit

English I develops basic structures of reading and writing, using a variety of works from diverse authors to increase student interest, awareness, appreciation, and understanding of a variety of genre as well as opportunities to apply the writing process to promote communication through written expression. Students will come to understand that personal expression and the way we express ourselves is influenced by society and culture through literary analysis, reflective writing, persuasive writing and character analysis.

### English I S2 (LA104)

PREREQUISITE: LA103 | Offered: Spring | .5 English credit

English I develops basic structures of reading and writing, using a variety of works from diverse authors to increase student interest, awareness, appreciation, and understanding of a variety of genre as well as opportunities to apply the writing process to promote communication through written expression. Students will come to understand that personal

expression and the way we express ourselves is influenced by society and culture through literary analysis, reflective writing, persuasive writing and character analysis.

### **Power English S1 (LA1210)**

PREREQUISITE: NONE | Offered: Fall | .5 Elective Credit

Power English supports students in developing essential reading, writing, vocabulary, and analysis skills. This course, when coupled with a comprehensive English course, helps students fill in gaps in skills to secure success in high school English coursework. **For Special Education use ONLY.**

### **Power English S2 (LA1220)**

PREREQUISITE: NONE | Offered: Spring | .5 Elective Credit

Power English supports students in developing essential reading, writing, vocabulary, and analysis skills. This course, when coupled with a comprehensive English course, helps students fill in gaps in skills to secure success in high school English coursework. **For Special Education use ONLY.**

### **English II S1 (LA205)**

PREREQUISITE: NONE | Offered: Fall | .5 English credit

English II continues the development of the structures of communication with an emphasis on the language arts of speaking and listening. Through the communication of ideas in both writing and speaking, students will learn to use information responsibly, accurately, and ethically. Students will communicate through a variety of mediums, including technology, to recognize the role evaluation and response have on oral communication.

### **English II S2 (LA206)**

PREREQUISITE: NONE | Offered: Spring | .5 English credit

English II continues the development of the structures of communication with an emphasis on the language arts of speaking and listening. Through the communication of ideas in both writing and speaking, students will learn to use information responsibly, accurately, and ethically. Students will communicate through a variety of mediums, including technology, to recognize the role evaluation and response have on oral communication.

### **Journalism 1 (LA213)**

PREREQUISITE: LA105 | Offered: Fall | .5 Elective credit

Journalism allows students to explore the fundamental concepts behind the communications industry, including print, broadcast and advertising and the Internet. Students will study history, writing, editing, law and the packaging process, as well as obtain the understanding of deadlines and interviewing through practical application. Prerequisite for newspaper and yearbook practicum.

### **Speech (LA227)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 Elective credit

This course emphasizes critical thinking and effective communication through a variety of approaches, including public speaking and interpersonal, relational, intercultural, and nonverbal communication. Students analyze a range of verbal communications, from daily interactions and speeches by public officials to texts distributed through the mass media, and apply their analyses to practice and improve their own verbal communication styles and techniques.

### **Creative Writing 1 (LA303)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 English credit

Creative Writing is a valuable course for those who have an interest in writing. The goal is to achieve a greater appreciation of literature by creating one's own fiction and by reading and responding to others' work while attending to structure and style. Students will be encouraged to select their own topics with the support and guidance of the instructor.

### **English III S1 (LA305)**

PREREQUISITE: NONE | Offered: Fall | .5 English credit

English III builds on the structures of reading and writing, using a variety of materials representing different literary forms and authors. An emphasis on American literature through a global perspective will support critical analysis of author's style, character motivation, point of view, mood, and tone. Composition will focus on synthesizing new understandings with background knowledge and gain insight into the author's craft while adhering to conventions generally established in conventions, usage, syntax, and style.

### **English III S2 (LA306)**

PREREQUISITE: NONE | Offered: Spring | .5 English credit

English III builds on the structures of reading and writing, using a variety of materials representing different literary forms and authors. An emphasis on American literature through a global perspective will support critical analysis of author's style, character motivation, point of view, mood, and tone. Composition will focus on synthesizing new understandings with background knowledge and gain insight into the author's craft while adhering to conventions generally established in conventions, usage, syntax, and style.

### **Mass Comm / Mass Media (LA315)**

PREREQUISITE: LA103/LA104 | Offered: Both | .5 Elective credit

Studies in mass media and communications.

### **Urban Leadership 101: Elective English Credit (TAC317 / TAC318)**

COREQUISITE: Urban Leadership at Central Campus | .5 English credit

Urban Leadership is committed to empowering students on their journey to becoming community-based activists and entrepreneurs. Based in the principle of hip-hop culture, students engage in a in-depth study of social movements shaping history and urban settings across the United States. Through the use of various mediums such as the written and spoken word, performance-based literacy, urban arts. And youth + community summits, and internships, students are given a platform to become the leaders of today.

### **Newspaper S1/S2 (LA321/322)**

PREREQUISITE: LA221 | Offered: Fall | .5 English credit

Repeatable. May earn English credit for 1 semester only of either LA321/LA322 or LA323/324. Newspaper is a hands-on laboratory course that allows students to apply the fundamental theories explored through journalism. Students will write, edit, package, produce and distribute the school's newspaper. Concepts emphasized include leadership, prioritizing, deadline meeting, interviewing, people-skill building, and business skills.

### **Yearbook S1/S2 (LA323/324)**

PREREQUISITE: LA223 | Offered: Fall | .5 English credit

Repeatable. May earn English credit for 1 semester only of either LA321/LA322 or LA323/324. Yearbook is a hands-on laboratory course that allows students to apply the fundamental theories explored through journalism in a real-world setting. Students will write, edit, package, produce and distribute the school's yearbook. Concepts emphasized include leadership, prioritizing, deadline meeting, interviewing, editing, teamwork and business skills.

### **English IV S1 (LA403)**

PREREQUISITE: NONE | Offered: Fall | .5 English credit

English IV (formerly known as World Literature) includes a survey of world literature studied in a thematic approach to critically evaluate information based on relevancy, objectivity, and reliability. Students will write several compositions using expository and argumentative techniques, including a research project. This project will include an articulated research question or thesis statement, and incorporate findings while adhering to a consistent format for documentation.

### **English IV S2 (LA404)**

PREREQUISITE: NONE | Offered: Spring | .5 English credit

English IV (formerly known as World Literature) includes a survey of world literature studied in a thematic approach to critically evaluate information based on relevancy, objectivity, and reliability. Students will write several compositions using expository and argumentative techniques, including a research project. This project will include an articulated research question or thesis statement, and incorporate findings while adhering to a consistent format for documentation.

### **Creative Writing 2 (LA411)**

PREREQUISITE: LA303 | Offered: Fall or Spring | .5 English credit

Creative Writing 2 is a valuable course for those who have an interest in writing. The goal is to achieve a greater appreciation of literature by creating one's own fiction and by reading and responding to others' work while attending to structure and style. Students will be encouraged to select their own topics with the support and guidance of the instructor.

### **\*AP English Language & Composition S1 (LA501)**

PREREQUISITE: LA206 | Offered: Fall | .5 English credit

AP Language and Composition enables a student to be an effective writer at the postsecondary level. Students read, analyze, and practice a variety of discursive prose. Through the organized study of language skills and the structures of sentences, paragraphs, and expository patterns, students analyze and implement the resources of the English language. Completion of the AP exam is an expectation for all AP courses.

### **\*AP English Language & Composition S2 (LA502)**

PREREQUISITE: LA501 | Offered: Spring | .5 English credit

AP Language and Composition enables a student to be an effective writer at the postsecondary level. Students read, analyze, and practice a variety of discursive prose. Through the organized study of language skills and the structures of

sentences, paragraphs, and expository patterns, students analyze and implement the resources of the English language. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Literature & Composition S1 (LA503)**

PREREQUISITE: LA206 | Offered: Fall | .5 English credit

AP English Literature and Composition is designed to engage students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students can deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students should consider a work's structure, style, and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. The composition instruction ranges from basic principles to more refined and advanced matters of style, requiring several compositions ranging from the imaginative and personal to the formal and detached. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Literature & Composition S2 (LA504)**

PREREQUISITE: LA503 | Offered: Spring | .5 English credit

AP English Literature and Composition is designed to engage students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students can deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students should consider a work's structure, style, and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. The composition instruction ranges from basic principles to more refined and advanced matters of style, requiring several compositions ranging from the imaginative and personal to the formal and detached. Completion of the AP exam is an expectation for all AP courses.

### **\*College Speech (LA521)**

PREREQUISITE: LA206 | Offered: Fall, Spring | .5 Elective Credit

This dual-credit course emphasizes critical thinking and effective communication through a variety of approaches, including public speaking and interpersonal, relational, intercultural, and nonverbal communication. Students analyze a range of verbal communications, from daily interactions and speeches by public officials to texts distributed through the mass media, and apply their analyses to practice and improve their own verbal communication styles and techniques.

### **\*College Creative Writing (LA526)**

PREREQUISITE: LA206 | Offered: Both | .5 English credit

College Creative Writing is a dual-credit class. Though it is taken at DMPS High Schools and students receive English credit, DMACC competencies for ENG 221 will be assessed for college credit; in essence, this is a collegiate class. This course will focus on the processes of writing when creating fiction and poetry by applying the elements of both those genres into the practice of composition. Students will study the elements of poetry and fiction through samples of professional writers and their peers and apply these techniques when composing their own pieces. The class will culminate in a writing portfolio in which students will keep their writings along with analyses of where these ideas came from and some of the techniques used when composing.

### **\*College AP Literature & Composition S1 (LA529)**

PREREQUISITE: LA206 | Offered: Fall | .5 English credit

AP English Literature and Composition with college credit is a one-year high school course equivalent to two semesters of college course work designed to engage students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students can deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students should consider a work's structure, style, and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. The composition instruction ranges from basic principles to more refined and advanced matters of style, requiring several compositions ranging from the imaginative and personal to the formal and detached. Completion of the AP exam is an expectation for all AP courses.

### **\*College AP Literature & Composition S2 (LA530)**

PREREQUISITE: LA529 | Offered: Spring | .5 English credit

AP English Literature and Composition with college credit is a one-year high school course equivalent to two semesters of college course work designed to engage students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students can deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students should consider a work's structure, style, and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. The composition instruction ranges from basic principles to more refined and advanced matters of style, requiring several compositions ranging from the imaginative and personal to the formal and detached. Completion of the AP exam is an expectation for all AP courses.

### **\*College AP English Language & Composition S1 (LA531)**

PREREQUISITE: LA206 | Offered: Fall | .5 English Credit

AP Language and Composition is a dual-credit course that enables a student to be an effective writer at the postsecondary level. Students read, analyze, and practice a variety of discursive prose. Through the organized study of language skills and the structures of sentences, paragraphs, and expository patterns, students analyze and implement the resources of the English language. Completion of the AP exam is an expectation for all AP courses.

### **\*College AP English Language & Composition S2 (LA532)**

PREREQUISITE: LA531 | Offered: Spring | .5 English Credit

AP Language and Composition is a dual-credit course that enables a student to be an effective writer at the postsecondary level. Students read, analyze, and practice a variety of discursive prose. Through the organized study of language skills and the structures of sentences, paragraphs, and expository patterns, students analyze and implement the resources of the English language. Completion of the AP exam is an expectation for all AP courses.

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# Mathematics

Mathematics is a tool we use to understand and interpret our world. In our increasingly technological economy, those who understand and know how to apply mathematics have significantly enhanced opportunities in continuing education and later in life. The key to opening the door to these opportunities is a deep understanding of important mathematical concepts and procedures.

In Des Moines Public Schools, we will ensure all students have equitable access to a rigorous math experience that is supported by a balance of *conceptual understanding*, *real-world application*, and *procedural skills and fluency*.

The end result is a student who knows, uses, and enjoys mathematics.

When considering which math classes best align to your future plans, be sure to check the Post-Secondary Readiness Requirements in this catalog as well as our pathways guidance at <https://www.dmschools.org/ready-for-algebra/dmps-secondary-math-pathway/>

## Curriculum Coordinator:

Isaac Rodenberg

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## Algebra I S1 (MTH111)

PREREQUISITE: NONE | Offered: Fall | .5 Credit

Algebra is the foundation of higher mathematics. Students will explore functional relationships, use algebraic systems and properties, represent patterns of change, and apply equations and inequalities to solve the problems. Special emphasis is placed on application of skills and concepts through problem solving. Also offered as a sheltered course for ELL students with a dual focus of building algebra content knowledge and the ability to use academic language in Mathematics.

## Algebra I S2 (MTH112)

PREREQUISITE: MTH111 Algebra I S1 | Offered: Spring | .5 credit

Algebra is the foundation of higher mathematics. Students will explore functional relationships, use algebraic systems and properties, represent patterns of change, and apply equations and inequalities to solve problems. Special emphasis is placed on application of skills and concepts through problem solving. Also offered as a sheltered course for ELL students with a dual focus of building algebra content knowledge and the ability to use academic language in Mathematics.

## Geometry S1 (MTH211)

PREREQUISITE: MTH111/112 Algebra I S1/S2 | Offered: Fall | .5 credit

Geometry is the study of shape. Students will develop deductive reasoning skills as they consider properties of and relationships among shapes, location of shapes, transformation of shapes, and special shapes such as circles and triangles. Technology is used to enhance geometric experimentation and situations.

### **Geometry S2 (MTH212)**

PREREQUISITE: MTH211 Geometry S1 | Offered: Spring | .5 credit

Geometry is the study of shape. Students will develop deductive reasoning skills as they consider properties of and relationships among shapes, location of shapes, transformation of shapes, and special shapes such as circles and triangles. Technology is used to enhance geometric experimentation and situations.

### **Algebra II S1 (MTH311)**

PREREQUISITE: MTH111/112 Algebra I S1/S2 | Offered: Fall | .5 credit

This course extends basic algebraic skills developed in Algebra 1. Students study patterns in functions and their graphs, polynomials, and complex numbers.

### **Algebra II S2 (MTH312)**

PREREQUISITE: MTH311 Algebra II S1 | Offered: Spring | .5 credit

This course extends basic algebraic skills developed in Algebra 1. Students study trigonometric functions and their graphs, exponential and logarithmic functions, and statistical inferences.

### **Introduction to Statistics (MTH321)**

PREREQUISITES: MTH111/112 Algebra I S1/S2 and MTH211/212 Geometry S1/S2

Offered: Both | 0.5 credit

Intro to Statistics is a one-semester class. Topics include: Describing distributions of data, normal distribution, describing linear relationships, and chance/probability.

### **Compacted Algebra 2/Pre-Calculus S1 (MTH351) \*NEW FOR 22-23\***

PREREQUISITE: MTH111/112 Algebra 1 S1/S2 and MTH211/212 Geometry S1/S2 | Offered: Fall | .5 Credit

This class has a strong focus on expanding students' understanding of functions and their graphs, polynomials, rational functions, and complex numbers. This course will cover additional topics beyond Algebra 2 to prepare students for AP Calculus. This class is designed for students interested and motivated to take AP Calculus and will be an intense, fast-paced course.

### **\*Compacted Algebra 2/Pre-Calculus S2 (MTH352) \*NEW FOR 22-23\***

PREREQUISITE: NONE | Offered: Spring | .5 Credit

This class has a strong focus on expanding students' understanding of functions and their graphs, polynomials, rational functions, and complex numbers. This course will cover additional topics beyond Algebra 2 to prepare students for AP Calculus. This class is designed for students interested and motivated to take AP Calculus and will be an intense, fast-paced course.



### **\*Pre-Calculus S1 (MTH401)**

PREREQUISITE: MTH311/312 Algebra II S1/S2 | Offered: Fall | .5 credit

Pre-Calculus is the post-algebra class to bridge students to Calculus topics. Students explore functions and their graphs, polynomials, rational functions, exponential and logarithmic functions, and conics.

### **\*Pre-Calculus S2 (MTH402)**

PREREQUISITE: MTH401 Pre-Calculus S1 | Offered: Spring | .5 credit

Pre-Calculus is the post-algebra class to bridge students to Calculus topics. Students explore more complex trigonometry, vectors and polar coordinates, systems and matrices, and beginning calculus concepts

### **Intro to Trigonometry (MTH413)**

PREREQUISITE: MTH111/112 Algebra I S1/S2 and MTH211/212 Geometry S1/S2

Offered: Both | 0.5 credit

Intro to Trigonometry is a one-semester class. Topics include: right and non/right triangle trigonometry, the unit circle, graphing trigonometric functions, and vectors.

### **\*AP Calculus AB S1 (MTH501)**

PREREQUISITE: MTH402 | Offered: Fall | .5 credit

The AP Calculus course follows the Advanced Placement syllabus and prepares students for the AP test in the spring. Course study includes properties of functions, limits, differential calculus, and integral calculus. Use of the graphing calculator is an integral part of this course and its use is required on the advanced placement test. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Calculus AB S2 (MTH502)**

PREREQUISITE: MTH501 AP Calculus S1 | Offered: Spring | .5 credit

The AP Calculus course follows the Advanced Placement syllabus and prepares students for the AP test in the spring. Course study includes properties of functions, limits, differential calculus, and integral calculus. Use of the graphing calculator is an integral part of this course and its use is required on the advanced placement test. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Calculus BC S1 (MTH503A)**

PREREQUISITE: MTH402 | Offered: Fall | .5 credit

The AP Calculus course follows the Advanced Placement syllabus and prepares students for the AP test in the spring. Course study includes properties of functions, limits, differential calculus, and integral calculus. Use of the graphing calculator is an integral part of this course and its use is required on the advanced placement test. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Calculus BC S2 (MTH504A)**

PREREQUISITE: MTH402 | Offered: Spring | .5 credit

The AP Calculus course follows the Advanced Placement syllabus and prepares students for the AP test in the spring. Course study includes properties of functions, limits, differential calculus, and integral calculus. Use of the graphing

calculator is an integral part of this course and its use is required on the advanced placement test. Completion of the AP exam is an expectation for all AP courses.

### **\*College Pre-Calculus S2 (MTH534)**

PREREQUISITE: MTH401 Pre-Calculus S1 | Offered: Spring | .5 credit

Pre-Calculus is the post-algebra class to bridge students to Calculus topics. Students explore more complex trigonometry, vectors and polar coordinates, systems and matrices, and beginning calculus concepts.

### **\*AP Statistics S1 (MTH551)**

PREREQUISITE: C or higher in MTH311/312 & Algebra II S1/S2 | Offered: Fall | .5 credit

The AP statistics course follows the Advanced Placement syllabus and prepares students for the AP test in the spring. Students will plan and conduct a study, explore random phenomena using probability and simulation, estimate population parameters and test hypotheses. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Statistics S2 (MTH552)**

PREREQUISITE: AP Statistics S1 | Offered: Fall | .5 credit

The AP statistics course follows the Advanced Placement syllabus and prepares students for the AP test in the spring. Students will plan and conduct a study, explore random phenomena using probability and simulation, estimate population parameters and test hypotheses. Completion of the AP exam is an expectation for all AP courses.

### **\*AP College Calculus S1 AB (MTH557)**

PREREQUISITE: MTH402 | Offered: Fall | .5 credit

This rigorous course includes properties of functions, limits, differential calculus, and integral calculus. Use of the graphing calculator is an integral part of this course.

### **\*AP College Calculus S2 AB (MTH558)**

PREREQUISITE: MTH525 | Offered: Spring | .5 credit

This rigorous course includes properties of functions, limits, differential calculus, and integral calculus. Use of the graphing calculator is an integral part of this course.

### **College Technical Math S1 (MTH569)**

COREQUISITE: MULTIPLE CENTRAL CAMPUS PROGRAMS

This course is an application of the mathematics involved with many Central Campus programs. Topics covered include fundamental operations with whole numbers, fractions, decimals, and signed numbers; percents; geometric figures and basic constructions; area and volume formulas; English/Metric systems; measurements; and the interpretation of graphs and charts. This math class is integrated to the specific mathematical calculations of each program of study.

### **\*College Technical Math S2 (MTH570/MTH5702)**

PREREQUISITE: MTH569 College Technical Math S1

This course is an application of the mathematics involved with many Central Campus programs, and offered at Central Campus ONLY. Topics covered include fundamental operations with whole numbers, fractions, decimals, and signed numbers; percents; geometric figures and basic constructions; area and volume formulas; English/Metric systems; measurements; and the interpretation of graphs and charts. This math class is integrated to the specific mathematical calculations of each program of study.

### **ELL Math Foundations I | S1 (MTH923)**

PREREQUISITE: NONE | Offered: Fall | .5 Credit

This course is for English Language Learner (ELL) students only. It has a dual focus of building foundational content knowledge and the ability to use academic language in Mathematics.

### **ELL Math Foundations I | S2 (MTH924)**

PREREQUISITE: NONE | Offered: Spring | .5 Credit

This course is for English Language Learner (ELL) students only. It has a dual focus of building foundational content knowledge and the ability to use academic language in Mathematics.

### **ELL Math Foundations II S1 (MTH925)**

PREREQUISITE: NONE | Offered: Fall | .5 Credit

This course is for English Language Learner (ELL) students only. It has a dual focus of building foundational content knowledge, pre-algebra concepts, and the ability to use academic language in Mathematics in the English language.

### **ELL Math Foundations II S2 (MTH926)**

PREREQUISITE: NONE | Offered: Spring | .5 Credit

This course is for English Language Learner (ELL) students only. It has a dual focus of building foundational content knowledge, pre-algebra concepts, and the ability to use academic language in Mathematics in the English language.

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## Social Studies

The interconnected nature of the world makes in depth, relevant social studies instruction essential for all students. Our goal is to provide all students with authentic and rigorous learning opportunities that spark interest in the social studies and enhance students' abilities to understand the people and spaces around them.

Des Moines Public Schools offers high school students required and elective courses that specialize in the various disciplines within the social sciences.

### Curriculum Coordinator

McKenzie Kennedy

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### Modern US History S1 (SOC103)

PREREQUISITE: NONE | Offered: Fall | .5 credit

The Modern United States History course provides students with the analytical skills and factual knowledge to deal critically with the events in our nation's history. Instructional units invite students to travel thematically through US History since the Civil War. These units include the study of Domestic Reform, Immigration and Migration, Economics, and Conflict. Students will then examine how the history of each theme impacts our country today. Students also learn to assess historical materials, determine their relevance to a given problem, assess the reliability of sources, and present reasoning and evidence clearly and persuasively in writing.

### Modern US History S2 (SOC104)

PREREQUISITE: SOC103 | Offered: Spring | .5 credit

This is the second semester of Modern US History. The Modern United States History course provides students with the analytical skills and factual knowledge to deal critically with the events in our nation's history. Instructional units invite students to travel thematically through US History since the Civil War. These units include the study of Domestic Reform, Immigration and Migration, Economics, and Conflict. Students will then examine how the history of each theme impacts our country today. Students also learn to assess historical materials, determine their relevance to a given problem, assess the reliability of sources, and present reasoning and evidence clearly and persuasively in writing.

### Global Black History (SOC261)

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

Students are exposed to raw and truthful history about Black people starting before the slave trade. The course focuses on celebrating the history of Black people both in Africa and during and after the diaspora. We will discuss how African and African American histories are intertwined. Students will leave the course with a more in-depth description of global Black experiences. A central goal of this course is to leave students feeling empowered and recognized throughout history. That previously marginalized groups are centered and celebrated.

### **African American Studies (SOC263)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

The goal of this course will be gaining a better understanding about the experiences and history of Black people in the United States. Primarily through the study of cultural influence, political impact, and historical context. Students will gain more knowledge about African Americans and their impacts on the United States. The historical aspects of the course will be connected to contemporary and current issues to build deeper understanding of the integral part Black Americans have played in the development of the United States. A central goal of this course is to leave students feeling empowered and recognized throughout history. That previously marginalized groups are centered and celebrated.

### **Indigenous/Native Peoples' History (SOC265)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

This class will provide a real and raw depiction of the history of native and indigenous people. Students will learn about the many indigenous nations within the geographic areas now known as the United States. We will celebrate the diverse histories and cultures of these people as well as investigate the oppression of indigenous people. It's important to analyze the injustice and oppression but also celebrate their joy. Indigenous people thrived pre-European contact and continue to live in resistance. A central goal of this course is to leave students feeling empowered and recognized throughout history. That previously marginalized groups are centered and celebrated.

### **Chicano/a Studies (SOC267)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

This course will provide students an intersectional lens to analyze the Chicano/a identity, movement and experience in the U.S. and their strong ties with Mexico and Indigenous peoples. A central goal of this course is to leave students feeling empowered and recognized throughout history. That previously marginalized groups are centered and celebrated.

### **Latin American History (SOC269)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

This course will explore the complexity of Latin American history (Mexico, Central America, South America and the Caribbean). Students will analyze colonization through an intersectional lens and its direct effects on social injustice in Latin America. Students will be provided with tools to reflect on intersectional identity and differentiate racial and ethnic identities. A central goal of this course is to leave students feeling empowered and recognized throughout history. That previously marginalized groups are centered and celebrated.

### **Asian American and Pacific Islanders History (SOC268)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

This course introduces students to the history of people of Asian and Pacific Islanders ancestry in the United States. Students will investigate several timely issues facing the Asian American community today. Asian American History will explore law, politics, and social interactions. The course will focus on the similarities and differences between many Asian ethnicities exploring culture and values with the hope of understanding why the Asian American identity is unique in comparison to other races in the U.S. Students will investigate the Model Minority Myth, Generation-Gap, Civic Interactions, etc.

A central goal of this course is to leave students feeling empowered and recognized throughout history. That previously marginalized groups are centered and celebrated.

### **LGBTQ+ History (SOC361)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

This is a course to provide students with the tools to do identity work, assess history with an intersectional lens and provide the much-needed history of the LGBTQ+ community. At the end of the course students should leave with the understanding the rich history of the community, the importance of advocacy and allyship/being an accomplice, and feeling empowered and recognized across space and time, and within academia.

### **Intersectional Feminism (SOC363)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

This course will evaluate the history of feminist resistance from the 18th century to modern era. Through an examination of the role gender and gender identity have played in the cultural/social, political, and economic spheres throughout U.S. history. Emphasis is placed on exploring the impact of intersectionality and activism in these histories.

### **Psychology (SOC205)**

PREREQUISITE: 1.0 credits of history | Offered: Fall or Spring | .5 credit

This course is designed to provide students with a basic understanding of human behavior and social relationships. The purpose is to create an awareness of the uniqueness of the individual and help students apply psychological principles to the solution of personal problems. Psychology will help students identify personal needs, values, and goals to assist them as they make career choices and family decisions. This course will also provide students with an understanding of the learning process and an appreciation of psychology as a field of knowledge based on scientific methods of research. The course is composed of the following instructional units: history and methods of psychology, the biology of psychology, cognitive psychology, human development, social psychology, and variations (psychological disorders and treatments).

### **Sociology (SOC209)**

PREREQUISITE: 1.0 credits of history | Offered: Fall or Spring | .5 credit

This course is designed to provide students with a basic understanding of the society in which they live by analyzing and evaluating the function of major social institutions, the effects of social change, and the origin and impact of prejudice, discrimination, stereotyping, and social stratification. This course will help students develop a broad understanding of culture and the ability to think objectively as they seek solutions to current social problems.

### **Personal Economics (SOC407)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

The study of personal economics is a study of choices and decision-making. This course provides students with an opportunity to develop sound decision-making procedures, based on his/her values, and to evaluate alternative solutions to economic problems. Economics will help students understand how our economy works and how economic incentives influence consumers, business owners, and investors. Students will focus on setting goals, saving and spending, credit and debt, investing, and measuring financial risk. By developing an awareness and perception of economics as it is interwoven in other areas of existence, students gain insight and understanding of business, government and themselves. This course introduces high school students to economics concepts through a combination of practical problems, analysis, and economic philosophy

## **Government (SOC405)**

PREREQUISITE: 1.0 Modern US History | Offered: Fall or Spring | .5 credit

The ultimate goal of this one semester course is active, responsible citizenship. The course provides students with multiple opportunities to develop an analytical perspective on government and politics in the United States, to develop civic commitment and capacity, and to build a well-informed, thoughtful response to the course driving question: What is the proper role of government in a democratic society? This question will be used throughout the course. Students return to it frequently, revising and deepening their understanding and responses in light of the concepts they are learning such as the foundation of U.S. government, political beliefs/behaviors, elections and voting, and policy making institutions. This course includes both the study of general concepts used to interpret U.S. politics and the analysis of specific examples

## **\*AP US History S1 (SOC501)**

PREREQUISITE: NONE | Offered: Fall | .5 credit

The AP U.S. History course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. history. The course focuses on the development of historical thinking skills (chronological reasoning, comparing and contextualizing, crafting historical arguments using historical evidence, and interpreting and synthesizing historical narrative) and an understanding of content learning objectives organized around seven themes. The themes include: identify, peopling, and America in the world, along with others. This course is in line with college and university U.S. history survey courses' increased focus on early and recent American history and decreased emphasis on other areas (special attention is given to 1491 to 1607 and from 1980 to the present). AP courses are college level courses taken in high school. A national exam is given in May of each year and scored on a 1 to 5 scale. A score of 3, 4, or 5 is considered passing and leads to

## **\*AP US History S2 (SOC502)**

PREREQUISITE: SOC501 | Offered: Spring | .5 credit

The AP U.S. History course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. history. The course focuses on the development of historical thinking skills (chronological reasoning, comparing and contextualizing, crafting historical arguments using historical evidence, and interpreting and synthesizing historical narrative) and an understanding of content learning objectives organized around seven themes. The themes include: identify, peopling, and America in the world, along with others. This course is in line with college and university U.S. history survey courses' increased focus on early and recent American history and decreased emphasis on other areas (special attention is given to 1491 to 1607 and from 1980 to the present). AP courses are college level courses taken in high school. A national exam is given in May of each year and

## **\*AP Government S1 (SOC507)**

PREREQUISITE: 2.0 credits of history | Offered: Fall | .5 elective credit

In the year-long AP U.S. Government and Politics course, students move together through five project cycles that address the six AP topics specified by the College Board for success on the Advanced Placement exam. The course is designed using the problem-based learning approach and developed with the support of the George Lucas Educational Foundation and the University of Washington, Seattle. Student-centered learning is at the heart of this course that has students participating in five project cycles: Founders's Intent, Election 2012, Government in Action, 112th Congress, and Supreme Court of the United States. Students in AP US Government and Politics will know important facts, concepts, and theories pertaining to U.S. government and politics. Students will understand typical patterns of political processes and

behavior and their consequences (including the components of political behavior, the principles used to explain or justify various

### **\*AP Government S2 (SOC508)**

PREREQUISITE: SOC507 | Offered: Spring | .5 credit (government credit for graduation)

In the year-long AP U.S. Government and Politics course, students move together through five project cycles that address the six AP topics specified by the College Board for success on the Advanced Placement exam. The course is designed using the problem-based learning approach and developed with the support of the George Lucas Educational Foundation and the University of Washington, Seattle. Student-centered learning is at the heart of this course that has students participating in five project cycles: Founders's Intent, Election 2012, Government in Action, 112th Congress, and Supreme Court of the United States. Students in AP US Government and Politics will know important facts, concepts, and theories pertaining to U.S. government and politics. Students will understand typical patterns of political processes and behavior and their consequences (including the

### **\*AP Macroeconomics (SOC511)**

PREREQUISITE: 2.0 credits of history | Offered: Fall or Spring | .5 PERSONAL ECONOMICS credit

The purpose of an AP course in macroeconomics is to give students a thorough understanding of the principles of economics that apply to an economic system as a whole. Such a course places particular emphasis on the study of national income and price-level determination and also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth and international economics. An additional purpose of this course is to give students a thorough understanding of the principles of economics that apply to an economic system as a whole. This course places particular emphasis on the study of the major macroeconomic goals of economic growth, full employment, and price stability. It also develops a students' familiarity with economic performance measures; national income and price determination, the study of which includes aggregate supply, aggregate demand, the circular flow of money, fiscal policy, and

### **\*AP Psychology S1 (SOC513)**

PREREQUISITE: 1.0 credits of history | Offered: Fall | .5 credit

This year-long college-level course covers in depth all topics in introductory psychology. The course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the methods psychologists use in their science and practice. AP courses are college level courses taken in high school. A national exam is given in May of each year and scored on a 1 to 5 scale. A score of 3, 4, or 5 is considered passing and leads to college credit or advanced placement in most all 4-year colleges and universities. There are over 30 Advanced Placement courses available to DMPS students. Completion of the AP exam is an expectation for all AP courses

### **\*AP Psychology S2 (SOC514)**

PREREQUISITE: SOC513 | Offered: Spring | .5 credit

This year-long college-level course covers in depth all topics in introductory psychology. The course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the methods psychologists use in their science and practice. AP courses are college level courses taken in high school. A national exam is given in May of each year and scored on a 1 to 5 scale. A



score of 3, 4, or 5 is considered passing and leads to college credit or advanced placement in most all 4-year colleges and universities

### **\*AP Human Geography S1 (SOC519)**

PREREQUISITE: 1.0 credit of history | Offered: Fall | .5 credit

The purpose of the AP Human Geography course is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice. The particular topics studied in an AP Human Geography course should be judged in light of the following five college-level goals that build on the National Geography Standards developed in 1994: perspectives in geography, population, cultural patterns and processes; political organization of space; agricultural and rural land use; industrialization and economic development; and cities and urban land use.

### **\*AP Human Geography S2 (SOC520)**

PREREQUISITE: SOC519 | Offered: Spring | .5 credit

The purpose of the AP Human Geography course is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice. The particular topics studied in an AP Human Geography course should be judged in light of the following five college-level goals that build on the National Geography Standards developed in 1994: perspectives in geography, population, cultural patterns and processes; political organization of space; agricultural

### **Youth Voices for Equity S1/S2 (TAC207/208)**

PREREQUISITE: None | Offered: Fall/Spring | .5 credit

Repeatable. Students learn (and unlearn) ideas for examining the social world including theories about oppressions, justice, and equity. They engage critical perspectives to analyze their individual and collective educational experiences. The learning in the course is grounded in culturally relevant pedagogy that supports students in academic achievement through centering their social identities and experiences.

Youth participatory action research (YPAR) involves students conducting research on the inequities that they experience within their schools. The students learn a variety of research methods, including participant observation, survey sampling, interview techniques, photo documentation, and videography. The YPAR goal is for the students to use their research results as a vehicle for action. Students will use the knowledge they gained to guide leadership in promoting equitable school and district improvement through presentations and research products such as reports, videos, and creative expressions.

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## Science

Des Moines Public Schools seeks to provide a rigorous academic and quality laboratory experience for all students. Science education cultivates a natural curiosity that leads to investigations and interpretations about one's environment. Through experimentation, inquiry, critical thinking and team-work, all students will be provided with the experiences necessary to become responsible decision makers in an increasingly technological world.

Our curriculum fosters an appreciation for science and its technological applications and emphasizes the connection between the classroom and the scientific community. Through ongoing partnerships with Iowa State University our students and staff connect with field scientists and researchers throughout the year.

Our courses are aligned with nationally recognized standards and are delivered in an environment that provides rich opportunities for all students to access content information, through laboratory experiences and real world problems. Our goal is to graduate students who are informed, aware, scientifically literate citizens.

### **Curriculum Coordinator**

Alida Acosta

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### **Environmental Science S1 (SCI201)**

PREREQUISITE: SCI203/SCI204 | Offered: Fall | .5 credit

Environmental Science is a course designed to explore underlying causes and effects of earth's natural and man-made environmental problems. The interrelationships between all living things and the interactions between living things and their non-living environment will be the framework for this study of the earth and its environment. This course combines principles of biology and earth science, and would be appealing to students interested in either of these disciplines. There are many different opinions regarding the causes and effects of environmental problems. Therefore, students will be expected to practice and display a range of problem solving and critical thinking skills to examine scientific evidence and propose and conduct investigations.

### **Environmental Science S2 (SCI202)**

PREREQUISITE: SCI201 | Offered: Spring | .5 credit

Environmental Science is a course designed to explore underlying causes and effects of earth's natural and man-made environmental problems. The interrelationships between all living things and the interactions between living things and their non-living environment will be the framework for this study of the earth and its environment. This course combines principles of biology and earth science, and would be appealing to students interested in either of these disciplines. There are many different opinions regarding the causes and effects of environmental problems. Therefore, students will be expected to practice and display a range of problem solving and critical thinking skills to examine scientific evidence and propose and conduct investigations.

## **Biology S1 (SCI203)**

PREREQUISITE: NONE | Offered: Fall | .5 credit

Biology is the study of life. This lab-based course provides a survey of life science topics with a special focus on science processes and inquiry, the cell, the molecular basis of heredity, evolution, interdependence of organisms, living systems, and behavior of organisms. Integration of these topics allows students to practice scientific thinking skills and apply them to in-class investigations. Biology serves as a prerequisite for several advanced life science courses including Environmental Science, AP Biology, and Marine Biology.

## **Biology S2 (SCI204)**

PREREQUISITE: SCI203 | Offered: Spring | .5 credit

Biology is the study of life. This lab-based course provides a survey of life science topics with a special focus on science processes and inquiry, the cell, the molecular basis of heredity, evolution, interdependence of organisms, living systems, and behavior of organisms. Integration of these topics allows students to practice scientific thinking skills and apply them to in-class investigations. Biology serves as a prerequisite for several advanced life science courses including Environmental Science, AP Biology, and Marine Biology.

## **Conceptual Physics S1 (SCI205)**

PREREQUISITE: NONE CO-REQUISITE: MTH111 is strongly suggested | Offered: Fall | .5 credit

This course examines physics concepts without emphasizing high level mathematics. Basic Algebra skills are used to increase students' understanding of these concepts. Designed to make physics available to a wider audience, this course will provide students with an intellectual foundation for the study of biology and chemistry later in their high school education. Concepts such as straight-line motion, forces, energy and mechanical waves will be studied. This course will help to prepare a student to take AP Physics 1 during his/her junior or senior year, and should not be viewed as a substitute for an upper level Physics course.

## **Conceptual Physics S2 (SCI206)**

PREREQUISITE: SCI205 CO-REQUISITE: MTH112 is strongly suggested | Offered: Spring | .5 credit

This course examines physics concepts without emphasizing high level mathematics. Basic Algebra skills are used to increase students' understanding of these concepts. Designed to make physics available to a wider audience, this course will provide students with an intellectual foundation for the study of biology and chemistry later in their high school education. Concepts such as straight-line motion, forces, energy and mechanical waves will be studied. This course will help to prepare a student to take AP Physics 1 during his/her junior or senior year, and should not be viewed as a substitute for an upper level Physics course.

## **Earth Science S1 (SCI207)**

PREREQUISITE: NONE | Offered: Fall | .5 credit

This interdisciplinary course, consisting of a study of the earth and space, is an integral part of the science sequence. Topics of study include geology, space and astronomy, meteorology and oceanography. Laboratory investigations, which involve students in the inquiry processes of science, are incorporated into the course. This course is part of the sequence of science courses students should consider for a strong, diversified academic program in science.

## **Earth Science S2 (SCI208)**

PREREQUISITE: SCI207 | Offered: Spring | .5 credit

This interdisciplinary course, consisting of a study of the earth and space, is an integral part of the science sequence. Topics of study include geology, space and astronomy, meteorology and oceanography. Laboratory investigations, which involve students in the inquiry processes of science, are incorporated into the course. This course is part of the sequence of science courses students should consider for a strong, diversified academic program in science.

## **Chemistry S1 (SCI301)**

PREREQUISITE: MTH111/MTH112 | Offered: Fall | .5 credit

The nature of matter and its relationship to chemical changes is emphasized in this course. Matter is examined through a study of elements, atoms and molecules, the periodic table, chemical behavior, and energy changes. Laboratory investigations are used extensively to enable students to discover and reinforce these concepts while challenging students to use good scientific thinking and reasoning skills.

## **Chemistry S2 (SCI302)**

PREREQUISITE: SCI301 | Offered: Spring | .5 credit

The nature of matter and its relationship to chemical changes is emphasized in this course. Matter is examined through a study of elements, atoms and molecules, the periodic table, chemical behavior, and energy changes. Laboratory investigations are used extensively to enable students to discover and reinforce these concepts while challenging students to use good scientific thinking and reasoning skills.

## **Forensic Science (SCI303)**

PREREQUISITE: SCI203/SCI204 | Offered: Fall or Spring | .5 credit

Forensic Science is an innovative and unique one semester course that develops critical thinking and problem-solving skills. Fingerprinting identification, hair analysis, and trace evidence examination are only a few of the many topics discussed. This course is rich in lab work and is a natural vehicle for students to practice science as inquiry. Forensic science is multidisciplinary; it is an applied science that encompasses the sciences, technology, mathematics, social studies, and language arts.

## **Zoology (SCI307)**

PREREQUISITE: SCI203/SCI204 | Offered: Fall or Spring | .5 credit

Zoology is the study of animals. In this course, students with an interest in animals will have opportunities to practice skills of inquiry as they study relationships among animal groups and their environment, classification and life cycles of animal groups, and relationships between animal groups. Laboratory investigations are regularly incorporated.

## **Anatomy and Physiology (SCI309)**

PREREQUISITE: SCI203/SCI204 | Offered: Fall or Spring | .5 credit

Anatomy & Physiology is a one semester survey course that covers the structure and function of the human body from the cellular level to organ systems. The organ systems studied are the skin and integumentary system, the skeletal and muscular systems, the nervous system, and the senses, the endocrine system, blood and the cardiovascular system, the lymphatic system and immunity, the respiratory system, the urinary system, the digestive system including nutrition, and the reproductive system. Other topics included in the course are: the body's balance of water; electrolytes, acids, and bases; and an introduction to human growth and development. This course is meant to be an introductory course in Anatomy & Physiology.

## **Astronomy (SCI311)**

PREREQUISITE: SCI205/SCI206 or SCI207/SCI208 | Offered: Fall or Spring | .5 credit

A one-semester course devoted to the study of astronomy. Units of study will include: objects that can be observed in the sky with the unaided eye such as the sun, planets, and stars; equipment that is used to further our knowledge of the universe; the relation between the earth and the other objects in the sky; the properties and lives of stars; the origins of our universe and solar system.

## **\*AP Environmental Science S1 (SCI501)**

PREREQUISITE: SCI203/SCI204 CO-REQUISITE: SCI301/SCI302 | Offered: Fall | .5 credit

Environmental Science is a one-year high school course, equivalent to a one-semester college course stressing scientific principles and analysis. The goal of the course is to provide students with scientific principles, concepts and 35 methodologies to understand the interrelationship of the natural world; to identify and analyze natural and man-made environmental problems; to evaluate the relative risk associated with these problems; and to examine alternative solutions for resolving and preventing them. There are strong lab and field investigations, allowing students to learn about the environment through firsthand observation. Field experiences may be arranged outside of school hours. Completion of the AP exam is an expectation for all AP courses. Iowa Energy and Sustainability Academy (IESA) year 1 spring SCI232 is equivalent to SCI501 and SCI 502.

## **\*AP Environmental Science S2 (SCI502)**

PREREQUISITE: SCI501 | Offered: Spring | .5 credit

AP Environmental Science is a one-year high school course, equivalent to a one-semester college course stressing scientific principles and analysis. The goal of the course is to provide students with scientific principles, concepts and methodologies to understand the interrelationship of the natural world; to identify and analyze natural and man-made environmental problems; to evaluate the relative risk associated with these problems; and to examine alternative solutions for resolving and preventing them. There are strong lab and field investigations, allowing students to learn about the environment through firsthand observation. Field experiences may be arranged outside of school hours. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Chemistry S1 (SCI505)**

PREREQUISITE: SCI301/SCI302 | Offered: Fall | .5 credit

AP Chemistry is an intensive study of matter at the atomic and molecular levels, emphasizing inorganic chemistry. There is a concentration on the mathematical treatment of the principles of college chemistry. The course covers formula writings, types of chemical reactions and stoichiometry, atomic and molecular structure, gases, kinetics, equilibrium, acid-base chemistry, and thermodynamics. Laboratory work is extensive and equivalent to freshman college-level with formal reports. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Chemistry S2 (SCI506)**

PREREQUISITE: SCI505 | Offered: Spring | .5 credit

AP Chemistry is an intensive study of matter at the atomic and molecular levels, emphasizing inorganic chemistry. There is a concentration on the mathematical treatment of the principles of college chemistry. The course covers formula writings, types of chemical reactions and stoichiometry, atomic and molecular structure, gases, kinetics, equilibrium, acid-base chemistry, and thermodynamics. Laboratory work is extensive and equivalent to freshman college-level with formal reports. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Biology S1 (SCI507)**

PREREQUISITE: SCI203/SCI204 CO-REQUISITE: SCI301/302 | Offered: Fall | .5 credit

This course is the equivalent of an introductory college biology course. It is an intensive study emphasizing the molecular biology of the cell, genetics and evolution, organisms and populations. Laboratory activities challenge students' abilities to understand problems, develop and implement experimental designs, manipulate data, and think analytically. Laboratory work is extensive. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Biology S2 (SCI508)**

PREREQUISITE: SCI507 | Offered: Spring | .5 credit

This course is the equivalent of an introductory college biology course. It is an intensive study emphasizing the molecular biology of the cell, genetics and evolution, organisms and populations. Laboratory activities challenge students' abilities to understand problems, develop and implement experimental designs, manipulate data, and think analytically. Laboratory work is extensive. Completion of the AP exam is an expectation for all AP courses.

### **\*College AP Environmental S1 (SCI517)**

PREREQUISITE: SCI203/SCI204 CO-REQUISITE: SCI301/SCI302 | Offered: Fall | .5 credit

AP Environmental Science with college credit is a one-year high school course, equivalent to a one-semester college course stressing scientific principles and analysis. The goal of the course is to provide students with scientific principles, concepts and methodologies to understand the interrelationship of the natural world; to identify and analyze natural and man-made environmental problems; to evaluate the relative risk associated with these problems; and to examine alternative solutions for resolving and preventing them. There are strong lab and field investigations, allowing students to learn about the environment through firsthand observation. Field experiences may be arranged outside of school hours. Completion of the AP exam is an expectation for all AP courses.

### **\*College AP Environmental S2 (SCI518)**

PREREQUISITE: SCI517 | Offered: Spring | .5 credit

AP Environmental Science with college credit is a one-year high school course, equivalent to a one-semester college course stressing scientific principles and analysis. The goal of the course is to provide students with scientific principles, concepts and methodologies to understand the interrelationship of the natural world; to identify and analyze natural and man-made environmental problems; to evaluate the relative risk associated with these problems; and to examine alternative solutions for resolving and preventing them. There are strong lab and field investigations, allowing students to learn about the environment through firsthand observation. Field experiences may be arranged outside of school hours. Completion of the AP exam is an expectation for all AP courses.

### **\*College AP Physics S1 (SCI519)**

PREREQUISITE: MTH111/MTH112, MTH211/MTH212CO-REQUISITE: MTH311/MTH312

Offered: Fall.5 credit This AP course with associated college credit is the equivalent of an introductory college physics course and includes topics in both classical and modern physics, emphasizing the mathematical treatment of physical events. The course covers topics such as kinematics, forces and Newton, gravity and fields, energy, momentum, rotational momentum, magnetism, simple harmonic motion, and waves. Students interested in pursuing a major in science or engineering in college should take this course in order to be fully prepared for college physics. Lab experience is extensive. Concurrent enrollment in Pre-Calculus is recommended, but not REQUIRED. Completion of the AP exam is an expectation for all AP courses.

### **\*College AP Physics S2 (SCI520)**

PREREQUISITE: SCI519 | Offered: Spring | .5 credit

This AP course with associated college credit is the equivalent of an introductory college physics course and includes topics in both classical and modern physics, emphasizing the mathematical treatment of physical events. The course covers topics such as kinematics, forces and Newton, gravity and fields, energy, momentum, rotational momentum, magnetism, simple harmonic motion, and waves. Students interested in pursuing a major in science or engineering in college should take this course in order to be fully prepared for college physics. Lab experience is extensive. Concurrent enrollment in Pre-Calculus is recommended, but not REQUIRED. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Physics 1 S1 (SCI525)**

PREREQUISITE: MTH111/MTH112, MTH211/MTH212CO-REQUISITE: MTH311/MTH312 | Offered: Fall | .5 credit

This course is the equivalent of an introductory college physics course and includes topics in both classical and modern physics, emphasizing the mathematical treatment of physical events. The course covers topics such as kinematics, forces and Newton, gravity and fields, energy, momentum, rotational momentum, magnetism, simple harmonic motion, and waves. Students interested in pursuing a major in science or engineering in college should take this course in order to be fully prepared for college physics. Lab experience is extensive. Concurrent enrollment in Pre-Calculus is recommended, but not REQUIRED. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Physics 1 S2 (SCI526)**

PREREQUISITE: SCI525 | Offered: Spring | .5 credit

This course is the equivalent of an introductory college physics course and includes topics in both classical and modern physics, emphasizing the mathematical treatment of physical events. The course covers topics such as kinematics, forces and Newton, gravity and fields, energy, momentum, rotational momentum, magnetism, simple harmonic motion, and

waves. Students interested in pursuing a major in science or engineering in college should take this course in order to be fully prepared for college physics. Lab experience is extensive. Concurrent enrollment in Pre-Calculus is recommended, but not REQUIRED. Completion of the AP exam is an expectation for all AP courses.

*For additional science credit options, please see the Career & Technical Program offerings in the Central Campus Section.*



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## Performing Arts

The Des Moines Public Schools music and drama programs are highly acclaimed and offer a comprehensive and extensive variety of classes at all levels. The Performing Arts programs in our district high schools empower students to use their minds creatively and inspire students through diversity in learning. Students who participate in Performing Arts academic areas broaden their life experiences and become equipped with the critical thinking, communication, collaboration, creativity, and problem solving skills needed in the 21<sup>st</sup> century.

### Curriculum Coordinator

Kelly Schnackenberg

kelly.schnackenberg@dmschools.org

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## Band

### Band S1 (BND101)

PREREQUISITE: Previous semester of concert band experience on applicable instrument or audition

Offered: Fall | .5 credit

This course includes concert band, and may include marching band (check with your school). Marching Band: The course begins approximately two weeks prior to the start of school with a required summer marching band camp. Marching band involves performances at all home varsity football games and a variety of other contests or parades each fall. Concert Band: Auditions for concert band are held in October. Members in the band will study traditional concert band literature, and perform regularly throughout the winter and spring months. Members are encouraged to take private lessons and may be asked to participate in honor bands.

### Band S2 (BND102)

PREREQUISITE: Previous semester of concert band experience on applicable instrument or audition

Offered: Spring | .5 credit

This course includes concert band. Concert Band: Auditions for concert band are held in October. Members in the band will study traditional concert band literature, and perform regularly throughout the winter and spring months. Members are encouraged to take private lessons, and may also participate in solo/ensemble contests.

### Jazz I (BND107/108)

PREREQUISITE: Audition and must conform to IHSMA rules regarding participation CO-REQUISITE: Concert Band, Wind Ensemble, or Wind Symphony, unless implicitly allowed by IHSMA | Offered: Fall/Spring | .25 credit

This course is offered to any student who plays a jazz instrument. Through performances, students will develop an understanding of basic jazz styles and improvisation techniques.

### Wind Ensemble S1/S2 (BND117/118)

PREREQUISITE: Audition only | Offered: Fall | .5 credit

Wind Ensemble is the most advanced wind and percussion ensemble. Wind Ensemble is select group that will study highly advanced concert band music.

## **Jazz II (BND207/208)**

PREREQUISITE: Audition and must conform to IHSMA rules regarding participation CO-REQUISITE: Concert Band, Wind Ensemble, or Wind Symphony, unless implicitly allowed by IHSMA | Offered: Fall/Spring | .25 credit

This course is offered to any student who plays a jazz instrument. Through performances, students will develop an understanding of basic jazz styles and improvisation techniques.

## **Jazz Combo (BND209/210)**

PREREQUISITE: Middle school band, Audition | Offered: Fall/Spring | .5 credit

This course is offered to any student who plays a jazz instrument. Through performances, students will develop an understanding of basic jazz styles and improvisation techniques.

## **Jazz Ensemble (BND211/212)**

PREREQUISITE: Audition and must conform to IHSMA rules regarding participation CO-REQUISITE: Concert Band, Wind Ensemble, or Wind Symphony, unless implicitly allowed by IHSMA | Offered: Fall/Spring | .25 credit

This course is offered to any student who plays a jazz instrument. Through performances, students will develop an understanding of basic jazz styles and improvisation techniques.

## **\*Honors Band S1 (BND401/402)**

PREREQUISITE: Audition | Offered: Fall/Spring | .5 credit

This course is for a select group that will study highly advanced band music. Members are determined by audition. Students in this course are required to audition for All-State/SCIBA.

# **Vocal**

## **Concert Choir S1 & S2 (VOC101/VOC102)**

PREREQUISITE: NONE | Offered: Fall & Spring | .5 credit

This course will include a study of vocal techniques and exercises, music theory and terminology, study of the human voice, and the history of choral music through performance of varied choral literature. The ensemble will study and rehearse music to be performed at various concerts throughout the year.

## **Treble Choir S1&S2 (VOC111/VOC112)**

PREREQUISITE: NONE | Offered: Fall and Spring | .5 credit

This course will include a study of vocal techniques and exercises, music theory and terminology, study of the human voice, and the history of choral music through performance of varied choral literature. The ensemble will study and rehearse music to be performed at various concerts throughout the year.

## **Bass Choir S1& S2 (VOC113/VOC114)**

PREREQUISITE: NONE | Offered: Fall and Spring | .5 credit

This course will include a study of vocal techniques and exercises, music theory and terminology, study of the human voice, and the history of choral music through performance of varied choral literature. The ensemble will study and rehearse music to be performed at various concerts throughout the year.

### **Audition Treble Choir Audition S1&S2 (VOC209/VOC210)**

PREREQUISITE: Audition only | Offered: Fall and Spring | .5 credit

This choir is designed to develop vocal technique, part-singing, and fundamentals of choral singing through a variety of musical styles. Multiple performances will be expected throughout the year.

### **Show Choir S1 & S2 (VOC211/VOC212)**

PREREQUISITE: Audition CO-REQUISITE: Concert, Chamber or Core Choir Ensemble per IHSMA rules

Offered: Fall and Spring | .5 credit

This course will include a study of vocal techniques and exercises, music theory and terminology, study of the human voice, and the performance of varied literature, including popular, musical theatre, and jazz styles. The ensemble will study and rehearse music to be performed at various concerts and contests throughout the year.

### **Jazz Choir S1&S2 (VOC221/VOC222)**

PREREQUISITE: Audition | Offered: Fall and Spring | .5 credit

This course will include an advanced study of vocal jazz techniques and exercises, music theory and terminology, study of the human voice, improvisation, and the history of jazz music through performance of varied vocal jazz literature. The ensemble will study and rehearse music to be performed at various concerts and contests throughout the year.

### **Gospel Choir S1&S2 (VOC223/VOC224)**

PREREQUISITE: Audition | Offered: Fall and Spring | .5 credit

This course will include a study of international gospel tradition, including traditional United States gospel, modern/urban gospel, contemporary inspirational music, African gospel, and spirituals. Students will study aural skills, gospel technique, improvisation and stylism, and perform at various concerts throughout the year.

### **Chamber Choir S1&S2 (VOC311/VOC312)**

PREREQUISITE: Audition only | Offered: Fall and Spring | .5 credit

This course will include an advanced study of vocal techniques and exercises, music theory and terminology, study of the human voice, and the history of choral music through performance of varied choral literature. The ensemble will study and rehearse music to be performed at various concerts throughout the year.

### **\*Honors Chamber Choir S1&S2 (VOC401/402)**

PREREQUISITE: Audition | Offered: Fall and Spring | .5 credit

This course will include an advanced study of vocal techniques and exercises, music theory and terminology, study of the human voice, and the history of choral music through performance of varied choral literature. The ensemble will study and rehearse music to be performed at various concerts throughout the year.

## **Varsity Show Choir S1 & S2 (VOC403/VOC404)**

PREREQUISITE: Audition | Offered: Fall and Spring | .5 credit

This course will include an advanced study of vocal techniques and exercises, music theory and terminology, study of the human voice, and the performance of varied literature, including popular, musical theatre, and jazz styles. The ensemble will study and rehearse music to be performed at various concerts and contests throughout the year.

## **Orchestra**

### **Orchestra S1 (ORC101)**

PREREQUISITE: Previous semester of Orchestra on applicable instrument or audition | Offered: Fall | .5 credit

This course is for all interested string players. Students participate in several concerts per year.

### **Orchestra S2 (ORC102)**

PREREQUISITE: Previous semester of Orchestra on applicable instrument or audition | Offered: Spring | .5 credit

This course is for all interested string players. Students participate in several concerts per year.

### **\*Honors Orchestra S1 (ORC401)**

PREREQUISITE: Audition | Offered: Fall | .5 credit

This course is for a select group that will study highly advanced orchestra music. Members are determined by audition.

### **\*Honors Orchestra S2 (ORC402)**

PREREQUISITE: Audition | Offered: Spring | .5 credit

This course is for a select group that will study highly advanced orchestra music. Members are determined by audition.

## **Music Theory**

### **Music Theory (MUS153)**

PREREQUISITE: None | Offered: Fall | .5 credit

Students will study traditional music theory, including scales, chords, intervals, transposition, and beginning part-writing.

### **\*AP Music Theory (MUS501)**

PREREQUISITE: Instructor Approval CO-REQUISITE: Must be enrolled in an instrumental or vocal music course | Offered: Fall | .5 credit

Advanced Placement Music Theory is a college-level study of the theory and ear training of music. It is geared toward the Advanced Placement Music Theory test, which is strong on aural (listening) skills as well as written skills. Students will learn to identify scales, intervals, chord progressions and modulations by sound and by sight. Students will sing melodies on sight and improve students' rhythm reading. Students will learn how to write music from various forms of shorthand and analyze music. Students will learn, chords, cadences and forms. Students will decode music and decode how and why music is written the way it is. There are no official prerequisites, but those having had music before will have a definite advantage. This course combined with IS Music Composition (MUS301/MUS302) and IS Music Theory (MUS303/MUS304).

## **\*AP Music Theory (MUS502)**

PREREQUISITE: Instructor Approval CO-REQUISITE: Must be enrolled in an instrumental or vocal music course | Offered: Spring | .5 credit

Advanced Placement Music Theory is a college-level study of the theory and ear training of music. It is geared toward the Advanced Placement Music Theory test, which is strong on aural (listening) skills as well as written skills. Students will learn to identify scales, intervals, chord progressions and modulations by sound and by sight. Students will sing melodies on sight and improve students' rhythm reading. Students will learn how to write music from various forms of shorthand and analyze music. Students will learn, chords, cadences and forms. Students will decode music and decode how and why music is written the way it is. There are no official prerequisites, but those having had music before will have a definite advantage.

## **Drama**

### **Intro to Theatre Arts S1 & S2 (DRM129/130)**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

Theatre Arts I is an introductory course that will teach students to utilize and develop self-confidence, poise, basic theatre terminology, appreciation of various dramatic forms, appropriate response, awareness of theatre production processes, understanding of theatre literature, knowledge of theatre history, and beginning performance skills.

### **Intro to Play Production S1 & S2 (DRM131/132)**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

Play Production I is a survey course of technical theatre covering set construction/safety, costumes, make-up, publicity/programs, lights/sound, props, house management, and play reading and analysis.

### **Intermediate Theatre Arts S1 & S2 (DRM229/230)**

PREREQUISITE: DRM130 | Offered: Fall/Spring | .5 credit

The course provides the opportunity for students to thoroughly investigate the subjects taught in Theatre Arts I. Areas of concentration will be theatre history, literature, acting and play production. Performance will be a major component of this course.

### **Intermediate Play Production S1 & S2 (DRM231/232)**

PREREQUISITE: DRM132 | Offered: Fall/Spring | .5 credit

This course provides students an opportunity to apply the skills learned in Play Production I. Students will participate in decision making, construction and crew supervision, and problem solving. Students will learn advanced methods in dealing with props, sets, lights/sound, costumes, make-up, and publicity/programs.

### **Advanced Theatre Arts S1 & S2 (DRM329/330)**

PREREQUISITE: DRM230 | Offered: Fall/Spring | .5 credit

This course will begin to prepare the more serious theatre student with advanced concepts in performance and production. Also included will be an intro to playwriting, criticism, and auditioning. Students will explore forms of creative expression, performance styles, methods of acting, and artistic styles.

**Advanced Play Production S1 & S2 (DRM331/332)**

PREREQUISITE: DRM232 | Offered: Fall/Spring | .5 credit

Play Production III covers exploratory methods of script analysis, design work, and stage management. Students will use basic and advanced design and construction concepts to create a production.

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## Visual Arts

The Des Moines Public Schools offer a comprehensive, hands-on approach to learning and mastering the skills in visual arts. Students who pursue an academic study of the visual arts will deepen their communications skills, define and solve creative problems with insight and technical ability, focus their critical analysis skills, and develop an informed acquaintance with exemplary works of art from a variety of cultures across historical periods and genres. Learning in the visual arts provides opportunities for students to broaden their life experience and become equipped with skills needed and valued in the 21<sup>st</sup> century.

### Coordinator

Kathleen Davenport

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### Intro 2D Art & 3D Art S1 (ART101)

PREREQUISITE: NONE | Offered: Fall | .5 credit

This course is an introductory foundational level study of all visual art standards and requires no previous art experience. Students use a variety of media, techniques and processes to explore the Elements of Art and solve visual arts and creative problems. Students will engage in the creative process through planning, applying, and evaluating. This course is recommended for students considering careers requiring artistic skill. Satisfactory completion of this course is a prerequisite for all advanced art courses.

### Intro 2D Art & 3D Art S2 (ART102)

PREREQUISITE: ART101 | Offered: Spring | .5 credit

This course is an introductory foundational level study of all visual art standards and requires no previous art experience. Students use a variety of media, techniques and processes to explore Elements of Art and Principles of Design, and solve visual arts and creative problems. Students will engage in the creative process through planning, applying, evaluating, and connecting art to wider contexts. This course is recommended for students considering careers requiring artistic skill. Satisfactory completion of this course is a prerequisite for all advanced art courses.

### Intro to Art History S1 (ART105)

PREREQUISITE: NONE | Offered: Fall | .5 credit

In this course, students will develop a basic vocabulary for describing visual art, an understanding of the functions of imagery, and explore the role art has played throughout Western and Non-Western history and contemporary trends. The focus of this course is describing, exploring, and participating in the creative process in order to better understand the role of art in history. This course is recommended for students considering careers in architecture, art education, art history, ceramics, fashion design, interior architecture, interior design, landscape design, or studio art or future enrollment in the AP Art History course

### **Intro to Art History S2 (ART106)**

PREREQUISITE: ART141 | Offered: Spring | .5 credit

In this course, students will develop a basic vocabulary for describing visual art, an understanding of the functions of imagery, and explore the role art has played throughout Western and Non-Western history and contemporary trends. The focus of this course is describing, exploring, and participating in the creative process in order to better understand the role of art in history. This course is recommended for students considering careers in architecture, art education, art history, ceramics, fashion design, interior architecture, interior design, landscape design, or studio art or future enrollment in the AP Art History course

### **Intro to Graphic Design S1 (ART141)**

PREREQUISITE: NONE | Offered: Fall | .5 credit

This course is an introduction to the principles and elements of graphic design. Students will explore different avenues of visual communication, self-expression, and creative problem-solving through the creation of commercial, interactive, and fine art. Students will engage in the creative process through planning, application, and evaluation of graphic design concepts.

### **Intro to Graphic Design S2 (ART142)**

PREREQUISITE: ART141 | Offered: Spring | .5 credit

This course continues and deepens an introduction to the principles and elements of graphic design. Students will explore different avenues of visual communication, self-expression, and creative problem-solving through the creation of commercial, interactive, and fine art. Students will engage in the creative process through planning, application, and evaluation of graphic design concepts.

### **Drawing and Painting II S1 (ART201)**

PREREQUISITE: ART102 | Offered: Fall | .5 credit

This course is a further exploration of Elements of Art and Principles of Design through the drawing and painting media such as acrylic, watercolor, oil pastels, and charcoal. Students will engage in the creative process through planning, applying, evaluating, and connecting art to wider contexts. This course is recommended for students considering careers requiring artistic skill. Satisfactory completion of ART101/ART102 is a prerequisite for this and all advanced course work. Art teacher may recommend waive of prerequisite when student portfolio demonstrates readiness for advanced course work.

### **Drawing and Painting II S2 (ART202)**

PREREQUISITE: ART201 | Offered: Spring | .5 credit

This course is a further exploration of Elements of Art and Principle of Design through the drawing and painting media such as acrylic, watercolor, oil pastels and charcoal. Students will engage in the creative process through planning, applying, evaluating, and connecting art to wider concepts. This course is recommended for students considering careers requiring artistic skill. Satisfactory completion of ART101/ART102 is a prerequisite for this and all advanced course work. Art teacher may recommend waive of prerequisite when student portfolio demonstrates readiness for advanced coursework.



### **3D Design II S1 (ART211)**

PREREQUISITE: ART102 | Offered: Fall | .5 credit

This course is a further exploration of the Elements of Art and Principles of Design through three dimensional sculptural media such as clay, wood, metals, fiber, paper, tile, glass, plaster, and mixed media. Students will engage in the creative process through planning, applying, and evaluating. This course is recommended for students considering careers requiring artistic skill. Satisfactory completion of ART101/ART102 is a prerequisite for this and all advanced course work. Art teacher may waive prerequisite when student portfolio demonstrates readiness for advanced coursework.

### **3D Design II S2 (ART212)**

PREREQUISITE: ART211 | Offered: Spring | .5 credit

This course is a further exploration of the Elements of Art and Principles of Design through three dimensional sculptural media such as clay, wood, metals, fiber, paper, tile, glass, plaster, and mixed media. Students will engage in the creative process through planning, applying, and evaluating. This course is recommended for students considering careers requiring artistic skill. Satisfactory completion of ART101/ART102 is a prerequisite for this and all advanced course work. Art teacher may waive prerequisite when student portfolio demonstrates readiness for advanced coursework.

### **Intro to Photography S1 (ART221)**

PREREQUISITE: NONE | Offered: Fall | .5 credit

This course is an introductory foundational level study of the Elements of Art and the Principles of Design through the medium of photography and requires no previous art experience. Students develop skills in basic camera operation, photographic processes, procedures, theory, and studio techniques. Students will engage in the creative process through exploring the camera as a tool and evaluating their work and the work of others. This course is recommended for students considering careers in animation, digital media, graphic design, illustration, multi-media, museum, object design, photojournalism, studio art, or visual communications.

### **Intro to Photography S2 (ART222)**

PREREQUISITE: ART221 | Offered: Spring | .5 credit

This course is an introductory foundational level study of the Elements of Art and Principles of Design through the medium of photography and requires no previous art experience. Students develop skills in basic camera operation, photographic processes, procedures, theory, and studio techniques. Students will engage in the creative process through exploring the camera as a tool and evaluating their own work and the work of others. This course is recommended for students considering careers in animation, digital media, graphic design, illustration, multi-media, museum, object design, photojournalism, studio art, or visual communications.

### **Advanced Photography S1 (ART225)**

PREREQUISITE: ART222 | Offered: Fall | .5 credit

This course is an advanced level study of the Elements of Art and Principles of Design through the medium of photography for students who have mastered the basic photographic principles and process. Students will engage in the creative process and explore the camera as a tool by connecting work to wider contexts, planning, evaluating, and presenting. This course is recommended for students considering careers in animation, digital media, graphic design, illustration, multi-media, object design, photojournalism, studio art, commercial art, or visual communications.

### **Advanced Photography S2 (ART226)**

PREREQUISITE: ART225 | Offered: Spring | .5 credit

This course is an advanced level study of the Elements of Art and Principles of Design through the medium of photography for students who have mastered the basic photographic principles and process. Students will engage in the creative process and explore the camera as a tool by connecting work to wider contexts, planning, evaluating, and presenting. This course is recommended for students considering careers in animation, digital media, graphic design, illustration, multi-media, object design, photojournalism, studio art, commercial art, or visual communications.

### **Intermediate Art History S1 (ART231)**

PREREQUISITE: ART105 | Offered: Fall | .5 credit

In this course, students will develop a deeper vocabulary for describing visual art, an understanding of the functions of imagery, and explore the role art has played throughout Western and Non-Western history and contemporary trends. The focus of this course is describing, exploring, and participating in the creative process in order to better understand the role of art in history. This course is recommended for students considering careers in architecture, art education, art history, ceramics, fashion design, interior architecture, interior design, landscape design, or studio art or future enrollment in the AP Art History course

### **Intermediate Art History S2 (ART232)**

PREREQUISITE: ART 106 | Offered: Spring | .5 credit

In this course, students will develop a deeper vocabulary for describing visual art, an understanding of the functions of imagery, and explore the role art has played throughout Western and Non-Western history and contemporary trends. The focus of this course is describing, exploring, and participating in the creative process in order to better understand the role of art in history. This course is recommended for students considering careers in architecture, art education, art history, ceramics, fashion design, interior architecture, interior design, landscape design, or studio art or future enrollment in the AP Art History course

### **Intermediate Graphic Design S1 (ART241)**

PREREQUISITE: ART142 | Offered: Fall | .5 credit

This course is a further exploration into visual communication through graphic design. Students will explore different avenues of visual communication, self-expression, and creative problem-solving through the creation of commercial, interactive, and fine art. Students will be engaged in the creative process through planning, application, evaluation, and presentation of graphic design concepts.

### **Intermediate Graphic Design S2 (ART242)**

PREREQUISITE: ART241 | Offered: Spring | .5 credit

This course is a deeper exploration into digital imaging and computer-based art. Students will explore different avenues of visual communication, self-expression, and creative problem-solving through the creation of commercial, interactive, and fine art. Students will engage in the creative process through planning, application, evaluation, and presentation of graphic design concepts.

### **Drawing and Painting III S1 (ART301)**

PREREQUISITE: ART202 | Offered: Fall | .5 credit

This course is an advanced study of the Elements of Art and Principles of Design through the drawing and painting media. Students will engage in the creative process through planning, applying, evaluating, and connecting art to wider contexts. This course is recommended for students considering careers in architecture, art education, art history, graphic design, illustration, interior design, or studio art.

### **Drawing and Painting III S2 (ART302)**

PREREQUISITE: ART301 | Offered: Spring | .5 credit

This course is an advanced study of the Elements of Art and Principles of Design through the drawing and painting media. Students will engage in the creative process through planning, applying, evaluating, and connecting art to wider concepts. This course is recommended for students considering careers in architecture, art education, art history, graphic design, illustration, interior design, or studio art.

### **3D Design III S1 (ART311)**

PREREQUISITE: ART212 | Offered: Fall | .5 credit

This advanced course is a deeper exploration of the Elements of Art and Principles of Design through three dimensional sculptural media such as clay, wood, metals, fiber, paper, tile, glass, plaster, and mixed media. Students will engage in the creative process through planning, applying, evaluating, and connecting work to wider contexts. This course is recommended for students considering careers in architecture, art education, art history, ceramics, fashion design, interior architecture, interior design, landscape design, or studio art.

### **3D Design III S2 (ART312)**

PREREQUISITE: ART311 | Offered: Spring | .5 credit

This advanced course is a deeper exploration of the Elements of Art and Principles of Design through three dimensional sculptural media such as clay, wood, metals, fiber, paper, tile, glass, plaster, and mixed media. Students will engage in the creative process through planning, applying, evaluating, and connecting work to wider contexts. This course is recommended for students considering careers in architecture, art education, art history, ceramics, fashion design, interior architecture, interior design, landscape design, or studio art.

### **Commercial Photography @ Central Campus (ART319)**

PREREQUISITES: Recommended other art courses, Photography, Multimedia | .5 credit per block each semester

In the Commercial Photography program, students obtain skills in film processing, darkroom procedures, studio shooting techniques, camera techniques, photographic history, presentation skills and digital imaging. Portfolio development enables students to apply for employment, scholarships and college admission. Students will publicly display work at the Central Campus Student Art Exhibit and other exhibitions.

### **Advanced Graphic Communications @ Central Campus (ART361)**

PREREQUISITES: Two courses in any of the following areas highly recommended: Art, Graphic Design, Computer Applications, Journalism, and Technology Education.

Graphic Communication provides education, training and real-world graphic design and print production experiences. Through close relationships with industry experts, the program's curriculum and industry experiences reflect the

technological expectations of the graphic communication industry. First-year students complete a wide variety of hands-on projects in design, layout, and screen printing. Students work in the Adobe Creative Suite. Graphic Communications program at Central Campus can teach you how to implement your ideas across your design field of choice – whether it's graphics, websites, interactive presentations, print and packaging.

### **Drawing and Painting IV S1 (ART401)**

PREREQUISITE: ART302 | Offered: Fall | .5 credit

This advanced studio course is a study of personal expression using the Elements and Principles through the drawing and painting media. Students will engage in the creative process through planning, applying, evaluating, connecting and presenting art concepts. This course is recommended for students considering careers in architecture, art education, art history, graphic design, illustration, interior design, or studio art.

### **Drawing and Painting IV S2 (ART402)**

PREREQUISITE: ART401 | Offered: Spring | .5 credit

This advanced studio course is a study of personal expression using the Elements and Principles through the drawing and painting media. Students will engage in the creative process through planning, applying, evaluating, connecting, and presenting art concepts. This course is recommended for students considering careers in architecture, art education, art history, graphic design, illustration, interior design, or studio art.

### **Honors 2D Art S1 (ART403)**

PREREQUISITE: ART102 | Offered: Fall | .5 credit

This advanced level course emphasizes making art as an ongoing process that involves the students in critical decision making; helps students develop technical skills and familiarizes them with the functions of the visual elements. The course encourages systematic, creative, investigation of formal and conceptual issues.

### **Honors 2D Art S2 (ART404)**

PREREQUISITE: ART403 | Offered: Spring | .5 credit

This advanced level course emphasizes making art as an ongoing process that involves the students in critical decision making; helps students develop technical skills and familiarizes them with the functions of the visual elements. The course encourages systematic, creative, investigation of formal and conceptual issues.

### **3D Design IV S1 (ART411)**

PREREQUISITE: ART312 | Offered: Fall | .5 credit

This advanced course is a deeper exploration of personal expression with the Elements of Art and Principles of Design through three dimensional sculptural media such as clay, wood, metals, fiber, paper, tile, glass, plaster, and mixed media. Students will engage in the creative process through planning, applying, evaluating, presenting, and connecting work to wider contexts. This course is recommended for students considering careers in architecture, art education, art history, ceramics, fashion design, interior architecture, interior design, landscape design, or studio art.

### **3D Design IV S2 (ART412)**

PREREQUISITE: ART411 | Offered: Fall | .5 credit

This advanced course is a deeper exploration of personal expression with the Elements of Art and Principles of Design through three dimensional sculptural media such as clay, wood, metals, fiber, paper, tile, glass, plaster, and mixed media. Students will engage in the creative process through planning, applying, evaluating, presenting, and connecting work to wider contexts. This course is recommended for students considering careers in architecture, art education, art history, ceramics, fashion design, interior architecture, interior design, landscape design, or studio art.

### **\*AP Art: 2D Studio S1 (ART501)**

PREREQUISITE: None | Offered: Fall | .5 credit

This weighted, advanced level course emphasizes making art as an ongoing process that involves the students in critical decision making; helps students develop technical skills and familiarizes them with the functions of the visual elements. The course encourages systematic, creative, investigation of formal and conceptual issues. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Art: 2D Studio S2 (ART502)**

PREREQUISITE: None | Offered: Fall | .5 credit

This weighted, advanced level course emphasizes making art as an ongoing process that involves the students in critical decision making; helps students develop technical skills and familiarizes them with the functions of the visual elements. The course encourages systematic, creative, investigation of formal and conceptual issues. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Art History S1 (ART503)**

PREREQUISITE: None | Offered: Fall | .5 credit

In this course, students examine major forms of artistic expression from the ancient world to the present and from a variety of cultures. They learn view and analyze works of art within their historical context, and to articulate what they see or experience in a meaningful way. A meaningful way to experience works of art is learning to frame an understanding that relates how and why works of art communicate visual meaning. Completion of the AP exam is an expectation for all AP courses.

### **\*AP Art History S2 (ART504)**

PREREQUISITE: ART503 | Offered: Fall | .5 credit

In this course, students examine major forms of artistic expression from the ancient world to the present and from a variety of cultures. They learn view and analyze works of art within their historical context, and to articulate what they see or experience in a meaningful way. A meaningful way to experience works of art is learning to frame an understanding that relates how and why works of art communicate visual meaning. Completion of the AP exam is an expectation for all AP courses.

*For additional art credit options, i.e. Commercial Photography, Graphic Communications, please see the Career & Technical Programs listed under Central Campus in this catalog.*

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## Physical Education & Health Science

Physical Education is an important and unique part of the daily instructional program. Not only does it contribute to the overall goals of education, but it also contributes to the development and maintenance of fitness, motor skills, social skills, health, and brain development.

The Des Moines Public Schools provides a comprehensive curriculum that allows students choice in a planned sequential instructional program that teaches skills, knowledge and behaviors to promote lifelong fitness.

These are necessary to function at an adequate level of competence enabling each student to be an active, physically and mentally fit individual throughout life.

Contract PE Eligibility & Chapter 12 Guidance (COUNSELOR GUIDE ONLY):

**12th grade students** are eligible to enroll in Contract PE for 1 semester of their senior year provided they meet at least one of the following criteria:

- Student is involved in a work study or other educational program that requires the student's absence from school.
- Student is carrying a full academic schedule for the current semester.
- Student is involved in a school-sponsored athletic program or activity supervised by a staff member with a coaching endorsement.

**9th-11th Grade:** All other high school students are eligible to enroll in Contract PE provided they meet all of the following criteria:

- Student is carrying a full academic schedule for the current semester.
- Student has no physical education failures to make up from previous years.
- Student is involved in a school-sponsored athletic or activity supervised by a staff member with a coaching endorsement.

Once a student's eligibility to enroll has been determined using these criteria, they must complete a Contract Physical Education Student Application and secure the required signatures.

### Coordinator

Carlye Satterwhite

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### Lifelong Rec Activities (PHY103)

PREREQUISITE : NONE | Offered: Fall/Spring | .5 credit

Students will learn a variety of rules, skills, and fundamentals and strategies in a variety of individual and dual sport activities. Safety and sportsmanship will be emphasized. Activities include but are not limited to: Badminton, pickle ball, tennis, bowling, table tennis, and other individual and dual sports. District mandates fitness assessments will be administered in pre and post test form.

### Team Games/Act & Sports (PHY105)

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

Students will learn a variety of rules, skills, fundamentals and strategies in multiple team activities. Safety and sportsmanship will be emphasized. Activities will include by not limited to: Basketball, Soccer, Volleyball, Floor Hockey, Lacrosse, Ultimate Games, Non-traditional Games, Flag Football, Diamond Sports. District mandated fitness assessments will be administered in pre and post test form.

### **Creative Contemporary Movement (PHY107) @ Central Academy**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

This course will focus on the beginning to intermediate level kinesthetic and intellectual understanding of dance principles, terminology, and concert dance techniques. Areas of emphasis include, but are not limited to, ballet and modern dance. This course will offer an increased awareness of proper body alignment, balance, flexibility, strength and coordination as it pertains to dance and day-to-day living. Increase familiarity with anatomy and injury prevention. View a dance performance with a more educated eye and grateful heart. Execute dance combinations with correct sequence, quality and technique. This course is only offered to students who have been identified through the GT program. (Offered at Central Academy only)

### **Total Body Fitness & Cond LI (PHY109)**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

This beginning course is designed to introduce proper lifting techniques, spotting methods, weight room safety, and workout routines. Activities will include but not limited to: a multitude of lifts utilizing free weights, machine weights, as well as an emphasis on conditioning and fitness. District mandated fitness assessments will be administered in pre and post test form

### **Fitness Walking (PHY115)**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

This course is designed for students to improve cardiovascular fitness by walking. This course is completely activity based and suggested for those who are self-motivated. Various walking activities and assessments will be used throughout the class. Students will be expected to walk 2-3 miles per class period. This will allow students' the opportunity to participate in individual fitness activities that can be continued throughout one's lifetime. Activities include by not limited to: walking, heart rate monitoring, circuit training, treadmills, time laps/stairs, time mile, pedometers/activity monitors, walking bands. District mandated fitness assessments will be administered in pre and post test form.

### **Unified PE (PHY117)**

PREREQUISITE: NONE | Offered: Fall/Spring | Credit: .5

This course combines students of all abilities to participate in developmentally appropriate activities including lifetime activities, physical fitness, and sport. Students will work together to increase competence and confidence in a variety of physical activities. Unified Peer PE is planned and implemented to provide each student access to physical education grade-level outcomes and standards while making necessary accommodations. Through ongoing leadership opportunities, members of this course will be empowered to help create a more inclusive and accepting school environment for all students.

### **High Intensity Physical Fit (PHY120)**

PREREQUISITE: NONE | Offered: Fall/Spring | Credit: .5

Students will learn about health and nutrition, knowledge of lifetime wellness and fitness will be covered and emphasized. Activities include but not limited to: Circuit training, weight resistance, free weights, resistance bands, group fitness classes, designing a fitness class, and fitness technology. District mandated fitness assessments will be administered in pre and post test form.

### **Innovative Fitness (PHY131)**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

Whether you are looking to improve your overall physique, gain strength, and flexibility, or live a healthier lifestyle, Innovative Fitness Class will aid you in your goals and expectations. This program provides opportunities for introductions to fitness skills and knowledge to help develop personal workout plans. Students must be willing to workout at an intense cardio level, break a sweat, and expect a body transformation. Activities include but are not limited to: Yoga, fitness technology, aerobics, bosu-trainers, CrossFit, creative dance, fitness assessment, jump roping, kick boxing, medicine balls, and weight resistance.

### **Total Body Fitness & Cond LII (PHY209)**

PREREQUISITE: Suggested – Total Body Fitness & Cond LI | Offered: Fall/Spring | .5 credit

This advanced course is designed to build upon proper lifting techniques, spotting methods, weight room safety, and work out routines. Activities will include but not limited to: Fitness Plan, Advanced strength exercises, SMART goals, student logs, basic nutrition, hydration, adjustment of pace, power building, Olympic lifts, fitness portfolio, analyzes the components skill-related fitness in reaction to life and career goals, and designs an appropriate fitness program to meet their goals. District mandated fitness assessments will be administered in pre and post-test form.

### **Psychology of Health & Wellness (PHY227)**

PREREQUISITE: 1 year prior Physical Education courses | Offered: Fall/Spring | .5 credit

Within this course we will be providing an overview to help students develop a relationship with exercise and lifelong wellness. Psychology of Health and wellness course will introduce the field of psychology and the relationship between health and overall wellness. This course will cover a wide range of topics and skills that will improve an overall healthy lifestyle. Activities can include but not limited to: mental toughness, goal setting, motivation, injury prevention, training principles, schedules, and stress management.

### **Lifeguarding (PHY235)**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

This course will offer instruction to students through the American Red Cross lifeguarding curriculum. Throughout this course lifeguard candidates and lifeguards will be taught with the necessary skills and knowledge needed to prevent and respond to aquatic emergencies. Students will be given the opportunity to receive lifeguard certification after successful completion of this course. Students will learn CPR and First Aid. District mandated fitness assessments will be administered in a pre and post test form.

### **Aquatics (PHY241)**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

Students will gain an awareness of the importance of water safety training and to provide general information on being safe in, on, and around water. Students will work on their coordination and refinement of strokes. Students will participate, assess, and improve levels of flexibility, cardiovascular fitness, muscular strength, endurance, and body composition. CPR has been mandated by the state and may be included in the curriculum. Activities can include but not limited to: pool rules, safety/expectations, water injuries, deck rescues/in water rescues, introduction to water skills, fundamental aquatic skills and stroke techniques.

### **Methods of Physical Education (PHY319) @ Central Campus**

PREREQUISITE: None | Offered: Fall/Spring | .5 credit

Students will learn first-hand elementary career expectations and experiences through this advanced study of the developmental approach to teaching elementary physical education in urban schools. Beginning movement concepts



and fundamental motor skills are discussed in relation to developmentally appropriate elementary grade-level outcomes and standards. Students will plan and implement instructional teaching cycles using the elementary PE curriculum guide, focusing on skills and knowledge development in gymnastics, striking with a long/short implement, fitness activities/assessments, weight transfer, jump roping, locomotors, over and underhand toss/roll, striking overhand, dribbling with feet/hands, and catching. Students will acquire field experience through classroom observations and complete a practicum component with necessary teaching experts. Offered at Central Campus only.

### **Sports Officiating & Leadership (PHY327 /PHY328) @ Central Campus**

PREREQUISITE: NONE | Offered: Spring | .5 credit

There is an ever-growing need for qualified sports officials - from amateur to professional sports - and in this program, students learn the purpose, procedures, and requirements of success in officiating . Students learn the mechanics and consistency required for working multiple team and individual sports.

### **Contract PE (PHY901) counselor only**

PREREQUISITE: NONE | Offered: Fall/Spring | .5 credit

Contract PE is only for those students who are carrying a full schedule of required academic classes in order to meet minimum graduation requirements. Please see school counselor and PE department chair for further details, qualifications, and acceptable athletic programs in which the student may participate. Students will log physical activity and utilize the goal setting feature through the online database daily fit log, to motivate and set challenging and realistic goals.

### **PE Exemption (PHY905 S1 (NC), PHY906 S2 (NC) counselor only)**

This code is used for students who have been excused from Physical Education for religious or medical reasons. In order to be considered excused the student will need to fill out the initial exemption request (counselor at home building, registrar at home, and PE Department Head), approved doctor documentation, and then place the copy of the form in students cumulative folder.

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## World Languages

Des Moines Public Schools provides students with opportunities to develop and maintain communicative and cultural proficiencies in a variety of world languages. World language courses are offered at all high schools and some middle schools and elementary schools. In an effort to promote language and literacy development, DMPS also offers Spanish as heritage language courses.

The district's world language goals include:

- Increasing overall student academic achievement through critical thinking skills and supports of essential literacy skills.
- Ensuring all student have access to world language acquisition courses for community connection and college preparation.
- Offering curriculum that reflects our students and community in authentic and follows research supported best practices.
- Increasing students' communication abilities within and beyond the classroom with functional language skills and a desire to engage with our community.

DMPS World Language courses are available to all students. Courses are offered in Arabic, Chinese, French, German, Italian, Japanese, and Spanish. Students can earn DMACC college credits for some courses. Students who complete the AP Exam and earn a qualifying score will also earn college credits for their work. All DMPS curricula in World Languages is based on the growth of language skills and grounded in national and state standards. Students may apply for the Seal of Biliteracy in any language, even if DMPS does not offer a course.

### Coordinator

Sam Finneseth

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### Spanish I S1 (WL111)

PREREQUISITE: NONE | Offered: Fall | .5 credit

Spanish 1 is for learners in high school who are new to Spanish language study. First year students engage daily with written and spoken Spanish language to build communicative capacity. Students experience the language to learn about worldwide Spanish culture, current events, and build their productive capacity. Year one students start in the Novice range and focus on being able to express themselves on very familiar topics using a variety of words, phrases, simple sentences, and practiced and memorized questions. At the end of semester 1, students will likely enter the Novice Low range and be able to answer in words and short phases on practiced and familiar topics. It is common that students understand more than they can produce.

### Spanish I S2 (WL112)

PREREQUISITE:WL111 | Offered: Spring | .5 credit

Spanish 1 is for beginning learners in high school. First year students engage daily with written and spoken Spanish language to build communicative capacity. Students experience the language to learn about worldwide Spanish culture, current events, and build their productive capacity. Year one students start in the Novice range and focus on being able to

express themselves on very familiar topics using a variety of words, phrases, simple sentences, and practiced and memorized questions. At the end of semester 2, students will likely enter the Novice Mid range and be able to communicate confidently in short phases on practiced and familiar topics. It is common that students understand more than they can produce

### **Spanish II S1 (WL211)**

PREREQUISITE: WL112 or Teacher Placement | Offered: Fall | .5 credit

Spanish 2 is for continuing beginning learners in high school wanting to increase their Spanish communicative proficiency and have solid foundational skills. Second year students continue engage daily with written and spoken Spanish language to expand their communicative capacities. Students learn about worldwide Spanish culture, historical events, and current events in the target language. Year two students continue in the Novice range and focus on being able to express themselves on very familiar topics using a variety of words, phrases, simple sentences, and practiced questions. At the end of semester 1, students develop within the Novice Mid range and able to communicate confidently in short phases on practiced and familiar topics. They will also be able to present short bits of information to an authentic audience. It is common that students understand more than they can produce.

### **Spanish II S2 (WL212)**

PREREQUISITE: WL211 or Teacher Placement | Offered: Spring | .5 credit

Spanish 2 semester 2 is for continuing Spanish learners in high school wanting to increase their Spanish communicative proficiency. Second year students continue engage daily with written and spoken Spanish language to expand their communicative capacities. Students learn about worldwide Spanish culture, historical events, and current events in the target language. Year two semester two students advance to the Novice High range and focus on being able to express themselves on very familiar topics using a variety of phrases, sentences, and practiced questions. At the end of semester two, students will be able to communicate more effectively in short exchanges by asking questions, understanding answers, and able to navigate authentic texts for big ideas. They will also be able to present simplified concepts to an authentic audience. It is common that students understand more than they can produce. Students successfully completing this course are encouraged to apply for the Seal of Biliteracy and take a proficiency exam.

### **Heritage Spanish Foundations S1 (WL213)**

PREREQUISITE: None | Offered: Fall | .5 credit

Heritage Spanish Foundations is a Spanish language course for bilingual (Spanish/English), Latinx students. Here students develop their full linguistic abilities as a bilingual and bicultural person. Latinx students who are receptive to native speakers of Spanish but may not be able to produce are encouraged to take this course. Students will listen, read, speak and write in Spanish daily. Content follows research-supported curriculum specifically for Latinx youth and focuses on self-identity and cultural awareness. This course is repeatable with approval from the teacher and curriculum coordinator.

### **Heritage Spanish Foundations S2 (WL214)**

PREREQUISITE: WL213 or Teacher Placement | Offered: Spring | .5 credit

Heritage Spanish Foundations is a Spanish language course for bilingual (Spanish/English), Latinx students. Here students develop their full linguistic abilities as a bilingual and bicultural person. Latinx students who are receptive to native speakers of Spanish but may not be able to produce oral or written Spanish are encouraged to take this course. Students will listen, read, speak and write in Spanish daily. Content follows research-supported curriculum specifically for Latinx youth and focuses on self-identity and cultural awareness. This course is repeatable with approval from the teacher and curriculum coordinator. Students can anticipate moving on to Heritage Spanish Language Arts or into a 300 level Spanish elective course.

### **Spanish III S1 (WL311)**

PREREQUISITE: WL212 or Teacher Placement | Offered: Fall | .5 credit

Third year Spanish students continue to improve their Spanish language skills in reading, writing, listening and speaking. Students will help direct the course of study. Topics are not limited to: current world events, Afrolatino history, and themes of justice. Students will use authentic texts, materials written for language learners, and be expected to use a much Spanish in class as possible. This semester leans heavily on reading, listening, and writing in Spanish. Students will work to move their language proficiency from Novice High to Intermediate Low. Students successfully completing this course are encouraged to apply for the Seal of Biliteracy and take a proficiency exam.

### **Spanish III S2 (WL312)**

PREREQUISITE: WL311 | Offered: Spring | .5 credit

Third year Spanish students continue to improve their Spanish language skills in reading, writing, listening and speaking. Students will help direct the course of study. Topics are not limited to: current world events, American Chicano movement, and cultural expression. Students will use authentic texts, materials written for language learners, and be expected to use a much Spanish in class as possible. This semester leans heavily on writing, listening, and speaking in Spanish. Students will work to grow their language proficiency in Intermediate Low and approach Intermediate Mid. Students successfully completing this course are encouraged to apply for the Seal of Biliteracy and take a proficiency exam.

### **Heritage Spanish Language Arts S1 (WL417)**

PREREQUISITE: Heritage Spanish Foundations (WL213) or Teacher Placement | Offered: Fall | .5 credit

Heritage Spanish Language Arts is a Spanish language course to serve Latinx students with Spanish as a dominant language or schooling in Spanish. Students are likely at an Intermediate High+ level of Spanish. Students will listen, read, speak and write in Spanish daily. Content follows the structure of a high school English Language Arts course but focuses on the voices of Latinx authors, perspectives, and stories. Even though AP Spanish is easier than this course, students are encouraged to take AP Spanish at completion of Heritage Spanish Language Arts. Students may also choose a 300 level Spanish elective. This course is repeatable with teacher and coordinator approval.

### **Heritage Spanish Language Arts S2 (WL418)**

PREREQUISITE: WL417 or Teacher Placement | Offered: Spring | .5 credit

Heritage Spanish Language Arts is a Spanish language course to serve Latinx students with Spanish as a dominant language or schooling in Spanish. Students are likely at an Intermediate High+ level of Spanish. Students will listen, read, speak and write in Spanish daily. Content follows the structure of a high school English Language Arts course but focuses on the voices of Latinx authors, perspectives, and stories. Even though AP Spanish is easier than this course, students are encouraged to take AP Spanish at completion of Heritage Spanish Language Arts. Students may also choose a 300 level Spanish elective. This course is repeatable with teacher and coordinator approval.

### **Chinese III S1 (WL331IB) @ Central Academy**

PREREQUISITE: WL 233 | Offered: Fall | .5 credit

Students in the third year continue to engage in exploration of culture in Chinese-speaking countries in order to gain intermediate intercultural competence. Students will speak, read, write, and listen in Chinese using Novice vocabulary and grammatical structures. Units focus on global themes to provide opportunities for students to communicate and make connections with aural language and literature. By the end of the year, students should be able to communicate in the Novice Mid range. *Offered at Central Academy only.*

### **Chinese III S2 (WL332 IB) @ Central Academy**

PREREQUISITE: WL 331 | Offered: Spring | .5 credit

Students in the third year continue to engage in exploration of culture in Chinese-speaking countries in order to gain intermediate intercultural competence. Students will speak, read, write, and listen in Chinese using Novice vocabulary and grammatical structures. Units focus on global themes to provide opportunities for students to communicate and make connections with aural language and literature. By the end of the year, students should be able to communicate spoken and written language in the Novice Mid range. *Offered at Central Academy only.*

### **\*AP Spanish IV S1 (WL515)**

PREREQUISITE: WL312 or WL418 | Offered: Fall | .5 credit

The AP Spanish IV is the Language and Culture course aligned with the College Board AP exam. It focuses on academic language skills and presents an in-depth review of grammatical structures. Communicative skills are expanded to include analysis, synthesis, and elaborated opinions. Appreciation of, awareness of, and respect for Hispanic cultures are expanded through multiple genres. This course provides dual credit for DMACC's FLS242. *Completion of the AP exam is an expectation for all AP courses. An English proficient student who earns a score of 3 or higher on the AP Spanish Language and Culture exam qualifies for the Seal of Biliteracy.*

### **\*AP Spanish IV S2 (WL516)**

PREREQUISITE: WL515 | Offered: Spring | .5 credit

The AP Spanish IV is the Language and Culture course aligned with the College Board AP exam. It focuses on academic language skills and presents an in-depth review of grammatical structures. Communicative skills are expanded to include analysis, synthesis, and elaborated opinions. Appreciation of, awareness of, and respect for Hispanic cultures are expanded through multiple genres. This course provides dual credit for DMACC's FLS242. *Completion of the AP exam is an expectation for all AP courses. An English proficient student who earns a score of 3 or higher on the AP Spanish Language and Culture exam qualifies for the Seal of Biliteracy.*

### **\*AP Spanish Lit S1 (WL523)**

PREREQUISITE: WL515 or Heritage Spanish | Offered: Fall | .5 credit

The AP Spanish Literature and Culture course aligns with the College Board exam. It focuses on academic language development through a thematic approach to introduce representative texts (short stories, novels, poetry, and essays) from Peninsular Spanish, Latin American, and United States Hispanic literature. Students continue to develop proficiencies across the full range of the modes of communication (interpersonal, presentational, and interpretive), honing their critical reading and analytical writing skills. Literature is examined within the context of its time and place, as students reflect on the many voices and cultures present in the required readings. The course also includes a strong focus on cultural connections and comparisons, including exploration of various media (e.g., art, film, articles, and literary criticism). *Completion of the AP exam is an expectation for all AP courses.*

### **\*AP Spanish Lit S2 (WL524)**

PREREQUISITE: WL515 or higher or Heritage Language Learner | Offered: Spring | .5 credit

The AP Spanish Literature and Culture course aligns with the College Board exam. It focuses on academic language development through a thematic approach to introduce representative texts (short stories, novels, poetry, and essays) from Peninsular Spanish, Latin American, and United States Hispanic literature. Students continue to develop proficiencies across the full range of the modes of communication (interpersonal, presentational, and interpretive), honing their critical reading and analytical writing skills. Literature is examined within the context of its time and place, as

students reflect on the many voices and cultures present in the required readings. The course also includes a strong focus on cultural connections and comparisons, including exploration of various media (e.g., art, film, articles, and literary criticism). *Completion of the AP exam is an expectation for all AP courses.*

## World Language Courses Offered at Central Academy

The following World Language courses are offered at Central Academy and open to all students. Heritage speakers of the following languages are encouraged to enroll. Please, talk to the course instructor for proper placement.

For complete information about Central Academy programming and courses, please see the dedicated section in this document or visit <http://ca.dmschools.org/>

### COURSE NUMBER AND NAMES

WL 131	Chinese I S1	WL 103	French 1 S1
WL 132	Chinese I S2	WL 104	French 1 S2
WL 231	Chinese II S1	WL 203	French 2 S1
WL 232	Chinese II S2	WL 204	French 2 S2
WL 331	Chinese III S1	WL 303	French III S1
WL 332	Chinese III S2	WL 304	French III S2
WL 531	*AP Chinese IV S1	WL 503	*AP French IV S1
WL 532	*AP Chinese IV S2	WL 504	*AP French IV S2
WL 161	Japanese I S1	WL 151	Italian I S1
WL 162	*Japanese I S2	WL 152	*Italian I S2
WL 261	Japanese II S1	WL 251	Italian II S1
WL 262	*Japanese II S2	WL 252	*Italian II S2
WL 361	Japanese III S1	WL 351	Italian III S1
WL 362	*Japanese III S2	WL 352	*Italian III S2
WL 545	*AP Japanese IV S1	WL 355	Italian IV S1
WL 546	*AP Japanese IV S2	WL 356	*Italian IV S2
WL 141	German I S1	WL 181	Arabic I S1
WL 142	*German I S2	WL 182	Arabic I S2
WL 241	German II S1	WL 281	Arabic II S1
WL 243	*German II S2	WL 282	Arabic II S2
WL 341	German III S1	WL 381	Arabic III S1
WL 343	*German III S2	WL 382	Arabic III S2
WL 345	German IV S1	WL481	Arabic IV S1
WL 346	*German IV S2	WL482	Arabic IV S2

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## Career & Technology Education

Through our career and technical education programs, Des Moines Public Schools equips students with the knowledge and skills necessary for college, career and for life. College and career readiness include three major skill areas; core academic skills, employability skills, and technical, job-specific skills. Students are able to apply these necessary skills to rigorous, authentic situations, allowing them to understand the real-world applications.

In addition, Des Moines is home to the nationally-renowned Career & Technical Institute at Central Campus, providing students with highly-technical, college-level courses. For courses and programming housed at Central Campus, students will need to connect with their school counselor to seek admission through the processes outlined in the Educational Programs section of this document or on the Central Campus website at <http://centralcampus.dmschools.org>. Career & Technical Education courses delivered at home high schools have no admissions requirements beyond the prerequisites listed with the course description.

### Coordinator

Kerry Manus

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## Business / Technology

### Future Ready: Acad Career Plan (CTE101)

Prerequisite: NONE | Offered Fall or Spring | .5 credit

Future Ready will direct students in career and academic planning. Students will be exposed to all types of postsecondary options. Future Ready will meet graduation requirements including Health Literacy, Financial Literacy, Technology Literacy, and Employability Skills. Future Ready will help prepare students for life after HS...whether college, vocational, or directly into the workforce. Topics include: health literacy, financial literacy, technology literacy, and employability skills.

### Intro to Business (BUS103)

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Introduction to Business offers students the opportunity to examine a variety of careers in the field of business. The course will include some activities designed to help students assess their interests, aptitudes, and abilities and match them with the requirements of various occupations. Activities such as resume writing, interviewing, problem solving, and working with groups will be included in order to help students develop skills to obtain and keep a job. Topics include: economics, business organization, and career planning and development

### General Business (BUS105)

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

General Business is designed to enhance students' understandings of the role businesses play in our present-day economic system. Topics include: banking, careers, insurance, personal investment, consumerism, credit and marketing. Topics include: financial planning and services, consumerism, investing, insurance, and marketing.

## **Beginning Computer Apps (BUS111)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Beginning Computer Applications is designed specifically for students new to computer applications and/or new to the English language. Students will be introduced to Microsoft Office by producing flyers, charts, graphs, and presentations. Students will complete projects in each topic. This course will help students to develop skills needed for both professional, educational, and personal use. Topics include: word processing, presentation, spreadsheet functions, and database

## **PLTW: Computer Science Essentials (TEC161/TEC162)**

Prerequisite: NONE | .5 credit

Designed to be the first computer science course for students who have never programmed before, Introduction to Computer Science is an optional starting point for the PLTW Computer Science Program. Students work in teams to create apps for mobile devices using MIT App Inventor. They explore the impact of computing in society and build skills in digital citizenship and cybersecurity. Beyond learning the fundamentals of programming, students build computational-thinking skills by applying computer science to collaboration tools, modeling and simulation, and data analysis. In addition, students transfer the understanding of programming gained in App Inventor to text-based programming in Python and apply their knowledge to create algorithms for games of chance and strategy.

## **Intro to Robotics (EGR218) @ Central Campus**

Grades: 9-10-11-12 | One semester

Intro to Robotics is a course that introduces eager students to the world of robotics. Students will work with multiple robotic platforms and learn the C++ programming language. In addition to programming, students will assemble multiple circuits to enable their robot to navigate their world through the use of touch sensors, infrared light sensors, and ultrasound sensors. Although not a prerequisite, this class will greatly prepare the student for the Digital Electronics & Robotics class.

## **Future Set: Acad Career Plan (CTE301)**

Prerequisite: NONE | .5 credit

Recommended for juniors and seniors. This course helps you prepare a plan for moving out on your own and determining next steps after high school. Future Set is a student driven course that is designed to answer all of your burning questions about life after high school! This course will cover post-secondary education/training, career readiness, housing decisions and personal financial decision making to make you successful as you navigate the world of adulthood. Topics include: college readiness, housing decisions, personal finance, careers

## **Accounting (BUS301)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

An understanding of the purpose of the accounting function will be developed during Accounting 1. This course will also assist students in the development of a vocabulary and in the acquisition of the skills and general information necessary to perform the accounting function. If you would like to earn DMACC concurrent college credit, enroll in BUS533. Topics include: accounting basics, transaction analysis, special journals, banking procedures, payroll, accounting cycle for business



### **Marketing / Principles (BUS311)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

This course will provide a broad overview of the marketing process and the role that marketing plays in our lives. Various marketing functions such as research, transportation, warehousing, advertising, promotion, pricing and selling will be studied. There will be a heavy emphasis on occupational opportunities and requirements in each area. Topics include: marketing foundations, consumer marketing, marketing mix, and marketing plan

### **Marketing / Retail (BUS312)**

PREREQUISITE: NONE | Offered: Every other year | .5 credit

This course is designed to prepare students for employment or future education in the area of retail marketing. Specific topics studied include site selection, store layout, display, promotion, advertising, pricing, discounting, warehousing, ordering, special sales, selling, and control of merchandise and receipts. Careers in retailing will also be investigated thoroughly. Personal and workplace human relation skills will be studied.

### **Marketing / Sales (BUS313)**

PREREQUISITE: NONE | Offered: Every other year | .5 credit

The emphasis of this course will be on selling techniques and human relations skills needed by salespeople. All aspects of the selling process, from preparation to closing and follow-up, will be examined and practiced. Selling as a career will be investigated, and job-seeking skills will be developed. To earn college credit please enroll in BUS529.

### **Marketing / Entpr (BUS314)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

The steps necessary when starting and managing a business will be covered in this course. The relationship of information-gathering and decision-making in business organization and management is emphasized. Personal traits and characteristics of entrepreneurs and managers will be investigated. The nature of risk and the role it and management play in our economy will be studied. Management styles and philosophies will be discussed through the use of guest entrepreneurs. To earn college credit please enroll in BUS530. Topics include: entrepreneurship, management, marketing, business plan

### **Business Law (BUS321)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

This course will help students understand basic legal principles relevant to individual rights and professional life. We will be learning through case studies, role-playing, online simulations and other interactive activities. Emphasis will be placed on helping students recognize those situations that occur in life that require assistance from legal professionals. Topics include: contract law, criminal/civil law, family law, and employment law.

### **Computer Applications (BUS333)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Computer Applications includes modern information processing techniques with a heavy emphasis on the use of electronic databases and spreadsheets. The course also stresses the importance of human relations and communication skills necessary for job success, the development of marketable skills using the most current procedures and technologies, and application of time management and decision-making skills. If you would like to earn DMACC

concurrent college credit, enroll in BUS531. Topics include: word processing, spreadsheets, database, and electronic presentation

### **Desktop Publishing (BUS335)**

PREREQUISITE: BUS111 or BUS333 or BUS531 | Offered: Fall or Spring | .5 credit

This course stresses the in-house preparation of documents, brochures, leaflets, and newspapers. Current procedures and technologies will be used while stressing the importance of communication skills. Individual and group projects will be completed for inclusion in their personal employment portfolios. If you would like to earn DMACC concurrent college credit, enroll in BUS527. Topics include: document planning and design, file conversion and organization, type, and image enhancement.

### **PowerPoint & Multimedia (BUS337)**

PREREQUISITE: BUS111 or BUS333 or BUS531 | Offered: Fall or Spring | .5 credit

The use of PowerPoint presentation software and the Internet are used during this course. Students will learn how to create electronic presentations using a variety of software, basic web pages, computer animation, and effectively search for information using the Internet. Students will also use computer peripherals such as the scanner, digital camera, and computer projection devices. If you would like to earn DMACC concurrent college credit, enroll in BUS525. Topics include: creating slides, formatting slides, text content, visual content, and presentation.

### **Intro to Website (BUS339)**

PREREQUISITE: None | Offered: Fall or Spring | .5 credit

This course introduces the student to basic concepts, languages and tools used in the development of an Ecommerce website. Students will identify effective design concepts and characteristics of successful websites. During the course students will be introduced to HTML and DHTML concepts and technologies including HTML, XHTML, CSS, JavaScript and the Document Object Model. Students will use current tools and techniques to design and create commercially oriented websites. This course offers DMACC concurrent enrollment credit. Topics include: basic HTML coding, formatting using CSS, images and standards, and project development.

### **\*College Intro to Website (BUS521)**

PREREQUISITE: None | Offered: Fall or Spring | .5 credit

This course introduces the student to basic concepts, languages and tools used in the development of an Ecommerce website. Students will identify effective design concepts and characteristics of successful websites. During the course students will be introduced to HTML and DHTML concepts and technologies including HTML, XHTML, CSS, JavaScript and the Document Object Model. Students will use current tools and techniques to design and create commercially oriented websites. If you would like to earn DMACC concurrent college credit, enroll in BUS521. Topics include: basic HTML coding, formatting using CSS, images and standards, and project development.

### **\*College Pers Finance Mgmt (BUS523)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Students will study the management of personal, family and business finances, including budgeting, consumer buying, personal credit, savings and investing, home ownership, insurance, and retirement. This course will help prepare all students for their financial challenges now and in the future. Topics include: savings and budgeting, credit and debt, financial planning and insurance, and income taxes and giving. This course offers DMACC concurrent enrollment credit.

### **\*College PowerPt & Multimedia (BUS525)**

PREREQUISITE: BUS111 or BUS333 or BUS531 | Offered: Fall or Spring | .5 credit

The use of PowerPoint presentation software and the Internet are used during this course. Students will learn how to create electronic presentations using a variety of software, basic web pages, computer animation, and effectively search for information using the Internet. Students will also use computer peripherals such as the scanner, digital camera, and computer projection devices. Topics include: creating slides, formatting slides, text content, visual content, and presentation. This course offers DMACC concurrent enrollment credit.

### **\*College Desktop Publishing (BUS527)**

PREREQUISITE: BUS111 or BUS333 or BUS531 | Offered: Fall or Spring | .5 credit

This course stresses the in-house preparation of documents, brochures, leaflets, and newspapers. Current procedures and technologies will be used while stressing the importance of communication skills. Individual and group projects will be completed for inclusion in their personal employment portfolios. Topics include: document planning and design, file conversion and organization, type, and image enhancement. This course offers DMACC concurrent enrollment credit.

### **\*College Marketing / Sales (BUS529)**

PREREQUISITE: NONE | Offered: Every other year | .5 credit

The emphasis of this course will be on selling techniques and human relations skills needed by salespeople. All aspects of the selling process, from preparation to closing and follow-up, will be examined and practiced. Selling as a career will be investigated, and job-seeking skills will be developed. This course offers DMACC concurrent enrollment credit.

### **\*College Marketing / Entpr (BUS530)**

PREREQUISITE: NONE | Offered: Every other year | .5 credit

The steps necessary when starting and managing a business will be covered in this course. The relationship of information-gathering and decision-making in business organization and management is emphasized. Personal traits and characteristics of entrepreneurs and managers will be investigated. The nature of risk and the role it and management play in our economy will be studied. Management styles and philosophies will be discussed through the use of guest entrepreneurs. Topics include: entrepreneurship, management, marketing, business plan. This course offers DMACC concurrent enrollment credit.

### **\*College Computer Applications (BUS531)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Computer Applications 2 includes modern information processing techniques with a heavy emphasis on the use of electronic databases and spreadsheets. The course also stresses the importance of human relations and communication skills necessary for job success, the development of marketable skills using the most current procedures and technologies, and application of time management and decision-making skills. Topics include: word processing, spreadsheets, database, and electronic presentation. This course offers DMACC concurrent enrollment credit.

### **\*College Accounting (BUS533)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

An understanding of the purpose of the accounting function will be developed during Accounting 1. This course will also assist students in the development of a vocabulary and in the acquisition of the skills and general information necessary to

perform the accounting function. Topics include: accounting basics, transaction analysis, special journals, banking procedures, payroll, accounting cycle for business This course offers DMACC concurrent enrollment credit after BUS534 is completed.

## **Family and Consumer Sciences**

### **Future Ready: Academic & Career Planning (CTE101)**

Prerequisite: NONE | Offered Fall or Spring | .5 credit

Future Ready will direct students in career and academic planning. Students will be exposed to all types of postsecondary options. Future Ready will meet graduation requirements including Health Literacy, Financial Literacy, Technology Literacy, and Employability Skills. Future Ready will help prepare students for life after high school, wherever their path may lead!

### **Personal Health & Development (FCS101)**

Personal Development & Health is a course designed to provide students with information about how to develop a healthy lifestyle. The topics included are self-concept, nutrition, exercise, substance usage and sexuality. Students will apply the decision-making process to health choices and examine the interrelation between physical, emotional, mental and social health.

### **Child Development I (FCS103)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Previously named: Child Development This course will include sexual health, conception, pregnancy and birth. Students will examine the decisions and responsibilities that go into planning a pregnancy. Students will develop skills in the care and guidance of children from birth through toddler. Students will participate in many activities designed to simulate the physical, social, emotional, and intellectual development of children.

### **Nutrition & Food Prep 1 (FCS107)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

In Nutrition and Food Prep I, students will apply nutrition principles to personal eating habits; develop skills in the selection, care and preparation of a variety of food. Labs are designed to help students learn safe food preparation techniques.

### **Nutrition & Food Prep 2 (FCS109)**

PREREQUISITE: FCS107 | Offered: Fall or Spring | .5 credit

Nutrition and Food Preparation 2 is a nutrition and food preparation course that challenges students to expand their understanding of the food industry while advancing their skills and knowledge with advanced food preparation techniques. Students will explore the basic operations of a restaurant and other food services including professional menus and dietary needs of customers. Throughout the course students will demonstrate advanced food preparation techniques while exploring foods, customs, and recipes.

### **Textile Construction (Sewing) 1 (FCS113)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Sewing Technology I teaches sewing basics to construct clothing and textile products using appropriate equipment and techniques. Students may choose to purchase materials, patterns and notions throughout the semester for individual projects.

### **Health: Relationships (FCS201)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

The Relationships course prepares students for a mature adult role as a single person or a marriage partner through the study of human development and relationships. The coordination of personal, marriage, family and career goals will be explored as well as resources for adjusting to change and crisis. Students will analyze skills needed to establish positive relationships with others.

### **Child Development 2 (FCS203)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Students will develop skills in the care and guidance of children from preschool to adolescent. Students will examine various type of parenting styles and determine which styles are most effective. Students will participate in many activities designed to simulate the physical, social, emotional, and intellectual development of preschool children and teens.

### **Textile Construction (Sewing) 2 (FCS205)**

PREREQUISITE: FCS113 | Offered: Fall or Spring | .5 credit

In Sewing Technology II, students will experiment with more advanced sewing techniques. Students will select individual projects based upon their skill level and interest. Students may choose to purchase and bring materials, patterns and notions throughout the semester for individual projects.

### **Housing & Design Industry (FCS207)**

Pre-Requisites: None

In this course students will analyze career pathways and opportunities for employment and entrepreneurial endeavors in the housing industry. Students will explore interior design, exterior design, housing decisions, and housing trends

### **Fashion Runway (FCS213)**

PREREQUISITE: NONE | Offered: Fall | .5 credit

Students in Fashion Runway will explore fashion careers by doing projects similar to those done in the fashion industry. Careers included are fashion designer, marketing, and entrepreneurship. Planning a fashion show or presenting individual designs are also part of this course.

### **Future Set: Academic & Career Planning (CTE301)**

Prerequisite: NONE | .5 credit

Starting to feel nervous about graduating and moving out on your own? Do you feel ready for that next step after high school? Are you worried about handling life on your own? Future Set is a student driven curriculum course that is designed to answer all of your burning questions about life after high school! This course will cover post-secondary

education/training, career readiness, housing decisions and personal financial decision making to make you successful as you navigate the world of adulthood.

### **Textile Construction (Sewing) 3 (FCS305)**

PREREQUISITE: FCS205 | Offered: Fall or Spring | .5 credit

In Advanced Sewing Technology III, students will continue to advance their skills in the selection, purchase, construction and alternation of clothing and textiles. Students may choose to purchase and bring materials, patterns and notions throughout the semester for individual projects.

### **Textile Construction (Sewing) 4 (FCS405)**

PREREQUISITE: FCS305 | Offered: Fall or Spring | .5 credit

In Advanced Sewing Technology IV, students will continue to advance their skills in the selection, purchase, construction and alternation of clothing and textiles. Students may choose to purchase and bring materials, patterns and notions throughout the semester for individual projects.

### **Textile Construction (Sewing) 5 (FCS406)**

PREREQUISITE: FCS405 | Offered: Fall or Spring | .5 credit

In Advanced Sewing Technology V, students will continue to advance their skills in the selection, purchase, construction and alternation of clothing and textiles. Students may choose to purchase and bring materials, patterns and notions throughout the semester for individual projects.

### **Textile Construction (Sewing) 6 (FCS407)**

PREREQUISITE: FCS406 | Offered: Fall or Spring | .5 credit

In Advanced Sewing Technology VI, students will continue to advance their skills in the selection, purchase, construction and alternation of clothing and textiles. Students may choose to purchase and bring materials, patterns and notions throughout the semester for individual projects.

### **Early Childhood Careers @ Central Campus (ECC325)**

Prerequisites: Successful background check, Child Development courses recommended. | .5 credit per block per semester

The Early Childhood Careers program prepares students to work with children from infancy to eight years of age. Students combine classroom instruction with practicum experiences in child care centers, Head Start programs, and elementary schools. Successful completion of the second year of the program enables students to earn a national credential, Child Development Associate.

Students complete the training required by the Iowa Department of Human Services for persons working in childcare centers. Upon completing this program, they can find employment in childcare centers or may choose to further their studies in elementary or early childhood education.

### **Culinary Arts & Restaurant Management @ Central Campus (CUL365)**

Prerequisites: food course recommended.

Culinary Arts students explore opportunities for employment in the hospitality and food service industry through the operation of the student-run Central Campus Café. Students receive their ProStart certification from the National

Restaurant Association and compete in local and national competitions. Students plan and prepare food, use institutional equipment, set up the dining room, and serve customers on designated Central Campus Café days. Students also have the chance to visit area restaurants and other hospitality businesses.

### **Fashion Design & Merchandising @ Central Campus (FDM327)**

Prerequisites: Sewing Technology or Fashion recommended.

Within the creative discipline of Fashion Design, students discover fascinating fundamentals of the fashion industry and learn about all of the exciting behind-the-scene details that make every show and every display perfect. Study famous and up-and-coming designers, explore historical and current trends, and learn the importance of alterations and proper fit. In this program students building upon their sewing skills, create fashion drawings, and analyze the designs of others. The program enhances entrepreneurial skills and techniques to successfully market their designs in the fashion industry. The culminating event for this program is a spring fashion show that is created and produced by the fashion students and other cooperating Central Campus programs.

### **Career Opportunities in Health @ Central Campus (COH311)**

Prerequisite: Current immunizations as required.

Career Opportunities in Health introduces students to a variety of health careers through a curriculum that integrates academic and workplace skills. Rotations at UnityPoint Health-Des Moines hospital and clinic locations, as well as other private clinics throughout the metro, provide observation experiences that allow students to explore careers of their interest, learn about medicine and work towards an understanding of the big picture of healthcare while developing personal skills.

### **Nurse Aide (Basic & Advanced) @ Central Campus (CNA391 / CNA393)**

Criminal/abuse background check; Immunization form as required by clinical site; influenza vaccine – October through April. Must pass with a C or higher to continue. See DMACC website for more information.

These programs give students the opportunity to learn the necessary skills and training to work in various health care settings. They experience classroom and laboratory instruction along with supervised clinical experience in local long-term care (nursing home) and hospital settings. The advanced program also provides students the opportunity to obtain health care provider BLS certification.

Nurse Aide certification is required for admission to most Iowa nursing schools. Either of these courses prepares students for the nurse aide certification. This course includes classroom and laboratory instruction at Central Campus and supervised clinical experience at various health care settings. In addition to the content of the 75-hour Nurse Aide class, the 150-hour Advanced Nurse Aide class covers skills and knowledge utilized by nurse aides in skilled-care units and in hospital areas. Content in the 150-hour course is presented at a faster pace than in the 75-hour Nurse Aide class.

## **Industrial Technology**

### **Future Ready: Academic & Career Planning (CTE101)**

Prerequisite: NONE | Offered Fall or Spring | .5 credit

Future Ready will direct students in career and academic planning. Students will be exposed to all types of postsecondary options. Future Ready will meet graduation requirements including Health Literacy, Financial Literacy, Technology Literacy, and Employability Skills. Future Ready will help prepare students for life after high school, wherever their path may lead!

## **PLTW: Intro to Computer Science (TEC161)**

Prerequisite: NONE | .5 credit

Designed to be the first computer science course for students who have never programmed before, Introduction to Computer Science is an optional starting point for the PLTW Computer Science Program. Students work in teams to create apps for mobile devices using MIT App Inventor. They explore the impact of computing in society and build skills in digital citizenship and cybersecurity. Beyond learning the fundamentals of programming, students build computational-thinking skills by applying computer science to collaboration tools, modeling and simulation, and data analysis. In addition, students transfer the understanding of programming gained in App Inventor to text-based programming in Python and apply their knowledge to create algorithms for games of chance and strategy.

## **Intro to Computer Aided Design (CAD) for Engineering/ Manufacturing (TEC203)**

*Formerly: 3D Mechanical Dsgn & Dvlpmnt*

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Students will be introduced to the universal language of the mechanical design and development industry. Students will apply the basic skills such as measurement and problem solving in the areas of free hand sketching, geometric construction, and create technical dimensioned drawings. Students will use a computer 3D modeling software and 3D printer to create their designs. This course is a building block to students who may be enrolling in other Tech Ed courses such as the Project Lead the Way courses or programs at Central Campus.

## **Intro to Computer Aided Design (CAD) for Architecture/ Construction (TEC205)**

*Formerly: 3D Architectural Dsgn & Dvlpmnt*

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Students will be introduced to the universal language of the Construction Industry. Students will obtain knowledge and skills relating to the various fields of engineering; such as, construction, mechanical, industrial, structural, and civil, as well as, the fields of residential and commercial architecture. Students will use a 3D modeling program such as Chief Architect or Revit to produce their architectural designs. Students will find this course helpful if they choose to continue in the CADD program at Central Campus and/or if they choose to continue their education in the fields of Architecture, Construction or Engineering.

## **Metalworking Fundamentals 1 (TEC207)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

The Career & Technical student will be introduced to basic processes within all manufacturing industries. The students, through classroom, lab and problem solving activities, will develop skills and knowledge in the areas of bench metal (sheet metal, small hand and power tools), machine tools (lathes, grinders, mills, drill presses), and hot metals (gas and arc welding foundry, forging). As the students explore the areas of metalworking, emphasis will be placed on the career opportunities and safety. Students will build upon their skills from academic areas as they use and develop skills relating to measurement, blueprint reading and layout.

## **Metalworking Technology 2 (TEC209)**

PREREQUISITE: TEC207 | Offered: Fall or Spring | .5 credit

This course will build upon the metalworking skills, knowledge and problem solving abilities acquired in Metalworking Fundamentals 1. Through hands-on and problem solving activities the students will develop an understanding of the basic elements of metalworking such as design, planning, producing, and distribution of a manufactured product. Students will



be introduced to the use of manufacturing equipment and materials commonly found in industry today including test equipment, robots, lasers, CNC, CAM, and other various computer applications.

### **Introduction to Wood Construction 1 (TEC211)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

The Career & Technical student will be introduced to Wood Construction as a career and/or avocation. Through a variety of hands-on, problem solving projects, students will be introduced to the safe use, care and maintenance of various hand tools, power tools, and stationary equipment. Projects will be produced using a variety of processing techniques and technologies used in the construction industry. Students will build upon their skills from other academic areas as they interpret technical information from working drawings, complete board feet calculations and study wood science.

### **Introduction to Wood Construction 2 (TEC213)**

PREREQUISITE: TEC211 | Offered: Fall or Spring | .5 credit

This course will build upon the wood construction skills, knowledge and problem solving abilities acquired in Intro to Wood Construction 1. The course is designed to provide students with an understanding of technology and its impact on the construction industry. Students will continue to work with the CNC equipment in the production of their projects. Students will have the opportunity to explore the impact of technology on the construction industry. Students will continue to build upon their skills from other academic areas as they interpret technical information from a variety of technical sources, calculate materials needed, materials strength and building design.

### **Power Fundamentals (TEC215) @ Lincoln HS Only**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

This class is for all students. Attention juniors and seniors looking for a course that offers employment opportunity upon graduation! We Partner with Toyota of Des Moines to bring students real world work experience. Students will gain knowledge of vehicle tool safety, lubrication systems, brake systems, tire and suspension systems, general electrical systems, as well as how to conduct 60-point vehicle inspections. We will also cover vehicle consumer skills and walk through the steps of researching, inspecting, and getting the best deal on your first car purchase! This course balances academic instruction time with hands on learning experiences.

### **Graphic Design Fundamentals 1 (TEC223)**

PREREQUISITE: NONE | Offered: Fall or Spring | .5 credit

Graphic Design Fundamentals is the exchange of information in visual form. Students will use Adobe Illustrator, InDesign and Photoshop to generate designs. The students will use high tech equipment such as laser printers, digital printing presses, wide format printers/cutters and laser engravers and sublimation printers to output their designs. This is a project-based class. Some reading and written work is required. Students will learn the safe use of the basic tools and equipment used in this course. Projects could include a button, a notepad and calendar printed on a digital printing press, a coaster or key chain using the sublimation printer and a laser engraved key chain. This course is beneficial to students who will be enrolling in other advanced technology courses in high school or advanced technology courses at Central Campus.

## **Graphic Design Technology 2 (TEC225)**

PREREQUISITE: TEC223 | Offered: Fall or Spring | .5 credit

Graphic Design Technology will be an extension of the Graphic Design Fundamentals class. Students will use Adobe Illustrator, InDesign and Photoshop to generate designs. Projects could include a magazine cover, laser engraved plaque, a large banner, heat transfer T-shirt, business cards and letter head, and a tri-fold brochure. This course is beneficial to students who will be enrolling in other advanced technology courses in high school or advanced technology courses at Central Campus.

## **Intro to Automotive (CAR228) @ Central Campus**

PREREQUISITE: NONE | Offered: Fall or Spring at Central Campus | .5 credit

Students learn the physical and mechanical principles related to the transportation field including ownership, maintenance, and related career opportunities in the automotive industry. They increase their knowledge regarding the operation and service of internal combustion engine systems and the various parts and accessories. Students learn shop safety related to the use of hand and power tools, run tests on equipment, and gain experience with industry vocabulary. Students are introduced to the following programs at Central Campus: Auto Technology, Auto Collision and Welding.

## **Construction Intro to Industry (TEC231) @ Lincoln HS Only**

Prerequisite: NONE | Offered: Fall or Spring | .5 credit

This course is for all students. Attention juniors and seniors who are want a class with job offer potential upon completion of our program! This course uses Ace accredited; LIUNA Training Education Curriculum for classroom instruction. Students will be provided boots, bibs, gloves and hard hats for outdoor simulations. This course is designed for students interested in commercial construction duties specific to the Laborers Union. Students will learn about Union history as well as participate in form setting, scaffold building, cement pouring, screeding, and gain common tool knowledge specific to cement work and forming. Students will also have the opportunity to earn an OSHA 10 card, this safety certification is accepted nationwide in the construction industry and sets our students ahead of the curve regarding training, experience and pay.

## **Future Set: Academic & Career Planning (CTE301)**

Prerequisite: NONE | .5 credit

Starting to feel nervous about graduating and moving out on your own? Do you feel ready for that next step after high school? Are you worried about handling life on your own? Future Set is a student driven curriculum course that is designed to answer all of your burning questions about life after high school! This course will cover post-secondary education/training, career readiness, housing decisions and personal financial decision making to make you successful as you navigate the world of adulthood.

## **Finish Carpentry 3 (TEC301)**

PREREQUISITE: TEC213 | Offered: Fall | .5 credit

This advanced course is available to students to continue to develop machine techniques as they construct various projects including cabinets, tables, and finish carpentry construction applications. Individual projects will be developed by the student and teacher together.

### **Finish Carpentry 4 (TEC302)**

PREREQUISITE: TEC301 | Offered: Spring | .5 credit

This advanced course is available to students to continue to develop machine techniques as they construct various projects including cabinets, tables, and finish carpentry construction applications. Individual projects will be developed by the student and teacher together.

### **Adv Graphic Arts Tech S1 (TEC307)**

PREREQUISITE: TEC225 | Offered: Fall or Spring | .5 credit

The student's knowledge and skill base will continue to grow in this advanced course, as the students will develop their own multi-color projects as designed by both the student and the teacher.

### **Advanced Metals I (TEC309)**

PREREQUISITE: TEC209 | Offered: Fall or Spring | .5 credit

This Advanced course is available to students to continue to develop machine techniques as they construct various projects. The individual projects will be designed by the student and teacher together and will involve some power mechanics and CNC machining.

### **Advanced Metals II (TEC310)**

PREREQUISITE: TEC309 | Offered: Fall or Spring | .5 credit

This Advanced course is available to students to continue to develop machine techniques as they construct various projects. The individual projects will be designed by the student and teacher together and will involve some power mechanics and CNC machining.

### **Construction Pre-Apprentice S1 (TEC331) @ Lincoln HS Only**

Prerequisite: Construction Intro to Industry TEC231 | Offered: Fall | .5 Credit for TEC331

The Construction Pre-Apprenticeship course will focus on the commercial construction process. Students will be working with experienced professionals in the field, as well as representatives of local contractors and local apprenticeships programs. The course will be utilizing the Ace Accredited LIUNA Training Education Fund General Construction II curriculum. Topics include: Employability Skills, Hoisting and Rigging, Cutting and Burning, Concrete, Pipe Laying, Blue Print Reading and Line Grade, Ladders and Scaffolds. Throughout the school year, the students will be involved in building a community project. General Construction II qualifies for three college semester hours in Introduction to Construction Technology. Completion of this course qualifies for direct entry to LIUNA's Construction Craft Laborers' Apprenticeship Program.

### **Construction Pre-Apprentice S2 (TEC332) @ Lincoln HS Only**

Prerequisite: Construction Pre-Apprentice S1: TEC331 | Offered: Spring | .5 credit

The Construction Pre-Apprenticeship course will focus on the commercial construction process. Students will be working with experienced professionals in the field, as well as representatives of local contractors and local apprenticeships programs. The course will be utilizing the Ace Accredited LIUNA Training Education Fund General Construction II curriculum. Topics include: Employability Skills, Hoisting and Rigging, Cutting and Burning, Concrete, Pipe Laying, Blue Print Reading and Line Grade, Ladders and Scaffolds. Throughout the school year, the students will be involved in building a community project. General Construction II qualifies for three college semester hours in Introduction to Construction

Technology. Completion of this course qualifies for direct entry to LIUNA's Construction Craft Laborers' Apprenticeship Program.

### **Electricity and Electronics (TEC361)**

PREREQUISITE: NONE | Offered: Fall | .5 credit

In this course students will learn skills and career opportunities that are valuable in industry as electricians or electrical engineers. Through classroom and lab activities students will gain skills and knowledge in the areas of Digital electronics and residential wiring. Learn to build functioning circuits as well as how to wire outlets and light switches. This course will help you understand how we manipulate and channel this exciting and invisible energy source that is singularly responsible for the advancement of our world and society.

### **\*Introduction to Engineering Design (IED)**

#### **S1 (TEC501), S2 (TEC502)**

*Formerly: \*College Intro Engin. Dsgn S1 & \*College Intro Engin. Dsgn S2*

COREQUISITE: MTH111 (Algebra I) or higher, meets / exceeds proficiency in previous math course or teacher's approval. | Offered: Full year | .5 credit/semester

DMACC Course: EGT 400 (3 credits)

Introduction to Engineering Design (IED) is a high school engineering course in the PLTW Engineering Program. In IED, students explore engineering tools and apply a common approach to the solution of engineering problems, an engineering design process. Utilizing the

activity-project-problem-based (APB) teaching and learning pedagogy, students' progress from completing structured activities to solving open-ended projects and problems that require them to

plan, document, communicate, and develop other professional skills. Through both individual and collaborative team activities, projects, and problems, students apply systems thinking and consider various aspects of engineering design including material selection, human-centered design, manufacturability, assemblability and sustainability. Students develop skills in technical representation and documentation, especially through 3D computer modeling using a Computer Aided Design (CAD) application. As part of the design process, students produce precise 3D-printed engineering prototypes using an additive manufacturing process. Student-developed testing protocols drive decision-making and iterative design

Improvements. To inform design and problem solutions addressed in IED, students apply computational methods to inform design by developing algorithms, performing statistical analyses, and developing mathematical models. Students build competency in professional engineering practices including project management, peer review, and environmental impact analysis as part of a collaborative design team. Ethical issues related to professional practice and product development are also presented.

### **\*Principles of Engineering (POE)**

#### **S1 (TEC503), S2 (TEC504)**

*Formerly: \*College Principles Engin S1 & \*College Principles Engin S2*

Prerequisite: Typical progression is TEC501/502 (Intro to Engineering Design) is taken first: Grade Level or Higher Math Course | Offered: Full year | .5 credit/semester

DMACC Course: EGT 410 (3 credits)

Principles of Engineering (POE) is a foundation course of the high school engineering pathway. This survey course exposes students to some of the major concepts that they will encounter in a postsecondary engineering course of study. Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the

strength of materials and structures, automation, and kinematics. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology. Students can develop skills and understanding of course concepts through activity-, project-, and problem-based (APB) learning. By solving rigorous and relevant design problems using engineering and science concepts within a collaborative learning environment, APB learning challenges students to continually hone their interpersonal skills, creative abilities, and problem-solving skills. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community. It also allows students to develop strategies to enable and direct their own learning.

### **\*PLTW Digital Electronics HS S1 (EGR505) @ Central Campus**

CO-REQUISITE: Grade level Math course | Offered: Fall | .5 credit

This is the third year foundation course in the national pre-engineering program, Project Lead the Way. This course is a study of applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices.

### **\*PLTW Digital Electronics S2 (EGR506/EGR5062) @ Central Campus**

PREREQUISITE: EGR505 CO-REQUISITE: Grade level Math course | Offered: Spring | .5 credit

This is the third year foundation course in the national pre-engineering program, Project Lead the Way. This course is a study of applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices.

### **\*AP Computer Sci Principles S1 (TEC551)**

PREREQUISITES: MTH111/112 Algebra I S1/S2 | Offered: Fall | 0.5 credit

This course introduces students to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting students to understand how computing changes the world. The rigorous course promotes deep learning and computational content, develops computational thinking skills, and engages students in the creative aspects of the field.

### **\*AP Computer Sci Principles S2 (TEC552)**

PREREQUISITE: TEC551 AP Computer Sci Principles S1 | Offered: Spring | 0.5 credit

This course introduces students to the central ideas of computer science, instilling the ideas and practices of computational thinking and inviting students to understand how computing changes the world. The rigorous course promotes deep learning and computational content, develops computational thinking skills, and engages students in the creative aspects of the field.

### **Welding Program @ Central Campus (STA375)**

Prerequisite: None | Offered: Fall, Central Campus | .5 credit per block each semester

Welding provides students with the occupational and technical skills to be safe, competent welders. Students develop skills in different welds such as oxy-acetylene, shield metal arc, mig, and plasma arc cutting. Students learn tig welding and learn to weld a variety of steels and steel alloys. Skills include blueprint reading, design, layout, and fabrication of projects. Students have the opportunity to participate in the Student American Welding Society Organization.

### **Auto Collision Program @ Central Campus (CAR313)**

Prerequisite: Exploring Tech recommended | Offered: Fall | 0.5 Credit per block each semester

Auto Collision Repair provides students with experience through repairs on late model, damaged automobiles. Quality workmanship, shop safety, good work habits, cooperation, dependability, and responsibility are stressed. Students become familiar with and work with the latest hand and power tools and equipment unique to this trade. The course is designed to prepare students to operate at the same level of workmanship that is found in local auto body shops. Refinishing products have been updated to the current state of the art waterborne paints that are found in many of the area dealership collision shops.

### **Auto Technology Program @ Central Campus (CAR317)**

Prerequisite: TEC228 or other TEC course or interest in Career | Offered: Fall and Spring

In the Automotive Technology program students complete competencies in Automotive Engines, Brakes, Steering and Suspension, Electricity/Electronics, HVAC, Engine Performance and both Automatic and Manual Transmissions. Students are engaged academically in learning basic automotive knowledge and skills. Students are then exposed to real world activities in the automotive lab learning, how to safely diagnose, disassemble, assemble and repair all aspects of the modern automobile.

### **Marines JROTC Marines S1/S2 (MIS169/MIS170) @ Central Campus**

The primary purpose of the MCJROTC Program is Leadership Education. It prepares high school students for responsible leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens. In order to be a good leader, one must first learn to be a good follower. As a cadet gains experience and knowledge, he or she will be given active, hands-on leadership responsibilities within the JROTC Program. The Marine Corps JROTC Leadership Education Program emphasizes the development of self-discipline, leadership, honor, integrity, and the value of community service. Citizenship training is emphasized throughout the program and reinforced by using current events and activities occurring in the Polk County area, the state of Iowa, our nation and the entire world. In addition, students are acquainted with basic military skills and Marine Corps traditions. Satisfactory completion of the program can lead to preferential consideration for a service academy appointment, advanced placement credit in the Senior ROTC program or advanced rank in the Armed Forces.

### **Broadcasting & Film @ Central Campus (MDA363)**

Prerequisites: None | .5 credit per block each semester

The Broadcasting & Film Program at Central Campus is an introduction to all things related to the creative and communication aspects of the radio/television/film industry. Emphasis is placed on analysis of career paths and the production techniques associated with gainful employment. Considerable time is spent working on the craft of planning, scripting, announcing, equipment operation, creative thinking and time management skills. Enrollment may include studio assignments in the FCC-licensed radio station, KDPS 88.1 FM or submission of film and television projects to DMPS-TV. Projects can also be submitted to colleges and universities in pursuit of scholarships in the area of Broadcasting & Film. College credit is coordinated with Iowa Central Community College in Fort Dodge, Iowa.

### **Commercial Photography @ Central Campus (ART319)**

Prerequisites: Recommended Art 1, Art 2, other art classes, Photography, Multimedia or other project-based class | .5 credit

In the Commercial Photography program, students obtain skills in film processing, darkroom procedures, studio shooting techniques, camera techniques, photographic history, presentation skills and digital imaging. Portfolio development

enables students to apply for employment, scholarships and college admission. Students will publicly display work at the Central Campus Student Art Exhibit and other exhibitions.

### **Graphic Communications @ Central Campus (ART361)**

**Prerequisites:** Two courses in any of the following areas highly recommended: Art, Graphic Design, Computer Applications, Journalism, and Technology Education.

Graphic Communication provides education, training and real world graphic design and print production experiences. Through close relationships with industry experts, the program's curriculum and industry experiences reflect the technological expectations of the graphic communication industry. First-year students complete a wide variety of hands-on projects in design, pre-press, print production, and bindery. Participation in frequent industry tours allows students to increase the range and depth of their understanding.

### **Criminal Justice Program @ Central Campus (CJT461)**

**Offered:** Fall | .5 Fine/Applied Arts credit

The Criminal Justice program gives students the opportunity to explore careers in police work, criminal law, crime scene investigation, and other related vocations. Faculty works closely with the Des Moines Police Department and Polk County Sheriff's Office to provide authentic experience in a vibrant law enforcement community. Students participate in mock crime scene scenarios and job shadowing professionals.

### **Sports Officiating & Leadership @ Central Campus (PHY327 Fall / PHY328 Spring)**

**Grades:** 11-12

In Sports Officiating and Leadership, students become IHSAA and IHSGAU certified officials in a variety of sports. They will have film study through industry-leading Hudl software to understand theories and movements of the sport to better understand rules and positioning. Along the way, they will have live on site training in cooperation with the other programs located in our facility performing "intermural" sports to gain experience and practice in live game situations. After students earn certification with the state of Iowa they will be placed in jobs within the DMPS District to start earning money as a fully certified official. Throughout class students will prepare business cards and develop an officiating philosophy for work after class ends. This is a great opportunity, for young adults, to gain confidence and job experience in a field they can do for the rest of their life.

### **Urban Leadership Academy @ Central Campus**

**Prerequisites:** None

Urban Leadership is committed to empowering students on their journey to becoming community-based activists and entrepreneurs. Based in the principles of hip-hop culture, students engage in an in-depth study of social movements shaping history and urban settings across the United States. Through the use of various mediums such as the written and spoken word, performance-based literacy, urban arts, and youth + community summits, and internships, students are given a platform to become the leaders of today.

The objective is to provide students with in-depth knowledge regarding social movements shaping US History, equipping them with the leadership skills necessary to becoming change agents in their local communities. Students receive elective English credit.

### [Dream to Teach I \(TAC251\) S1](#)

### [Dream to Teach I \(TAC252\) S2](#)

This class is an introduction to the field of education/teaching and is offered to ninth through twelfth grade students. The course introduces students to a variety of careers in education through a curriculum that integrates academic and workplace skills. Students will be exposed to guest speakers from different backgrounds and educational roles. Students will also learn about the foundations of education, educational theories/theorists, and pedagogy through a social justice lens. The class is worth one elective credit with the possibility of earning an English elective credit.

### [Dream to Teach II \(TAC351\) S1](#)

### [Dream to Teach II \(TAC352\) S2](#)

This class is offered to eleventh and twelfth grade students who have either taken Dream to Teach Year One or who have participated in their school's Dream to Teach club. The course will also examine education from a historical, philosophical, and sociological perspective. Challenges and issues in education today will be discussed in the context of school organization, politics, funding, and curriculum through a social justice lens. First semester will help prepare students for their upcoming student teaching internships by reviewing topics such as professionalism, mandatory reporting, cultural responsiveness, etc. Second semester students will acquire extensive field experience through student teaching internships, observation, and field trips. Students will work to develop leadership skills toward becoming agents of change in their schools and communities. This class provides a strong foundation and transition to teacher education programs post high school. The class is worth two elective credits, five college credits, and the possibility of earning an English elective credit.

## **Computer Aided Design (CAD) Technology @ Central Campus (EGR327/EGR328)**

Recommended prior courses: Introduction to Computer Aided Design (Engineering/Manufacturing or Architecture/Construction) | .5 credit per block each semester | Grades: 10-11-12 | Full year

DMACC Courses: CAD 119 (3 credits), CAD 125 (3 credits), CAD 126 (3 credits), WBL 100 (1 credit)

The Computer Aided Design program is a one-year program that provides students with the occupational and technical skills for job entry in manufacturing and technical skills for job entry in manufacturing and construction, or college entrance in the fields of engineering, design, and architecture. The engineering and mechanical curriculum of the course emphasizes principles and practices, engineering standards and the uses of references and technical information. Industrial production practices such as rapid prototyping and CNC machining are introduced. The architectural curriculum of this course emphasizes design and technical information and the production of construction drawings in the CAD environment. Up to date design and construction practices are researched and utilized. Participation in a student organization is encouraged. Industry certifications are available.

## **Civil Engineering & Architecture (CEA) @ Central Campus (EGR507)**

Recommended prior courses: Intro to Engineering Design, Principles of Engineering, or Introduction to Computer Aided Design (Engineering/Manufacturing or Architecture/Construction). Grades: 11-12 | Full year

DMACC Course: EGT 460 (3 credits)

Civil Engineering and Architecture is a one-year course utilizing Project Lead the Way curriculum course where students are introduced to architecture and civil/construction engineering components involved in the construction of residential, commercial, and civic projects. Studies include project planning, site considerations and planning, building design, structural design and analysis, cost efficiency and analysis, services and utilities, and land use. 3D architectural modeling software will be used to develop designs. CEA will help students prepare for a career in architecture, engineering, and construction. Industry leading software packages learned and used include Autodesk product: Revit. Software certified user certifications are available.



## **Computer Integrated Manufacturing (CIM) @ Central Campus (EGR521/522)**

Recommended prior courses: Intro to Engineering Design, Principles of Engineering, or Introduction to Computer Aided Design (Engineering/Manufacturing or Architecture/Construction). Grades: 11-12 | Full year

DMACC Course: EGT 450 (3 credits)

Computer Integrated Manufacturing (CIM) is one of the specialization courses in the PLTW Engineering program. The course deepens the skills and knowledge of an engineering student within the context of efficiently creating the products all around us. Students build upon their Computer Aided Design (CAD) experience through the use of Computer Aided Manufacturing (CAM) software. CAM transforms a digital design into a program that a Computer Numerical Controlled (CNC) mill uses to transform a block of raw material into a product designed by a student. Students learn and apply concepts related to integrating robotic systems such as Automated Guided Vehicles (AGV) and robotic arms into manufacturing systems. Industry leading software packages learned and used include Autodesk products: Inventor CAM, Fusion. Software certified user certifications are available.

## **Engineering, Robotics & Electronics @ Central Campus (EGR486)**

Prerequisites: None

The one-year Engineering, Robotics and Electronics program focuses on the application of electronics and physics. Students work with the operation of electronic devices and integrated circuits. Students apply this knowledge to project-driven course work, including the operation and programming of robotic systems. This course is designed for students with an interest in science, engineering, or electronics. This program includes Digital Electronics course work. Digital Electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras and high-definition televisions. The major focus of the course is the process of combinational and sequential logic design, teamwork, communication methods, engineering standards and technical documentation.

## **Aquarium Science @ Central Campus (AQS465)**

Prerequisite: None

The focus of Aquarium Science is conservation through Aquaculture. What that means is that we will teach students the skills to breed marine fish, corals, and jellyfish in an aquarium. The oceans of the world are threatened, and many species of animals are finding it difficult to reproduce and survive on their own and need a human hand to help. Aquarium Science students can be a huge part of the solution to this problem. Students will learn by actively running the public aquarium at Central Campus. There are no simulations in this class.... only real-life experiences working with real live aquatic animals. There are over 150 aquariums in the student run lab totaling more than 14,000 gallons of saltwater exhibits. The lab is the size of a small public aquarium. Past students have grown thousands of corals on the coral farm, reproduced jellyfish and donated them for public display at major public aquariums in the United States, and they have grown thousands of clownfish from eggs for the pet trade. Aquarium Science students are currently building the largest marine fish hatchery in a United States high school with the hopes of breeding fish that no one else in the world has ever bred in captivity before. Aquarium Science is a great stand-alone course for students interested in setting up their own aquarium, doing research in Marine Biology or working in any aquatic field. Aquarium Science will help prepare students for careers working at a public aquarium, pet store, aquaculture facility/fish farm, and working in any conservation field in the ocean. This is a great stand only course and it is also an excellent complimentary course to Marine Biology for students interested in careers in Marine Sciences. Students in Aquarium Science are eligible to participate in the optional marine field ecology trip in the spring semester offered by Dr. Barord to both the Marine Biology and Aquarium Science students. (Aquarium Science is an elective course and does not satisfy high school science credit requirements.)

### **Horticulture & Animal Science @ Central Campus (SCI239/241)**

At our Agriculture Science Academy at 201 County Line Road on the southside of Des Moines (south of Blank Park Zoo), students learn about animals and plants through hands-on activities and exciting projects. The nation's largest secondary school student-run greenhouse and livestock facility allow them to gain practical experience in fields including agricultural business, environmental science, horticulture, landscaping, and veterinary careers. Students are enrolled as members of FFA, the national youth leadership organization, which enhances communication and leadership skills while attending the academy

### **Vet Careers @ Central Campus (SCI443)**

Prerequisites: Sci239/241 Recommended

Veterinary Science and Careers covers the skills necessary to being successful in an animal science career. All animal science careers are explored. The class includes the origins of common medical terms used in the veterinary field. The class will center on diseases of large and companion animals, including discussion of causes, transmission, prevention and control. Students will work with all animals and be involved in their care. Upon completion of this program, a student will feel comfortable with the nomenclature and skills necessary to work in the animal science industry.

### **Global Animal Science @ Central Campus (S1: SCI5113; S2: SCI5125)**

Prerequisites: SCI239/241 Recommended

The major focus of Global Animal Science will be biotechnology, current issues in the agriculture industry, preparing for the agriscience fair, and the World Food Prize. Students participating in this class will receive a broad view of current agriculture around the world and the advancement of technology in the industry. There are many hands-on laboratory learning experiences. Some of the labs include electrophoresis, DNA extraction, and pGLO experiments. Upon completion of this course, students will feel confident going into careers in the agriculture industry.

### **Floral and Greenhouse Production @ Central Campus (S1: SCI355, S2: SCI356)**

Prerequisites: SCI239/241 Recommended

The focus of the Floral and Greenhouse Production class at Central campus is to explore the world of flower, floral arrangements, greenhouse management and maintenance. Students participating in this class will build on their knowledge of the horticulture industry in specific ways. The time spent in class is split between planning and designing floral arrangements and learning and demonstrating how to successfully run our greenhouses. This class is full of hands-on learning opportunities to engage students in exciting ways. Upon completion of this course, students will have the skills necessary to arrange flowers and efficiently work in the greenhouse.

### **Entrepreneurship in Agriculture @ Central Campus (S1: SCI347, S2: SCI348)**

Prerequisites: SCI239/241 Recommended

The Entrepreneurship in Agriculture course covers learning targets to help students understand agricultural businesses, and how they could start their own business. Some of the topics covered in class include marketing, communications, economics, finance, and human resources. The Central Market, our own on-site grocery store, and the Campus Greenhouse plant sale will both be real-world businesses that this class helps manage. Students will also learn about various careers within the agricultural industry.

### **Marine Biology @ Central Campus (AQS445)**

Prerequisite: None

The Marine Biology program puts students face to face with hundreds of marine organisms found around the world. Students won't just learn about the ocean from books, they also take care of over 100 "tiny oceans" during the year and personally interact with sharks, jellyfish, corals, nautilus, and hundreds of fish in a new facility modeled after university laboratories and public aquariums. Students are also given the opportunity to conduct their own research projects, participate in science fairs, practice field work by kayaking, dissect different organisms, and more. What makes this

program so unique is that it is a student-run laboratory and aquarium which gives each student the opportunity to literally get their hands wet in everything that goes on, but to also leave a legacy for other students by coming up with new ideas for aquariums and different marine organisms to have in the program.

An optional Field Studies course occurs in March where the students are able to put their skills to the test, earn college credit, and have a lot of fun! For 1-2 weeks, students become "Marine Biologists" and participate in several activities to gain an understanding of life as a marine biologist.

### **Quality Pre-Apprenticeship Skilled Trades Academy @ Central Campus (STA219)**

The Quality Pre-Apprenticeship Skills Trades course is the introductory course into the Skills Trades Academy at Central Campus. This course provides an overview of multiple skilled trades (Carpentry, Electrical, Plumbing, Painting & Drywall, Concrete & Masonry, HVACR, and Welding) involving both commercial and residential construction. Students will leave with industry-recognized credentials including; OSHA 30-hour card and the CAMT- Certificate for Apartment Maintenance Technicians.

### **Carpentry Skilled Trades @ Central Campus (STA265/STA266/STA365/STA366)**

Prerequisites: TEC211 Intro to Wood Construction 1 and Finish Carpentry 2 recommended. Grades: 10-11-12

This program concentrates on craftsmanship in the areas of woodworking and carpentry. In year one, students will continue to develop machine techniques as they construct various projects including cabinets, tables, and finish carpentry construction applications. During year two, students to continue to develop machine techniques as they construct individual projects which will be developed by the student and teacher together. During both years student will be exposed to home building concepts and techniques, ranging from framing, flooring, trim, roofing, and other aspects of residential types of building projects. Work-based learning experiences will be provided during both years to allow students to gain understanding of the various opportunities for future employment in a career in carpentry. In addition, students will learn teamwork and participate in budgeting, purchasing, and estimating to prepare for careers in contracting. This experience has direct links to the local union apprenticeship programs, DMACC and other training programs after graduating from high school.

### **Electricity Program @ Central Campus**

(Year One – S1:STA371, S2:STA372)

(Year Two - S1:STA471, S2:STA472)

The electrical program is a multi-year program that provides students with hands-on skills, knowledge, and attitude needed to begin their career in the electrical industry. Students will explore electricity and identify how to safely work around electricity. Students will spend time building and understanding electrical circuits, practice with and learn the safe and proper use of working with common electrical tools and electrical materials, practice bending; cutting; and threading electrical conduit, use full scale construction drawings to become proficient in reading blueprints, install a residential electrical service, electrical panel, and common residential electrical devices.

Throughout the program, students will be given the opportunity to tour, work with, and apply for local electrical apprenticeships and local industry leaders. Students will spend time working on their math and measurement skills needed for passage through an electrical apprenticeship. Students will demonstrate employability skills; practicing needed communication skills, expected workplace skills, and collaborative team skills.

Successful completion of the electrical program will result in receiving certification of Interim Credentialing and can provide advanced placement into the Des Moines Electrical Apprenticeship.

## **Cybersecurity @ Central Campus (TEC381)**

Grades: 10-11-12

Cybersecurity is a multi-year program designed to assist students in acquiring the knowledge and skills needed for success in one of today's fastest growing career areas. Courses focus on evaluation, repair and replacement of computer hardware components and the installation and configuration of computer operating systems. The software courses focus on the installation and configuration of network operating systems, network design and administration, security and troubleshooting. Experience hands-on learning, field trips, Cyber Defense Competition and much more. Students who successfully complete this program can earn IT certifications and college credits. The skills learned in this course are a solid foundation for a career in IT.

## **Game Design & Programming @ Central Campus (CBS435)**

Prerequisites: Computer class recommended along with strong interest in field.

Delving into both technology and creativity, Software Design and Gaming immerses students into a simulated internship for a video game design company. They use the design process as well as other skills (graphic design, programming, and music generation) to create 2D and 3D video games. Game creation software is used to package images, textures, audio, media, and programming code into the final product. Students should anticipate a video game design competition in the spring semester.

Video game software compiler DarkBASIC Pro will be used to package images, textures, sounds, music, media and programming code to package final game products. Experience in software design will allow the student to realize the potential for entertainment and educational game design, application design and programming, and simulation design.

## **Introduction to Automotive @ Central Campus (CAR228)**

Prerequisites: Strong career interest. Grades: 10-11-12

1 Block – 1 Semester Course

Basic physical and mechanical principals related to the transportation field, including ownership, maintenance, and related careers will be covered in this course. Through instruction, demonstrations, hands-on and problem-solving activities, students gain knowledge of skills involved in the operation and servicing of internal combustion engine systems, and the body and structural systems of various vehicles, including their parts and accessories. They also learn to apply safety as related to the vehicle, hand and power tools, test equipment, and materials common to this course.

## **Aviation Maintenance Technology @ Central Campus (AVI341)**

Prerequisite: Introduction to Aviation | Grades: 10-11-12 | Offered: Full year

Are you interested in a career that provides well-paid opportunities and ensures the safety of the flying public? FAA-certificated Aviation Maintenance Technicians (AMT) work in highly-technical specialty occupations involving the continued operational safety of products and articles, keeping U.S.-registered aircraft operating safely and efficiently. AMTs hold highly-transferable skills that can be used in a broad-range of industries; career opportunities in , and out of, the aviation sector include employment at airlines, fixed-base operators, manufacturers, repair stations, aviation maintenance schools and in business or general aviation. Specialty fields include avionics, balloons and airships, rotorcraft, and unmanned aircraft systems. The mechanic is a maintenance technician certificated by the FAA based on personal knowledge gained through training and experience, which is demonstrated via successful completion of written, oral, and practical tests. The Aviation Maintenance Technology program is the only high school aviation maintenance program certified by the Federal Aviation Administration (FAA) in Iowa and one of very few in the country. The program provides students with the knowledge and skills to possibly earn an FAA Airframe and/or Powerplant Certificate (A&P) to launch a career as an A&P technician. The Aviation Maintenance Technology program consists of up to three years of study. Beginning with General during year 1, students explore technician certification, FAA regulations, human factors, and

technical areas applicable to both Airframe and Powerplant studies. Two years of Airframe consists of airplane and helicopter systems and structures. Students use a modern lab classroom and six aircraft to learn hands-on skills such as aluminum construction, composite construction, electricity, flight controls, hydraulic systems, navigation systems, nondestructive testing, painting, pneumatic systems, and welding. Two years of Powerplant consists of airplane and helicopter reciprocating engines and propellers, turbine engine theory and repair, induction, ignition and starting, engine electrical systems, engine inspection and troubleshooting.

### **Introduction to Aviation and Aerospace @ Central Campus (AVI225)**

Prerequisites: NONE | Grades: 9-10-11-12 | Offered: Full year | .5 credit/semester

Introduction to Aviation's core curriculum provides the foundation for any aerospace and/or aviation career. It is designed to give students a clear understanding of career opportunities in aviation and aerospace and the critical issues affecting the aviation system. It serves as a prerequisite for either the Aviation Maintenance Technician or Private Pilot Ground School programs.

Introduction to Aviation will provide the foundation for advanced exploration in the areas of flying, aerospace engineering, and unmanned aircraft systems. Students will learn about engineering practices, problem-solving, and the innovations and technological developments that have made today's aviation and aerospace industries possible.

Students will look at the problem-solving practices and innovative leaps that transformed space exploration from the unimaginable to the common in a single generation. Students will also gain historical perspective, starting from the earliest flying machines and leading to the wide variety of modern aircraft and the integral role they play in making today's world work.

Students will also begin to drill down into the various sectors of aviation and the elements that make up the aviation and aerospace ecosystem. They will discover how advances in aviation created a need for regulation and will learn about the promulgation of civil aviation oversight.

Students will explore modern innovations and develop their own innovative ideas to address real-world challenges facing the aviation industry. They will be exposed to a variety of career options in aviation and aerospace and take an in-depth look at the opportunities available. This course will allow students to begin to define their individual interests, whether it be Aviation Maintenance Technician and/or Private Pilot Ground School programs.

### **Pilot Ground School 1 @ Central Campus (S1:FLT441, S2:FLT442)**

In the Pilot Ground School I Course students will take a closer look at aircraft operation. Students will begin with an exploration of the types of aircraft in use today before going on to learn how aircraft are made and how they fly. Students will understand how aircraft are categorized, be able to identify their parts, and learn about aircraft construction techniques and materials. They will gain an in-depth understanding of the forces of flight—lift, weight, thrust, and drag—including how to make key calculations. They will then touch on aircraft design, looking at stability, aircraft controls, and maneuvering flight. The course will also focus on career skills related to these topics. Students will take an in-depth look at the systems that make aircraft work as well as the instrumentation powered by those systems. Beginning with aircraft powerplants and fuel systems, students will learn about the different options available and how they affect aircraft design and performance. They will go on to explore other key aircraft systems, including electrical, pitot-static, and vacuum systems. Throughout, they will learn about the flight instruments associated with each system and how to identify and troubleshoot common problems. This course also covers airplane flight manuals, the pilot's operating handbook, and required aircraft documents. Students will learn about the factors that affect aircraft performance and how to determine critical operating data for aircraft.

## **Pilot Ground School II @ Central Campus (S1:FLT451, S2:FLT452)**

(Prerequisite: Pilot Ground School I)

Pilot Ground School II is foundational for any pilot career and will prepare students to take the Private Pilot Knowledge Test. Topics include pre-flight procedures, airspace, radio communications, aviation phraseology, regulations, airport operations, aviation safety, weather, cockpit management, and emergency procedures. Students will learn pilot and aircraft qualifications, cross-country flight planning, weight and balance, performance and limitations, human factors, chart use, night operations, navigation systems, and aeronautical decision making. Students will be provided with the opportunity to participate in multiple practice examinations. At the end of this course, students may have the opportunity to be signed off to take the Federal Aviation Administration's Private Pilot written exam.

## Credit Acquisition for Grade Level Advancement

In order to be considered on track to graduate with your class, credits must accumulate to...

- 5.75 credits going into your sophomore / 10<sup>th</sup> grade year
- 11.5 credits going into your junior / 11<sup>th</sup> grade year
- 17.25 credits going into your senior / 12<sup>th</sup> grade year
- 23.0 credits for graduation and diploma

## Post-Secondary Enrollment Options

Post-Secondary Enrollment Options (PSEO) is established to promote rigorous academic or career & technical pursuits and to provide a wider variety of options to high school students. Students interested in PSEO should contact their school counselor for information and forms.

## Weighted Courses

Weighted courses are classes in which the final/semester grade are assigned an advantage when calculating a grade point average (GPA). Weighted courses give students an advantage for enrolling in and completing higher-level classes or more challenging learning experiences. Des Moines Public Schools offers two types of weighted courses: Advanced Placement and concurrent credit courses.

### Advanced Placement Courses

- Advanced Placement (AP) courses are college-level courses taken in high school. A national exam is given in May of each year and scored on a 1 to 5 scale. A score of a 3, 4 or 5 is considered passing and leads to college credit in most all 4-year colleges and universities. There are more than 30 different Advanced Placement courses available to high school students. You can find a current list of DMPS AP course offerings at each school by visiting <http://ap.dmschools.org/parentsstudents.html>
- Research proves that the knowledge and experience of taking a college-level course in high school will better prepare you for success after high school. You will learn many important skills in organization, time management, reading, writing and habits of mind. The AP course designation on your resume shows college admissions officers that you are willing to challenge yourself with difficult courses and can help with scholarship competitions as well.
- Students must take an AP exam to earn college credit. There is an exam fee. Students may qualify for fee assistance. Students should connect with their school counselor to determine their eligibility for fee assistance.
- The rewards of taking an AP exam include an opportunity to earn a passing score and receive college credit while in high school. In addition, a passing score may lead to advanced placement in college. Taking difficult exams like AP exams prepares you for other challenging tests such as SATs, ACTs, and other college entrance tests.

### Concurrent Credit Courses

- Courses offered for concurrent credit stem from agreements between high schools and community colleges. These agreements allow high school students to enroll in a college course taught in a DMPS school. Academic credit earned from both the college and the high school comes at no additional cost to the student.
- Concurrent credit courses include both academic courses as well as career & technical courses. These courses are stepping stones from high school to college, serving as a path to a variety of post-secondary opportunities.

- Credits earned are accepted at most in-state institutions, including Regents schools. Acceptance and transference of credit is at the discretion of the receiving school. Students and families are encouraged to investigate the policies at prospective post-secondary schools.
- Enrollment in a concurrent credit course is recorded on the transcripts of both the high school and the post-secondary school.

## Credit Transfer Policy

Students seeking to transfer credits from another accredited high school program must submit a transcript to their building registrar. Since high school programs vary in rigor and content, only an evaluation by the DMPS Office of Academics will determine the number of credits transferred and whether those credits will be applied as an elective or required credit for graduation. DMPS reserves the right to only recognize credits awarded by appropriately accredited institutions and earned in courses aligned to standards used by DMPS curriculum. If possible, prior approval should be sought by students who are transferring for a short period of time and plan to return to DMPS (example: a summer school program delivered online) to ensure credits will be recognized.

## Academic Audit Policy

### Students entering DMPS without transcripts:

Students enrolled in credit bearing classes may participate with an (automatic) audit status if enrolled within the last nine weeks of the semester. At any time an audit status may be changed to credit status at the request of the teacher if the student demonstrates the evidence to fulfill course requirements. The parents/guardians and student will be notified of audit status at the time of enrollment when the Academic Audit Request Form is signed.

If a student has been enrolled in a course for longer than nine weeks, then an audit may be approved by the building principal/designee for educationally sound purposes. ***The school must have and consider evidence of supports, interventions, and parent/guardian communications before the decision to audit is made.*** A parent/guardian and the student must approve and sign the Academic Audit Request Form. All academic audit requests for students enrolled for longer than nine weeks must be completed four weeks before the end of the semester.

The Academic Audit Request Forms can be requested from school counselors.

### Students with low levels of English language proficiency entering DMPS with transcripts:

Students who enter DMPS with transcripts but have low levels of English language proficiency may qualify to audit a course for educationally sound purposes.

### All other students entering DMPS with transcripts:

No audit is necessary. When handling transfers from outside the district from non-SRG schools, we want to honor the work of students transferring into our classrooms. Please refer to the Mobility section on Guiding Practice 3 in the DMPS Grading Practices Handbook for this process. The handbook can be found at <http://grading.dmschools.org>.



## Grading and Reporting

Des Moines Public Schools commits to all stakeholders to provide *fair, accurate, specific, and timely* information regarding student progress towards agreed-upon common standards as well as feedback for next steps and growth areas. In order to meet these commitments, DMPS uses standards-referenced grading – instructional approaches that are aligned to learning standards.

### Six Guiding Practices

Six Guiding Practices are implemented K-12 districtwide to serve as a common framework:

1. A consistent 4-point grading scale will be used.
2. Letter grades, derived from the 4-point scale, will be based solely on achievement of course/grade level standards. Student participation, work completion, and ability to work with others will be reported separately using the "DMPS Citizenship and Employability Skills Rubric".
3. Scores will be based on a body of evidence.
4. Achievement will be organized and reported by learning topic, which will be converted to a grade at semester's end.
5. Students will have multiple opportunities to demonstrate proficiency.
6. Accommodations and modifications will be provided for exceptional learners.

### Translation of a Score to a Final Grade

Teachers collect a body of evidence for each learning topic. At semester, teachers will examine the evidence and determine a final topic score for each topic. Final topic scores are then averaged and converted to a grade using the following conversion scale:

<b>A (Honors)</b>	<b>3.50-4.00</b>
<b>A</b>	<b>3.00-3.49</b>
<b>B</b>	<b>2.50-2.99</b>
<b>C</b>	<b>2.00-2.49</b>
<b>D</b>	<b>1.75-1.99</b>
<b>F</b>	<b>0.00-1.74</b>

### SRG, GPAs, and College Admissions

All scores will be converted to a grade at the end of each semester. Student GPAs will be calculated the same way they always have and transcripts will look the same. Colleges want grade point averages to be an accurate reflection of student learning and understanding. Grades should correlate to a student's performance on high-stakes assessments such as the Iowa Assessments or ACT.

## **Credit and Topic Recovery**

Before a student finds themselves in a situation where they are failing a course, schools will focus on supporting students in recovery of learning at the topic level. By working to recover topics before the end of a course, students are more likely to stay on track for graduation.

DMPS provides a variety of credit recovery options. Students who qualify for the Flex Academy Program can participate in full course or topic recovery with a content teacher. They may choose their learning modality, which includes but is not limited to: online learning, an offline independent study, or one-on-one blended learning instruction with the teacher. Any students who do not qualify for the Flex Academy Program may retake a course for the purpose of earning a higher grade (please connect with your school counselor for more information on this process). The higher of the two grades will be recorded on the transcript. Courses may be retaken only at the comprehensive high schools, Central Campus, or Virtual Campus and must be retaken during the regular school year.

Students are required to submit evidence of learning for every reported topic in a course. Failure to do so results in an F/IE (insufficient evidence) at semester. Students who earn an F/IE in a course and choose to retake the complete course in summer school or in alternative programs during the school year will receive an F/R on their permanent record, but the F will not be calculated in the overall GPA. After successful completion of the course, a new grade will be issued and override the previous failure.

## **More Information on SRG and Grading Practices in DMPS**

To find out more about DMPS and SRG at all levels, please visit <http://grading.dmschools.org>.

To access the Infinite Campus Parent Portal, where families can monitor student progress, please visit: <http://www.dmschools.org/infinite-campus-studentparent-portal>

## Eligibility for Participation in Extra Curricular Activities

To participate in extracurricular activities for which competition is required for participation, a student must have passed four subjects in the previous semester and be in the process of passing four subjects in the current semester. An extracurricular activity is defined as one for which no grade is given and is not part of a graded course.

**Students participating in the following activities must comply with the eligibility requirement by passing in four subjects:**

- All athletics
- Cheerleading
- Student government
- Drill team\*
- Color guard\*
- *\*Does not apply to students enrolled in JROTC or band.*

**Special consideration will be given to self-contained special education students, and other special needs students; e.g., LEP, special education resource.**

**Students enrolled in courses that require extracurricular activity as part of the course grade need not establish eligibility for participation. The courses are:**

- Marching band
- Pep band
- Orchestra
- Jazz band
- Choir
- Chamber choir
- Swing choir
- Debate
- Forensics
- Drama
- Courses with varying titles which have a performance requirement

**Students not enrolled in the courses listed above or others to which the policy might apply must establish eligibility requirements if they wish to participate in a school production or an activity.**

**Eligibility may be monitored at:**

- the beginning of each activity's season,
- the designated time in the annual calendar when form 939's are issued,
- the quarterly grading period,
- the semester grading period.
- Additional eligibility checks may be conducted at any time as needed for students' participating in any school activity.

Teachers will be encouraged to monitor students' academic progress during the semester and notify coaches and sponsors about unsatisfactory class work and failing grades. The purpose is to emphasize the importance of academic success as students participate in school activities.

## Educational Programs

Des Moines Public Schools provides students with more options to meet their educational needs and interests than any place in Iowa. Through programs like Central Campus and Central Academy and the English Language Learners Program, the school district provides educational programming as diverse as the people who learn and live in our community.

### Central Academy

Central Academy provides additional services for students in comprehensive schools by offering Accelerated and Compacted Core courses and unique Advanced Placement & World Language courses.

Our Accelerated Core Pathway fosters academic excellence through the challenge of compacted curricula by offering acceleration and enrichment for students who demonstrate early readiness for advanced work. Students, especially those under-represented in gifted programs, develop competence, connection, and confidence as they embrace challenging coursework.

Central Academy is listed in the top 1% of educational programs nationally, as recognized by the College Board. Students who successfully complete the program are prepared for the competitive demands of top colleges and universities.

**Identification for 8th Grade Academy:** The 8th Grade Academy program is designed for students who are academically prepared to accelerate their learning by one grade in three subjects. Students are evaluated according to a comprehensive set of criteria to ensure they are prepared for three rigorous, accelerated classes. These criteria include:

- Performance on standardized assessments (Iowa Assessments) in reading, mathematics, and science
- Grades in core subject areas
- Placement in mathematics
- Gifted/Talented identification
- Teacher recommendation

Students in the 8th Grade Academy take three accelerated academic courses, most of them at the high school level. All students must take English. Additionally, students choose two more subjects among mathematics, science, and social sciences. For high school coursework, 8th graders have the option of including their grades in their high school grade point average or not. Course options for 8th grade students are:

- English: Accelerated Language and Literature I (awarded high school credit in English I).
- Mathematics\*: Academy Math 8 (Accelerated version of the Middle school course), Academy Algebra I, Academy Geometry, Radically Accelerated I. A placement exam is given to determine course placement beyond Academy Math 8.
- Science: Conceptual Physics & Environmental Science (one semester of each high school class will prepare students for Accelerated Chemistry and Accelerated Biology in 9th grade)
- Social Studies: Accelerated Early US History and Government (awarded high school social studies credit).

### What if a student does not attend academy in 8th grade?

Interesting Fact: 38% of current 10th grade students in the Academy's Accelerated Core Pathway did not attend as 8th graders. Children mature and develop at different rates. Some students need an extra year at a normal pace to hone skills and develop talents so that they are genuinely ready to accelerate. Putting a student in an accelerated class too soon can damage the student's skill development and growth. The middle school intervention teams and the Academy Intervention team are working collaboratively and carefully considering students individually for placement in this program for students who are discrepant from their peers. Not attending Academy in 8th grade does not rule out the option to attend later.

For additional information about Central Academy, please talk with your school counselor and visit <http://ca.dmschools.org>

### Advanced Placement at Central Academy

Central Academy is consistently ranked as the top Advanced Placement program by the Belin-Blank Center at the University of Iowa. AP course offerings at Central Academy include the AP Capstone Program with Seminar and Research, Accelerated English Language and Composition, Accelerated English Literature and Composition, Calculus at the AB and BC levels, Statistics, Computer Science A, Chemistry, Physics 1, 2 and C, Accelerated Human Geography Accelerated US History, European History, World History, Macroeconomics, Comparative Government and Politics, Chinese Language and Culture, Japanese Language and Culture, and French Language and Culture.

## Course Offerings at Central Academy

Course	Course Name	Course	Course Name	Course	Course Name
ART351A	Beginning Throwing S1	MIS431	AP Seminar S1	WL103	French I S1
ART352A	Beginning Throwing S2	MIS432	AP Seminar S2	WL104	French I S2
ART353A	Intermediate Throwing S1	MIS433	*AP Research S1	WL131	Chinese I S1
ART354A	Intermediate Throwing S2	MIS434	*AP Research S2	WL132	Chinese I S2
ART451A	Advanced Throwing S1	MTH701	Math 7 S1	WL141	German I S1
ART452A	Advanced Throwing S2	MTH702	Math 7 S2	WL142	German I S2
ART453A	Advanced Throwing II S1	MTH801A	Academy Math 8 S1	WL151	Italian I S1
ART454A	Advanced Throwing II S2	MTH802A	Academy Math 8 S2	WL152	Italian I S2
LA413A	Studies in World Literature S1	MTH111A	Academy Algebra I S1	WL161	Japanese I S1
LA414A	Studies in World Literature S2	MTH112A	Academy Algebra I S2	WL162	Japanese I S2
MIS072	Attending Campus	MTH211A	Academy Geometry S1	WL181	Arabic I S1
SCI201	Environmental Science S1	MTH212A	Academy Geometry S2	WL182	Arabic I S2
SCI205	Conceptual Physics S1	TBD	Rad Acc I S1	WL203	French II S1
SCI351A	Accelerated Chemistry S1	TBD	Rad Acc I S2	WL204	French II S2
SCI357A	Accelerated Biology S1	MTH311A	Academy Algebra II S1	WL231	Chinese II S1
SCI523	*College AP Chemistry S1	MTH312A	Academy Algebra II S2	WL233	*Chinese II S2
SCI524	*College AP Chemistry S2	MTH401A	*Pre-Calculus S1	WL241	German II S1
SCI525A	*AP Physics 1 S1	MTH407	Adv Math Problem Solving S1	WL243	*German II S2
SCI526A	*AP Physics 1 S2	MTH408	Adv Math Problem Solving S2	WL251	Italian II S1
SCI527A	*AP Physics 2 S1	MTH451A	Rad Acc Alg IIA	WL253	*Italian II S2
SCI528A	*AP Physics 2 S2	MTH452A	Rad Acc Alg IIB	WL261	Japanese II S1

SCI529	*AP Physics C S1
SCI530	* AP Physics C S2
LA251A	Acc Lang & Lit I S1
LA252A	Acc Lang & Lit I S2
LA413A	Acc Lang & Lit II S1
LA414A	Acc Lang & Lit II S2
LA529	*Col Acc Lit & Comp S1
LA530	*Col Acc Lit & Comp S2
LA531	*Col Acc Lang & Comp S1
LA532	*Col Acc Lang & Comp S2
LA453A	Acc Lang & Lit Capstone S1
LA454A	Acc Lang & Lit Capstone S2
LA711	Prep Language Arts S1
LA712	Prep Language Arts S2

MTH453A	*Rad Acc Precalc A
MTH454A	*Rad Acc Precalc B
MTH501A	*AP Calculus AB S1
MTH502A	*AP Calculus AB S2
MTH503A	*AP Calculus BC S1
MTH504A	*AP Calculus BC S2
MTH551A	*AP Statistics S1
MTH552A	*AP Statistics S2
TEC453A	Computer Science II S1
TEC454A	Computer Science II S2
TEC557A	*AP Computer Science A S1
TEC558A	*AP Computer Science A S2
SOC101A	Acc Early US History
SOC213	*Accel AP Hum Geo & Hist S1
SOC214	*Accel AP Hum Geo & Hist S2
SOC405A	Government
SOC557A	*AP Comparative Gov
SOC511A	*AP Macroeconomics
SOC515A	*College AP World History S1
SOC516A	*College AP World History S2
SOC521A	*College AP US History S1
SOC522A	*College AP US History S2
SOC523A	*College AP European HistoryS1
SOC524A	*College AP European HistoryS2

WL263	*Japanese II S2
WL281	Arabic II S1
WL282	Arabic II S2
WL303	French III S1
WL304	French III S2
WL331	*Chinese III S1
WL333	*Chinese III S2
WL335	*Chinese IV S1
WL337	*Chinese IV S2
WL341	*German III S1
WL505	*AP French V S1
WL506	*AP French V S2
PHY9107SPO	Creative Contemporary Movement Workshop

## Central Campus

Central Campus complements and extends the programs of Central Iowa Schools, offering unique academic and career opportunities that direct, inspire, and motivate a diverse group of students.

Central Campus serves as the Premier Regional Academy within the Des Moines Public Schools. Over two thousand students from dozens of Iowa High Schools experience our Advance Career Training Programs. With academic planning and support in high school, students have the opportunity to earn community college credit and two-year Associates Degree at no extra cost.

Located at the heart of the model district for urban education, Central Campus offers hands on, real world work-based educational programs to a highly diverse community and surrounding areas. One of our greatest strengths is the friendships and networking of students from diverse backgrounds and communities. Des Moines Public Schools dedicates itself to excelling at unique and technologically advanced opportunities for all learners. Central Campus commits itself to providing equal access and prospects through rigorous academic and career training experiences for all.

Requests for Central Campus courses begin with inquiries made through your home high school counselor or scheduling contact. You are also welcome to call Central Campus at 515-242-7676. Central Campus is open to all qualifying high school students regardless of home district. Criteria for enrollment in Central Campus programming with requests exceeding capacity is as follows: the student expresses strong interest in a career path, is credited as a junior or senior (does not apply to courses designed for sophomores or three-year programs), has met prerequisites at their home high school, is on track to graduate, has a strong attendance record, demonstrates strong citizenship skills, and enrollment would increase opportunities for underserved populations. No one indicator is a deciding factor in enrollment. Students not meeting these criteria may work with their counselor and school administrator to seek an exception. Students wishing to request a program at Central Campus need to complete the form found at <http://tiny.cc/enroll2017> for any and all programs they are interested in pursuing at Central Campus. Out of district students will also need to have a parent or guardian fill out and submit this electronic form: [https://sis.dmps.k12.ia.us/campus/onlineregloginKiosk\\_desmoines.jsp](https://sis.dmps.k12.ia.us/campus/onlineregloginKiosk_desmoines.jsp)

For additional information about Central Campus, please talk with your school counselor and visit <http://centralcampus.dmschools.org>

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## Central Campus Courses and Programs of Study

### **Business Education**

**(BUS301,BUS311,BUS314,BUS323,BUS339)**

#### **Accounting (BUS301)**

An understanding of the purpose of the accounting function will be developed during Accounting 1. This course will also assist students in the development of a vocabulary and in the acquisition of the skills and general information necessary to perform the accounting function. If you would like to earn DMACC concurrent college credit, enroll in BUS533. Topics include: accounting basics, transaction analysis, special journals, banking procedures, payroll, accounting cycle for business

### **Marketing/Principles (BUS311)**

This course will provide a broad overview of the marketing process and the role that marketing plays in our lives. Various marketing functions such as research, transportation, warehousing, advertising, promotion, pricing and selling will be studied. There will be a heavy emphasis on occupational opportunities and requirements in each area. Topics include: marketing foundations, consumer marketing, marketing mix, and marketing plan

### **Marketing/Entrepreneurship (BUS314):**

The steps necessary when starting and managing a business will be covered in this course. The relationship of information-gathering and decision-making in business organization and management is emphasized. Personal traits and characteristics of entrepreneurs and managers will be investigated. The nature of risk and the role it and management play in our economy will be studied. Management styles and philosophies will be discussed through the use of guest entrepreneurs. To earn college credit please enroll in BUS530. Topics include: entrepreneurship, management, marketing, business plan

### **Personal Finance Mgmt (BUS323):**

Students will study the management of personal, family and business finances, including budgeting, consumer buying, personal credit, savings and investing, home ownership, insurance, and retirement. This course will help prepare all students for their financial challenges now and in the future. To earn college credit please enroll in BUS523. Topics include: savings and budgeting, credit and debt, financial planning and insurance, and income taxes and giving.

### **Intro to Website Dsgn (BUS339):**

This course introduces the student to basic concepts, languages and tools used in the development of an Ecommerce website. Students will identify effective design concepts and characteristics of successful websites. During the course students will be introduced to HTML and DHTML concepts and technologies including HTML, XHTML, CSS, JavaScript and the Document Object Model. Students will use current tools and techniques to design and create commercially oriented websites. If you would like to earn DMACC concurrent college credit, enroll in BUS521. Topics include: basic HTML coding, formatting using CSS, images and standards, and project development.

## **Communication Media Academy**

### **Broadcasting & Film (MDA363/364, MDA463/464)**

The Broadcasting & Film Department at Central Campus is a dynamic, two-year program which concentrates on the creative and communication aspects of the radio/television/film industry. Emphasis is placed on analysis of career paths and the production techniques associated with gainful employment. Considerable time is spent working on the craft of writing, reading, equipment operation, announcing, creative thinking and management skills. The program may include studio assignments in the FCC-licensed radio station, KDPS 88.1 FM (and streaming live online: kdpscentral.streamon.fm), or submission of film and television projects to DMPS-TV. Students also have the opportunity to submit work to various contests and festivals, such as the Wild Rose Film Festival, 48 Hour Film Festival, Iowa Motion Pictures Association Film Festival, Cedar Rapids Film Festival and John Drury Radio Awards. Projects may be submitted to colleges and universities in pursuit of scholarships in the area of Broadcasting & Film. Prerequisites: None

### **Commercial Photography (ART319/320, LA421/422)**

In the Commercial Photography program, students obtain skills in film processing, darkroom procedures, studio shooting techniques, camera techniques, photographic history, presentation skills and digital imaging. Portfolio development enables students to apply for employment, scholarships and college admission. Students will publicly display work at the Central Campus Student Art Exhibit and other exhibitions. It is recommended, but not required, that students have a 35mm film camera with manual options.

Prerequisites: ART186



## **Graphic Communications (ART361/362, 461/462, 469/470)**

Graphic Communication provides education, training and real world graphic design and print production experiences. Through close relationships with industry experts, the program's curriculum and industry experiences reflect the technological expectations of the graphic communication industry. First-year students complete a wide variety of hands-on projects in design, pre-press, print production, and bindery. Participation in frequent industry tours allows students to increase the range and depth of their understanding. All students enrolled in the second year of the program are expected to complete a variety of increasingly complex project work. They also are expected to participate in the design, layout and production of various "live jobs." Both the "live jobs" and the projects are intended to further develop their skills and overall understanding of the graphic communication industry. Second-year students may choose the privilege of participating in job-shadow and internship experiences. Job shadowing and internships provide a stronger foundation and background for the advanced student desiring to enter the industry. For students planning to continue their postsecondary education, these foundational experiences provide the opportunity to earn additional college credit.

Prerequisites: Two courses in any of the following areas highly recommended: Art, Graphic Design, Computer Applications, Journalism, and Technology Education.

## **Education & Leadership Academy**

### **Criminal Justice (CJT461/462)**

The Criminal Justice program gives students the opportunity to explore careers in police work, criminal law, crime scene investigation, and other related vocations. Faculty works closely with the Des Moines Police Department and Polk County Sheriff's Office to provide authentic experience in a vibrant law enforcement community. Students participate in mock crime scene scenarios and job shadowing professionals.

### **Early Childhood Careers**

The Early Childhood Careers program prepares students to work with children from infancy to eight years of age. Students combine classroom instruction with practicum experiences in child care centers, Head Start programs, and elementary schools. Successful completion of the second year of the program enables students to earn a national credential, Child Development Associate. Students complete the training required by the Iowa Department of Human Services for persons working in childcare centers. Upon completing this program, they can find employment in childcare centers or may choose to further their studies in elementary or early childhood education. CPR training is offered with this course.

Prerequisites: Child Development recommended

### **Sports Officiating and Leadership (PHY327/328)**

In Sports Officiating and Leadership, students become certified officials through the IHSAA and IHSGAU in a variety of sports. Students will use film study to understand theories and movements of several sports to better understand rules and positioning. Along the way, students will cooperate with other DMPS programs at our Central Campus facilities to gain live on-site training and experience in live game situations. After students earn certification with the state of Iowa, they can be placed in jobs within the district to start earning money as a fully certified official. Throughout the class, students will gain confidence and job experience within a field in high demand that they can do for the rest of their lives.

### **Urban Leadership Academy (TAC320)**

Urban Leadership is committed to empowering students on their journey to becoming community-based activists and entrepreneurs. Based in the principles of hip-hop culture, students engage in an in-depth study of social movements

shaping history and urban settings across the United States. Through the use of various mediums such as the written and spoken word, performance-based literacy, urban arts, and youth + community summits, and internships, students are given a platform to become the leaders of today. The objective is to provide students with in-depth knowledge regarding social movements shaping US History, equipping them with the leadership skills necessary to becoming change agents in their local communities. This course includes one semester of Digital Media. Students will earn elective high school English credit with this course. Prerequisites: Strong interest in Social Justice and the Urban Arts.

## **Dream to Teach Program**

(TAC251/252,TAC351/352)

### **Dream to Teach I (TAC251/252)**

This course is an introduction to the field of education/teaching and is offered to ninth through twelfth grade students. The course introduces students to a variety of careers in education through a curriculum that integrates academic and workplace skills. Students will be exposed to guest speakers from different backgrounds and educational roles. Students will also learn about the foundations of education, educational theories/theorists, and pedagogy through a social justice lens. The class is worth one elective credit with the possibility of earning an English elective credit.

### **Dream to Teach II (TAC351/TAC352)**

This class is offered to eleventh and twelfth grade students who have either taken Dream to Teach Year One or who have participated in their school's Dream to Teach club. The course will also examine education from a historical, philosophical, and sociological perspective. Challenges and issues in education today will be discussed in the context of school organization, politics, funding, and curriculum through a social justice lens. First semester will help prepare students for their upcoming student teaching internships by reviewing topics such as professionalism, mandatory reporting, cultural responsiveness, etc. Second semester students will acquire extensive field experience through student teaching internships, observation, and field trips. Students will work to develop leadership skills toward becoming agents of change in their schools and communities. This class provides a strong foundation and transition to teacher education programs post high school. The class is worth two elective credits, five college credits, and the possibility of earning an English elective credit.

## **Engineering Academy**

### **Computer Aided Design Technology**

This program provides occupational and technical skills for job entry in manufacturing and construction or college entrance in the fields of engineering, design, and architecture. You will be introduced to principles and practices, engineering/construction/manufacturing standards, and the use of references and technical information. In this program students design, document, and build their activities using industry leading software and equipment. Participation in a student organization is encouraged and industry software certifications are available.

The Computer Aided Design Technology program is a two or four semester career area that provides students with the occupational and technical skills for job entry in manufacturing and construction or college entrance in the fields of engineering, design, and architecture.

The engineering/manufacturing curriculum of this course emphasizes principles and practices, engineering standards and the use of references and technical information for production of manufactured goods. Industry based 2D and 3D computer aided design skills will be taught, as well as introduction to computer aided machining (CAM) and computer aided coordinate measuring (CMM). Rapid prototyping will be integrated with the use of multiple types of 3D printers and computer numerically controlled (CNC) equipment.

The architectural curriculum of this course emphasizes design studies and technical information, and the production of construction drawings. Interior design, landscape design and the development and study of energy efficient housing is incorporated in the curriculum to prepare students for changes in the housing industry. 2D and 3D computer aided design

skills in architecture and construction industries are practiced and critiqued by professionals. Model building is used to improve visualization skills.

Industry leading software packages learned and used include Autodesk products: AutoCAD, Inventor, Revit; Dassault Systems Solidworks, and CNC Software Inc. Mastercam. Software certified user certifications are available.

Prerequisites: Mechanical/architectural drafting/design recommended.

### **Civil Engineering & Architecture (EGR508)**

Civil Engineering and Architecture emphasizes design studies and technical information, and the production of construction drawings. Interior design, landscape design and the development and study of energy efficient housing is incorporated in the curriculum to prepare students for changes in the housing industry. 2D and 3D computer aided design skills in architecture and construction industries are practiced and critiqued by professionals and model building is used to improve visualization skills. Industry leading software packages learned and used include Autodesk products: AutoCAD, Inventor, Revit; Dassault Systems Solidworks, and CNC Software Inc. Mastercam. Software certified user certifications are available. Prerequisites: Mechanical/architectural drafting/design recommended.

### **Engineering Development and Design (EGR521/522)**

The curriculum of the Engineering Development and Design program emphasizes principles and practices, engineering standards and the use of references and technical information for production of manufactured goods. Industry based 2D and 3D computer aided design skills are taught, as well as introduction to computer aided machining (CAM) and computer aided coordinate measuring (CMM). Rapid prototyping is integrated with the use of multiple types of 3D printers and computer numerically controlled (CNC) equipment. Industry leading software packages learned and used include Autodesk products: AutoCAD, Inventor, Revit; Dassault Systems Solidworks, and CNC Software Inc. Mastercam.

Prerequisites: POE or IED recommended.

### **Intro to Robotics (EGR218)**

The Intro to Robotics program introduces students to the world of robotics and automation. Through the one semester course, students will learn how to program in multiple languages, like Lego NXT-G, Basic and C++, and a little electronics. Students apply this knowledge to project-driven course work, including the operation and programming of robotic and automation systems. This course is designed for students interested in STEM.

### **Engineering, Robotics & Electronics (EGR485/486)**

The one-year Engineering, Robotics and Electronics program focuses on the application of electronics and physics. Students work with the operation of electronic devices and integrated circuits. Students apply this knowledge to project-driven course work, including the operation and programming of robotic systems. This course is designed for students with an interest in science, engineering, or electronics. This program includes Digital Electronics course work.

### **Digital Electronics (EGR506)**

Digital Electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras and high-definition televisions. The major focus of the course is the process of combinational and sequential logic design, teamwork, communication methods, engineering standards and technical documentation.

Prerequisites: Proficient in reading, math, and science based on IA Assessments

## **Environmental & Agricultural Sciences Academy**

### **Aquarium Science (AQS465 / AQS466)**

In Aquarium Science, students experience aquatic animal husbandry and aquaculture in a facility modeled after a professional public aquarium laboratory. They learn to replicate environmental conditions in the lab similar to those on a coral reef by studying the effects of lighting, water quality, and nutrition on the saltwater organisms in their care. Hands-on activities in the laboratory include breeding saltwater clownfish, propagating live corals and anemones on the coral farm, breeding jellyfish, and live food culture. This program prepares students for careers in Marine Biology, Environmental Science, commercial aquaculture (fish hatcheries), public aquariums, aquarium maintenance, pet industries and most environmental fields. Students in Aquarium Science are eligible to participate in an optional marine field ecology trip in the spring semester for DMACC credit. (Aquarium Science is an elective course and does not satisfy high school science credit requirements.)

Prerequisite: None

### **Marine Biology (AQS445 / AQS446)**

The Marine Biology program puts students face to face with hundreds of marine organisms found around the world. Students won't just learn about the ocean from books, they also take care of over 100 "tiny oceans" during the year and personally interact with sharks, jellyfish, corals, nautilus, and hundreds of fish in a new facility modeled after university laboratories and public aquariums. Students are also given the opportunity to conduct their own research projects, participate in science fairs, practice field work by kayaking, dissect different organisms, and more. What makes this program so unique is that it is a student-run laboratory and aquarium which gives each student the opportunity to literally get their hands wet in everything that goes on, but to also leave a legacy for other students by coming up with new ideas for aquariums and different marine organisms to have in the program.

An optional Field Studies course occurs in March where the students are able to put their skills to the test, earn college credit, and have a lot of fun! For 1-2 weeks, students become "Marine Biologists" and participate in several activities to gain an understanding of life as a marine biologist. Previous trips have gone to California, Texas, and Florida. Most expenses for this trip are the responsibility of the student. At least one fundraiser is made available to students to help offset the cost.

Prerequisite: None

## **Agri-Science Academy**

### **Horticulture & Animal Science @ Central Campus (SCI239/241)**

At our Agriculture Science Academy at 201 County Line Road on the southside of Des Moines (south of Blank Park Zoo), students learn about animals and plants through hands-on activities and exciting projects. The nation's largest secondary school student-run greenhouse and livestock facility allow them to gain practical experience in fields including agricultural business, environmental science, horticulture, landscaping, and veterinary careers. Students are enrolled as members of FFA, the national youth leadership organization, which enhances communication and leadership skills while attending the academy.

## **Family & Consumer Sciences Academy**

### **Culinary Arts & Restaurant Management**

Culinary Arts students explore opportunities for employment in the hospitality and food service industry through the operation of the student-run Central Campus Café. Students receive their ProStart certification from the National Restaurant Association and compete in local and national competitions. Students plan and prepare food, use institutional equipment, set up the dining room, and serve customers on designated Central Campus Café days. Students also have the chance to visit area restaurants and other hospitality businesses.

### **Fashion Design & Merchandising**

Within the creative discipline of Fashion Design, students discover fascinating fundamentals of the fashion industry and learn about all of the exciting behind-the-scene details that make every show and every display perfect. Study famous and up-and-coming designers, explore historical and current trends, and learn the importance of alterations and proper fit. In this program students building upon their sewing skills, create fashion drawings, and analyze the designs of others. The program enhances entrepreneurial skills and techniques to successfully market their designs in the fashion industry. The culminating event for this program is a spring fashion show that is created and produced by the fashion students and other cooperating Central Campus programs.

Prerequisites: Sewing / Fashion courses recommended

## **Health Sciences Academy**

### **Career Opportunities in Health (COH311/COH312)**

Career Opportunities in Health introduces students to a variety of health careers through a curriculum that integrates academic and workplace skills. Rotations at UnityPoint Health-Des Moines hospital and clinic locations, as well as other private clinics throughout the metro, provide observation experiences that allow students to explore careers of their interest, learn about medicine and work towards an understanding of the big picture of healthcare while developing personal skills.

Prerequisite: Current immunizations are required.

### **Nurse Aide (Basic & Advanced)**

These programs give students the opportunity to learn the necessary skills and training to work in various health care settings. They experience classroom and laboratory instruction along with supervised clinical experience in local long-term care (nursing home) and hospital settings. The advanced program also provides students the opportunity to obtain health care provider BLS certification.

Nurse Aide certification is required for admission to most Iowa nursing schools. Either of these courses prepares students for the nurse aide certification. This course includes classroom and laboratory instruction at Central Campus and supervised clinical experience at various health care settings. In addition to the content of the 75-hour Nurse Aide class, the 150-hour Advanced Nurse Aide class covers skills and knowledge utilized by nurse aides in skilled-care units and in hospital areas. Content in the 150-hour course is presented at a faster pace than in the 75-hour Nurse Aide class.

Prerequisites: Criminal / Abuse Background check; Immunization form as required by clinical site; flu vaccine – October through April. Must pass with a C or higher to continue. See DMACC website for more information.

## Skilled Trades Academy

### Survey of Skilled Trades (STA221/STA222)

***This course is a good option for students who are unable to take Industrial Technology classes, such as Woodworking and Carpentry at their home school.*** Students taking the 1-year Survey of the Skilled Trades course will be introduced to the Carpentry, Welding, Plumbing/Mechanical, and Electrical trades. They will learn about the materials used in these industries and develop an understanding of the fundamentals of construction within each of these types of industries. Students will work with various power tools and hand tools common to the different industries and will learn how to analyze workplace hazards and identify how to safely work around these hazards. Students will learn to take precise and accurate measurements and what a jobsite looks like and how a project is completed from the start to finish. The course will help students identify a particular type of construction they enjoy and provide them with the starting point towards a pathway in skilled trades.

### Computer Aided Design Technology: MaDE - Manufacturing and Design Engineering (EGR327/AGR328)

This program provides occupational and technical skills for job entry in manufacturing and construction or college entrance in the fields of engineering, design, and architecture. You will be introduced to principles and practices, engineering/construction/manufacturing standards, and the use of references and technical information. In this program students design, document, and build their activities using industry leading software and equipment. Participation in a student organization is encouraged and industry software certifications are available.

The Computer Aided Design Technology program is a two or four semester career area that provides students with the occupational and technical skills for job entry in manufacturing and construction or college entrance in the fields of engineering, design, and architecture.

The engineering/manufacturing curriculum of this course emphasizes principles and practices, engineering standards and the use of references and technical information for production of manufactured goods. Industry based 2D and 3D computer aided design skills will be taught, as well as introduction to computer aided machining (CAM) and computer aided coordinate measuring (CMM). Rapid prototyping will be integrated with the use of multiple types of 3D printers and computer numerically controlled (CNC) equipment.

The architectural curriculum of this course emphasizes design studies and technical information, and the production of construction drawings. Interior design, landscape design and the development and study of energy efficient housing is incorporated in the curriculum to prepare students for changes in the housing industry. 2D and 3D computer aided design skills in architecture and construction industries are practiced and critiqued by professionals. Model building is used to improve visualization skills.

Industry leading software packages learned and used include Autodesk products: AutoCAD, Inventor, Revit; Dassault Systems Solidworks, and CNC Software Inc. Mastercam. Software certified user certifications are available.

Prerequisites: Mechanical/architectural drafting/design recommended.

### Carpentry

(Carpentry I - STA265/266, Carpentry II - STA365/366)

Prerequisites: TEC211 Intro to Wood Construction 1. Grades: 10-11-12

This program concentrates on craftsmanship in the areas of woodworking and carpentry. In year one, students will continue to develop machine techniques as they construct various projects including cabinets, tables, and finish carpentry construction applications. During year two, students to continue to develop machine techniques as they construct individual projects which will be developed by the student and teacher together. During both years student will be exposed to home building concepts and techniques, ranging from framing, flooring, trim, roofing, and other aspects of residential types of building projects. Work-based learning experiences will be provided during both years to allow students to gain understanding of the various opportunities for future employment in a career in carpentry. In addition, students will learn teamwork and participate in budgeting, purchasing, and estimating to prepare for careers in

contracting. This experience has direct links to the local union apprenticeship programs, DMACC and other training programs after graduating from high school.

### **Advanced Paint Applications (STA271/STA272/STA369/STA370)**

The Advanced Paint Applications program focuses on getting students in the field to acquire the skills necessary for the commercial painting industry. They learn the proper use of hand and power equipment used for applying a variety of finishes. Some specific skills taught in the program include brush and roller applications, estimating costs, surface preparation, and taping for drywall applications. Along with direct links to union apprenticeships, students can earn a ten-hour OSHA card for general construction.

Prerequisites: Technical Education course recommended.

### **Plumbing & Mechanical Systems (STA443/STA434)**

The Plumbing & Mechanical Systems (HVAC) program is currently a one-year program which provides students with hands-on skills, knowledge, and attitude needed to begin their career in the Plumbing & Mechanical Systems industries. Students will explore the many career options available in today's Plumbing & Mechanical Systems Professions. Students will learn about safety, the tools of the trade, skilled trades math how to read Drawings, various piping materials and connection methods using fittings, plumbing fixtures, Drain, Waste, and Vent Systems, Water Distribution Systems, and HVAC fundamentals, various piping materials and connection methods using fittings, Furnaces, Air Conditioning equipment, and thermostats. Integrated into the course is a Skilled Trades Technical Math Course. The Plumbing and Technical Math Course earns students high school and DMACC Credits.

### **Electricity (STA371/STA372, STA471/472)**

The electrical program is a multi-year program that provides students with hands-on skills, knowledge, and attitude needed to begin their career in the electrical industry. Students will explore electricity and identify how to safely work around electricity. Students will spend time building and understanding electrical circuits, practice with and learn the safe and proper use of working with common electrical tools and electrical materials, practice bending; cutting; and threading electrical conduit, use full scale construction drawings to become proficient in reading blueprints, install a residential electrical service, electrical panel, and common residential electrical devices.

Throughout the program, students will be given the opportunity to tour, work with, and apply for local electrical apprenticeships and local industry leaders. Students will spend time working on their math and measurement skills needed for passage through an electrical apprenticeship. Students will demonstrate employability skills; practicing needed communication skills, expected workplace skills, and collaborative team skills.

Successful completion of the electrical program will result in receiving certification of Interim Credentialing and can provide advanced placement into the Des Moines Electrical Apprenticeship

### **Welding Technology (STA375/STA376/STA475/STA476)**

Welding provides opportunities for students to gain skills in blueprint reading, design, layout, and fabrication of specific projects great and small. Throughout the program, they develop skills in different welds such as oxy-acetylene, shield metal arc, MIG, and plasma arc cutting. Students also receive instruction on key construction welding techniques to include pipe welding, as well as TIG welding with a variety of steels and steel alloys. This course gives them the opportunity to participate in the Student American Welding Society organization.

Prerequisites: Technical Education course recommended.

# Technology & Systems Integration Academy

## Cybersecurity (CBS381/CBS382/CBS383/CBS384)

Cybersecurity is a multi-year program with two block courses designed to assist students in acquiring the knowledge and skills needed for success in one of today's fastest growing career areas! Students learn about firewalls, vpns, computer forensics, ethical hacking, and so much more! We also have a ton of fun doing hands-on work, going on field trips, participating in the cybersecurity competitions, paid registered apprenticeships, and much more! Students who complete this course can earn IT certifications and over 30 DMACC credits! The skills learned in this course will be a solid foundation for a career in cybersecurity!

Students will all receive DMACC dual-enrollment credit for the following courses. These college credits will transfer to any accredited college, or can be used as a part of a degree obtained from DMACC.

DMACC Core competencies for these courses can be found at:

<https://go.dmac.edu/competencies/Pages/welcome.aspx>

## Game Design & Programming (TEC435/TEC436)

Delving into both technology and creativity, Software Design and Gaming immerses students into a simulated internship for a video game design company. They use the design process as well as other skills (graphic design, programming, and music generation) to create 2D and 3D video games. Game creation software is used to package images, textures, audio, media, and programming code into the final product. Students should anticipate a video game design competition in the spring semester.

Video game software compiler DarkBASIC Pro will be used to package images, textures, sounds, music, media and programming code to package final game products. Experience in software design will allow the student to realize the potential for entertainment and educational game design, application design and programming, and simulation design.

Prerequisites: Computer class recommended along with strong interest in field.

# Transportation Academy

## Introduction to Automotive (CAR228)

Basic physical and mechanical principals related to the transportation field, including ownership, maintenance, and related careers will be covered in this course. Through instruction, demonstrations, hands-on and problem-solving activities, students gain knowledge of skills involved in the operation and servicing of internal combustion engine systems, and the body and structural systems of various vehicles, including their parts and accessories. They also learn to apply safety as related to the vehicle, hand and power tools, test equipment, and materials common to this course. Students gain additional knowledge and skills in the cranking and charging systems, fuel systems, power transmission devices, body and chassis systems, steering components, and accessory systems. Instruction will emphasize technologies related to modern vehicles with an introduction to electronic and computer-controlled systems. Introduction to Auto Technology, Auto Collision and Welding are included in this course of study.

Prerequisites: Strong career interest.

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## Automotive Collision Repair (CAR313/CAR314/CAR413/CAR414)

Students in the Automotive Collision Repair program gain the marketable trade of repairing what others have managed to destroy. They are provided with supervised experience in repairing late model automobiles. Quality workmanship, shop safety, work ethic, cooperation, dependability, and responsibility are topics of importance. Students in this program work with the latest hand and power tools unique to this trade.

Prerequisites: Technical education courses recommended along with strong career interest in the field.

## Automotive Technology (CAR317/CAR417/CAR418/CAR421/CAR422)

In the Automotive Technology program students complete competencies and gain skills in working with automotive engines, brakes, steering and suspension, electricity/electronics, HVAC, engine performance, and transmissions. The program is also



affiliated with most of the major automotive manufacturers including Ford, General Motors, Toyota, Honda and Chrysler through AYES (Automotive Youth Educations Systems).

Students are engaged academically in the classroom learning basic automotive knowledge and skills. Students are then exposed to real world activities in the automotive lab learning how to safely diagnose, disassemble, assemble and repair all aspects of the modern automobile. Students are introduced to automotive apprentice training programs through dealership tours and job shadowing. The AYES program allows successful students the opportunity to get a head start on their career with early entrance into dealerships and repair facilities through internships and co-op agreements. Students also have the opportunity to certify in four automotive areas through Ford Motor Company in the Maintenance and Light Repair (MLR) Program.

Prerequisites: Tech Ed course recommended.

## **Aviation Technology**

**(AVI225, AVI341, FLT441/442, FLT 451,452)**

The Aviation Technology Academy at 205 County Line Road on the southside of Des Moines is designed to train students for careers in various areas of the rapidly growing Aviation Industry. Students have opportunities to become adept in Airlines Maintenance Airframe/Power Plant mechanics, Fixed Base Operators (military or corporate operations), and Piloting. The Aviation Technology Academy is only FAA Certified program at the high school level in Iowa, as well as the only high school program of its type in the entire Midwest. While students earn high school credit learning aviation technology, they also gain college credit at no additional cost.

Prerequisites: Technical education courses recommended along with strong career interest in the field.

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## English Language Learners Program

The English Learner (EL) Program offers courses to both newly arrived immigrant students whose first language is not English, and to Long Term ELL Learners. Students are placed in courses according to their English language proficiency levels and length of time in the U.S. The unique needs of English Learners are met by the instructional methods and materials designed to increase English proficiency in listening, speaking, reading, writing, and academic language.

Goals for the district's English Language Learner Program curriculum include:

- To teach the critical language, knowledge about language, and skills using language that are in college-and career-ready standards and that are necessary for English language learners to be successful in schools
- To teach language functions (what students can do with language to accomplish content-specific tasks) and language forms (vocabulary, grammar, and discourse) which are needed by ELLs as they develop competence in the practices associated with English language arts & literacy and other content areas
- To recognize students' diverse ethnic and cultural backgrounds and experiences
- To develop social and academic language in the context of real experiences

### Curriculum Coordinator

Suzanna Sieren

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### High School ELL Language Instruction Education Program (LIEP)

Placement of English language learners into the correct courses can be determined by several data points such the length of time students have been in the U.S. and the results from the ELPA 21 Screener for newly identified students or the annual ELPA21 in all domain scores. Students in the intensive program should expect to remain in school for 2-3 years minimum, despite grade level. The chart below is to be used to guide schools in placing students in the appropriate courses. In some instances, it will be necessary to consider other factors such as Iowa Assessment scores, Map score, level of success in previous ELL and/or core courses, and teacher recommendation.

### Process for waiving ELL services

1. Upon parents' decision to waive the LIEP service for their child (children), they are asked to sign and date the "Request for the English Language Development Program Withdrawal/Denial of Enrollment" form. This document is kept in the ELL Portfolio.
2. In the event that parents choose to waive their child's participation in the district ELL program, the student's academic progress will continue to be monitored. The student will also be included in the annual language proficiency assessments and reporting.
3. When parents decide to withdraw their child (children) from the current LIEP (applicable for current ELL), ELL teacher will send the "Withdrawal/ Denial Services" form home for parents to sign and date. The signed and dated form will be kept in the student's ELL portfolio.

An ELL student's required courses in English that apply towards graduation can be met in a variety of ways depending on a student's English language proficiency level when they first enrolled in grade 9. *To ensure that students are prepared for the next stage in their life, passing the minimum required English 1 course indicates that they possess the language skills necessary to enter the workforce or post-secondary education or training opportunities. To meet the qualifications for*

*graduation from the Des Moines Public Schools, students must have at least 4 credits of English. One credit must represent English 1 (LA103/104, Sheltered ELL English LA929/930) or course of higher complexity.*

### **Eng Lang Development I S1 (MIS921)**

PREREQUISITE: NONE | Offered: Fall | .5 Credit

This is a beginning course for newly arrived students who have not previously studied English or who have very Basic English skills. Students in this course are primarily Beginning Level students. This course includes vocabulary and language structures with an emphasis on communicative competence. This course receives elective credit and enrollment is concurrent with ELA Foundations I. It is the first semester of a yearlong course. Lexiles 170 and below.

### **Eng Lang Development I S2 (MIS922)**

PREREQUISITE: Appropriate English Language Proficiency | Offered: Spring | .5 Credit

This is a beginning course for newly arrived students who have not previously studied English or who have very Basic English skills. Students in this course are primarily Beginning Level students. This course includes vocabulary and language structures with an emphasis on communicative competence. This course receives elective credit and enrollment is concurrent with ELA Foundations I. It is the second semester of a yearlong course. Lexiles 170 and below.

### **Eng Lang Development II S1 (MIS933)**

PREREQUISITE: Appropriate English Language Proficiency | Offered: Fall | .5 Credit

This course extends the basic skills of ELD I in listening comprehension, speaking/oral communications, reading and writing. Students in this course are primarily Beginning Level students. This is a course for students who have completed ELD I coursework, have studied English approximately one year before entering U.S. schools, and /or who test at this level of proficiency. This course receives elective credit. Enrollment is concurrent in ELA Foundations II. It is the first semester of a yearlong course. Lexiles 170-415.

### **Eng Lang Development II S2 (MIS934)**

PREREQUISITE: Appropriate English Language Proficiency | Offered: Spring | .5 Credit

This course extends the basic skills of ELD I in listening comprehension, speaking/oral communications, reading and writing. Students in this course are primarily Beginning Level students. This is a course for students who have completed ELD I coursework, have studied English approximately one year before entering U.S. schools, and /or who test at this level of proficiency. This course receives elective credit. Enrollment is concurrent in ELA Foundations II. It is the second semester of a yearlong course. Lexiles 170-415.

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### **Eng Lang Development III S1 (LA923)**

PREREQUISITE: Appropriate English Language Proficiency | Offered: Fall | .5 Credit

This course continues to extend the basic skill of ELD 2 listening comprehension, speaking/oral communication, reading and writing. Students in this course are primarily Early Intermediate students. This course is for students who have successfully completed ELD 2 coursework, have studied English approximately two years before entering U.S. schools, and/or who test at this level. This course receives English credit. This course can be concurrent enrollment with ELL English I, or English I. It is the first semester of a yearlong course. Lexiles 415-635.

### **Eng Lang Development III S2 (LA924)**

PREREQUISITE: Appropriate English Language Proficiency | Offered: Spring | .5 Credit

This course continues to extend the basic skill of ELD 2 listening comprehension, speaking/oral communication, reading and writing. Students in this course are primarily Early Intermediate students. This course is for students who have

successfully completed ELD 2 coursework, have studied English approximately two years before entering U.S. schools, and/or who test at this level. This course receives English credit. This course can be concurrent enrollment with ELL English I, or English I. It is the second semester a yearlong course. Lexiles 415-635.

### **Eng Lang Development IV S1 (LA925)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Fall](#) | .5 Credit

The focus of this course is on the enhancement of students' listening, speaking, reading, and writing skills in English through the study of both narrative and informational written and oral text. Students in this course are primarily Intermediate Level students. This course receives English credit. There is a concurrent enrollment in an English class. It is the first semester of a yearlong course. Lexiles 635-770.

### **Eng Lang Development IV S2 (LA926)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Spring](#) | .5 Credit

The focus of this course is on the enhancement of students' listening, speaking, reading, and writing skills in English through the study of both narrative and informational written and oral text. Students in this course are primarily Intermediate Level students. This course receives English credit. There is a concurrent enrollment in an English class. It is the second semester of a yearlong course. Lexiles 635-770.

### **Eng Lang Development V S1 (LA927)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Fall](#) | .5 Credit

In this course students are independently applying strategies to expand their academic reading, writing, listening and speaking skills. Students in this course are primarily Early Advanced students. This course receives English credit. This is a concurrent enrollment in an English class. It is the first semester of a yearlong course. Lexiles 770-855.

### **Eng Lang Development V S2 (LA928)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Spring](#) | .5 Credit

In this course students are independently applying strategies to expand their academic reading, writing, listening and speaking skills. Students in this course are primarily Early Advanced students. This course receives English credit. This is a concurrent enrollment in an English class. It is the second semester of a yearlong course. Lexiles 770-855.

### **ELA Foundations I S1 (LA911)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Fall](#) | 1 Credit

This course focuses on integrating reading skills, writing skills, and vocabulary building from study of narrative and informational oral or written text. This course includes teaching of foundational reading and writing skills. Students in this course are primarily Beginning Level students. This course receives English credit. Enrollment is concurrent with ELD I. It is semester one of a yearlong course. Lexiles 170 and below.

### **ELA Foundations I S2 (LA912)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Spring](#) | 1 Credit

This course focuses on integrating reading skills, writing skills, and vocabulary building from study of narrative and informational oral or written text. This course includes teaching of foundational reading and writing skills. Students in this

course are primarily Beginning Level students. This course receives English credit. Enrollment is concurrent with ELD I. It is semester two of a yearlong course. Lexiles 170 and below.

### **ELA Foundations II S1 (LA913)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Fall](#) | 1 Credit

This course focuses on consolidating many of the beginning skills through extended practice and instruction as students gain the new skills that are presented at this level. Instruction emphasizes interpersonal communication and academic skills. Students in this course are primarily Beginning Level students. This course receives English credit. This is concurrent enrollment in ELD II. It is semester one of a yearlong course. Lexiles 170-415.

### **ELA Foundations II S2 (LA914)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Spring](#) | 1 Credit

This course focuses on consolidating many of the beginning skills through extended practice and instruction as students gain the new skills that are presented at this level. Instruction emphasizes interpersonal communication and academic skills. Students in this course are primarily Beginning Level students. This course receives English credit. This is concurrent enrollment in ELD II. It is semester two of a yearlong course. Lexiles 170-415.

### **ELL Intensive Foundations (MIS920)**

PREREQUISITE: NONE | Offered: [Fall/Spring](#) | .5 Credit

This course is for Beginning level students that audited semester one or two of ELA Foundations I or Eng Lang Development I courses. Beginning level students that enroll with DMPS second semester should also take this course. The focus of this course is to fill in the topics that were missed in the ELA Foundations I and Eng Lang Development I classes. Lexiles 170 and below.

### **Language of Science S1 (MIS 941)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Fall](#) | .5 Credit

The focus of this course is language development through the exploration of science concepts and skills. It will offer a balanced science experience by engaging students in the practice of science and help them develop their understanding of scientific phenomena and the natural world. This course is designed for newly arrived English Language Learners. It is a yearlong course.

### **Language of Science S2 (MIS 942)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Spring](#) | .5 Credit

The focus of this course is language development through the exploration of science concepts and skills. It will offer a balanced science experience by engaging students in the practice of science and help them develop their understanding of scientific phenomena and the natural world. This course is designed for newly arrived English Language Learners. It is a yearlong course

### **ELL Academic Skills (MIS931)**

PREREQUISITE: [Appropriate English Language Proficiency](#) | Offered: [Fall](#) | .5 Credit

This course is for Long Term ELL Students who are close to proficiency or proficient in English language development. Students continue to acquire precise academic vocabulary in all four language domains, learn to effectively communicate

across discourses, and interact and respond to text across genres with a critical, global lens. This is an advanced level ELL course. Lexiles 855 and above.

### **ELL Eng I S1 (LA103 (ELL))**

PREREQUISITE: NONE | Offered: Fall | .5 Credit

This is an ELL Sheltered English course. English I develops basic structures of reading and writing, using a variety of works from diverse authors to increase student interest, awareness, appreciation, and understanding of a variety of genre as well as opportunities to apply the writing process to promote communication through written expression. Students will come to understand that personal expression and the way we express ourselves is influenced by society and culture through literary analysis, reflective writing, persuasive writing and character analysis. Lexiles 415-635

### **ELL Eng I S2 (LA104 (ELL))**

PREREQUISITE: NONE | Offered: Spring | .5 Credit

This is an ELL Sheltered English course. English I develops basic structures of reading and writing, using a variety of works from diverse authors to increase student interest, awareness, appreciation, and understanding of a variety of genre as well as opportunities to apply the writing process to promote communication through written expression. Students will come to understand that personal expression and the way we express ourselves is influenced by society and culture through literary analysis, reflective writing, persuasive writing and character analysis. Lexiles 415-635.

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# Diploma Information

## Considerations for Early Graduation

Students eligible for early graduation have some important things to consider as they choose a January or May diploma date. The date on the diploma can affect federal funding, college scholarship eligibility, child support, and social security. Students and their families should use the following information to make a choice that is right for them and their particular situation.

If a student chooses to graduate in January, they are permitted to participate in May with the rest of their graduating class, as DMPS does not currently hold a January commencement program. These students will then have a diploma dated with a January graduation date and are not allowed to attend school or required to take additional classes during the second semester. The diploma will also be held until May.

If a student meets graduation requirements at the close of S1, they may continue S2 and graduate in May with the rest of their graduating class. These students will then have a diploma with a May graduation date. It is highly suggested that these students take a minimum of 4 classes/2.0 credits during S2 so they are considered full time and eligible to receive federal funding, qualify for child support, social security, and scholarships from colleges.

## Educational Equity Statement

The Des Moines Independent Community School District does not discriminate on the basis of race, color, national origin, gender, disability, religion, creed, age (for employment), marital status (for programs), sexual orientation, gender identity and socioeconomic status (for programs) in its educational programs and its employment practices.

The Des Moines Independent Community School District offers career and technical programs in the following service areas:

Agriculture, Food, & Natural Resources; Arts, Communication, & Information Systems; Applied Sciences, Technology, Engineering, & Manufacturing; Health Sciences; Human Services; and Business, Finance, Marketing, & Management. Career & Technical Education courses delivered at home high schools have no admissions requirements beyond the prerequisites listed with the course description. Central Campus is open to all qualifying high school students regardless of home district. Criteria for enrollment in Central Campus programming with requests exceeding capacity is as follows: the student expresses strong interest in a career path, is credited as a junior or senior (does not apply to courses designed for sophomores or three-year programs), has met prerequisites at their home high school, is on track to graduate, has a strong attendance record, demonstrates strong citizenship skills, and enrollment would increase opportunities for underserved populations. No one indicator is a deciding factor in enrollment. Students not meeting these criteria may work with their counselor and school administrator to seek an exception

There is a grievance procedure for processing complaints of discrimination. If you have questions or a grievance related to this policy, please contact the District Equity Officer, 2100 Fleur Drive, Des Moines, IA 50321; phone: 515-242-7662.

Complaints can also be directed to the Iowa Civil Rights Commission, 400 E. 14th Street, Des Moines, IA50319-1004, (515) 281-4121, or Region VII Office for Civil Rights, Citigroup Center 500 W. Madison Street, Suite 1475 Chicago, IL 6066