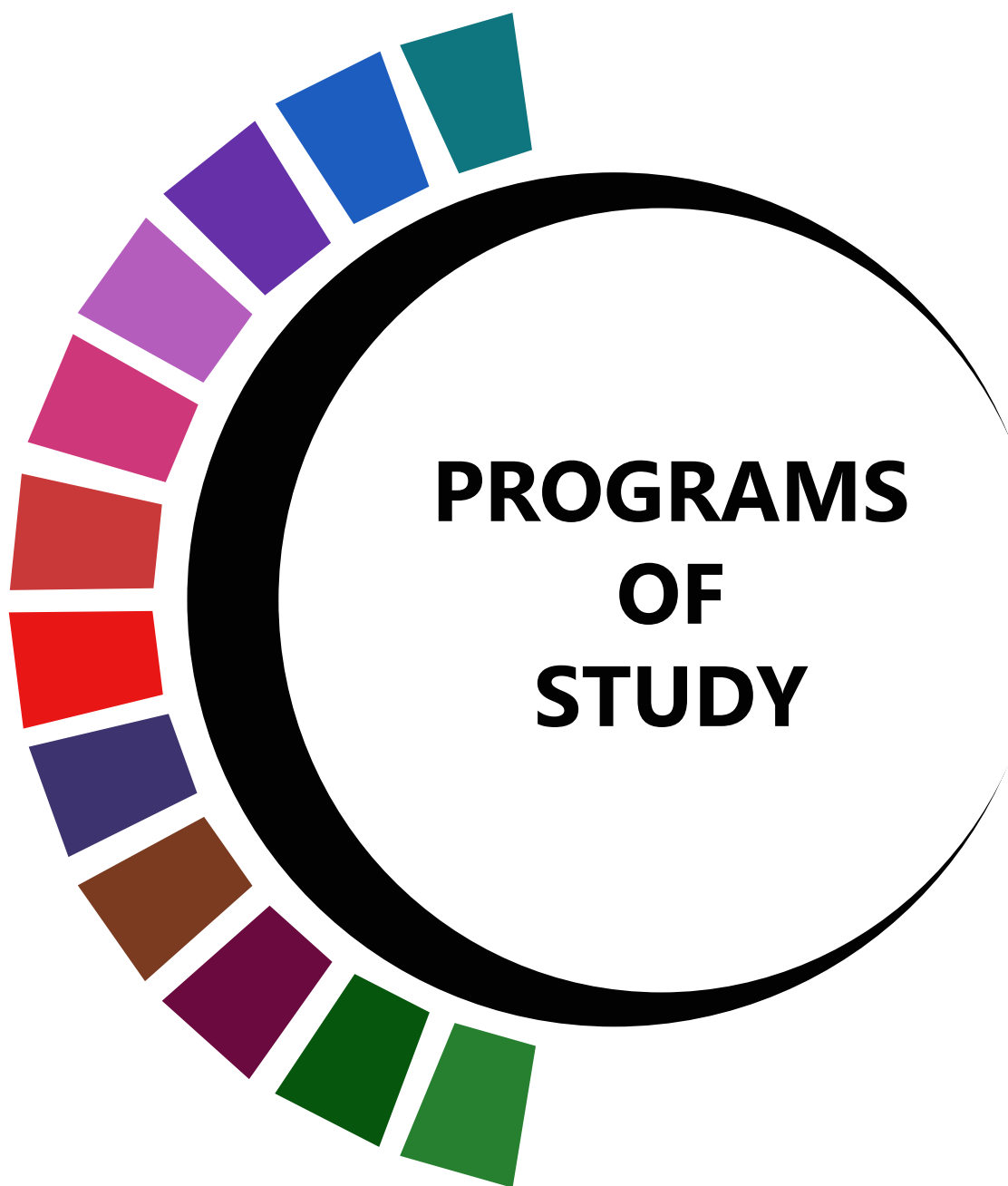


CAREER AND TECHNICAL EDUCATION



COMMITTED TO EXCELLENCE
DEDICATED TO CARING
POWERED BY LEARNING
PLANO ISD PROUD.



PLANO ISD VISION

It is the policy of Plano ISD not to discriminate on the basis of race, color, national origin, sex or handicap in its vocational programs, services or activities as required by Title VI of the Civil Rights Act of 1964, as amended; Title IX of the Educational Amendments of 1972; and Section 504 of the Rehabilitation Act of 1973, as amended. Plano ISD will take steps to assure that lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs. Plano ISD will take steps to ensure cost will not prevent access to programs.

CAREER & TECHNICAL EDUCATION

Courses below are not tied to grade levels. Not all courses have a required prerequisite. Courses listed in *italics* have been added for local purpose.

LEVEL 1		LEVEL 2
AGRICULTURE, FOOD, AND NATURAL RESOURCES		
AGRIBUSINESS	Principles of Agriculture, Food, and Natural Resources	Professional Standards in Agribusiness
ANIMAL SCIENCE	Principles of Agriculture, Food, and Natural Resources	Small Animal Management
APPLIED AGRICULTURAL ENGINEERING	Principles of Agriculture, Food, and Natural Resources	<i>Professional Communications</i> <i>Professional Standards in Agribusiness</i>
ENVIRONMENTAL AND NATURAL RESOURCES	Principles of Agriculture, Food, and Natural Resources	Wildlife, Fisheries, and Ecology Management *, **
PLANT SCIENCE	Principles of Agriculture, Food, and Natural Resources	Landscape Design and Management
ARCHITECTURE AND CONSTRUCTION		
ARCHITECTURAL DESIGN	<i>Professional Communications</i>	<i>Digital Media</i>
ARTS, AUDIO VIDEO TECHNOLOGY, AND COMMUNICATIONS		
GRAPHIC DESIGN AND MULTIMEDIA ARTS	Principles of Arts, A/V Technology and Communications Video Game Design	Digital Media
DIGITAL COMMUNICATIONS	Principles of Arts, A/V Technology, and Communications	Professional Communications
BUSINESS, MARKETING, AND FINANCE		
ACCOUNTING AND FINANCIAL SERVICES	Principles of Business, Marketing, and Finance	Business Information Management (BIM) *
BUSINESS MANAGEMENT	Principles of Business, Marketing, and Finance	Business Information Management (BIM) * Virtual Business
ENTREPRENEURSHIP	Principles of Business, Marketing, and Finance	Business Information Management (BIM) *
MARKETING AND SALES	Principles of Business, Marketing, and Finance	Virtual Business
EDUCATION AND TRAINING		
EARLY LEARNING	Principles of Human Services	Child Development
TEACHING AND TRAINING	Principles of Human Services	Child Development

FOR MORE INFORMATION, VISIT OUR WEBSITE: www.pisd.edu/cte-programs-of-study



PROGRAMS OF STUDY - AT A GLANCE

Industry Based Certifications listed in **bold** count towards College, Career, and Military Readiness; those listed in *italics* have been added for local purpose only.

LEVEL 3	LEVEL 4	INDUSTRY BASED CERTIFICATIONS <i>(subject to change)</i>	
AGRICULTURE, FOOD, AND NATURAL RESOURCES			
Professional Communications	Career Preparation I and Extended Career Preparation Practicum in Agriculture, Food, and Natural Resources		
Equine Science Livestock Production Veterinary Medical Applications	Honors Scientific Research and Design Practicum in Agriculture, Food, and Natural Resources *, **	* Certified Veterinary Assistant Level 1 ** <i>Hill's Pet Nutrition</i>	 
Agricultural Mechanics and Metal Technologies	Agricultural Structures Design and Fabrication * Honors Scientific Research and Design Practicum in Agriculture, Food, and Natural Resources	* American Welding Society	 
Honors Scientific Research and Design	Practicum in Agriculture, Food, and Natural Resources	* <i>Texas Boater Education</i> ** <i>Texas Hunter Education</i>	
Floral Design *, ** Horticultural Science	Advanced Floral Design + Honors Scientific Research and Design Practicum in Agriculture, Food, and Natural Resources +	* Texas State Florists' Association Knowledge Based ** Texas State Florists' Association Level 1 + Texas State Florists' Association Level 2	 
ARCHITECTURE AND CONSTRUCTION			
Architectural Design I * Interior Design I	Architectural Design II ** Career Preparation I and Extended Career Preparation	* Autodesk Certified User in AutoCAD ** Autodesk Certified User in Revit Architecture	 
ARTS, AUDIO VIDEO TECHNOLOGY, AND COMMUNICATIONS			
Fashion Design I Graphic Design and Illustration I *	Career Preparation I and Extended Career Preparation Fashion Design II/Lab Graphic Design and Illustration II/Lab *	* Adobe Certified Professional Illustrator/Photoshop/InDesign	
Audio Video Production I *	Audio Video Production II/Lab *	* Adobe Certified Professional Premiere Pro	
BUSINESS, MARKETING, AND FINANCE			
Accounting I	Accounting II Honors ** Career Preparation I and Extended Career Preparation	* Microsoft Office Specialist (MOS) ** Intuit Quickbooks Certified User	
Business Law Global Business	Career Preparation I and Extended Career Preparation	* Microsoft Office Specialist (MOS)	
Entrepreneurship **	Career Preparation I and Extended Career Preparation	* Microsoft Office Specialist (MOS) ** Entrepreneurship and Small Business	
Fashion Marketing Social Media Marketing * Sports and Entertainment Marketing	Career Preparation I and Extended Career Preparation	* Stukent Social Media Marketing	
EDUCATION AND TRAINING			
<i>Interpersonal Studies</i> <i>Professional Communications</i>	Career Preparation I and Extended Career Preparation		
Instructional Practices (Intro to Teaching)	Career Preparation I and Extended Career Preparation Practicum in Education and Training *	* Educational Aide I	

ENDORSEMENTS:



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER & TECHNICAL EDUCATION

Courses below are not tied to grade levels. Not all courses have a required prerequisite. Courses listed in *italics* have been added for local purpose.



























PROGRAM OF STUDY	LEVEL 1	LEVEL 2
HEALTH SCIENCE		
HEALTH INFORMATICS	Principles of Health Science	Medical Terminology
HEALTHCARE DIAGNOSTICS	Principles of Health Science	Health Science Theory * Medical Terminology
HEALTHCARE THERAPEUTIC	Principles of Health Science	Health Science Theory * Medical Terminology
MEDICAL THERAPY	Principles of Health Science	Health Science Theory * Medical Terminology
NURSING SCIENCE	Principles of Health Science	Medical Terminology
HOSPITALITY AND TOURISM		
CULINARY ARTS	Principles of Hospitality and Tourism	Introduction to Culinary Arts
TRAVEL, TOURISM, AND ATTRACTIONS	Principles of Hospitality and Tourism	<i>Professional Communications</i>
HUMAN SERVICES		
FAMILY AND COMMUNITY SERVICES	Principles of Human Services Professional Communications	Child Development Dollars and Sense Lifetime Nutrition and Wellness
HEALTH AND WELLNESS	Principles of Human Services	Lifetime Nutrition and Wellness
INFORMATION TECHNOLOGY		
NETWORKING SYSTEMS	Computer Science I Principles of Information Technology	AP Computer Science Principles
WEB DEVELOPMENT	Principles of Information Technology	Computer Science I
LAW AND PUBLIC SERVICE		
LAW ENFORCEMENT	<i>Professional Communications</i>	<i>Business Information Management (BIM) *</i>
SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS		
CYBERSECURITY	Computer Science I Principles of Information Technology	AP Computer Science Principles
ENGINEERING	Introduction to Engineering Design (PLTW)	Engineering Science (PLTW)
PROGRAMMING AND SOFTWARE DEVELOPMENT	Computer Science I	AP Computer Science Principles
TRANSPORTATION, DISTRIBUTION, AND LOGISTICS		
AUTOMOTIVE	<i>Professional Communications</i>	<i>Business Information Management (BIM) *</i>

FOR MORE INFORMATION, VISIT OUR WEBSITE: www.pisd.edu/cte-programs-of-study



PROGRAMS OF STUDY - AT A GLANCE

Industry Based Certifications listed in **bold** count towards College, Career, and Military Readiness; those listed in *italics* have been added for local purpose only.

LEVEL 3	LEVEL 4	INDUSTRY BASED CERTIFICATIONS <i>(subject to change)</i>	
HEALTH SCIENCE			
Business Information Management (BIM) *	World Health Research	* Microsoft Office Specialist (MOS)	 
Anatomy and Physiology Practicum in Health Science I (Clinical Rotation I) **	Practicum in Health Science II (Clinical Rotation II) +, ++	* American Heart Association First Aid and CPR	 
Anatomy and Physiology Practicum in Health Science I (Clinical Rotation I) **	Pharmacology ++ Practicum in Health Science II (Clinical Rotation II) +, ++	** American Heart Association Healthcare Provider CPR + Patient Care Technician	 
Practicum in Health Science I (Clinical Rotation I) **	Practicum in Health Science II (Clinical Rotation II) +, ++	++ Pharmacy Technician	 
Anatomy and Physiology	Pharmacology ++	++ Pharmacy Technician	 
HOSPITALITY AND TOURISM			
Culinary Arts *	Career Preparation I and Extended Career Preparation Food Science Practicum in Culinary Arts **	* Texas Food Handlers ** ServSafe Manager	
Entrepreneurship + Global Business Sports and Entertainment Marketing	Career Preparation I and Extended Career Preparation	+ Entrepreneurship and Small Business	
HUMAN SERVICES			
Interpersonal Studies	Career Preparation I and Extended Career Preparation		
Interpersonal Studies	Career Preparation I and Extended Career Preparation		
INFORMATION TECHNOLOGY			
Internetworking Technologies I	Career Preparation I and Extended Career Preparation Internetworking Technologies II		 
Web Design	Career Preparation I and Extended Career Preparation		 
LAW AND PUBLIC SERVICE			
Principles of Law, Public Safety, Corrections, and Security Law Enforcement I **	Forensic Science Law Enforcement II	* Microsoft Office Specialist (MOS) ** Non-Commissioned Security Officer Level II	
SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS			
AP Computer Science A Internetworking Technologies I	Internetworking Technologies II		 
Aerospace Engineering (PLTW) Digital Electronics (PLTW)	Engineering Design and Development (PLTW) Honors Scientific Research and Design		 
Computer Science II AP Computer Science A	Career Preparation I and Extended Career Preparation Computer Science III Honors *	* Oracle Certified Associate, Java SE 8 Programmer	 
TRANSPORTATION, DISTRIBUTION, AND LOGISTICS			
Automotive Technology I: Maintenance and Light Repair + Collision Repair +	Automotive Technology II: Automotive Service + Career Preparation I and Extended Career Preparation Paint and Refinishing +	* Microsoft Office Specialist (MOS) + Automotive Service Excellence	

ENDORSEMENTS:



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



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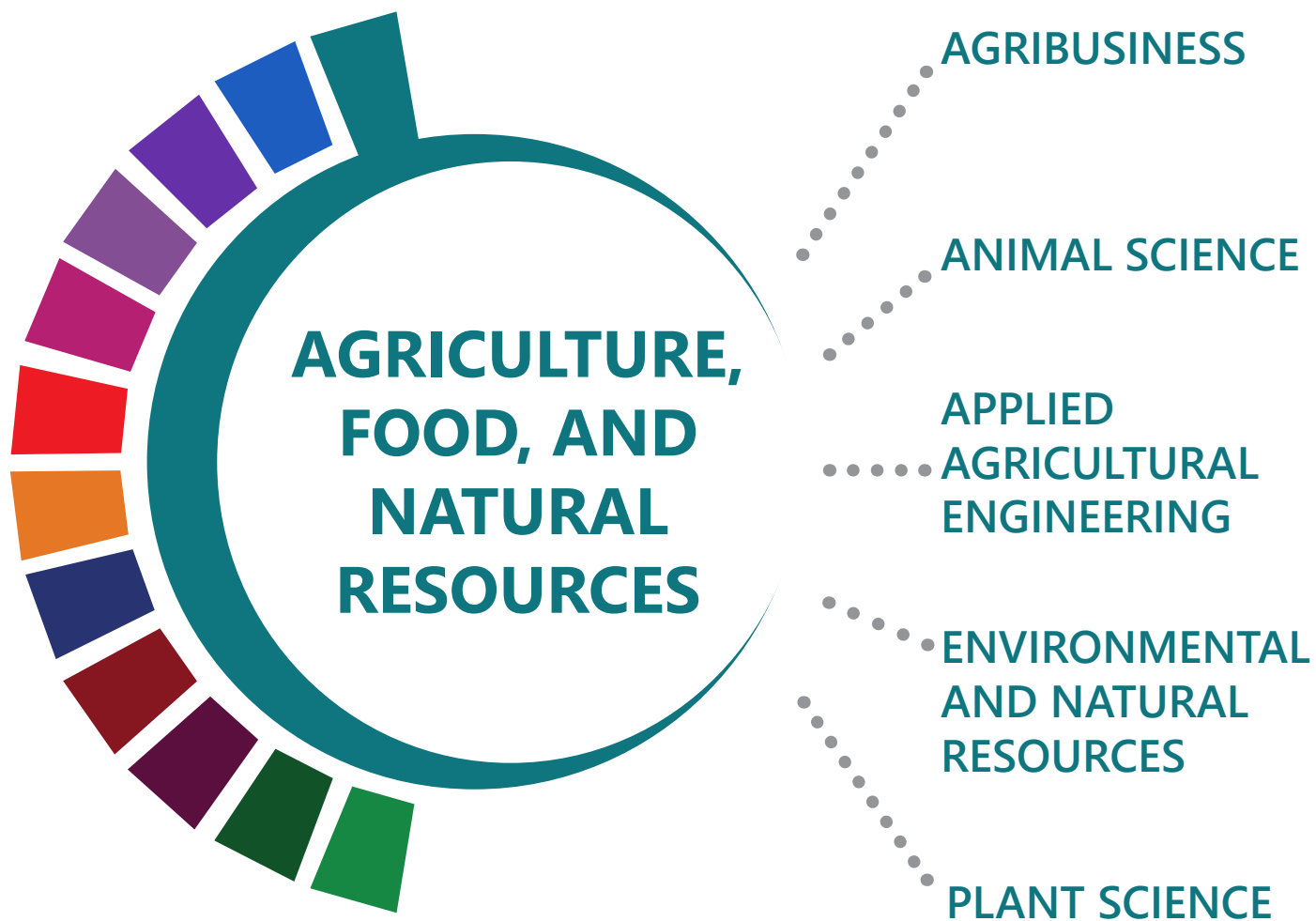
STEM

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UNDERSTANDING A PROGRAM OF STUDY



AGRICULTURE, FOOD, AND NATURAL RESOURCES

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



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STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



BUSINESS
PROFESSIONALS
OF AMERICA



DISTRIBUTIVE
EDUCATION CLUBS
OF AMERICA



FAMILY, CAREER,
AND COMMUNITY
LEADERS OF
AMERICA



NATIONAL
FFA
ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Agriculture, Food, and Natural Resources

LEVEL
2

Professional Standards in Agribusiness

LEVEL
3

Professional Communications

LEVEL
4

Career Preparation I and Extended Career Preparation
Practicum in Agriculture, Food, and Natural Resources

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55170Q	Principles of Agriculture, Food, and Natural Resources	9 - 10	None	N/A
55195B	Professional Standards in Agribusiness	9 - 12	None	N/A
45350B	Professional Communications (speech credit)	9 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
552901	Practicum in Agriculture, Food, and Natural Resources	12	Minimum of one credit (may not be Professional Communications or Career Preparation I and Extended Career Preparation) within the Agribusiness program of study	N/A

The Agribusiness program of study explores the occupations and educational opportunities associated with the business of farming and agriculturally related business that supplies farm inputs, such as machinery and seeds. This program of study may also include exploration into the marketing of farm products, the purchase of farm products either for further processing or resale, and grading or classifying unprocessed food or other agricultural products.



The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life - food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

55170Q Principles of Agriculture, Food, and Natural Resources
SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



This comprehensive course prepares students for careers in agriculture, food, and natural resource management. Students benefit from the basis of agricultural knowledge as this course allows students to explore areas of animal, plant, food, agribusiness, and environmental sciences while developing their awareness and gaining knowledge and skills that promote personal development and career success.

55195B Professional Standards in Agribusiness
SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5



This course includes topics in leadership, personal development, employee/employer relations, interpersonal communication, entrepreneurship, career opportunities, leadership styles, motivation and influence, preparing resumes and applications, job interviews, employer expectations, problem solving, setting personal goals, and time management.

45350B Professional Communications
SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5 (speech credit)

Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

552901
FULL YEAR

Practicum in Agriculture, Food, and Natural Resources

Grades: 12

Prerequisite: Minimum of one credit (may not be Professional Communications or Career Preparation I and Extended Career Preparation) within the Agribusiness program of study

Credit: 2.0



This course prepares students for careers in agriculture, food, and natural resource fields. It is delivered through classroom-based instruction and internship, job shadowing, and/or employment arrangements with local businesses. This is an Honors Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Professional Public Buyer	Agriculture Business and Management, General		
	Banking and Financial Support Services	Finance, General	
	Advertising	Financial Mathematics	
	Marketing/Marketing Management, General		

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Farmers, Ranchers, and Other Agricultural Managers	\$59,134	405	9%
Farm and Ranch Loan Officers	\$45,594	268	25%
Buyers and Purchasing Agents, Farm Products	\$46,488	102	20%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Agriculture, Food, and Natural Resources

LEVEL
2

Small Animal Management

LEVEL
3

Equine Science

Livestock Production

Veterinary Medical Applications

LEVEL
4

Honors Scientific Research and Design

Practicum in Agriculture, Food, and Natural Resources

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55170Q	Principles of Agriculture, Food, and Natural Resources	9 - 10	None	N/A
55105B	Small Animal Management	9 - 10	Principles of Agriculture, Food, and Natural Resources recommended	N/A
55130Q	Livestock Production	9 - 12	None	N/A
55145B	Equine Science	11 - 12	None	N/A
552801	Veterinary Medical Applications	11 - 12	Equine Science, Livestock Production, or Small Animal Management	N/A
208001	Honors Scientific Research & Design 1 <i>(science credit)</i>	9 - 12	Concurrent enrollment in an advanced level science course and approval of instructor through application	N/A
208131	<i>Honors Scientific Research & Design 2 (science credit)</i>	9 - 12	See course description (pg. 17)	N/A
208231	<i>Honors Scientific Research & Design 3 (science credit)</i>	9 - 12	See course description (pg. 17)	N/A
552901	Practicum in Agriculture, Food, and Natural Resources	12	Minimum of one credit (may not be Honors Scientific Research and Design 1, 2 or 3) within the Animal Science program of study	Certified Veterinary Assistant Level I, <i>Hills Pet Nutrition</i>

The Animal Science program of study focuses on the science, research, and business of animals and other living organisms. It teaches CTE learners how to apply biology and life science to real-world life processes of animals and wildlife, either in laboratories or in the field, which could include a veterinary office, a farm or ranch, or any outdoor area harboring animal life. Students may also research and analyze the growth and destruction of species and research or diagnose diseases and injuries of animals.



The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life - food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

55170Q Principles of Agriculture, Food, and Natural Resources

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0

FFA

This comprehensive course prepares students for careers in agriculture, food, and natural resource management. Students benefit from the basis of agricultural knowledge as this course allows students to explore areas of animal, plant, food, agribusiness, and environmental sciences while developing their awareness and gaining knowledge and skills that promote personal development and career success.

55105B Small Animal Management

SEMESTER

Grades: 9 - 10

Prerequisite: Principles of Agriculture, Food, and Natural Resources is recommended

Credit: 0.5

FFA

This course is designed to develop knowledge and skills pertaining to selection, ownership, nutrition, reproduction, health and management of a variety of small animals while also exploring career opportunities. This is a laboratory-oriented course that gives students hands-on experience in working with a variety of small animals to possibly include canines, felines, avian, hamsters, small mammals, and amphibians. It is suggested that students enroll in Small Animal Management before Veterinary Medical Applications.

55130Q Livestock Production

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

FFA

This course is designed to enhance knowledge and skills pertaining to the production and marketing of domestic livestock. It provides the student with the opportunity to work with live animals while learning technical skills relating to human, scientific and technological dimensions of animal systems, anatomy and physiology, nutrition, reproduction, genetics, pests and diseases, and business management and operation skills.

55145B Equine Science

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5

FFA

This course is designed to develop knowledge and skills pertaining to the selection, nutrition, reproduction, health, and management of horses. Students will learn the basic principles of care and training.

552801 Veterinary Medical Applications

FULL YEAR

Grades: 11 - 12

Prerequisite: Equine Science, Livestock Production, or Small Animal Management

Credit: 1.0

FFA

This course provides instruction for students interested in a career in Veterinary Medicine and focuses on developing the skills and competencies needed to be successful in today's industry. Instruction and laboratories include a wide variety of topics from anatomy and physiology to zoonotic diseases of domesticated companion animals and livestock.

208001 Honors Scientific Research and Design 1

FULL YEAR

Grades: 9 - 12

Prerequisite: Concurrent enrollment in an advanced level science course and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in Honors Scientific Research and Design 2 or 3. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

COURSE DESCRIPTIONS

208131 Honors Scientific Research and Design 2

FULL YEAR

Grades: 9 - 12

Prerequisite: Honors Scientific Research and Design 1, concurrent enrollment in an advanced level science course, and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

208231 Honors Scientific Research and Design 3

FULL YEAR

Grades: 9 - 12

Prerequisite: Honors Scientific Research and Design 1, Honors Scientific Research and Design 2, concurrent enrollment in an advanced level science course, and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

552901 Practicum in Agriculture, Food, and Natural Resources

FULL YEAR

Grades: 12

Prerequisite: Minimum of one credit (may not be Honors Scientific Research and Design 1, 2 or 3) within the Animal Science program of study

Credit: 2.0

Certification: Certified Veterinary Assistant Level I, *Hill's Pet Nutrition*

This course prepares students for careers in agriculture, food, and natural resource fields. It is delivered through classroom-based instruction and internship, job shadowing, and/or employment arrangements with local businesses. This is an Honors Level course.



POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Pet Groomer	Food Science and Technology	Animal Sciences	Genetics
Veterinary Technician	Veterinary Studies	Agriculture	Veterinary Medicine
Licensed Breeder	Biotechnology Laboratory Technician	Biology	Biological and Physical Sciences
	Biology Technician	Zoology/Animal Biology	Biological and Biomedical Sciences

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Animal Breeders	\$39,135	28	9%
Animal Scientists	\$57,533	22	12%
Medical Scientists	\$63,898	435	27%
Veterinarians	\$93,496	294	24%
Zoologists and Wildlife Biologists	\$67,309	45	32%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Agriculture, Food, and Natural Resources

LEVEL
2

Professional Communications

Professional Standards in Agribusiness

LEVEL
3

Agricultural Mechanics and Metal Technologies

LEVEL
4

Agricultural Structures Design and Fabrications

Practicum in Agriculture, Food, and Natural Resources

Honors Scientific Research and Design

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55170Q	Principles of Agriculture, Food, and Natural Resources	9 - 10	None	N/A
45350B	<i>Professional Communications</i> (speech credit)	9 - 12	None	N/A
55195B	<i>Professional Standards in Agribusiness</i>	9 - 12	None	N/A
55250Q	Agricultural Mechanics and Metal Technologies	11 - 12	None	N/A
552521	Agricultural Structures Design and Fabrications	12	Agricultural Mechanics and Metal Technologies	American Welding Society
208001	Honors Scientific Research & Design 1 (science credit)	9 - 12	Concurrent enrollment in an advanced level science course and approval of instructor	N/A
208131	<i>Honors Scientific Research & Design 2</i> (science credit)	9 - 12	See course description (pg. 21)	N/A
208231	<i>Honors Scientific Research & Design 3</i> (science credit)	9 - 12	See course description (pg. 21)	N/A
552901	Practicum in Agriculture, Food, and Natural Resources	12	A minimum of one credit (may not be a course added for local purpose or Honors Scientific Research and Design 1, 2, or 3) within the Applied Agricultural Engineering program of study	N/A

The Applied Agricultural Engineering program of study explores the occupations and educational opportunities associated with applying knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil water conservation, and processing agricultural products. This program of study may also include exploration into diagnosing, repairing, or overhauling farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.







The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life - food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

55170Q SEMESTER	Principles of Agriculture, Food, and Natural Resources Grades: 9 - 10 Prerequisite: None Credit: 1.0 	This comprehensive course prepares students for careers in agriculture, food, and natural resource management. Students benefit from the basis of agricultural knowledge as this course allows students to explore areas of animal, plant, food, agribusiness, and environmental sciences while developing their awareness and gaining knowledge and skills that promote personal development and career success.
45350B SEMESTER	Professional Communications Grades: 9 - 12 Prerequisite: None Credit: 0.5 (speech credit)	Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.
55195B SEMESTER	Professional Standards in Agribusiness Grades: 9 - 12 Prerequisite: None Credit: 0.5 	This course includes topics in leadership, personal development, employee/employer relations, interpersonal communication, entrepreneurship, career opportunities, leadership styles, motivation and influence, preparing resumes and applications, job interviews, employer expectations, problem solving, setting personal goals, and time management.
55250Q SEMESTER	Agricultural Mechanics and Metal Technologies Grades: 11 - 12 Prerequisite: None Credit: 1.0 	This hands-on course develops skills and competencies in the areas of plumbing, electrical wiring, concrete construction, carpentry, fencing methods, cold and hot metal techniques, and metal merging technologies. Students will learn how to use both woodworking and metal working tools and equipment safely while continuing to develop knowledge about career opportunities, entry requirements, and industry expectations.
552521 FULL YEAR 2 HR BLOCK	Agricultural Structures Design and Fabrication Grades: 12 Prerequisite: Agricultural Mechanics and Metal Technologies Credit: 2.0 Certification: American Welding Society 	In Agricultural Structures Design and Fabrication, students will explore career opportunities, entry requirements, and industry expectations while gaining knowledge about topics such as welding, facilities design and fabrication, electrical systems, and agricultural structures.
208001 FULL YEAR	Honors Scientific Research and Design 1 Grades: 9 - 12 Prerequisite: Concurrent enrollment in an advanced level science course and approval of instructor through application Credit: 1.0 (science credit)	Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in Honors Scientific Research and Design 2 or 3. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

COURSE DESCRIPTIONS

208131 *Honors Scientific Research and Design 2* FULL YEAR Grades: 9 - 12

Prerequisite: Honors Scientific Research and Design 1, concurrent enrollment in an advanced level science course, and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

208231 *Honors Scientific Research and Design 3* FULL YEAR Grades: 9 - 12

Prerequisite: Honors Scientific Research and Design 1, Honors Scientific Research and Design 2, concurrent enrollment in an advanced level science course, and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

552901 *Practicum in Agriculture, Food, and Natural Resources* FULL YEAR Grades: 12 Prerequisite: A minimum of one credit (may not be a course added for local purpose or Honors Scientific Research and Design) within the Applied Agricultural Engineering program of study Credit: 2.0



This course prepares students for careers in agriculture, food, and natural resource fields. It is delivered through classroom-based instruction and internship, job shadowing, and/or employment arrangements with local businesses. This is an Honors Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Professional Agronomist	Heavy Equipment Maintenance Technology/ Technician	Agricultural Engineering	
Certified Reliability Engineer	Agricultural Mechanization, General	Agricultural Mechanization, General	
Certified Irrigation Designer	Small Engine Mechanics and Repair Technology/ Technician		
Fluid Power Mobile Hydraulic Mechanic	Welding Technology/ Welder		

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Outdoor Power Equipment and Other Small Engine Mechanics	\$32,406	366	16%
Welders	\$41,350	6,171	9%
Farm Equipment Mechanics and Service Technicians	\$39,915	304	17%
Mobile Heavy Equipment Mechanics	\$47,299	1,627	16%
Agricultural Engineers	\$64,792	9	13%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Agriculture, Food, and Natural Resources

LEVEL
2

Wildlife, Fisheries, and Ecology Management

LEVEL
3

Honors Scientific Research and Design

LEVEL
4

Practicum in Agriculture, Food, and Natural Resources

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS (subject to change)
55170Q	Principles of Agriculture, Food, and Natural Resources	9 - 10	None	N/A
55110Q	Wildlife, Fisheries, and Ecology Management	9 - 12	None	<i>Texas Boater Education; Texas Hunter Education</i>
208001	Honors Scientific Research & Design 1 (science credit)	9 - 12	Concurrent enrollment in an advanced level science course and approval of instructor	N/A
208131	<i>Honors Scientific Research & Design 2</i> (science credit)	9 - 12	See course description (pg. 24)	N/A
208231	<i>Honors Scientific Research & Design 3</i> (science credit)	9 - 12	See course description (pg. 25)	N/A
552901	Practicum in Agriculture, Food, and Natural Resources	12	A minimum of one credit (may not be Honors Scientific Research and Design) within the Environmental and Natural Resources program of study	N/A

The Environmental and Natural Resources program of study explores the occupations and educational opportunities associated with the research, design, and planning of engineering or technical duties in the prevention and control of environmental hazards. This program of study may also include exploration into conducting research for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or the health of the population.



The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life - food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

55170Q Principles of Agriculture, Food, and Natural Resources

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



This comprehensive course prepares students for careers in agriculture, food, and natural resource management. Students benefit from the basis of agricultural knowledge as this course allows students to explore areas of animal, plant, food, agribusiness, and environmental sciences while developing their awareness and gaining knowledge and skills that promote personal development and career success.

55110Q Wildlife, Fisheries, and Ecology Management

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

Certification: *Texas Boater Education; Texas Hunter Education*



This course is designed to examine the importance of wildlife and outdoor recreation with emphasis on using scientific knowledge to study wildlife and natural resources. Sections covering boater, angler, and hunter education are also included.

208001 Honors Scientific Research and Design 1

FULL YEAR

Grades: 9 - 12

Prerequisite: Concurrent enrollment in an advanced level science course and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in Honors Scientific Research and Design 2 or 3. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

208131 Honors Scientific Research and Design 2

FULL YEAR

Grades: 9 - 12

Prerequisite: Honors Scientific Research and Design 1, concurrent enrollment in an advanced level science course, and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

COURSE DESCRIPTIONS

208231 Honors Scientific Research and Design 3

FULL YEAR

Grades: 9 - 12

Prerequisite: Honors Scientific Research and Design 1, Honors Scientific Research and Design 2, concurrent enrollment in an advanced level science course, and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

552901 Practicum in Agriculture, Food, and Natural Resources

FULL YEAR

Grades: 12

Prerequisite: A minimum of one credit (may not be Honors Scientific Research and Design) within the Environmental and Natural Resources program of study

Credit: 2.0



This course prepares students for careers in agriculture, food, and natural resource fields. It is delivered through classroom-based instruction and internship, job shadowing, and/or employment arrangements with local businesses. This is an Honors Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Board Certified Environmental Engineer - Hazardous Waste Management	Environmental Science		
Certified Water Technologist	Environmental Studies	Environmental/Environmental Health Engineering	
Certified Environmental Scientist	Wildlife, Fish, and Woodlands Science and Management		
Certified in Public Health	Environmental Engineering Technology/ Environmental Technology	Natural Resources Law Enforcement and Protective Services	Fishing and Fisheries Science and Management

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Environmental Engineering Technicians	\$53,352	101	32%
Environmental Engineers	\$86,757	288	25%
Environmental Science and Protection Technicians, Including Health	\$40,268	508	17%
Environmental Scientists and Specialists, Including Health	\$77,896	644	24%
Zoologists and Wildlife Biologists	\$67,309	45	32%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Agriculture, Food, and Natural Resources

LEVEL
2

Landscape Design and Management

LEVEL
3

Floral Design

Horticultural Science

LEVEL
4

Advanced Floral Design

Honors Scientific Research and Design

Practicum in Agriculture, Food, and Natural Resources

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55170Q	Principles of Agriculture, Food, and Natural Resources	9 - 10	None	N/A
55155B	Landscape Design and Management	9 - 12	None	N/A
55115Q	Horticultural Science	9 - 12	None	N/A
551501	Floral Design (fine arts credit)	11 - 12	None	Texas State Florists' Association Knowledge Based or Level I
208001	Honors Scientific Research & Design 1 (science credit)	9 - 12	Concurrent enrollment in an advanced level science course and approval of instructor	N/A
208131	<i>Honors Scientific Research & Design 2</i> (science credit)	9 - 12	See course description (pg. 28)	N/A
208231	<i>Honors Scientific Research & Design 3</i> (science credit)	9 - 12	See course description (pg. 29)	N/A
551801	Advanced Floral Design	12	Floral Design	Texas State Florists' Association Level 2
552901	Practicum in Agriculture, Food, and Natural Resources	12	A minimum of one credit (may not be Honors Scientific Research and Design 1, 2, or 3) within the Plant Science program of study	Texas State Florists' Association Level 2

The Plant Science program of study focuses on the science, research, and business of plants and other living organisms. It teaches students how to apply biology and life science to real-world life processes of plants and vegetation, either in laboratories or in the field.







The Agriculture, Food, and Natural Resources (AFNR) Career Cluster focuses on the essential elements of life - food, water, land, and air. This career cluster includes a diverse spectrum of occupations, ranging from farmer, rancher, and veterinarian to geologist, land conservationist, and florist. It also includes non-traditional agricultural occupations like wind energy, solar energy, and oil and gas production.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

55170Q SEMESTER	Principles of Agriculture, Food, and Natural Resources Grades: 9 - 10 Prerequisite: None Credit: 1.0 	This comprehensive course prepares students for careers in agriculture, food, and natural resource management. Students benefit from the basis of agricultural knowledge as this course allows students to explore areas of animal, plant, food, agribusiness, and environmental sciences while developing their awareness and gaining knowledge and skills that promote personal development and career success.
55155B SEMESTER	Landscape Design and Management Grades: 9 - 12 Prerequisite: None Credit: 0.5 	This course is designed to introduce students to horticultural sciences with emphasis on the technical skills involved in the designing, construction, and maintenance of planted areas and devices for the beautification of home grounds and other areas of human habitation and recreation.
55115Q SEMESTER	Horticultural Science Grades: 9 - 12 Prerequisite: None Credit: 1.0 	This course offers students the opportunity to explore plant systems and common horticulture management practices as they relate to food and ornamental plant production. Topics include ornamental trees and shrubs, insects, plant diseases, weed management, soils and plant nutrition, vegetable gardening, home fruit production, garden flowers, and water conservation.
551501 FULL YEAR	Floral Design Grades: 11 - 12 Prerequisite: None Credit: 1.0 (fine arts credit) Certification: Texas State Florists' Association Knowledge Based or Level I 	This is an activity-based course which prepares students to develop competencies in flower classification and identification, geometric and specialized floral designs, identification and classification of plants, interior landscape development, and the use of artistic elements in personal designs. Students will learn business practices as they relate to the floral industry.
208001 FULL YEAR	Honors Scientific Research and Design 1 Grades: 9 - 12 Prerequisite: Concurrent enrollment in an advanced level science course and approval of instructor through application Credit: 1.0 (science credit)	Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in Honors Scientific Research and Design 2 or 3. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.
208131 FULL YEAR	Honors Scientific Research and Design 2 Grades: 9 - 12 Prerequisite: Honors Scientific Research and Design 1, concurrent enrollment in an advanced level science course, and approval of instructor through application Credit: 1.0 (science credit)	Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

COURSE DESCRIPTIONS

208231 Honors Scientific Research and Design 3
 FULL YEAR
 Grades: 9 - 12
 Prerequisite: Honors Scientific Research and Design 1, Honors Scientific Research and Design 2, concurrent enrollment in an advanced level science course, and approval of instructor through application
 Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

551801 Advanced Floral Design
 FULL YEAR
 Grades: 12
 Prerequisite: Floral Design
 Credit: 1.0
 Certification: Texas State Florists' Association Level 2

In this course, students build on the knowledge from Floral Design and are introduced to more advanced floral design concepts, with an emphasis on specialty designs and specific occasion planning. This course focuses on building skills in advanced floral design and providing students with a thorough understanding of the design elements and planning techniques used to produce unique specialty floral designs that support the goals and objectives of a specific occasion or event. Through the analysis and evaluation of various occasion and event types, students explore the design needs and expectations of clients and propose and evaluate appropriate creations. From conception to evaluation, students are challenged to create and design appropriate specialty floral designs that meet the needs of the client. Furthermore, an emphasis on budgetary adherence and entrepreneurship equips students with many of the necessary skills needed for success in floral enterprises.



552901 Practicum in Agriculture, Food, and Natural Resources
 FULL YEAR
 Grades: 12
 Prerequisite: Minimum of one credit (may not be Honors Scientific Research and Design) within the Plant Science program of study
 Credit: 2.0
 Certification: Texas State Florists' Association Level 2

This course prepares students for careers in agriculture, food, and natural resource fields. It is delivered through classroom-based instruction and internship, job shadowing, and/or employment arrangements with local businesses. This is an Honors Level course.



POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Pesticide Applicator	Applied Horticulture/ Horticulture Operations, General		
Certified Floral Designer	Ornamental Horticulture	Agronomy and Crop Science	
Accredited Member of AIFD	Agricultural Business and Management, General		
Landscape Industry Certified Technician	Turf and Turfgrass Management		Farm/ Farm and Ranch Management

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Soil and Plant Scientists	\$54,662	116	21%
Tree Trimmers and Pruners	\$32,240	589	14%
Pesticide Handlers, Sprayers, and Applicators	\$36,733	196	22%
Landscaping Supervisors	\$44,408	807	19%
Biological Technicians	\$42,931	452	17%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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UNDERSTANDING A PROGRAM OF STUDY



ARCHITECTURE AND CONSTRUCTION

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

*Courses and/or certifications listed in italics
have been added for local purpose.*

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

ARCHITECTURE AND CONSTRUCTION

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



BUSINESS
PROFESSIONALS
OF AMERICA



DISTRIBUTIVE
EDUCATION CLUBS
OF AMERICA



FAMILY, CAREER,
AND COMMUNITY
LEADERS OF
AMERICA



NATIONAL
FFA
ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Professional Communications

LEVEL
2

Digital Media

LEVEL
3

Architectural Design I
Interior Design I

LEVEL
4

Architectural Design II
Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

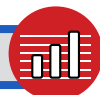
COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
45350B	<i>Professional Communications</i> (speech credit)	9 - 12	None	N/A
403051	<i>Digital Media</i>	9 - 12	None	N/A
556851	Architectural Design I	11 - 12	Algebra I and Geometry recommended	Autodesk Certified User in AutoCAD
55235Q	Interior Design I	11 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
557551	Architectural Design II	12	Architectural Design I	Autodesk Certified User in Revit Architecture

The Architectural Design program of study explores the occupations and educational opportunities associated with developing, engineering, and designing building structures and facilities. This program of study may also include exploration into collecting and interpreting geographic information, researching and preparing maps, and interior design.



The Architecture and Construction Career Cluster focuses on designing, planning, managing, building, and maintaining the built environment. Principles of Architecture provides an overview to the various fields of architecture, interior design, and construction management.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

45350B *Professional Communications*

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5 (speech credit)

Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.

403051 *Digital Media*

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0



Students will analyze current and emerging technologies, while designing and creating multimedia projects. Students will develop proficiency in the use of text, graphics, animation, audio, and video. Students will utilize these skills to produce a variety of projects and presentations using web tools and Adobe Creative Cloud applications. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society.

556851 *Architectural Design I*

FULL YEAR

Grades: 11 - 12

Prerequisite: Alegbra I and Geometry recommended

Credit: 1.0

Certification: Autodesk Certified User in AutoCAD



The study includes technical vocabulary, introduction to computer-aided drafting (CAD), orthographic projection, dimensioning, sectional views, working and presentation drawings, and introduction to architectural concepts and history. Students gain knowledge and skills applicable to the fields of architecture, construction science, drafting, interior design, and landscape architecture. Software used in this course includes AutoCAD, Revit, and 3dsMax.

55235Q *Interior Design I*

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 1.0



Interior Design I addresses the needs of individuals by enhancing the environments in which they live and work. Emphasis is placed on home construction, the elements and principles of design, space planning, presentation, and working designs. Styles and quality of furniture, wall, window, ceiling, floor treatments, and accessories will be analyzed for selection and use. Students will use knowledge and skills related to interior and exterior environments, construction, and furnishings to make wise consumer decisions and promote health and sustainability while increasing productivity.

COURSE DESCRIPTIONS

553801 Career Preparation I and Extended Career Preparation

FULL YEAR

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods allocated for early release for off campus work experience.

557551 Architectural Design II

FULL YEAR
2 HR BLOCK

Grades: 12

Prerequisite: Architectural Design I

Credit: 2.0

Certification: Autodesk Certified User in Revit Architecture



This course is a continuation of Architectural Design I. The study includes architectural concepts, site conditions, residential and commercial designs, structural systems, dimensioning, foundations, and computer-aided drafting concepts. Emphasis is placed on career paths, college investigation, and portfolio building. Solid modeling, 3D rendering, and BIM design are studied.

POSTSECONDARY OPTIONS

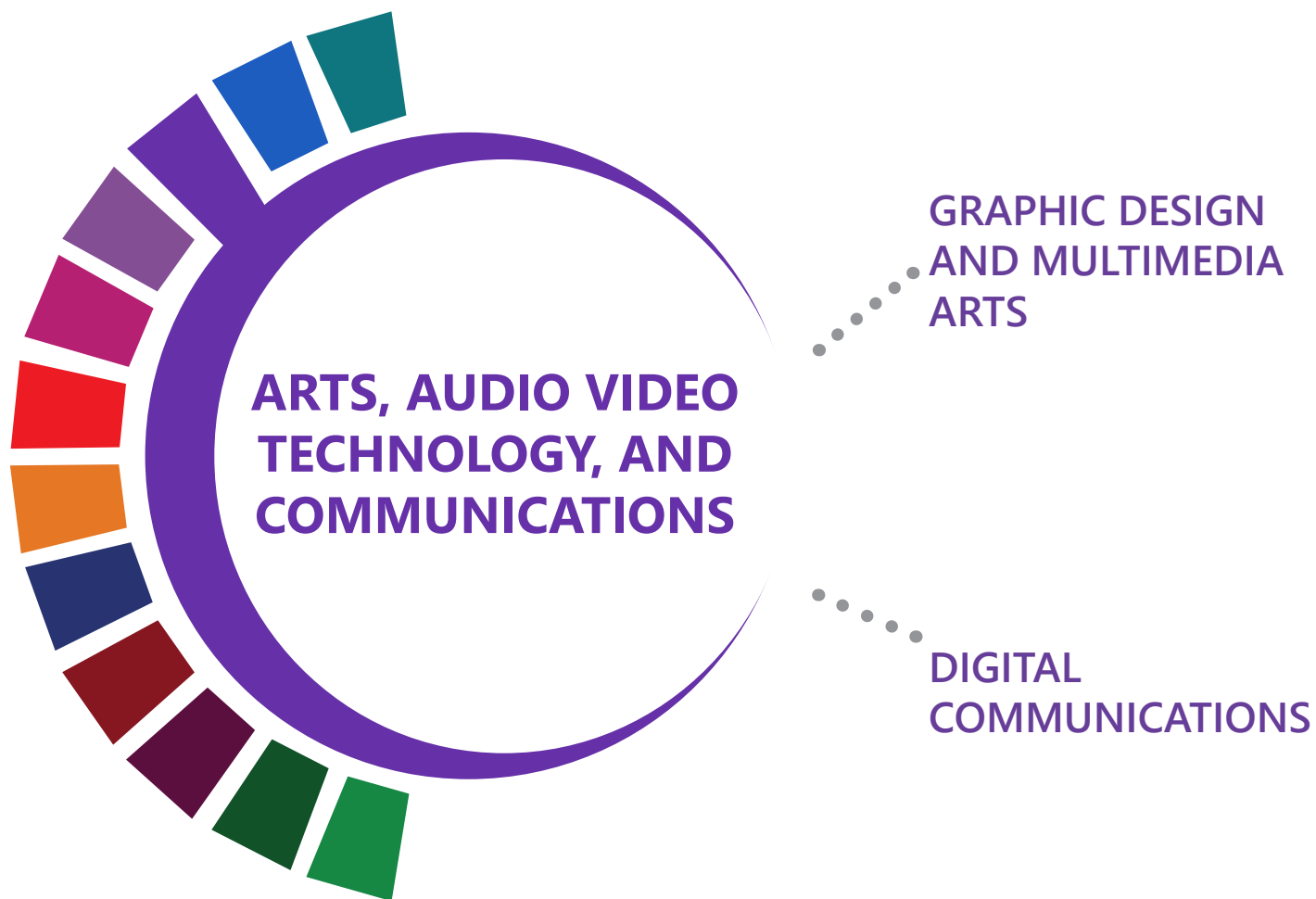
CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Photogrammetric Technologist	Architecture		
Certified Development, Design & Construction Professional	Interior Design		Interior Architecture
National Council Certified Interior Designer	Civil Engineering, General		
LEED AP Building Design & Construction	Geographic Information Science and Cartography		

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Architects	\$77,043	808	16%
Geographic Information Analysts and Surveyors	\$58,926	162	27%
Architectural/ Civil Drafters	\$50,170	1,068	9%
Construction Managers	\$87,402	2,401	14%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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UNDERSTANDING A PROGRAM OF STUDY



ARTS, AUDIO VIDEO TECHNOLOGY, AND COMMUNICATIONS

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

*Courses and/or certifications listed in italics
have been added for local purpose.*

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

ARTS, AUDIO VIDEO TECHNOLOGY, AND COMMUNICATIONS

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



BUSINESS
PROFESSIONALS
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DISTRIBUTIVE
EDUCATION CLUBS
OF AMERICA



FAMILY, CAREER,
AND COMMUNITY
LEADERS OF
AMERICA



NATIONAL
FFA
ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Arts, A/V Technology, and Communications
Video Game Design

LEVEL
2

Digital Media

LEVEL
3

Fashion Design I
Graphic Design and Illustration I

LEVEL
4

Career Preparation I and Extended Career Preparation
Fashion Design II/Lab
Graphic Design and Illustration II/Lab

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
40380Q	Principles of Arts, A/V Technology, and Communications	9 - 10	None	N/A
40360Q	Video Game Design	9 - 12	None	N/A
403051	Digital Media	9 - 12	None	N/A
553101	Fashion Design I	11 - 12	None	N/A
556801	Graphic Design and Illustration I	11 - 12	None	Adobe Certified Professional Illustrator, Photoshop, InDesign
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
553151	Fashion Design II/Lab	12	Fashion Design I	N/A
557351	Graphic Design and Illustration II/Lab	12	Graphic Design and Illustration I	Adobe Certified Professional Illustrator, Photoshop, InDesign

The Graphic Design and Multimedia Arts program of study explores the occupations and educational opportunities associated with designing or creating graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. This program of study may also include exploration into designing clothing and accessories, and creating special effects, animation, or other visual images using film, video, computers, or other electronic tools and media, for use in computer games, movies, music videos, and commercials.



The Arts, A/V Technology, and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

40380Q Principles of Arts, A/V Technology, and Communications

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0

BPA

Students will be expected to develop an understanding of the various and multifaceted career opportunities related to the arts, audio/video technology, and communications career cluster. During this course, students will examine a wide range of concepts including copyright, safety and technology, photography, principles of design, audio video production, animation, and fashion design.

40360Q Video Game Design

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

BPA

This course will allow students to explore one of the largest industries in the field of technology. Students will learn gaming, computerized gaming, evolution of gaming, and artistic aspects of perspective, design, and animation. Technical concepts of collision theory and programming logic will be covered in this course. Students will participate in a simulation of real video game design while developing technical proficiency in constructing an original 2D game design.

403051 Digital Media

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

BPA

Students will analyze current and emerging technologies, while designing and creating multimedia projects. Students will develop proficiency in the use of text, graphics, animation, audio, and video. Students will utilize these skills to produce a variety of projects and presentations using Web Tools and Adobe Creative Cloud applications. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society.

553101 Fashion Design I

FULL YEAR

Grades: 11 - 12

Prerequisite: None

Credit: 1.0



In this course, students will be introduced to the exciting world of the fashion industry. Course content includes garment styles, history of costume, textiles, elements and principles of design, fashion designers, sketching, clothing construction, retail, merchandising, promotion, and careers in the fashion industry.

556801 Graphic Design and Illustration I

FULL YEAR

Grades: 11 - 12

Prerequisite: None

Credit: 1.0

Certification : Adobe Certified Professional Illustrator, Photoshop, InDesign

BPA

SKILLS
USA

This course provides training for entry-level employment in the graphic design field. Instruction includes basic components of graphic design and the development of the creative process from concept to finished product. Students will learn traditional techniques as well as current computer software technologies (Adobe Creative Cloud applications). Career opportunities in graphic design and illustration, which span all aspects of the advertising and visual communications industries, will be explored.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

553151
FULL YEAR
2 HR BLOCK

Fashion Design II/Lab

Grades: 12

Prerequisite: Fashion Design I

Credit: 2.0



In this course, students will build upon the skills and knowledge acquired in Fashion Design I. Content consists of draping, flat pattern, and advanced construction methods. Students will design, construct, and market their own clothing collection. Fashion merchandising, business concepts, portfolio development, guest speakers, and field trips are integral parts of this course. The year culminates with the production of a fashion show featuring student designs.

557351
FULL YEAR
2 HR BLOCK

Graphic Design and Illustration II/Lab

Grades: 12

Prerequisite: Graphic Design and Illustration I

Credit: 2.0

Certification: Adobe Certified Professional Illustrator, Photoshop, InDesign



This course is a continuation of Graphic Design and Illustration providing students with hands-on experience working from concept to finish in a variety of formats. Students gain advanced knowledge of current computer software and techniques while applying them to class assignments and freelance jobs.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Digital Designer	Animation, Interactive Technology, Video Graphics and Special Effects		
WOW Certified Web Designer Apprentice	Graphic Design		
Adobe Suite Certifications	Game and Interactive Media Design	Intermedia/Multimedia	

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Graphic Designers	\$44,824	1,433	15%
Multimedia Artists and Animators	\$67,392	186	21%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Arts, A/V Technology, and Communications

LEVEL
2

Professional Communications

LEVEL
3

Audio Video Production I

LEVEL
4

Audio Video Production II/Lab

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
40380Q	Principles of Arts, A/V Technology, and Communications	9 - 10	None	N/A
45350B	Professional Communications (speech credit)	9 - 12	None	N/A
403201	Audio Video Production I	11 - 12	None	Adobe Certified Professional Premiere Pro
403301	Audio Video Production II/Lab	12	Audio Video Production I or audio video teacher recommendation in lieu of prerequisite	Adobe Certified Professional Premiere Pro

The Digital Communications program of study explores the occupations and educational opportunities associated with the production of audio and visual media formats for various purposes, such as TV broadcasts, advertising, video production, or motion pictures. This program of study may also include exploration into operating machines and equipment to record sound and images, such as microphones, sound speakers, video screens, projectors, video monitors, sound and mixing boards, and related electronic equipment.



The Arts, A/V Technology, and Communications (AAVTC) Career Cluster focuses on careers in designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services. Careers in the AAVTC career cluster require a creative aptitude, a strong background in computer and technology applications, a strong academic foundation, and a proficiency in oral and written communication.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

40380Q Principles of Arts, A/V Technology, and Communications

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



Students will be expected to develop an understanding of the various and multifaceted career opportunities related to the arts, audio/video technology, and communications career cluster. During this course, students will examine a wide range of concepts including copyright, safety and technology, photography, principles of design, audio video production, animation, and fashion design.

45350B Professional Communications

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5 (speech credit)

Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.

403201 Audio Video Production I

FULL YEAR

Grades: 11 - 12

Prerequisite: None

Credit: 1.0

Certification: Adobe Certified Professional Premiere Pro



In this hands-on introductory course students will explore video production techniques. The course will include techniques in videography, audio, editing, lighting, script writing, and motion graphics. Students are expected to develop an understanding of the film industry with a focus on pre-production, production, and post-production video and audio activities. Students will participate in minor and major projects for a variety of purposes and audiences.

COURSE DESCRIPTIONS

403301
FULL YEAR
2 HR BLOCK

Audio Video Production II/Lab

Grades: 12

Prerequisite: Audio Video Production I or audio video teacher recommendation in lieu of prerequisite

Credit: 2.0

Certification: Adobe Certified Professional Premiere Pro



This course is a continuation of Audio Video Production I. Students will learn advanced video concepts while working on major projects. Students are expected to develop an advanced understanding of the industry with a focus on pre-production, production, and post-production activities. The class will include projects that provide the campus with necessary video production services. Smaller projects will serve as supplemental material for the students' professional portfolio.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Video Engineer	Recording Arts Technology/Technician		Communications Technology/Technician
Commercial Audio Technician	Cinematography and Film/Video Production		
Certified AM Directional Specialist	Radio and Television Broadcasting Technology/Technician	Radio and Television	
Certified Broadcast Radio Engineer	Music Technology	Agricultural Communication/Journalism	

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Sound Engineering Technicians	\$39,562	79	27%
Camera Operators, Television, Video and Motion Picture	\$50,024	129	9%
Audio and Video Equipment Technicians	\$40,581	757	29%
Film and Video Editors	\$47,382	118	23%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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UNDERSTANDING A PROGRAM OF STUDY



BUSINESS, MARKETING, AND FINANCE

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

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LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



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STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

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SKILLS
USA



TEXAS
ASSOCIATION
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COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Business, Marketing, and Finance

LEVEL
2

Business Information Management (BIM)

LEVEL
3

Accounting I

LEVEL
4

Accounting II Honors

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
35100Q	Principles of Business, Marketing, and Finance	9 - 10	None	N/A
352001	Business Information Management (BIM)	9 - 12	None	Microsoft Office Specialist (MOS)
355001	Accounting I	11 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
355101	Accounting II Honors (math credit)	12	Accounting I	Intuit Quickbooks Certified User

The Accounting and Financial Services program of study teaches CTE learners how to examine, analyze, and interpret financial records. Through this program of study, students will learn the skills necessary to perform financial services, prepare financial statements, interpret accounting records, give advice, or audit and evaluate statements prepared by others. This program of study will also introduce students to mathematical modeling tools.



The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

35100Q Principles of Business, Marketing, and Finance

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



Principles of Business, Marketing, and Finance will provide the opportunity for students to gain knowledge and skills in economics and private enterprise systems, the impact of global business, marketing of goods and services, advertising, and product pricing. Students will analyze the sales process and financial management principles.

352001 Business Information Management (BIM)

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

Certification: Microsoft Office Specialist (MOS)



Business Information Management (BIM) gives students a working knowledge of technology and prepares them to be proficient in business applications using Microsoft Office. Students will develop word processing, spreadsheet, presentation, and database skills. BIM provides students the skills to master the world's most powerful business software.

355001 Accounting I

FULL YEAR

Grades: 11 - 12

Prerequisite: None

Credit: 1.0



Accounting I is highly recommended for all students planning to major in Business in college. Students will learn the general journal approach to accounting for sole proprietorships, partnerships, and corporations. Students will apply basic accounting principles to real world situations through the use of computers and business simulations. Students will investigate the field of accounting, including economic, financial, technological, international, social, legal, and ethical factors.

553801 Career Preparation I and Extended Career Preparation

FULL YEAR

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

COURSE DESCRIPTIONS

355101
FULL YEAR

Accounting II Honors

Grades: 12

Prerequisite: Accounting I

Credit: 1.0 (math credit)

Certification: Intuit Quickbooks Certified User



This course will provide in-depth application of the basic accounting principles as the students engage in various managerial and cost accounting activities. Students will formulate and interpret financial information for use in management decision making. The use of simulations, accounting software, and spreadsheets provide students with experience using real world situations. This is an Honors Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Management Accountant	Real Estate	Accounting	Financial Accounting
Certified Internal Auditor	Financial, General		Business Administration
Certified Income Specialist	Financial Planning and Services		Financial Planning
Certified Public Accountant	Certified Income Specialist		

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Accountants and Auditors	\$71,469	14,436	22%
Loan Officers	\$68,598	2,419	19%
Personal Financial Advisors	\$86,965	1,861	52%
Administrative Service Managers	\$96,138	2,277	21%
Insurance Underwriters	\$66,206	594	14%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Business, Marketing, and Finance

LEVEL
2

Business Information Management (BIM)
Virtual Business

LEVEL
3

Business Law
Global Business

LEVEL
4

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
35100Q	Principles of Business, Marketing, and Finance	9 - 10	None	N/A
352001	Business Information Management (BIM)	9 - 12	None	Microsoft Office Specialist (MOS)
33550B	Virtual Business	9 - 12	None	N/A
35530Q	Business Law	11 - 12	None	N/A
33540B	Global Business	11 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A

The Business Management program of study teaches CTE learners how to plan, direct, and coordinate the administrative services and operations of an organization. Through this program of study, students will learn the skills necessary to formulate policies, manage daily operations, and allocate the use of materials and human resources. This program of study will also introduce students to mathematical modeling tools and organizational evaluation methods.



The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

35100Q Principles of Business, Marketing, and Finance

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



Principles of Business, Marketing, and Finance will provide the opportunity for students to gain knowledge and skills in economics and private enterprise systems, the impact of global business, marketing of goods and services, advertising, and product pricing. Students will analyze the sales process and financial management principles.

352001 Business Information Management (BIM)

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

Certification: Microsoft Office Specialist (MOS)



Business Information Management (BIM) gives students a working knowledge of technology and prepares them to be proficient in business applications using Microsoft Office. Students will develop word processing, spreadsheet, presentation, and database skills. BIM provides students the skills to master the world's most powerful business software.

33550B Virtual Business

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5



Virtual Business will give students an opportunity to incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, and ethical dimensions of business to create a successful virtual business. Students assess their skills, interests, and strengths to determine their suitability for working in the virtual world. Students will be involved in a team project that will give them real world experience to develop leadership, communication, and project management skills through the process of starting a virtual business.

35530Q Business Law

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 1.0



Business Law provides practical information of our legal system as it pertains to minors, family law, contracts, bankruptcy, sales warranties, employment laws, criminal law, wills, and the court system. Topics will include social responsibility of business, business ethics, torts, contracts, negotiable financial instruments, personal property, sales, warranties, agency and employment concepts, and real property.

COURSE DESCRIPTIONS

33540B Global Business SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5



Global Business provides students with an understanding of how cultural issues and logistics affect international business. The content and activities of the course allow the student to analyze global trade theories in international monetary systems, trade, and politics. Students develop a foundation in the economic, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs.

553801 Career Preparation I and Extended Career Preparation FULL YEAR

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Records Manager	Business Administration		
Certified Facility Manager	Business/ Commerce		Business Management
Certified Commercial Contracts Manager	Public Administration		
Teradata 14 Basics/ Certified Technical Specialist	Business Management	Management Science	

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Administrative Service Managers	\$96,138	2,277	21%
Management Analysts	\$87,651	4,706	32%
General and Operations Managers	\$107,640	18,679	20%
Operations Research Analysts	\$78,083	1,128	38%
Supervisors of Administrative Support Workers	\$57,616	14,982	20%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Business, Marketing, and Finance

LEVEL
2

Business Information Management (BIM)

LEVEL
3

Entrepreneurship

LEVEL
4

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
35100Q	Principles of Business, Marketing, and Finance	9 - 10	None	N/A
352001	Business Information Management (BIM)	9 - 12	None	Microsoft Office Specialist (MOS)
55500Q	Entrepreneurship	11 - 12	None	Entrepreneurship and Small Business (ESB)
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A

The Entrepreneurship program of study teaches CTE learners how to plan, direct, and coordinate the management and operations of public or private sector organizations. Through this program of study, students will learn the skills necessary to formulate policies, manage daily operations, analyze management structures, and plan for the use of materials and human resources.



The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

35100Q Principles of Business, Marketing, and Finance

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



Principles of Business, Marketing, and Finance will provide the opportunity for students to gain knowledge and skills in economics and private enterprise systems, the impact of global business, marketing of goods and services, advertising, and product pricing. Students will analyze the sales process and financial management principles.

352001 Business Information Management (BIM)

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

Certification: Microsoft Office Specialist (MOS)



Business Information Management (BIM) gives students a working knowledge of technology and prepares them to be proficient in business applications using Microsoft Office. Students will develop word processing, spreadsheet, presentation, and database skills. BIM provides students the skills to master the world's most powerful business software.

55500Q Entrepreneurship

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 1.0

Certification: Entrepreneurship and Small Business (ESB)



This course provides an overview of the process involved in starting a business and explores the resources available to help business owners in their venture. The primary focus of the course is to help students understand the process of analyzing a business opportunity, preparing a business plan, determining feasibility of an idea using research, understanding financial reports, and developing a plan to organize and promote the business along with its products and services.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Facility Manager	Business Administration and Management		
Certified Management Accountant	Business/Commerce		
Certified Project Consultant	Public Administration		
Accredited Management Consultant	Business Management	Management Science	

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
General and Operations Managers	\$107,640	18,679	20%
Management Analysts	\$87,651	4,706	32%
Managers, All Others	\$113,110	1,794	26%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Business, Marketing, and Finance

LEVEL
2

Virtual Business

LEVEL
3

Fashion Marketing

Social Media Marketing

Sports and Entertainment Marketing

LEVEL
4

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

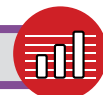
COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
35100Q	Principles of Business, Marketing, and Finance	9 - 10	None	N/A
33550B	Virtual Business	9 - 12	None	N/A
55270B	Fashion Marketing	11 - 12	None	N/A
55560B	Social Media Marketing	11 - 12	None	Stukent Social Media Marketing
55515B	Sports and Entertainment Marketing	11 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A

The Marketing and Sales program of study teaches CTE learners how to collect information to determine potential sales of a product or a service and/or create a marketing campaign to market or distribute goods and services. Through this program of study, students will learn the skills necessary to understand and apply data on customer demographics, preferences, needs, and buying habits.



The Business, Marketing, and Finance Career Cluster focuses on careers in planning, organizing, directing, and evaluating business functions essential to efficient and productive business operations.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

35100Q Principles of Business, Marketing, and Finance

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



Principles of Business, Marketing, and Finance will provide the opportunity for students to gain knowledge and skills in economics and private enterprise systems, the impact of global business, marketing of goods and services, advertising, and product pricing. Students will analyze the sales process and financial management principles.

33550B Virtual Business

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5



Virtual Business will give students an opportunity to incorporate a broad base of knowledge that includes the legal, managerial, marketing, financial, and ethical dimensions of business to create a successful virtual business. Students assess their skills, interests, and strengths to determine their suitability for working in the virtual world. Students will be involved in a team project that will give them real world experience to develop leadership, communication, and project management skills through the process of starting a virtual business.

55270B Fashion Marketing

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5



This course introduces students to the business side of the fashion industry. Fashion marketers plan, purchase, and forecast budgets, trends, and sales for each season. Students will learn fashion terminology, distribution, physical store layout, product merchandising, and marketing strategies specifically used in the fashion industry.

55560B Social Media Marketing

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5

Certification: Stukent Social Media Marketing



This course is designed to give the student a view of social media and how marketers are integrating social media tools in their overall marketing strategy. The course will investigate how the marketing community measures success in the new world of social media. Students will manage a successful social media presence for an organization, understand techniques for gaining customer and consumer buy-in to achieve marketing goals. Students will properly select social media platforms to engage consumers and monitor and measure the results of these efforts.

55515B Sports and Entertainment Marketing

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5



This course introduces students to the fundamentals of marketing in the sports and entertainment industries. Students will explore product branding, licensing, sponsorships, pricing, placement, promotion, event marketing, advertising, and implementation of sports and entertainment marketing plans. Students will create a football franchise using a virtual sports simulation. Students will gain an understanding of how the sports and entertainment industries impact the economy. Students will understand how culture and diversity affect sports and entertainment markets.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

POSTSECONDARY OPTIONS

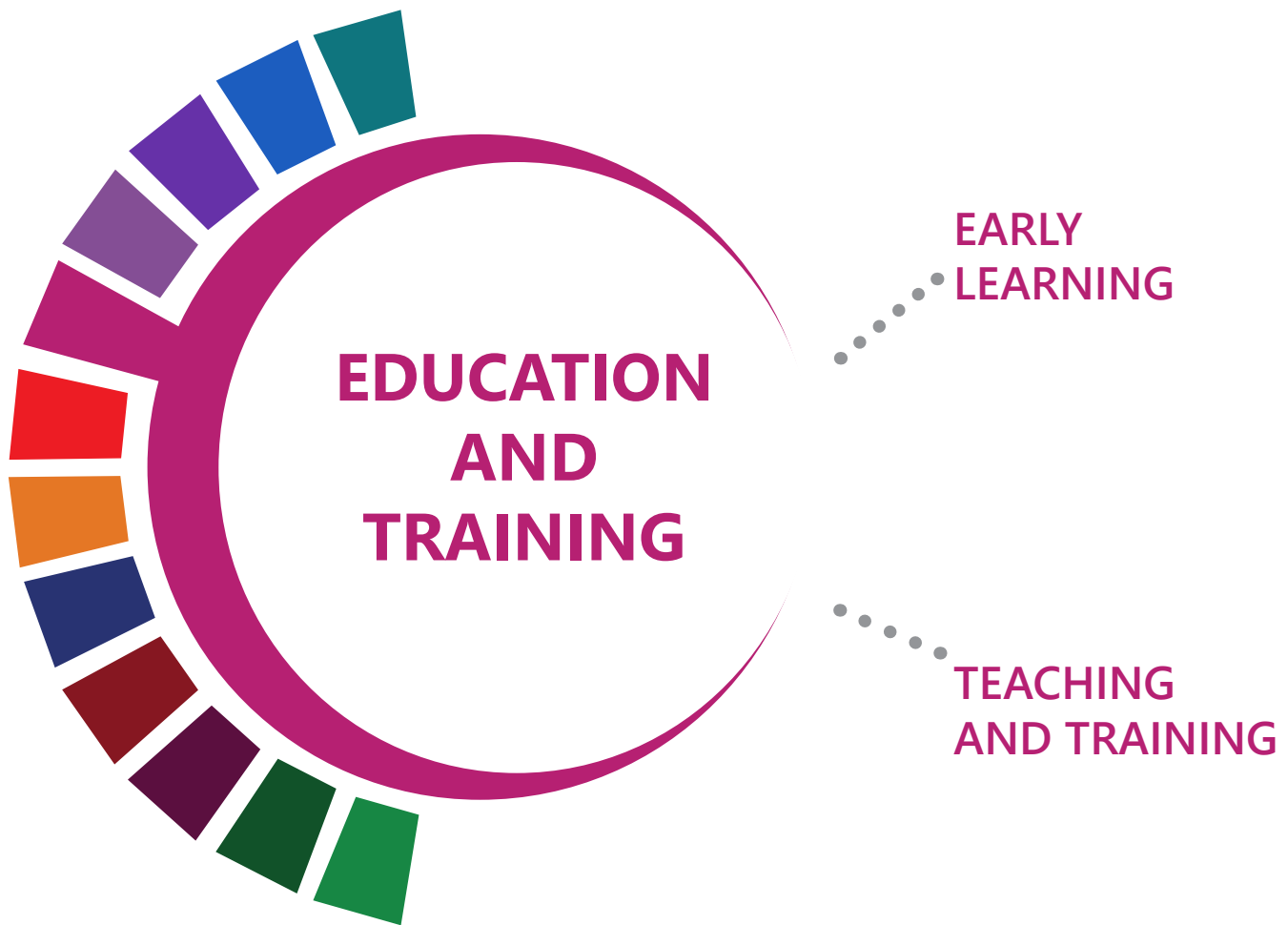
CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Product Manager	Marketing/Marketing Management, General		Marketing
DMA Certified Marketing Professional	Consumer Merchandising/Retailing Management	Business Administration	
Certified Salesperson	International Marketing	Applied Economics	
Real Estate Appraiser	Business	Marketing Research	Advertising

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Marketing Research Analysts and Marketing Specialists	\$70,346	4,664	40%
Insurance Sales Agents	\$43,181	5,886	30%
First-Line Supervisors of Retail Sales Workers	\$72,550	2,826	15%
Wholesale and Retail Buyers	\$51,106	1,229	19%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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UNDERSTANDING A PROGRAM OF STUDY



EDUCATION AND TRAINING

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



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ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Human Services

LEVEL
2

Child Development

LEVEL
3

Interpersonal Studies

Professional Communications

LEVEL
4

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55200Q	Principles of Human Services	9 - 10	None	N/A
55230Q	Child Development	10 - 12	None	N/A
45350B	<i>Professional Communications</i> (speech credit)	9 - 12	None	N/A
55245B	<i>Interpersonal Studies</i>	11 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A

The Early Learning program of study focuses on early childhood education, which consists of instructing and supporting preschool and early elementary school students in activities that promote social, physical, and intellectual growth as well as in basic elements of science, art, music, and literature. This program of study introduces CTE learners to tasks necessary for planning, directing, and coordinating activities for young children.



The Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster.

Meets the requirements of the Public Service endorsement.



EARLY LEARNING

COURSE DESCRIPTIONS

55200Q Principles of Human Services

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



This course investigates career clusters with a focus on human services careers, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student will participate in a variety of projects designed to develop personal characteristics and skills that will lead them into readiness and success in high-skill, high-wage, or high-demand careers.

55230Q Child Development

SEMESTER

Grades: 10 - 12

Prerequisite: None

Credit: 1.0



This course addresses knowledge and skills related to child development and growth from prenatal through school-aged children equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children.

45350B Professional Communications

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5(speech credit)

Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.

55245B Interpersonal Studies

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5



This course examines how the relationships between individuals and among family members significantly affect the quality of life. Students use knowledge and skills in family studies and human development to enhance personal development, foster quality relationships, promote wellness of family members, and manage multiple adult roles. Class discussion is an integral part of the learning experience.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Child Development Associate	Early Childhood Education and Teaching		
Texas Educator Certification Program	Multicultural Early Childhood Development		
County Librarian	Kindergarten/ Preschool Education and Training	Early Childhood	Educational, Instructional, & Curriculum Supervision
Professional Counselor	Psychology/Sociology		Educational Leadership and Administration

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Kindergarten Teachers, except Special Education	\$53,310	1,848	17%
Preschool Teachers	\$27,851	4,330	17%
Special Education Teachers, Preschool	\$55,670	148	27%
Elementary School Teachers	\$54,140	13,121	16%
Education Administrators, Elementary and Secondary School	\$79,830	2,407	16%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Human Services

LEVEL
2

Child Development

LEVEL
3

Instructional Practices (Intro to Teaching)

LEVEL
4

Career Preparation I and Extended Career Preparation
Practicum in Education and Training

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55200Q	Principles of Human Services	9 - 10	None	N/A
55230Q	Child Development	10 - 12	None	N/A
553001	Instructional Practices (Intro to Teaching)	11 - 12	Annual criminal background check required	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
553051	Practicum in Education and Training	12	Instructional Practices; Annual criminal background check required	Educational Aide I

The Teaching and Training program of study prepares students for careers related to teaching, instruction, and creation of instructional and enrichment materials. The program of study introduces CTE learners to a wide variety of student groups and their corresponding needs. It familiarizes them with the processes for developing curriculum, coordinating educational content, and coaching group and individuals.



The Education and Training Career Cluster focuses on planning, managing, and providing education and training services and related learning support services. All parts of courses are designed to introduce learners to the various careers available within the Education and Training career cluster.

Meets the requirements of the Public Service endorsement.



COURSE DESCRIPTIONS

55200Q Principles of Human Services

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



This course investigates career clusters with a focus on human services careers, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student will participate in a variety of projects designed to develop personal characteristics and skills that will lead them into readiness and success in high-skill, high-wage, or high-demand careers.

55230Q Child Development

SEMESTER

Grades: 10 - 12

Prerequisite: None

Credit: 1.0



This course addresses knowledge and skills related to child development and growth from prenatal through school-aged children equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children.

553001 Instructional Practices (Intro to Teaching)

FULL YEAR
2 HR BLOCK

Grades: 11 - 12

Prerequisite: Annual criminal background check required

Credit: 2.0



Instructional Practices is a field-based/internship course combined with classroom instruction designed to give students the opportunity to explore careers in teaching and occupations working directly with children and adolescents. Students explore the guidance and development of children physically, socially, emotionally, and intellectually through three days of classroom study per week and two days of internship experience per week at field site rotations. Internship sites include the educational preschool located on the senior high campus and nearby elementary and middle schools requiring students to travel independently. Students will plan and implement classroom activities while observing and recording development. This course offers training to students interested in professions related to human development, psychology, medicine, education, and childcare.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

553051
FULL YEAR
2 HR BLOCK

Practicum in Education and Training

Grades: 12

Prerequisite: Instructional Practices; Annual criminal background check required

Credit: 2.0

Certification: Educational Aide I



This course is a continuation of Instructional Practices with increased field-based internship time designed to give students the opportunity to complete in-depth study of the physical, social, emotional, and intellectual growth and development of children and adolescents. In this advanced field-based internship course, students will experience two days of classroom study per week and three days of internship experience per week at field site rotations. Internship sites include the educational preschool located on the senior high campus and nearby elementary and middle schools requiring students to travel independently. This course offers advanced training to students interested in professions related to human development, psychology, medicine, education, and childcare. This is an Honors Level course.

TEACHING AND TRAINING

POSTSECONDARY OPTIONS

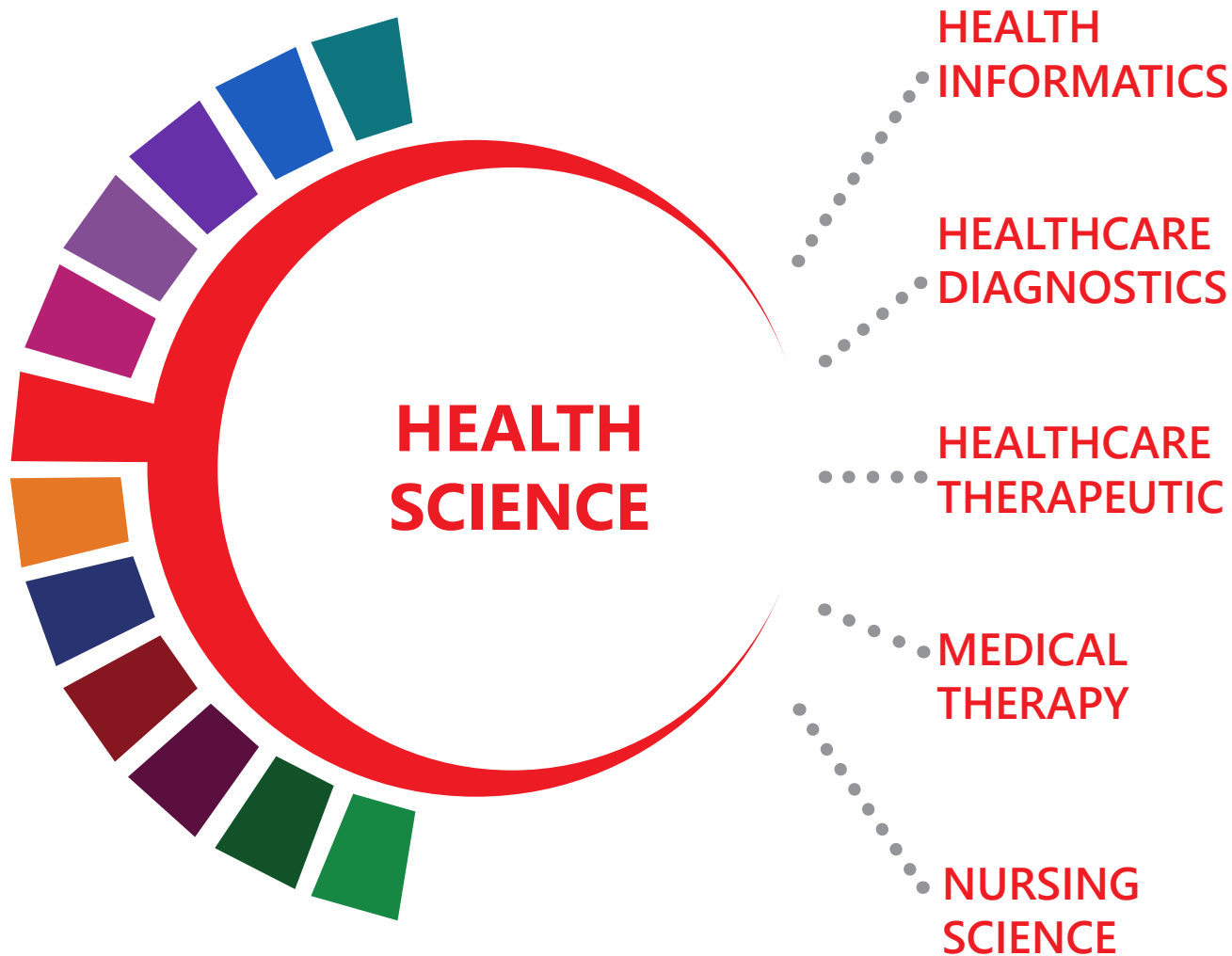
CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Texas Educator Certification Program	Teacher Education	Bilingual and Multilingual Education	Instruction and Learning
Educational Instructional Technology	Education, General (or specific subject area)		Educational Leadership and Administration, General
Counselor, Professional	Special Education		
Athletic Trainer	Health and Physical Education/Fitness		Social and Philosophical Foundations of Education

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Adult Basic and Secondary Education and Literacy Teachers & Instructors	\$48,069	862	17%
Middle School Teachers (except Special and Career/Technical Education)	\$54,510	6,407	15%
Career and Technical Education Teachers, Secondary School	\$56,360	719	9%
Special Education Teachers, Secondary School	\$56,720	980	18%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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UNDERSTANDING A PROGRAM OF STUDY



HEALTH SCIENCE

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



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ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Health Science

LEVEL
2

Medical Terminology

LEVEL
3

Business Information Management (BIM)

LEVEL
4

World Health Research

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55420Q	Principles of Health Science	9 - 10	None	N/A
55410Q	Medical Terminology	9 - 12	None	N/A
352001	Business Information Management (BIM)	9 - 12	None	Microsoft Office Specialist (MOS)
554601	World Health Research	11 - 12	Biology, Chemistry, and Medical Terminology or Principles of Health Science	N/A

HEALTH INFORMATICS

The Health Informatics program of study focuses on exposing students to the management and use of patient information in the healthcare field. Students may learn about and research recent modifications of computerized healthcare and the process of creating and maintaining hospital and patient records in accordance with regulatory requirements of the healthcare system. Students may also practice writing and interpreting medical reports.



The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Meets the requirements of the Public Service endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

55420Q Principles of Health Science

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0

HOSA

Principles of Health Science is an introductory course designed to provide students an overview of systems in the healthcare industry.

55410Q Medical Terminology

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

HOSA

This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining and singular/plural forms, as well as medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

352001 Business Information Management (BIM)

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

Certification: Microsoft Office Specialist (MOS)

BPA

Business Information Management (BIM) gives students a working knowledge of technology and prepares them to be proficient in business applications using Microsoft Office. Students will develop word processing, spreadsheet, presentation, and database skills. BIM provides students the skills to master the world's most powerful business software.

COURSE DESCRIPTIONS

554601
FULL YEAR

World Health Research

Grades: 11 - 12

Prerequisite: Biology, Chemistry, and Medical Terminology or Principles of Health Science

Credit: 1.0



This course examines major world health problems and emerging technologies as solutions to these medical concerns. The course is designed to improve students' understanding of cultural, infrastructural, political, educational, and technological constraints and inspire ideas for appropriate technological solutions to global health care issues.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Professional in Informatics	Health Information/ Medical Records Technology/ Technician	Medical and Health Service Managers	
Medical Transcriptionist			

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Medical Records and Health Information Technicians	\$35,922	1,588	24%
Medical and Health Service Managers	\$93,995	2,562	29%
Billing and Posting Clerks	\$35,485	5,775	25%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Health Science

LEVEL
2

Health Science Theory

Medical Terminology

LEVEL
3

Anatomy and Physiology

Practicum in Health Science I (Clinical Rotation I)

LEVEL
4

Practicum in Health Science II (Clinical Rotation II)

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55420Q	Principles of Health Science	9 - 10	None	N/A
55410Q	Medical Terminology	9 - 12	None	N/A
554431	Health Science Theory (health credit)	10 - 12	Biology	<i>American Heart Association First Aid and CPR</i>
204101	Anatomy and Physiology (science credit)	11 - 12	Biology and Chemistry	N/A
554531	Practicum in Health Science I (Clinical Rotation I)	11 - 12	Biology, Health Science Theory, and qualification packet	<i>American Heart Association Healthcare Provider CPR</i>
554551	Practicum in Health Science II (Clinical Rotation II)	12	Biology, Health Science Theory, Practicum in Health Science I, and qualification packet	Patient Care Technician, Pharmacy Technician

HEALTHCARE DIAGNOSTICS

The Healthcare Diagnostics program of study introduces students to occupations and educational opportunities related to performing complex medical laboratory tests for the diagnosis, treatment, and prevention of disease. This program of study may also include exploration into the opportunities associated with blood laboratories as well as radiologic technology and ultrasonic technology.



The Health Science Career Cluster® focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Meets the requirements of the Public Service endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

55420Q Principles of Health Science

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0

HOSA

This course is an introductory course designed to provide students an overview of systems in the healthcare industry.

55410Q Medical Terminology

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

HOSA

This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining and singular/plural forms, as well as medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

554431 Health Science Theory

FULL YEAR

Grades: 10 - 12

Prerequisite: Biology

Credit: 1.0 (health credit)

Certification: *American Heart Association First Aid and CPR*

HOSA

This course provides students the opportunity for comprehensive study of human anatomy and physiology, medical terms, introduction to basic patient care skills, as well as health career exploration.

204101 Anatomy and Physiology

FULL YEAR

Grades: 11 - 12

Prerequisite: Biology and Chemistry

Credit: 1.0 (science credit)

HOSA

This course is a hands-on survey of the structures and functions of the human body, including investigating the body's responses to forces, maintenance of homeostasis, electrical interactions, transport systems, and energy processes. It includes laboratory investigation and fieldwork using appropriate scientific inquiry.

COURSE DESCRIPTIONS

554531
FULL YEAR
2 HR BLOCK

Practicum in Health Science I (Clinical Rotation I)

Grades: 11 - 12

Prerequisite: Biology, Health Science Theory, and qualification packet

Credit: 2.0

Certification: *American Heart Association Healthcare Provider CPR*



This course provides the student with a unique opportunity to explore a variety of health care careers. Students develop skills while training under the direct supervision of a licensed healthcare professional. The first twelve weeks of the course are spent in class in preparation for the clinical rotation intern experience. The remainder of the year students alternate between related classroom instruction and serving as an unpaid intern in a hospital or other health care facility.

554551
FULL YEAR
2 HR BLOCK

Practicum in Health Science II (Clinical Rotation II)

Grades: 12

Prerequisite: Biology, Health Science Theory, Practicum in Health Science I, and qualification packet

Credit: 2.0

Certification: Patient Care Technician, Pharmacy Technician



This course provides students the opportunity to participate in unpaid clinical rotation internships at local healthcare facilities. Classroom instruction may include content designed to prepare students for Patient Care Technician, Pharmacy Technician, or other healthcare certification exams. This is an Honors Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Medical Sonographer	Nuclear Medical Technology/ Technologist		Radiologist
Radiologic Technologist	Magnetic Resonance Imaging (MRI) Technology/ Technician	Medical Radiologic Technology/ Science - Radiation Therapist	Radiologic Technology/ Science - Radiographer

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Diagnostic Medical Sonographers	\$69,909	495	35%
Phlebotomists	\$30,597	1,442	36%
Nuclear Medicine Technologists	\$75,962	91	13%
Radiologic Technologists	\$55,494	1,196	19%
Magnetic Resonance Imaging Technologists	\$68,661	217	21%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Health Science

LEVEL
2

Health Science Theory

Medical Terminology

LEVEL
3

Anatomy and Physiology

Practicum in Health Science I (Clinical Rotation I)

LEVEL
4

Pharmacology

Practicum in Health Science II (Clinical Rotation II)

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55420Q	Principles of Health Science	9 - 10	None	N/A
55410Q	Medical Terminology	9 - 12	None	N/A
554431	Health Science Theory (health credit)	10 - 12	Biology	<i>American Heart Association First Aid and CPR</i>
204101	Anatomy and Physiology (science credit)	11 - 12	Biology and Chemistry	N/A
554531	Practicum in Health Science I (Clinical Rotation I)	11 - 12	Biology, Health Science Theory, and qualification packet	<i>American Heart Association Healthcare Provider CPR</i>
554301	Pharmacology	12	Biology, Chemistry, Health Science Theory, and qualification packet	Pharmacy Technician
554551	Practicum in Health Science II (Clinical Rotation II)	12	Biology, Health Science Theory, Practicum in Health Science I, and qualification packet	Patient Care Technician, Pharmacy Technician

The Healthcare Therapeutic program of study introduces students to occupations and educational opportunities related to diagnosing and treating acute, episodic, or chronic illness independently or as part of a healthcare team. This program of study also includes an introduction to the opportunities associated with providing treatment and counsel to patients as well as rehabilitative programs that help build or restore daily living skills to persons with disabilities or development delays.



The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Meets the requirements of the Public Service endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

55420Q Principles of Health Science

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



Principles of Health Science is an introductory course designed to provide students an overview of systems in the healthcare industry.

55410Q Medical Terminology

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 1.0



This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining and singular/plural forms, as well as medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

554431 Health Science Theory

FULL YEAR

Grades: 10 - 12

Prerequisite: Biology

Credit: 1.0 (health credit)

Certification: *American Heart Association First Aid and CPR*



This course provides students the opportunity for comprehensive study of human anatomy and physiology, medical terms, introduction to basic patient care skills as well as health career exploration.

204101 Anatomy and Physiology

FULL YEAR

Grades: 11 - 12

Prerequisite: Biology and Chemistry

Credit: 1.0 (science credit)



This course is a hands-on survey of the structures and functions of the human body, including investigating the body's responses to forces, maintenance of homeostasis, electrical interactions, transport systems, and energy processes. It includes laboratory investigation and fieldwork using appropriate scientific inquiry.

554531 Practicum in Health Science I (Clinical Rotation I)

FULL YEAR

2 HR BLOCK

Grades: 11 - 12

Prerequisite: Biology, Health Science Theory, and qualification packet

Credit: 2.0

Certification: *American Heart Association Healthcare Provider CPR*



This course provides the student with a unique opportunity to explore a variety of health care careers. Students develop skills while training under the direct supervision of a licensed healthcare professional. The first twelve weeks of the course are spent in class in preparation for the clinical rotation intern experience. The remainder of the year students alternate between related classroom instruction and serving as an unpaid intern in a hospital or other health care facility.

COURSE DESCRIPTIONS

554301
FULL YEAR

Pharmacology

Grades: 12

Prerequisite: Biology, Chemistry, Health Science Theory, and qualification packet

Credit: 1.0

Certification: Pharmacy Technician



This course provides opportunities for the student to complete in-depth advanced studies in pharmacology.

554551
FULL YEAR
2 HR BLOCK

Practicum in Health Science II (Clinical Rotation II)

Grades: 12

Prerequisite: Biology, Health Science Theory, Practicum in Health Science I, and qualification packet

Credit: 2.0

Certification: Patient Care Technician, Pharmacy Technician



This course provides students the opportunity to participate in unpaid clinical rotation internships at local healthcare facilities. Classroom instruction may include content designed to prepare students for Patient Care Technician, Pharmacy Technician, or other healthcare certification exams. This is an Honors Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Dental Assistant	Dental Hygienist		Dentist
Surgical Technologist	Medical/ Clinical Assistant		Physician Assistant
Medical Assistant			Family and General Practitioners
Pharmacy Aides			Pharmacist

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Medical Assistants	\$29,598	8,862	30%
Surgical Technologists	\$45,032	1,150	20%
Dental Hygienists	\$73,507	1,353	38%
Physicians and Surgeons	\$213,071	1,151	30%
Dental Assistants	\$34,840	4,422	31%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Health Science

LEVEL
2

Health Science Theory

Medical Terminology

LEVEL
3

Practicum in Health Science I (Clinical Rotation I)

LEVEL
4

Practicum in Health Science II (Clinical Rotation II)

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55420Q	Principles of Health Science	9 - 10	None	N/A
55410Q	Medical Terminology	9 - 12	None	N/A
554431	Health Science Theory (health credit)	10 - 12	Biology	<i>American Heart Association First Aid and CPR</i>
554531	Practicum in Health Science I (Clinical Rotation I)	11 - 12	Biology, Health Science Theory, and qualification packet	<i>American Heart Association Healthcare Provider CPR</i>
554551	Practicum in Health Science II (Clinical Rotation II)	12	Biology, Health Science Theory, Practicum in Health Science I, and qualification packet	Patient Care Technician, Pharmacy Technician

MEDICAL THERAPY

The Medical Therapy program of study focuses on the study of biology and medicine in order to introduce students to the knowledge and skills necessary to be successful in the healthcare field in occupations such as Respiratory, Occupational, Physical, or Speech Therapy. CTE learners may also practice patient care and communication.



The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Meets the requirements of the Public Service endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

55420Q Principles of Health Science

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



Principles of Health Science is an introductory course designed to provide students an overview of systems in the healthcare industry.

55410Q Medical Terminology

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 1.0



This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining and singular/plural forms, as well as medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

554431 Health Science Theory

FULL YEAR

Grades: 10 - 12

Prerequisite: Biology

Credit: 1.0 (health credit)

Certification: *American Heart Association First Aid and CPR*



This course provides students the opportunity for comprehensive study of human anatomy and physiology, medical terms, introduction to basic patient care skills, as well as health career exploration.

554531 Practicum in Health Science I (Clinical Rotation I)

FULL YEAR
2 HR BLOCK

Grades: 11 - 12

Prerequisite: Biology, Health Science Theory, and qualification packet

Credit: 2.0

Certification: *American Heart Association Healthcare Provider CPR*



This course provides the student with a unique opportunity to explore a variety of health care careers. Students develop skills while training under the direct supervision of a licensed healthcare professional. The first twelve weeks of the course are spent in class in preparation for the clinical rotation intern experience. The remainder of the year students alternate between related classroom instruction and serving as an unpaid intern in a hospital or other health care facility.

COURSE DESCRIPTIONS

554551
FULL YEAR
2 HR BLOCK

Practicum in Health Science II (Clinical Rotation II)

Grades: 12

Prerequisite: Biology, Health Science Theory, Practicum in Health Science I, and qualification packet

Credit: 2.0

Certification: Patient Care Technician, Pharmacy Technician



This course provides students the opportunity to participate in unpaid clinical rotation internships at local healthcare facilities. Classroom instruction may include content designed to prepare students for Patient Care Technician, Pharmacy Technician, or other healthcare certification exams. This is an Honors Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Respiratory Therapist	Occupational Therapy Assistant	Respiratory Therapists	Occupational Therapists
Certified Physical Therapy Assistant	Radiation Therapists		Speech Language Pathologist
	Respiratory Therapists		Physical Therapists
	Physical Therapy Assistant		

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Speech Language Pathologists	\$73,070	1,068	25%
Respiratory Therapists	\$57,429	17,493	20%
Occupational Therapists	\$92,227	84	34%
Physical Therapy Assistants	\$70,200	1,268	44%
Radiation Therapists	\$70,658	101	23%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Health Science

LEVEL
2

Medical Terminology

LEVEL
3

Anatomy and Physiology

LEVEL
4

Pharmacology

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55420Q	Principles of Health Science	9 - 10	None	N/A
55410Q	Medical Terminology	9 - 12	None	N/A
204101	Anatomy and Physiology <i>(science credit)</i>	11 - 12	Biology and Chemistry	N/A
554301	Pharmacology	12	Biology, Chemistry, Health Science Theory, and qualification packet	Pharmacy Technician

NURSING SCIENCE

The Nursing Science program of study introduces students to the knowledge and skills related to patient care. CTE learners may learn about or practice caring for patients, routine procedures such as monitoring vital signs, development and implementation of care plans, maintenance of medical records, and disease or pain management. Students may focus on the healthcare system and research system designs and make recommended modifications.



The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, communicate effectively, and work well with others.

Meets the requirements of the Public Service endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

55420Q Principles of Health Science

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



Principles of Health Science is an introductory course designed to provide students an overview of systems in the healthcare industry.

55410Q Medical Terminology

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 1.0



This course is designed to introduce students to the structure of medical terms, including prefixes, suffixes, word roots, combining and singular/plural forms, as well as medical abbreviations and acronyms. The course allows students to achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology.

204101 Anatomy and Physiology

FULL YEAR

Grades: 11 - 12

Prerequisite: Biology and Chemistry

Credit: 1.0 (science credit)



This course is a hands-on survey of the structures and functions of the human body, including investigating the body's responses to forces, maintenance of homeostasis, electrical interactions, transport systems, and energy processes. It includes laboratory investigation and fieldwork using appropriate scientific inquiry.

COURSE DESCRIPTIONS

554301 Pharmacology
FULL YEAR

Grades: 12

Prerequisite: Biology, Chemistry, Health Science Theory, and qualification packet

Credit: 1.0

Certification: Pharmacy Technician



This course provides opportunities for the student to complete in-depth advanced studies in pharmacology.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Licensed Vocational Nurse	Registered Nursing/ Registered Nurse	Informatics Nurse Specialists	Nurse Practitioner
			Nursing Administration
			Nurse Anesthetist

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Licensed Vocational Nurses	\$45,178	7,186	21%
Registered Nurses	\$68,682	17,493	26%
Nurse Practitioners	\$107,827	977	50%
Nurse Anesthetists	\$154,856	357	23%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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UNDERSTANDING A PROGRAM OF STUDY



HOSPITALITY AND TOURISM

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



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ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Hospitality and Tourism

LEVEL
2

Introduction to Culinary Arts

LEVEL
3

Culinary Arts

LEVEL
4

Career Preparation I and Extended Career Preparation
Food Science
Practicum in Culinary Arts

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55210Q	Principles of Hospitality and Tourism	9 - 10	None	N/A
55550Q	Introduction to Culinary Arts	10 - 12	None	N/A
553201	Culinary Arts	11 - 12	None	<i>Texas Food Handlers</i>
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
552251	Food Science (science credit)	11 - 12	Biology plus IPC or Chemistry	N/A
553251	Practicum in Culinary Arts	12	Culinary Arts	ServSafe Manager

The Culinary Arts program of study introduces CTE learners to occupations and educational opportunities related to planning, directing, or coordinating activities of a food and beverage organization or department. This program of study also explores opportunities involved in directing and participating in the preparation and cooking of food.



The Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services. Students acquire knowledge and skills focusing on communication, time management, and customer service that meet industry standards. Students will explore the history of the hospitality and tourism industry and examine characteristics needed for success.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

55210Q Principles of Hospitality and Tourism

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



This course introduces students to the hospitality and tourism industry which encompasses lodging, travel and tourism, recreation, amusements, attractions, and food and beverage operations. The hospitality and tourism industry maintains the largest national employment base in the private sector. Students will explore the history of the hospitality and tourism industry, examine characteristics needed for success, and learn knowledge and skills focusing on communication, time management, and customer service that meet industry standards to function effectively in various positions within this multifaceted industry.

55550Q Introduction to Culinary Arts

SEMESTER

Grades: 10 - 12

Prerequisite: None

Credit: 1.0



This course will emphasize the principles of planning, organizing, staffing, directing, and controlling the management of a variety of food service operations. The course will provide insight into the operation of a well-run restaurant including food production skills, various levels of industry management, and hospitality skills. This course is designed for students interested in pursuing a career in the food service industry. Food labs simulating restaurants are included on most campuses.

553201 Culinary Arts

FULL YEAR
2 HR BLOCK

Grades: 11 - 12

Prerequisite: None

Credit: 2.0

Certification: *Texas Food Handlers*



This course is a laboratory class designed for students that have an interest in pursuing a career in the food service industry. The use of commercial kitchen equipment and the safety and sanitation factors involved in the food service industry are explored. Classroom and laboratory experiences will include basic skill development in quantity food preparation, beginning with the art of cooking and the science of baking including management as well as production skills and techniques. Experience is gained through preparation of meals for the onsite restaurant, East Side Bistro. Careers in the Hospitality and Tourism industry will be explored.

553801 Career Preparation I and Extended Career Preparation

FULL YEAR

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

COURSE DESCRIPTIONS

552251
FULL YEAR

Food Science

Grades: 11 - 12

Prerequisite: Biology plus IPC or Chemistry

Credit: 1.0 (science credit)



Food Science is the study of the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public. Food Science students conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving.

553251
FULL YEAR
2 HR BLOCK

Practicum in Culinary Arts

Grades: 12

Prerequisite: Culinary Arts

Credit: 2.0

Certification: ServSafe Manager



In this course students will practice advanced techniques in quantity food preparation in the commercial laboratory classroom. Some field site experiences may be arranged requiring students to travel independently to food service operations in addition to experience gained at the East Side Bistro. Emphasis will be on food service management as well as planning, preparing, and serving various meals for school and community groups. This is an Honors Level course.

CULINARY ARTS

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Chef	Hotel and Restaurant Management		
Foodservice Management Professional	Restaurant Culinary and Catering Management	Food Service Systems Administration/Management	
Comprehensive Food Safety	Hospitality Administration/Management, General		
Certified Food and Beverage Executive	Culinary Arts/ Chef Training	Culinary Science and Food Service Management	Business Administration Management, General

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Food and Beverage Managers	\$55,619	1,561	28%
Chef and Head Cooks	\$43,285	1,366	25%
Food Science Technicians	\$34,382	236	11%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Hospitality and Tourism

LEVEL
2

Professional Communications

LEVEL
3

Entrepreneurship

Global Business

Sports and Entertainment Marketing

LEVEL
4

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55210Q	Principles of Hospitality and Tourism	9 - 10	None	N/A
45350B	<i>Professional Communications</i> (speech credit)	9 - 12	None	N/A
55500Q	Entrepreneurship	11 - 12	None	Entrepreneurship and Small Business (ESB)
33540B	Global Business	11 - 12	None	N/A
55515B	Sports and Entertainment Marketing	11 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A

TRAVEL, TOURISM, AND ATTRACTIONS

The Travel, Tourism, and Attractions program of study introduces CTE learners to occupations and educational opportunities related to the marketing or sales of travel and tourism services. This program of study allows students to learn how to plan, direct, and coordinate marketing or business policies and programs, including identifying potential customers and determining demand and promotional strategies for products and services.



The Hospitality and Tourism Career Cluster focuses on the management, marketing, and operations of restaurants and other food/beverage services, lodging, attractions, recreation events, and travel-related services. Students acquire knowledge and skills focusing on communication, time management, and customer service that meet industry standards. Students will explore the history of the hospitality and tourism industry and examine characteristics needed for success.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

55210Q Principles of Hospitality and Tourism

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



This course introduces students to the hospitality and tourism industry which encompasses lodging, travel and tourism, recreation, amusements, attractions, and food and beverage operations. The hospitality and tourism industry maintains the largest national employment base in the private sector. Students will explore the history of the hospitality and tourism industry, examine characteristics needed for success, and learn knowledge and skills focusing on communication, time management, and customer service that meet industry standards to function effectively in various positions within this multifaceted industry.

45350B Professional Communications

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5 (speech credit)

Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.

55500Q Entrepreneurship

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 1.0

Certification: Entrepreneurship and Small Business (ESB)



This course provides an overview of the process involved in starting a business and explores the resources available to help business owners in their venture. The primary focus of the course is to help students understand the process of analyzing a business opportunity, preparing a business plan, determining feasibility of an idea using research, understanding financial reports, and developing a plan to organize and promote the business along with its products and services.

33540B Global Business

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5



Global Business provides students with an understanding of how cultural issues and logistics affect international business. The content and activities of the course allow the student to analyze global trade theories in international monetary systems, trade, and politics. Students develop a foundation in the economic, financial, technological, international, social, and ethical aspects of business to become competent consumers, employees, and entrepreneurs.

COURSE DESCRIPTIONS

55515B Sports and Entertainment Marketing

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5



This course introduces students to the fundamentals of marketing in the sports and entertainment industries. Students will explore product branding, licensing, sponsorships, pricing, placement, promotion, event marketing, advertising, and implementation of sports and entertainment marketing plans. Students will create a football franchise using a virtual sports simulation. Students will gain an understanding of how the sports and entertainment industries impact the economy. Students will understand how culture and diversity affect sports and entertainment markets.

553801 Career Preparation I and Extended Career Preparation

FULL YEAR

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

TRAVEL, TOURISM, AND ATTRACTIONS

POSTSECONDARY OPTIONS

WORKFORCE/CAREER OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Travel and Tourism Professional	Tourism Management		
Certified Tourism Executive	Business Administration and Management, General		
Communication Management Professional	Tourism and Travel Services Management	Tourism Management	Recreation and Resources Development
Certified Marketing Analyst	Tourism and Travel Services Marketing	Sport Event and Tourism Management	Recreation, Park, and Tourism Sciences

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Advertising and Promotions Managers	\$94,515	164	20%
Fundraisers	\$54,850	875	21%
Market Research Analyst and Marketing Specialists	\$70,349	4,664	40%
Marketing Managers	\$144,269	1,297	32%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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UNDERSTANDING A PROGRAM OF STUDY



HUMAN SERVICES

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



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FFA
ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Human Services
Professional Communications

LEVEL
2

Child Development
Dollars and Sense
Lifetime Nutrition and Wellness

LEVEL
3

Interpersonal Studies

LEVEL
4

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55200Q	Principles of Human Services	9 - 10	None	N/A
45350B	Professional Communications (speech credit)	9 - 12	None	N/A
55230Q	Child Development	10 - 12	None	N/A
55240B	Dollars and Sense	10 - 12	None	N/A
55260B	Lifetime Nutrition and Wellness	10 - 12	None	N/A
55245B	Interpersonal Studies	11 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A

FAMILY AND COMMUNITY SERVICES

The Family and Community Services program of study introduces students to knowledge and skills related to social services, including child and human development and consumer sciences. CTE learners may learn about or practice managing social and community services or teaching family and consumer sciences. Students may follow career paths in social work or therapy for children, families, or school communities.



The Human Services Career Cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services.

Meets the requirements of the Public Service endorsement.



COURSE DESCRIPTIONS

55200Q Principles of Human Services

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



This course investigates career clusters with a focus on human service careers, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student will participate in a variety of projects designed to develop personal characteristics and skills that will lead them into readiness and success in high-skill, high-wage, or high-demand careers.

45350B Professional Communications

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5 (speech credit)

Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.

55230Q Child Development

SEMESTER

Grades: 10 - 12

Prerequisite: None

Credit: 1.0



This course addresses knowledge and skills related to child development and growth from prenatal through school-aged children equipping students with child development skills. Students use these skills to promote the well-being and healthy development of children.

55240B Dollars and Sense

SEMESTER

Grades: 10 - 12

Prerequisite: None

Credit: 0.5



This vital course explores managing life independently focusing consumer practices and responsibilities, money-management processes, and decision-making skills. Areas of study include budgeting, banking, saving, borrowing, investing, housing, healthy living, clothing, transportation, insurance, consumer decisions, and careers.

55260B Lifetime Nutrition and Wellness

SEMESTER

Grades: 10 - 12

Prerequisite: None

Credit: 0.5



This interactive course allows students to use principles of lifetime wellness and nutrition to help make informed choices that promote wellness as well as pursue related careers. The role nutrition plays in both professional and recreational sports will be explored. Students will investigate the relationship between food and physical, emotional, and mental health while developing a nutritional plan which meets the needs of the individual.

COURSE DESCRIPTIONS

55245B Interpersonal Studies

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5



This course examines how the relationships between individuals and among family members significantly affect the quality of life. Students use knowledge and skills in family studies and human development to enhance personal development, foster quality relationships, promote wellness of family members, and manage multiple adult roles. Class discussion is an integral part of the learning experience.

553801 Career Preparation I and Extended Career Preparation

FULL YEAR

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Human Development and Family Studies	Human Development and Family Studies		
Community Health Services/ Liaison/ Counseling	Human Services/Sciences, General		Marriage and Family Therapy/ Counseling
Distance Credentialed Counselor	Family and Consumer Sciences		Human Services/ Sciences
Educator Certification in Family and Consumer Sciences	Community Health Services	Child and Family Services	Family Studies

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Child, Family, and School Social Workers	\$41,350	2,221	17%
Social and Community Services Managers	\$65,146	608	33%
Marriage and Family Therapists	\$42,266	217	35%
Social and Human Service Assistants	\$32,448	2,822	25%
Mental Health and Substance Abuse and Behavioral Disorder Counselors	\$42,120	576	39%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Human Services

LEVEL
2

Lifetime Nutrition and Wellness

LEVEL
3

Interpersonal Studies

LEVEL
4

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
55200Q	Principles of Human Services	9 - 10	None	N/A
55260B	Lifetime Nutrition and Wellness	10 - 12	None	N/A
55245B	Interpersonal Studies	11 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A

HEALTH AND WELLNESS

The Health and Wellness program of study introduces students to knowledge and skills related to promoting physical, emotional, social, and mental health and wellness. Students who choose this program of study may learn how to assist patients in planning for their health and wellness, respond to crises, and advise, provide education or counseling, or make referrals. CTE learners may also focus on addressing barriers to access health and wellness services.



The Human Services Career Cluster focuses on preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care services, and consumer services.

Meets the requirements of the Public Service endorsement.



COURSE DESCRIPTIONS

55200Q Principles of Human Services

SEMESTER

Grades: 9 - 10

Prerequisite: None

Credit: 1.0



This course investigates career clusters with a focus on human service careers, including counseling and mental health, early childhood development, family and community, personal care, and consumer services. Each student will participate in a variety of projects designed to develop personal characteristics and skills that will lead them into readiness and success in high-skill, high-wage, or high-demand careers.

55260B Lifetime Nutrition and Wellness

SEMESTER

Grades: 10 - 12

Prerequisite: None

Credit: 0.5



This interactive course allows students to use principles of lifetime wellness and nutrition to help make informed choices that promote wellness as well as pursue related careers. The role nutrition plays in both professional and recreational sports will be explored. Students will investigate the relationship between food and physical, emotional, and mental health while developing a nutritional plan which meets the needs of the individual.

55245B Interpersonal Studies

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 0.5



This course examines how the relationships between individuals and among family members significantly affect the quality of life. Students use knowledge and skills in family studies and human development to enhance personal development, foster quality relationships, promote wellness of family members, and manage multiple adult roles. Class discussion is an integral part of the learning experience.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

POSTSECONDARY OPTIONS

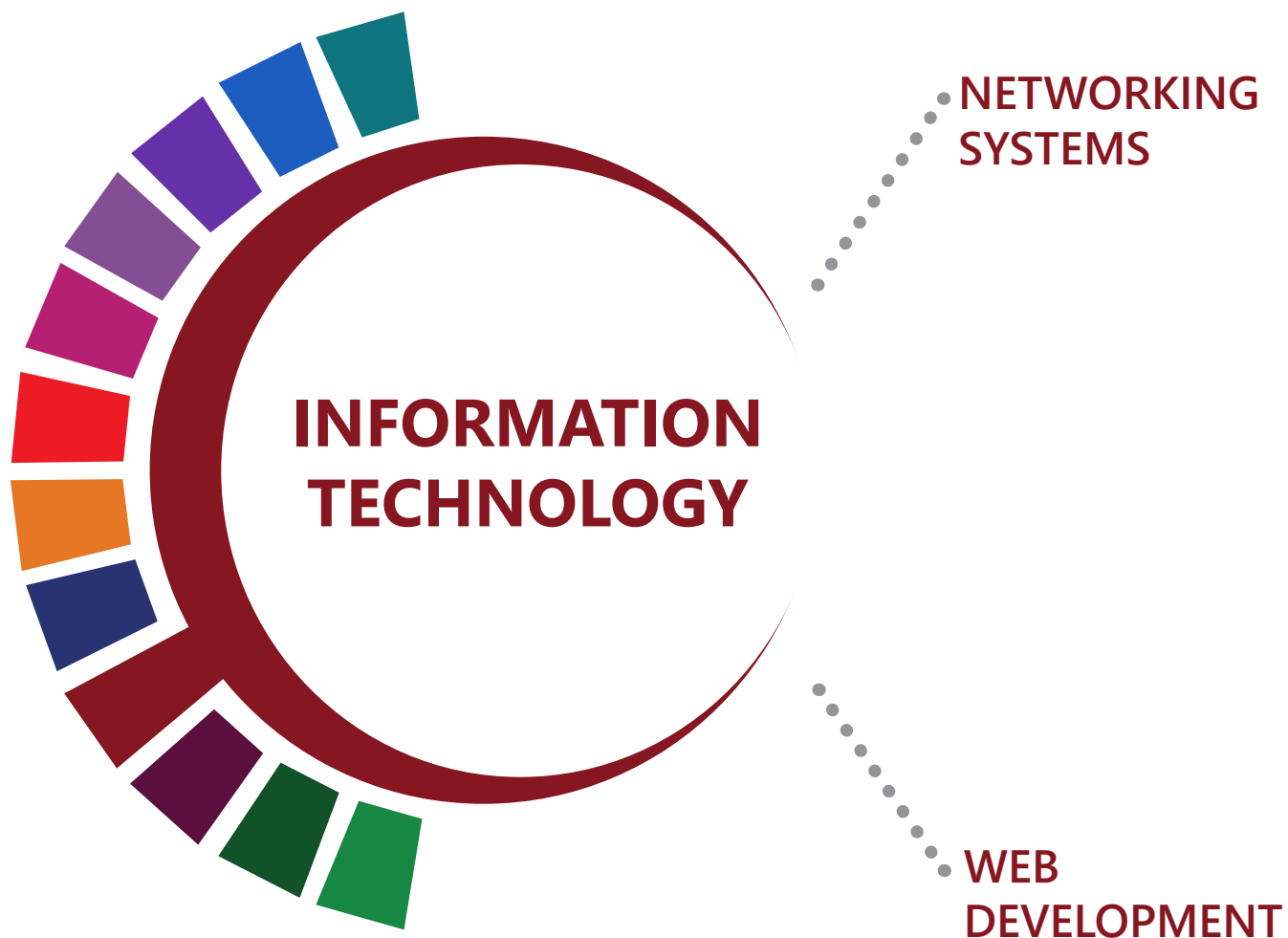
CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Registered Dietitian	Nutrition Sciences		
Counselor, Professional	Community Health Services/ Liaison/ Counseling	Mental Health Counseling/ Counselor	Community Health and Preventative Medicine
Registered Dietitian Nutritionist	Health and Wellness, General	Nutrition	
Social Worker	Public Health	Human Nutrition and Foods	Exercise and Sports Nutrition

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Community Health Workers	\$38,064	592	25%
Rehabilitation Counselors	\$43,930	586	23%
Mental Health Counselors	\$41,558	812	38%
Health Care Social Workers	\$55,515	1,583	35%
Dietitians and Nutritionists	\$57,762	428	24%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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UNDERSTANDING A PROGRAM OF STUDY



INFORMATION TECHNOLOGY

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



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ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



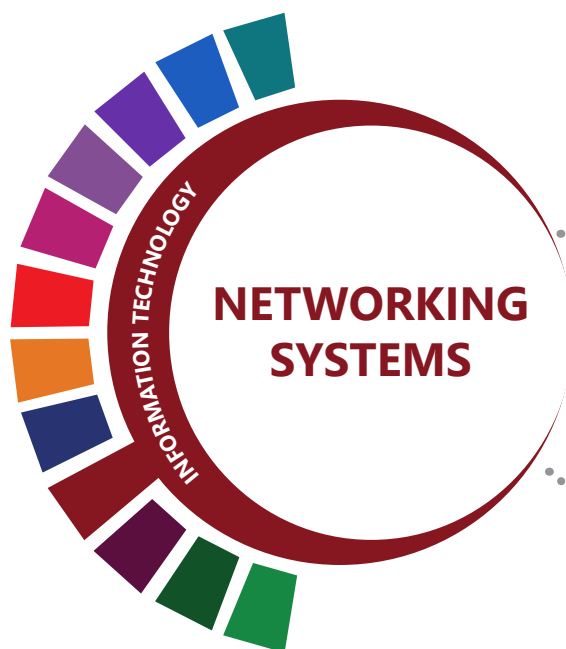
Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Computer Science I

Principles of Information Technology

LEVEL
2

AP Computer Science Principles

LEVEL
3

Internetworking Technologies I

LEVEL
4

Career Preparation I and Extended Career Preparation

Internetworking Technologies II

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
401001	Computer Science I	9 - 12	Algebra I	N/A
403401	Principles of Information Technology	9 - 12	None	N/A
403701	AP Computer Science Principles	9 - 10	None	N/A
556601	Internetworking Technologies I	11 - 12	Algebra II	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
556651	Internetworking Technologies II	12	Internetworking Technologies I	N/A

NETWORKING SYSTEMS

The Networking Systems program of study explores the occupations and educational opportunities associated with designing and implementing computer and information networks, such as local area networks (LAN), wide area networks (WAN), intranets, extranets, and other data communications networks. This program of study may also include exploration into analyzing science, engineering, and other data processing problems to implement and improve computer systems.



The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

401001 Computer Science I

FULL YEAR

Grades: 9 - 12

Prerequisite: Algebra I

Credit: 1.0

BPA

Computer Science I is an introduction to the automated processing of information, including computer programming. Students will apply their mathematical and logical reasoning to solve problems in the field of computer science. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will also explore various aspects of digital citizenship, including those affecting both users and programmers. The learning in this course equips students to read and write small programs using Java programming language in response to a given problem or scenario. No previous coding/programming experience is required.

403401 Principles of Information Technology

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

BPA

Principles of Information Technology develops computer literacy skills utilized in emerging technologies and the global marketplace. Students apply word processing, spreadsheet, database, presentation, and web publishing technologies using Microsoft Office and Google Tools.

403701 AP Computer Science Principles

FULL YEAR

Grades: 9 - 10

Prerequisite: None

Credit: 1.0

BPA

AP Computer Science Principles is an introduction to the complete field of computer science. This course is focused on five computer science big ideas: Creative Development, Data, Algorithms and Programming, Computer Systems and Networks, and Impact of Computing. Students will broaden their understanding of computer science for use in a diversity of interests, majors, and careers. Programming is only one component of this course and is taught at an introductory level using JavaScript. No previous coding/programming experience is required. Students will submit their Create Performance Task as part of their College Board score. This course prepares students to take the Advanced Placement (AP) Computer Science Principles exam to possibly earn college credit.

556601 Internetworking Technologies I

FULL YEAR

Grades: 11 - 12

Prerequisite: Algebra II

Credit: 1.0

BPA

This course teaches networking through the PISD Cisco Networking Academy Program and prepares students for industry standard certifications. Topics include LANs, the OSI model, addressing, and routing. Students may continue this training at any Cisco Academy. This is a Distinguished Level course.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

556651
FULL YEAR

Internetworking Technologies II

Grades: 12

Prerequisite: Internetworking Technologies I

Credit: 1.0



This course teaches networking through the PISD Cisco Networking Academy Program and prepares students for industry standard certifications. Topics include WANs, routers, TCP/IP addressing, routing protocols, and network troubleshooting. This is a Distinguished Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
AEM 6 Business Practitioner	Computer and Information Sciences, General		
Intelligence Planner Certification Program	Computer Systems Networking and Telecommunications		Information Technology
Cisco Certified Entry Networking Technician	Information Technology	Computer and Information Systems Security/Information Assurance	
Microsoft Networking Fundamentals	Network and System Administration/Administrator	Computer Engineering, General	

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Computer Network Architects	\$111,633	1,082	23%
Computer Systems Analysts	\$87,568	5,937	29%
Computer Network Support Specialists	\$68,037	1,824	19%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Principles of Information Technology

LEVEL
2

Computer Science 1

LEVEL
3

Web Design

LEVEL
4

Career Preparation I and Extended Career Preparation

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
403401	Principles of Information Technology	9 - 12	None	N/A
401001	Computer Science I	9 - 12	Algebra I	N/A
403101	Web Design	9 - 12	None	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A

WEB DEVELOPMENT

The Web Development program of study explores the occupations and educational opportunities associated with designing, creating, and modifying websites. This program of study may also explore integrating websites with other computer applications, and converting written, graphic, audio, and video components to compatible web formats by using software designed to facilitate the creation of web and multimedia content.



The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, multimedia, and systems integration services.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

403401 Principles of Information Technology

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

BPA

Principles of Information Technology develops computer literacy skills utilized in emerging technologies and the global marketplace. Students apply word processing, spreadsheet, database, presentation, and web publishing technologies using Microsoft Office and Google Tools.

401001 Computer Science I

FULL YEAR

Grades: 9 - 12

Prerequisite: Algebra I

Credit: 1.0

BPA

Computer Science I is an introduction to the automated processing of information, including computer programming. Students will apply their mathematical and logical reasoning to solve problems in the field of computer science. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will also explore various aspects of digital citizenship, including those affecting both users and programmers. The learning in this course equips students to read and write small programs using Java programming language in response to a given problem or scenario. No previous coding/programming experience is required.

403101 Web Design

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

BPA

The student will develop an understanding of the structure, functions and technical foundations of the Internet. After developing basic proficiency in creating web pages using traditional HTML coding, visual HTML editors, and graphics production software, students will plan and develop web sites targeting specific audiences.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
AEM 6 Developer	Computer Programming/ Programmer, General	Web/ Multimedia Management and Webmaster	Computational Science
Certified Webmaster Professional	Computer Science		
Adobe Campaign Developer	Web Page, Digital/Multimedia and Information Resources Design		Information Science/ Studies
IBM Certified Solution Developer - OpenSocial	Computer Systems Networking and Telecommunications		

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Web Developers	\$67,912	1,079	39%
Web Administrators, Computer Occupations	\$85,197	1,616	20%
Software Developers	\$104,499	6,311	30%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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..... LAW
ENFORCEMENT

LAW AND PUBLIC SERVICE



UNDERSTANDING A PROGRAM OF STUDY



LAW AND PUBLIC SERVICE

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



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FAMILY, CAREER,
AND COMMUNITY
LEADERS OF
AMERICA



NATIONAL
FFA
ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Professional Communications

LEVEL
2

Business Information Management (BIM)

LEVEL
3

Principles of Law, Public Safety, Corrections, and Security
Law Enforcement I

LEVEL
4

Forensic Science
Law Enforcement II

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
45350B	<i>Professional Communications</i> (speech credit)	9 - 12	None	N/A
352001	<i>Business Information Management (BIM)</i>	9 - 12	None	Microsoft Office Specialist (MOS)
55520Q	Principles of Law, Public Safety, Corrections, and Security	11 - 12	None	N/A
555301	Law Enforcement I	11 - 12	None	Non-Commissioned Security Officer Level II
555401	Forensic Science (science credit)	12	Biology plus IPC or Chemistry, and Law Enforcement I	N/A
555501	Law Enforcement II	12	Law Enforcement I	N/A

LAW ENFORCEMENT

The Law Enforcement program of study teaches CTE learners about the development of, adherence to, and protection of various branches of law. Students may learn how to appropriately and legally respond to breaches in the law according to statutory rules and regulations as well as investigate how and why the breaches occurred.



The Law and Public Service Career Cluster focuses on planning, managing, and providing legal services, public safety, and homeland security, including professional and technical support services. Students will examine the roles and responsibilities of police, courts, corrections, private security, and protective agencies of fire and emergency services.

Meets the requirements of the Public Service endorsement.



COURSE DESCRIPTIONS

45350B *Professional Communications*

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5 (speech credit)

Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.

352001 *Business Information Management (BIM)*

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

Certification: Microsoft Office Specialist (MOS)

Business Information Management (BIM) gives students a working knowledge of technology and prepares them to be proficient in business applications using Microsoft Office. Students will develop word processing, spreadsheet, presentation, and database skills. BIM provides students the skills to master the world's most powerful business software.

BPA

55520Q *Principles of Law, Public Safety, Corrections, and Security*

SEMESTER

Grades: 11 - 12

Prerequisite: None

Credit: 1.0

This course introduces students to professions in law enforcement, protective services, corrections, and fire and emergency management services. Students will examine legal and ethical roles and responsibilities of the professions and will recognize the importance of interagency cooperation. Students will identify the roles and functions of police, court systems, the correctional system, private security, and protective agencies of fire emergency services.

SKILLS
USA

555301 *Law Enforcement I*

FULL YEAR

Grades: 11 - 12

Prerequisite: None

Credit: 1.0

Certification: Non-Commissioned Security Officer Level II

This course is an overview of the history, organization and functions of local, state, and federal law enforcement. This course includes the role of constitutional law, the United States legal system, criminal law, law enforcement terminology, and the classification and elements of crime. Students will understand ethical behavior standards for law enforcement personnel. Students will study court cases and analyze the impact of court decisions, custody and interrogation, procedural and substantive criminal law, the rights of victims and witnesses, and reasonable suspicion and probable cause. Students will use field note-taking and report-writing skills and will employ procedures to protect, document, and process a crime scene.

SKILLS
USA

COURSE DESCRIPTIONS

555401
FULL YEAR

Forensic Science

Grades: 12

Prerequisite: Biology plus IPC or Chemistry, and Law Enforcement I

Credit: 1.0 (science credit)



This course uses a structured and scientific approach to the investigation of crimes of assault, abuse and neglect, domestic violence, accidental death, and homicide. Students will learn terminology and investigative procedures related to crime scene, interviewing, criminal behavior characteristics, and scientific procedures used to solve crimes. Using scientific methods, students will perform fingerprint analysis, ballistics, hair and fiber analysis, DNA profiling, forensic toxicology, forensic entomology, and blood spatter analysis on evidence collected from simulated crime scenes. Students will learn the history, legal aspects and career options for forensic science. A minimum of 40% of class time will be spent in laboratory work and field investigations.

555501
FULL YEAR

Law Enforcement II

Grades: 12

Prerequisite: Law Enforcement I

Credit: 1.0



This course provides the knowledge and skills necessary to prepare for a career in law enforcement. This course includes examining ethical and legal responsibilities, operation of police and emergency telecommunication equipment, and courtroom testimony. Students will evaluate body language, gestures, verbal tone, and inflection and will facilitate field note taking and report writing. Students will prepare testimony for court and during a mock trial. Students will demonstrate the use of anger management techniques to resolve conflicts. Students will study law enforcement procedures for serving writs, warrants, and summons, procedures pertaining to alcohol and beverage laws, driving while intoxicated and driving under the influence, and strategies for crowd management. Students will investigate and document a simulated motor vehicle accident.

LAW ENFORCEMENT

POSTSECONDARY OPTIONS

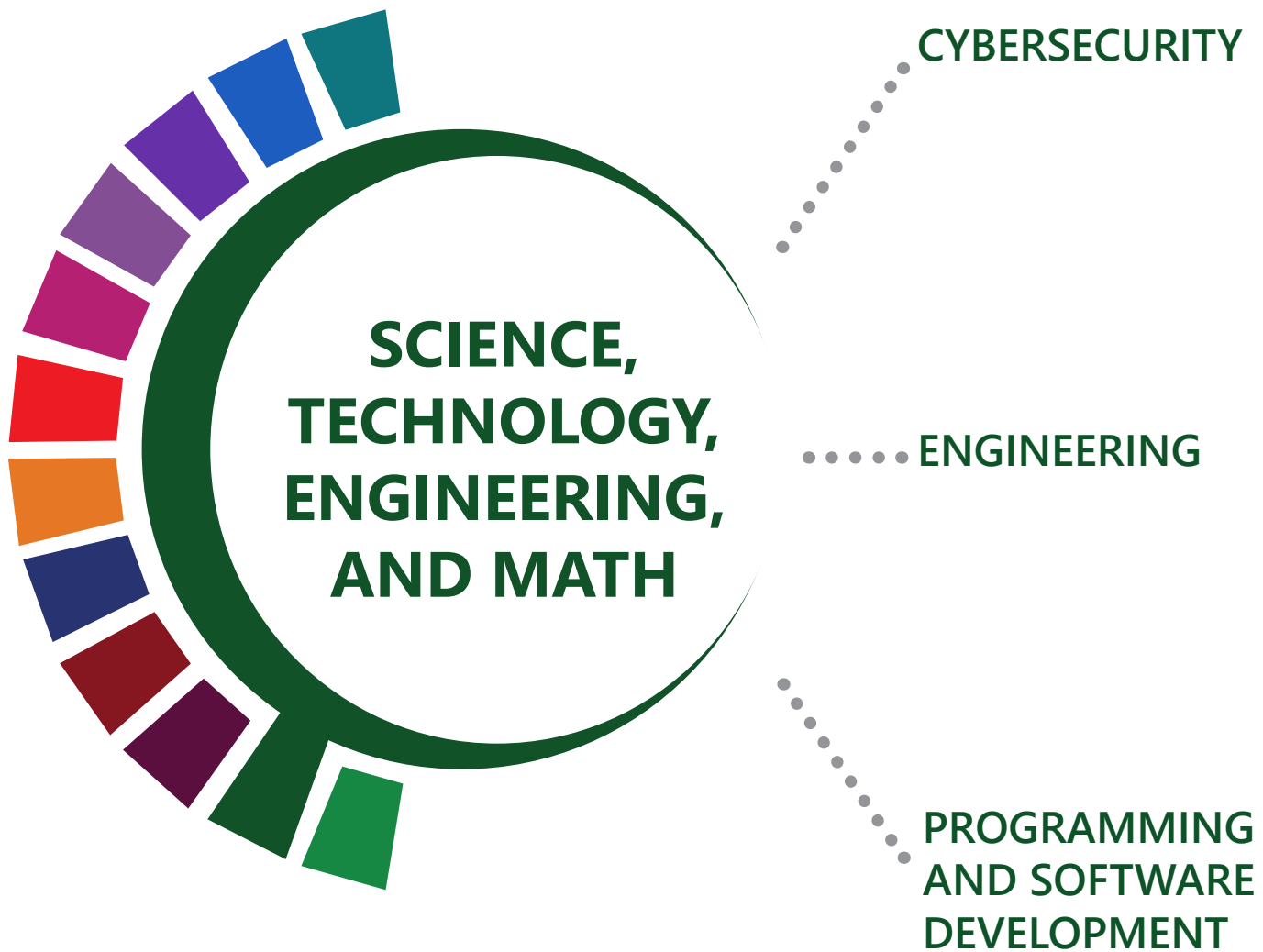
CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Law Enforcement Officer	Criminal Justice/Safety Studies/Law Enforcement Administration		
Private Investigator/ Security Guard	Criminal Justice/ Police Science		Natural Resources Law Enforcement and Protective Services
Code Enforcement Officer	Corrections	Juvenile Corrections	
Certified Law Enforcement Planner	Criminalistics and Criminal Science	Cyber/Computer Forensics and Counterterrorism	

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Police and Sheriff's Patrol Officers	\$60,112	5,241	13%
Probation Officers and Correctional Treatment Officers	\$44,054	793	9%
Correctional Officers and Jailers	\$40,186	4,683	9%
Immigration and Customs Inspectors	\$78,104	1,236	9%
First-Line Supervisors of Police and Detectives	\$91,312	253	25%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH



UNDERSTANDING A PROGRAM OF STUDY



SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



BUSINESS
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DISTRIBUTIVE
EDUCATION CLUBS
OF AMERICA



FAMILY, CAREER,
AND COMMUNITY
LEADERS OF
AMERICA



NATIONAL
FFA
ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Computer Science I
Principles of Information Technology

LEVEL
2

AP Computer Science Principles

LEVEL
3

AP Computer Science A
Internetworking Technologies I

LEVEL
4

Internetworking Technologies II

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS (subject to change)
401001	Computer Science I	9 - 12	Algebra I	N/A
403401	Principles of Information Technology	9 - 12	None	N/A
403701	AP Computer Science Principles	9 - 10	None	N/A
401051	AP Computer Science A (math credit)	11 - 12	Algebra I or a student should be comfortable with functions and the concepts found in the uses of functional notation such as $f(x)=x+2$ and $f(x)=g(h(x))$	N/A
556601	Internetworking Technologies I	11 - 12	None	N/A
556651	Internetworking Technologies II	12	Internetworking Technologies I	N/A

The Cybersecurity program of study includes the occupations and educational opportunities related to planning, implementing, upgrading, or monitoring security measure for the protection of computer networks and information. This program of study may also include exploration into responding to computer security breaches and viruses, and administering network security measures.



The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



CYBERSECURITY

COURSE DESCRIPTIONS

401001 Computer Science I

FULL YEAR

Grades: 9 - 12

Prerequisite: Algebra I

Credit: 1.0

BPA

Computer Science I is an introduction to the automated processing of information, including computer programming. Students will apply their mathematical and logical reasoning to solve problems in the field of computer science. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will also explore various aspects of digital citizenship, including those affecting both users and programmers. The learning in this course equips students to read and write small programs using Java programming language in response to a given problem or scenario. No previous coding/programming experience is required.

403401 Principles of Information Technology

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

BPA

Principles of Information Technology develops computer literacy skills utilized in emerging technologies and the global marketplace. Students apply word processing, spreadsheet, database, presentation, and web publishing technologies using Microsoft Office and Google Tools.

403701 AP Computer Science Principles

FULL YEAR

Grades: 9 - 10

Prerequisite: None

Credit: 1.0

BPA

AP Computer Science Principles is an introduction to the complete field of computer science. This course is focused on five computer science big ideas: Creative Development, Data, Algorithms and Programming, Computer Systems and Networks, and Impact of Computing. Students will broaden their understanding of computer science for use in a diversity of interests, majors, and careers. Programming is only one component of this course and is taught at an introductory level using JavaScript. No previous coding/programming experience is required. Students will submit their Create Performance Task as part of their College Board score. This course prepares students to take the Advanced Placement (AP) Computer Science Principles exam to possibly earn college credit.

401051 AP Computer Science A

FULL YEAR

Grades: 11 - 12

Prerequisite: Algebra I or a student should be comfortable with functions and the concepts found in the uses of functional notation such as $f(x)=x+2$ and $f(x)=g(h(x))$

Credit: 2.0 (math credit)

BPA

This course serves as an introduction to computers and the study of managing and processing information. Students apply algebraic and logical reasoning acquired in mathematics to develop robust programming solutions. The emphasis is on solving industry problems by means of computer programming (software engineering). Students will thoroughly learn the Java programming language and apply those skills in exploring how computers work. Some topics covered include object-oriented techniques, file management, data structures, classes, objects, graphics, debugging, hardware components, and social implications. This course prepares students to take the Advanced Placement Computer Science A exam to possibly earn college credit. Note: One of two credits counts toward GPA.

COURSE DESCRIPTIONS

556601
FULL YEAR

Internetworking Technologies I

Grades: 11 - 12

Prerequisite: None

Credit: 1.0



This course teaches networking through the PISD Cisco Networking Academy Program and prepares students for industry standard certifications. Topics include LANs, the OSI model, addressing, and routing. Students may continue this training at any Cisco Academy. This is a Distinguished Level course.

556651
FULL YEAR

Internetworking Technologies II

Grades: 12

Prerequisite: Internetworking Technologies I

Credit: 1.0



This course teaches networking through the PISD Cisco Networking Academy Program and prepares students for industry standard certifications. Topics include WANs, routers, TCP/IP addressing, routing protocols, and network troubleshooting. This is a Distinguished Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
GIAC Reverse Engineering Malware	System Networking, and LAN/WAN Management	Computer Systems Networking and Telecommunications	Computer Systems Analysis/Analyst
Certified Advanced Windows Forensic Examiner	Information Technology	Computer Systems Networking and Telecommunications	Information Technology
SAP Certified Technology Professional System Security Architect	Computer and Information Sciences, General		
Cisco Certified Network Professional Security Certification	Computer Science		

WORKFORCE/CAREER OPTIONS

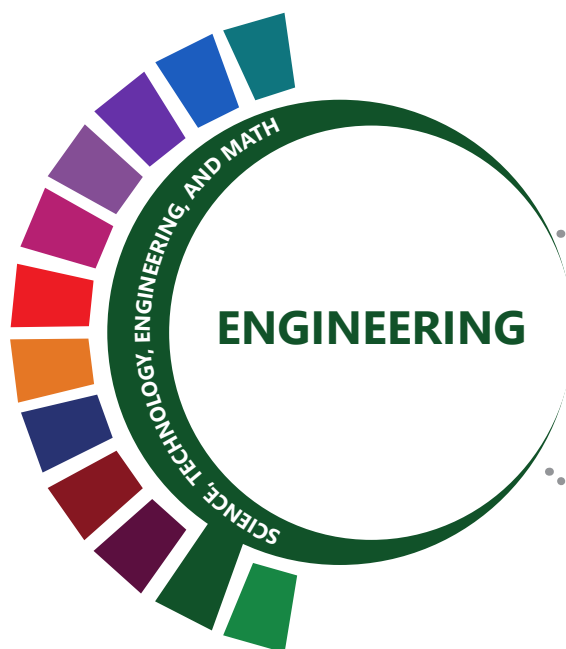
OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Information Security Analysts	\$91,915	814	29%
Network and Computer System Administrators	\$82,597	2,814	19%
Computer Systems Analyst	\$87,568	5,937	29%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Introduction to Engineering Design (PLTW)

LEVEL
2

Engineering Science (PLTW)

LEVEL
3

Aerospace Engineering (PLTW)

Digital Electronics (PLTW)

LEVEL
4

Engineering Design and Development (PLTW)

Honors Scientific Research and Design

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
556101	Introduction to Engineering Design (PLTW)	9 - 10	Algebra I or concurrent enrollment in Algebra I	N/A
556201	Engineering Science (PLTW) (science credit)	10 - 12	Geometry or concurrent enrollment required; Chemistry or concurrent enrollment required; Successful completion of Introduction to Engineering Design is recommended	N/A
556301	Aerospace Engineering (PLTW)	11 - 12	Algebra II or concurrent enrollment required; Physics or concurrent enrollment required; Successful completion of PLTW Introduction to Engineering Design required; Engineering Science is preferred	N/A
556351	Digital Electronics (PLTW) (math credit)	11 - 12	Algebra I and Geometry required; Successful completion of Introduction to Engineering Design or Engineering Science required; Engineering Science is preferred	N/A
208001	Honors Scientific Research & Design 1 (science credit)	9 - 12	Concurrent enrollment in an advanced level science course and approval of instructor	N/A
208131	<i>Honors Scientific Research & Design 2</i> (science credit)	9 - 12	See course description (pg. 141)	N/A
208231	<i>Honors Scientific Research & Design 3</i> (science credit)	9 - 12	See course description (pg. 141)	N/A
556501	Engineering Design and Development (PLTW)	12	Algebra II; Physics or concurrent enrollment; Introduction to Engineering Design; Engineering Science; or teacher recommendation in lieu of prerequisites	N/A

The Engineering program of study focuses on the design, development, and use of engines, machines, and structures. CTE learners will learn how to apply science, mathematical methods, and empirical evidence to the innovation, design, construction, operation, and maintenance of different manufacturing systems.



The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



ENGINEERING

COURSE DESCRIPTIONS

ENGINEERING	556101 FULL YEAR	Introduction to Engineering Design (PLTW) Grades: 9 - 10 Prerequisite: Algebra I or concurrent enrollment in Algebra I Credit: 1.0	This is the foundation course in a series of Project Lead The Way (PLTW) courses designed to introduce students to the field of engineering. The major focus of the course is learning how to take an idea through a design process that will eventually be manufactured or produced. Students will use state of the art 3-D design software to create solutions to different projects. Working in teams, students will learn about documenting solutions, solving problems, and communicating solutions to other students and members of the professional engineering community. This is a Distinguished Level course.
	556201 FULL YEAR	Engineering Science (PLTW) Grades: 10 - 12 Prerequisite: Geometry or concurrent enrollment required; Chemistry or concurrent enrollment required; Successful completion of Introduction to Engineering Design is recommended Credit: 1.0 (science credit)	This Project Lead The Way (PLTW) course applies the principles of physics to various technology systems and manufacturing processes which helps students learn how engineers and technicians use science, technology, and math in an engineering problem solving process. Topics covered include: mechanisms and mechanical advantage, static forces and bridge design, material properties, energy and power generation, thermodynamics, kinematics, fluid power, and creation of programs for robotics and machine control. This is a Distinguished Level course.
	556301 FULL YEAR	Aerospace Engineering (PLTW) Grades: 11 - 12 Prerequisite: Algebra II or concurrent enrollment required; Physics or concurrent enrollment required; Successful completion of PLTW Introduction to Engineering Design required; Engineering Science is preferred Credit: 1.0	This PLTW course is designed for independent learners with strong analytical skills who have an interest in the field of aviation and are interested in pursuing an engineering career. Aerospace Engineering is the study of the engineering discipline which develops new technologies for use in aviation, defense systems, and space exploration. The course explores the evolution of flight, flight fundamentals, navigation and control, aerospace materials, propulsion, space travel, orbital mechanics, ergonomics, remotely operated systems, and related careers. In addition, the course presents alternative applications for aerospace engineering concepts. Students will analyze, design, and build aerospace systems. While implementing these designs, students will continually hone their interpersonal skills, creativity, and application of the design process. This is a Distinguished Level course.
	556351 FULL YEAR	Digital Electronics (PLTW) Grades: 11 - 12 Prerequisite: Algebra I and Geometry required; Successful completion of Introduction to Engineering Design or Engineering Science required; Engineering Science is preferred Credit: 1.0 (math credit)	Digital electronics is the foundation of modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras, and high-definition televisions. The primary focus of Digital Electronics is to expose students to the design process of combinational and sequential logic, teamwork, communication methods, engineering standards, and technical documentation. This is a Distinguished Level course.
	208001 FULL YEAR	Honors Scientific Research and Design 1 Grades: 9 - 12 Prerequisite: Concurrent enrollment in an advanced level science course and approval of instructor through application Credit: 1.0 (science credit)	Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in Honors Scientific Research and Design 2 or 3. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

COURSE DESCRIPTIONS

208131 Honors Scientific Research and Design 2

FULL YEAR

Grades: 9 - 12

Prerequisite: Honors Scientific Research and Design 1, concurrent enrollment in an advanced level science course, and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

208231 Honors Scientific Research and Design 3

FULL YEAR

Grades: 9 - 12

Prerequisite: Honors Scientific Research and Design 1, Honors Scientific Research and Design 2, concurrent enrollment in an advanced level science course, and approval of instructor through application

Credit: 1.0 (science credit)

Students will explore science and become acquainted with the scientific community, improve fundamental research skills, apply statistical analysis, and enhance oral and visual presentation techniques. Each student will be required to develop his/her own independent science research project and will learn how to structure, organize, publish, and present the project in one or more formal presentations to a panel of judges. It is required that all student independent research projects be judged. Students in this course may not concurrently enroll in any other Honors Scientific Research and Design course. *Students enrolling in Biology Dual Credit as seniors can only have two credits of Honors Scientific Research and Design prior to their senior year.

556501 Engineering Design and Development (PLTW)

FULL YEAR

Grades: 12

Prerequisite: Algebra II; Physics or concurrent enrollment; Introduction to Engineering Design; Engineering Science; or teacher recommendation in lieu of prerequisites

Credit: 1.0

The knowledge and skills students acquire throughout their PLTW coursework come together in Engineering Design and Development as they work to identify an issue and then research, design, and test a solution of their open-ended problem, ultimately presenting and defending their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to standards and develop a product. While progressing through the engineering design process, students will work closely with experts and will continually hone their organizational, communication, and interpersonal skills, their creative and problem solving abilities, and their understanding of the design process. This is a Distinguished Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Engineer, Professional	Electrical and Electronics Engineering		
Fluid Power Systems Designer	Drafting and Design Technology/ Technician, General	CAD/CADD Drafting and/or Design Technology/ Technician	Mechanical Engineering
Certified Biomedical Auditor	Engineering Technology	Bioengineering and Biomedical Engineering	
Certified Cost Estimator/ Analyst		Construction Engineering Technology/ Technician	

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Aerospace Engineers	\$110,843	481	9%
Industrial Engineers	\$97,074	1,263	10%
Mechanical Engineers	\$91,707	1,535	11%
Chemical Engineers	\$112,819	474	9%
Electrical Engineers	\$98,405	1,137	10%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Computer Science I

LEVEL
2

AP Computer Science Principles

LEVEL
3

Computer Science II

AP Computer Science A

LEVEL
4

Career Preparation I and Extended Career Preparation

Computer Science III Honors

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
401001	Computer Science I	9 - 12	Algebra I	N/A
403701	AP Computer Science Principles	9 - 10	None	N/A
402001	Computer Science II	10 - 12	Computer Science I, Algebra I	N/A
401051	AP Computer Science A (math credit)	11 - 12	Algebra I or a student should be comfortable with functions and the concepts found in the uses of functional notation such as $f(x)=x+2$ and $f(x)=g(h(x))$	N/A
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
403531	Computer Science III Honors	11 - 12	Computer Science II or AP Computer Science A	Oracle Certified Associate, Java SE 8 Programmer

The Programming and Software Development program of study explores the occupations and education opportunities associated with researching, designing, developing, and testing operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computer applications. This program of study may also include exploration into creating, modifying, and testing the codes, forms, and script that allow computer applications to run.



The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Meets the requirements of the Business and Industry endorsement or STEM endorsement (if math/science requirements are met).



COURSE DESCRIPTIONS

401001 Computer Science I

FULL YEAR

Grades: 9 - 12

Prerequisite: Algebra I

Credit: 1.0

BPA

Computer Science I is an introduction to the automated processing of information, including computer programming. Students will apply their mathematical and logical reasoning to solve problems in the field of computer science. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will also explore various aspects of digital citizenship, including those affecting both users and programmers. The learning in this course equips students to read and write small programs using Java programming language in response to a given problem or scenario. No previous coding/programming experience is required.

403701 AP Computer Science Principles

FULL YEAR

Grades: 9 - 10

Prerequisite: None

Credit: 1.0

BPA

AP Computer Science Principles is an introduction to the complete field of computer science. This course is focused on five computer science big ideas: Creative Development, Data, Algorithms and Programming, Computer Systems and Networks, and Impact of Computing. Students will broaden their understanding of computer science for use in a diversity of interests, majors, and careers. Programming is only one component of this course and is taught at an introductory level using JavaScript. No previous coding/programming experience is required. Students will submit their Create Performance Task as part of their College Board score. This course prepares students to take the Advanced Placement (AP) Computer Science Principles exam to possibly earn college credit.

402001 Computer Science II

FULL YEAR

Grades: 10 - 12

Prerequisite: Computer Science I, Algebra I

Credit: 1.0

BPA

This course continues to build student learning from Computer Science I. The learning in this course equips students to read and write complex programs using Java programming language. Students apply algebraic and logical reasoning acquired in mathematics to develop robust programming solutions. Upon completion of this course, the student will have created software such as an interactive program and/or an animated graphics display.

401051 AP Computer Science A

FULL YEAR

Grades: 11 - 12

Prerequisite: Algebra I or a student should be comfortable with functions and the concepts found in the uses of functional notation such as $f(x)=x+2$ and $f(x)=g(h(x))$

Credit: 2.0 (math credit)

BPA

This course serves as an introduction to computers and the study of managing and processing information. Students apply algebraic and logical reasoning acquired in mathematics to develop robust programming solutions. The emphasis is on solving industry problems by means of computer programming (software engineering). Students will thoroughly learn the Java programming language and apply those skills in exploring how computers work. Some topics covered include object-oriented techniques, file management, data structures, classes, objects, graphics, debugging, hardware components, and social implications. This course prepares students to take the Advanced Placement Computer Science A exam to possibly earn college credit. Note: One of two credits counts toward GPA.

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per school day allocated for early release for off campus work experience.

403531
FULL YEAR

Computer Science III Honors

Grades: 11 - 12

Prerequisite: Computer Science II or AP Computer Science A

Credit: 1.0

Certification: Oracle Certified Associate, Java SE 8 Programmer



This course has four main goals: develop advanced software engineering skills in the Java programming language; teach advanced data structures such as linked lists, trees, classes, and data files; expose students to the development and analysis of classic computer algorithms such as sorting, searching, recursion, and numerical analysis; recognize the ethical and social implication of computer use. Students will develop major software projects over topics such as databases, sorting, business applications, and graphics. This course may provide instruction and training necessary for an industry based certification.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Certified Computing Professional	Computer Programming/ Programmer General	Management Information Systems, General	Computer Software Engineer
Cloud Technology Associate Certification	Computer Software Engineer		Computer Science
AEM 6 Developer	Computer Science		Information Science/Studies
Certified Software Analyst	Certified Software Analyst	Information Science/Studies	

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Software Developer, Systems Software	\$103, 334	2,985	25%
Software Developers, Applications	\$104, 499	26,311	30%
Computer Programmers	\$79,893	1,454	9%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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.....AUTOMOTIVE

TRANSPORTATION, DISTRIBUTION, AND LOGISTICS



UNDERSTANDING A PROGRAM OF STUDY



TRANSPORTATION, DISTRIBUTION, AND LOGISTICS

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.

Programs of study will provide students with a course sequence that ties to an endorsement and offers a strong vertical alignment between secondary and postsecondary education. The suggested course pathways are intended to provide guidance to students seeking college and career readiness through course content and industry based certifications.

LEVEL
1

Plano ISD Course Name

LEVEL
2

Plano ISD Course Name

LEVEL
3

Plano ISD Course Name

LEVEL
4

Plano ISD Course Name

Courses and/or certifications listed in italics have been added for local purpose.

PROGRAM OF STUDY ICONS - WHAT DO THEY MEAN?

PLANO ISD GRADUATION ENDORSEMENTS

Endorsements consist of a related series of courses that are grouped together by interest or skill set. They provide students with in-depth knowledge of a subject area. For more information on endorsement requirements, reference your course catalog or contact your counselor.



ARTS & HUMANITIES



BUSINESS & INDUSTRY



MULTI-DISCIPLINARY



PUBLIC SERVICE



STEM

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSO)

Career and Technical Student Organizations (CTSO) enhance student learning through contextual instruction, leadership and personal development, applied learning, and real world application. CTSOs work as an integral component of the classroom curriculum and instruction, building upon employability and career skills and concepts through the application and engagement of students in hands-on demonstrations and real life and/or work experiences through a Career and Technical Education (CTE) program.



BUSINESS
PROFESSIONALS
OF AMERICA



DISTRIBUTIVE
EDUCATION CLUBS
OF AMERICA



FAMILY, CAREER,
AND COMMUNITY
LEADERS OF
AMERICA



NATIONAL
FFA
ORGANIZATION



FUTURE HEALTH
PROFESSIONALS



SKILLS
USA



TEXAS
ASSOCIATION
OF FUTURE
EDUCATORS

COURSE REQUIREMENTS



Students are required to provide their own transportation.



Students may be required to pay a fee to participate.

SUGGESTED COURSE PATHWAY

Courses are not tied to grade levels.



LEVEL
1

Professional Communications

LEVEL
2

Business Information Management

LEVEL
3

Automotive Technology I: Maintenance and Light Repair
Collision Repair

LEVEL
4

Automotive Technology II: Automotive Service
Career Preparation I and Extended Career Preparation
Paint and Refinishing

Courses and/or certifications listed in italics have been added for local purpose.

COURSE INFORMATION

COURSE NO.	COURSE NAME	GRADE	PREREQUISITES	CERTIFICATIONS <i>(subject to change)</i>
45350B	<i>Professional Communications</i> (speech credit)	9 - 12	None	N/A
352001	<i>Business Information Management (BIM)</i>	9 - 12	None	Microsoft Office Specialist (MOS)
557101	Collision Repair	11 - 12	Qualification packet may be required	Automotive Service Excellence
557201	Automotive Technology I: Maintenance and Light Repair	11 - 12	Qualification packet may be required	Automotive Service Excellence
553801	Career Preparation I and Extended Career Preparation	11 - 12	16 years of age	N/A
557251	Automotive Technology II: Automotive Service	12	Automotive Technology I: Maintenance and Light Repair; Qualification packet may be required	Automotive Service Excellence
557151	Paint and Refinishing	12	Collision Repair; Qualification packet may be required	Automotive Service Excellence

AUTOMOTIVE

The Automotive program of study teaches CTE learners how to repair and refinish automobiles and service various types of vehicles. CTE learners may learn to collect payment for services or supplies and perform typical vehicle maintenance procedures such as lubrication, oil changes, installation of antifreeze, or replacement of accessories like wiper blades or tires.



The Transportation, Distribution, and Logistics Career Cluster focuses on careers in planning, management, and movement of people, materials, and goods by road, pipeline, air, rail, and water. It also includes related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

Meets the requirements of the Business and Industry endorsement.



COURSE DESCRIPTIONS

45350B Professional Communications

SEMESTER

Grades: 9 - 12

Prerequisite: None

Credit: 0.5 (speech credit)

Professional Communications blends written, oral, and graphic communication in a real world context that promotes leadership and professional behaviors. Creative individuals with strong communications skills, a solid academic foundation and proficiency in a wide range of technology applications are in demand by higher education institutions and global industry. This course will help to develop and expand the ability to write, read, edit, speak, listen, present, apply software applications, manipulate computer graphics, and conduct research to better prepare for a competitive academic and/or workplace environment.

352001 Business Information Management (BIM)

FULL YEAR

Grades: 9 - 12

Prerequisite: None

Credit: 1.0

Certification: Microsoft Office Specialist (MOS)

Business Information Management (BIM) gives students a working knowledge of technology and prepares them to be proficient in business applications using Microsoft Office. Students will develop word processing, spreadsheet, presentation, and database skills. BIM provides students the skills to master the world's most powerful business software.

BPA

557101 Collision Repair

FULL YEAR

2 HR BLOCK

Grades: 11 - 12

Prerequisite: Qualification packet may be required

Credit: 2.0

Certification: Automotive Service Excellence

Students receive training in the fundamental and manipulative skills related to auto body repair to become competent in the field of auto body repair. Areas covered are body frames, fender and bumper, removing windows and repairing damaged panels, replacing windows and windshields, welding light metals, filling with lead or plastic, estimating and pricing repair work, and spray painting.

**SKILLS
USA**

557201 Automotive Technology I: Maintenance and Light Repair

FULL YEAR

2 HR BLOCK

Grades: 11 - 12

Prerequisite: Qualification packet may be required

Credit: 2.0

Certification: Automotive Service Excellence

This course offers students theory and experience in all phases of automotive drive-train repair. Students spend approximately 75 percent of their time with hands-on training with the remaining time devoted to classroom instruction. Shop management and youth leadership are also incorporated into the course of study.

**SKILLS
USA**

COURSE DESCRIPTIONS

553801
FULL YEAR

Career Preparation I and Extended Career Preparation

Grades: 11 - 12

Prerequisite: 16 years of age

Credit: 3.0



This course provides opportunities for students to participate in a work-based learning experience that combines classroom instruction with paid business and industry employment experiences. Classroom experiences include: job acquisition, career progression, financial success, business/entrepreneurial applications, occupational safety and health, and relevant news topics. Professional portfolios will be created with material supporting an educational/career plan for the future. Students will earn 3.0 credits for successful completion of this course which includes one class period per school day on campus and two class periods per day allocated for early release for off campus work experience.

557251
FULL YEAR
2 HR BLOCK

Automotive Technology II: Automotive Service

Grades: 12

Prerequisite: Automotive Technology I;
Qualification packet may be required

Credit: 2.0

Certification: Automotive Service Excellence



This course is a continuation of Automotive Technology I, including new concepts and innovations, new engine types, studies of anti-pollutant equipment on automobile engines, and computerized engine analysis. This is an Honors Level course.

557151
FULL YEAR
2 HR BLOCK

Paint and Refinishing

Grades: 12

Prerequisite: Collision Repair; Qualification packet may be required

Credit: 2.0

Certification: Automotive Service Excellence



This course is a continuation of Collision Repair. Students receive advanced training in the processes, technologies, and materials used in the reconstruction of vehicles, including concepts and theory related to automotive paint and refinishing. This is an Honors Level course.

POSTSECONDARY OPTIONS

CERTIFICATE/ LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
Master Collision Repair and Refinishing Technician	Autobody/ Collision and Repair Technology/ Technician		Mechanical Engineering
Automobile Technician: various systems and parts	Medium/Heavy Vehicle and Truck Technology/ Technician	Medium/Heavy Vehicle and Truck Technology/ Technician	
Engine Machinist Technician	Mechanical Engineering/ Mechanical Technology/ Technician		
Collision Repair and Refinish			

WORKFORCE/CAREER OPTIONS

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Automotive Body and Related Repairers	\$40,144	1,456	25%
Automotive Service Technician and Mechanics	\$38,459	5,557	18%

Postsecondary, workforce, and career options data provided by Texas Education Agency (TEA).

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