
CAREER TECHNICAL EDUCATION

Career Technical Education (CTE) is a program of study that involves a multiyear sequence of courses that integrates core academic knowledge with technical and occupational knowledge to provide students with a pathway to postsecondary education and careers. Programs of study include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, unduplicated sequence of courses that aligns secondary with postsecondary education. CTE programs are designed to prepare students for ongoing education, long-term careers, citizenship, and entry into the workplace. CTE responds to the needs of the economy with regard to both industry focus and the skills and knowledge learned and applied by students.

Students who complete a sequence of courses take exploratory, foundation, intermediate, and advanced (funded by the Regional Occupational Program, or ROP) courses in a single, defined field of study. Students are encouraged to complete a series of workplace learning experiences including an internship in their chosen industry prior to completing their senior year. A program of CTE study may also lead to articulated community college credit, matriculated university recognition, an industry-recognized credential, a certificate at the postsecondary level, an associate degree, or a baccalaureate degree. Some 50 CTE courses, including more than 30 ROP-funded courses, currently meet the University of California's a-g subject-area requirements.

CTE courses are required in career-themed pathways at small learning communities, small schools, and academy programs.

Career Technical Education in the state of California is organized around 15 *industry sectors*, or groupings of interrelated occupations and industries:

- Arts, Media, and Entertainment (p. CTE-2)
- Building and Construction Trades (p. CTE-6)
- Business and Finance (p. CTE-11)
- Education, Child Development, and Family Services (p. CTE-15)
- Energy, Environment, and Utilities (p. CTE-20)
- Engineering and Architecture (p. CTE-23)
- Environmental Sciences and Natural Resources (p. CTE-28)
- Fashion and Interior Design (p. CTE-30)
- Health Science and Medical Technology (p. CTE-33)
- Hospitality, Tourism, and Recreation (p. CTE-40)
- Information and Communication Technologies (p. CTE-42)
- Manufacturing and Product Design (p. CTE-47)
- Marketing, Sales, and Services (p. CTE-51)
- Public Services (p. CTE-55)
- Transportation (p. CTE-59)

Each sector has two or more *career pathways*. Course sequences in each pathway prepare students for successful completion of Common Core State Standards, technical standards, and more advanced postsecondary coursework related to the career in which they may be interested.

Each industry sector and its corresponding career pathways is discussed in more detail in the following pages. Detailed descriptions of all districtwide CTE courses begin on page CTE-65. Descriptions of ROP-funded courses may be found in the Regional Occupational Program section of this publication.

The state of California Career Technical Education standards are available at the following website:

www.cde.ca.gov/ci/ct/sf/ctemcstandards.asp

For more information regarding Career Technical Education courses, call the Office of College, Career and Technical Education at (858) 503-1738, or visit:

www.sandi.net/cte

ARTS, MEDIA, AND ENTERTAINMENT INDUSTRY SECTOR

Career Pathways

- Design, Visual, Media Arts
- Performing Arts
- Production and Managerial Arts

Of all the career industries, the Arts, Media, and Entertainment (AME) sector requires perhaps the greatest cross-disciplinary interaction, because the work in this sector has a propensity to be largely project-based, requiring both independent work and interdependent management skills for career success. New technologies are also constantly reshaping the boundaries and skill sets of many arts career pathways. Consequently, core arts-sector occupations demand constantly varying combinations of artistic imagination, metaphoric representation, symbolic connections, and technical skills. Successful career preparation involves both broad and in-depth academic and technical preparation as well as the cultivation of twenty-first-century skill assets, such as flexibility, problem-solving abilities, and interpersonal skills. The anchor and pathway standards make explicit the appropriate knowledge, skills, and practical experience students should have in order to pursue their chosen profession, whether that profession requires postsecondary education, graduate training, or apprenticeship.

Learning the skills and knowledge for creating, refining, and sharing work in the AME industry sector promotes teamwork, communication, creative

thinking, and decision making abilities—traits that are necessary to function successfully in the competitive and media-rich twenty-first century. Through the manipulation of sight, sound, and motion, those choosing a pathway from this sector reach out in unique ways to enhance the quality of life for those around them.

Small learning communities of the San Diego Unified School district with an emphasis on the arts are:

- Arts Tech, University City High School
- Crawford High School
- Creative, Performing, and Media Arts Middle School (CPMA)
- Multimedia, Visual, and Performing Arts (MVPA), San Diego High Educational Complex
- San Diego School of Creative and Performing Arts (SCPA)
- School of Digital Media and Design (DMD), Kearny High Educational Complex
- School of the Arts (SOTA), Madison High School

The following websites can provide more information about the sample post-secondary options shown in the following charts:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Arts, Media, and Entertainment Industry Sector

Design, Visual, and Media Arts Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post- Secondary Options
Explorations in Technical Theatre 1,2 (1407, 1408) Exploring Careers 6th-8th (8299) Introduction to Video Production 6th-8th (8370) Photography 6th-8th (3690)	Computer Animation 1,2 (3639, 3640)* Graphic Communications Technology 1,2 (3621, 3622) Introduction to AME (Arts, Media & Entertainment) Production 1,2 (0681, 0682) Introduction to Fabrication and Design 1,2 (3591, 3592)* Introduction to Music Production Technology 1,2 (3765, 3766)* Photography 1,2 (3691, 3692)* Video Production 1,2 (8373, 8374)*	Foundations in VAD (Visual Art & Design) 1,2 (3645, 3646) Graphic Communications Technology 3,4 (3623, 3624) Introduction to Fabrication and Design 1,2 (3591, 3592) Photography 3,4 (3693, 3694) Technical Theatre 1,2 (1413, 1414)* Video Production 3–4 (8375, 8376)*	Broadcast Journalism (ROP)* Cinematic Arts 1,2 (8239, 8240) Computerized Graphic Design (ROP)*† Contemporary Communications 1,2 (0651, 0652)§ Digital Art & Mixed Media (ROP)* Fabrication & Design (ROP)* Multimedia Production (ROP)*† Photographic Imaging (ROP)*† Screen Printing (ROP)* Technical Theatre 3,4 (1462, 1463)*	SDCCD City College: <ul style="list-style-type: none"> Associate in Arts Degree Certificate of Achievement Mesa College: <ul style="list-style-type: none"> Associate in Science Degree in Multimedia Certificate of Achievement Certificate of Performance SDSU: <ul style="list-style-type: none"> BA in Applied Arts & Science Theatre, Television & Film (BA in Applied Arts & Science) BA in Visual Arts & Sciences UCSD: <ul style="list-style-type: none"> BA in Media BA in Visual Arts Sample Careers High school (diploma): <ul style="list-style-type: none"> Production Assistant Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> Videographer College or university (bachelor's degree or higher): <ul style="list-style-type: none"> Artistic Director Commercial Artist Digital Animator Medical and Scientific Illustrator Museum Curator Sound Engineer Web Designer

* This course meets the University of California's *f* (visual and performing arts) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

§ This course meets the University of California's *b* (English) subject-area requirement.

Performing Arts Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)		Artist in Residence 1,2 (0683, 0684)		<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree • Certificate of Performance <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BA in Applied Arts & Sciences • BA in Music • BA in Theatre <p>UCSD:</p> <ul style="list-style-type: none"> • BA in Music • BA in Theatre <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Announcer <p>Postsecondary training (certificate and/or AA degree):</p> <ul style="list-style-type: none"> • Actor • Voiceover Artist, Narrator <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Composer • Music Director/Conductor

Production and Managerial Arts Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Explorations in Technical Theatre 1,2 (1407, 1408) Exploring Careers 6th-8th (8299)	Introduction to AME (Arts, Media & Entertainment) Production 1,2 (0681, 0682) Introduction to Music Production Technology 1,2 (3765, 3766)*	Artist in Residence 1,2 (0683, 0684) Arts Management 1,2 (8691, 8692)	Arts Management 3,4 (8693, 8694) Contemporary Communications 1,2 (0651, 0652)†	<p>SDCCD</p> City College: <ul style="list-style-type: none"> • Associate in Arts Degree Mesa College: <ul style="list-style-type: none"> • Associate in Arts Degree Miramar College: <ul style="list-style-type: none"> • Associate in Arts Degree <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Business Administration <p>UCSD:</p> <ul style="list-style-type: none"> • BA in Management <p>Sample Careers</p> High School (diploma) <ul style="list-style-type: none"> • Event Planner Assistant • Theatrical and Broadcast Technician Assistant Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • First Assistant Camera Operator • Theatrical and Broadcast Technician College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Event Planner • Producer/Director • Stage Manager/Production Manager • Talent Management

* This course meets the University of California's *f* (visual and performing arts) subject-area requirement.

† This course meets the University of California's *b* (English) subject-area requirement.

BUILDING AND CONSTRUCTION TRADES INDUSTRY SECTOR

Career Pathways

- Cabinetry, Millwork, and Woodworking
- Engineering and Heavy Construction
- Mechanical Systems Installation and Repair
- Residential and Commercial Construction

This sector provides a foundation in the Building and Construction Trades industry for secondary students in California. Students engage in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and skill preparation in the Building and Construction Trades industry. The sector encompasses four career pathways: Cabinetry, Millwork, and Woodworking; Engineering and Heavy Construction; Mechanical Systems Installation and Repair; and Residential and Commercial Construction. These pathways emphasize processes, systems, and the way in which structures are built. The knowledge and skills are acquired in a sequential, standards-based pathway

program that integrates hands-on, project-based, and work-based instruction. Standards included in the Building and Construction Trades sector are designed to prepare students for technical training, postsecondary education, and entry to a career.

Small learning communities of the San Diego Unified School district with an emphasis on construction are:

- Academy of Sustainable Building and Engineering, Hoover High School
- Stanley E. Foster Construction Tech Academy, Kearny High Educational Complex

The following websites can provide more information about the sample post-secondary options shown in the following charts:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Building Trades and Construction Industry Sector

Cabinetry, Millwork, and Woodworking Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Construction Technology 6th-8th (3528) Exploring Careers 6th-8th (8299)	Construction Technology 1,2 (3651, 3652) Introduction to Arts, Media, and Entertainment (AME) 1,2 (0681, 0682)	Construction Technology 3,4 (3653, 3654)	Construction, General (ROP) Fine Woodworking (ROP)*	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Construction <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Construction <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Cabinet installer • Cabinetmaking Apprentice <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Cabinet Installer/Designer • Cabinetmaker <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Construction Management • Custom Millwork Project Estimator • Woodworking Engineer

* This course meets the University of California's g (college preparatory electives) subject-area requirement.

Engineering and Heavy Construction Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
<p>Construction Technology 6th-8th (3528) Exploring Careers 6th-8th (8299)</p>	<p>Construction Technology 1,2 (3651, 3652) Introduction to Design 1,2 (3657, 3658) Introduction to Engineering Design 1,2 (3542, 3544)* Introduction to Green Technology 1,2 (3763, 3764)† Manufacturing Technology 1,2 (3681, 3682)</p>	<p>Construction Technology 3,4 (3653, 3654) Manufacturing Technology 3,4 (3683, 3684)</p>	<p>Civil Engineering and Architecture (ROP)* Construction, General (ROP) Machine Tool Technology (ROP)§</p>	<p>SDCCD City College: • Associate in Science Degree • Certificate of Achievement Mesa College: • Associate in Science Degree • Certificate of Achievement • Certificate of Performance SDSU: • BA in Liberal Arts & Sciences UCSD: • BA in Engineering Sample Careers High school (diploma): • Cement Mason • Iron Worker Postsecondary training (certification and/or AA degree): • Welder College or university (bachelor’s degree or higher): • Civil Engineer</p>

* This course meets the University of California’s *g* (college preparatory electives) subject-area requirement.

† This course meets the University of California’s *d* (laboratory science) subject-area requirement.

§ This course is eligible for community college credit, if the student earns a grade of “B” or above.

Mechanical Systems Installation and Repair Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Construction Technology 6th-8th (3528) Exploring Careers 6th-8th (8299)	Construction Technology 1,2 (3652, 3652) Introduction to Green Technology 1,2 (3763, 3764)*	Construction Technology 3,4 (3653, 3654)	Construction, General (ROP)	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Mechanical Engineering <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Mechanical Engineering <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Electrician's Helper • Plumbing Installer <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • HVAC Installation and Maintenance Specialist <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Contractor • Mechanical Construction Field Manager

* This course meets the University of California's *d* (laboratory science) subject-area requirement.

Residential and Commercial Construction Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
<p>Construction Technology 6th-8th (3528)</p> <p>Exploring Careers 6th-8th (8299)</p>	<p>Construction Technology 1,2 (3651, 3652)</p> <p>Introduction to Arts, Media, and Entertainment (AME) 1,2 (0681, 0682)</p> <p>Introduction to Green Technology 1,2 (3763, 3764)*</p>	<p>Construction Technology 3,4 (3653, 3654)</p>	<p>Construction, General (ROP)</p> <p>Fine Woodworking (ROP)†</p>	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Construction <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Construction <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Carpenter • Heavy Equipment Operator • Plumber <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Electrician • Iron worker <p>College or university (bachelor’s degree or higher):</p> <ul style="list-style-type: none"> • Building Inspector • Engineer • Estimator

* This course meets the University of California’s *d* (laboratory science) subject-area requirement.

† This course meets the University of California’s *g* (college preparatory electives) subject-area requirement.

BUSINESS AND FINANCE INDUSTRY SECTOR***Career Pathways***

- Business Management
- Financial Services
- International Business

Persons trained in fields such as business management, international trade, and various financial services specialties (e.g., accounting, banking, and investing) will find that their skills are highly marketable. Students master basic business principles and procedures before proceeding to the career path specializations. The specializations emphasize concepts of accounting and finance, including computer applications, taxes, investments, and asset management as well as pathways in international business and business management. Because almost every business and organization has a financial and management component, students will find that opportunities exist in many career paths in addition to those in business and finance.

Small learning communities of the San Diego Unified School district with an emphasis on finance and business are:

- Academy of Business, Clairemont High School
- Academy of Finance, San Diego High Educational Complex
- Crawford High School
- School of International Business, Kearny High Educational Complex

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College:
studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University:
arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego:
www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Business and Finance Industry Sector

Business Management Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Keyboarding Introduction 6th-8th (0520)	Accounting 1,2 (0731, 0732)* Business 100 1,2 (0514, 0515) Business Law 1,2 (0561, 0562) Computer Applications in Business 1,2 (0723, 0724)* Virtual Enterprise 1,2 (0581, 0582)	Accounting 3,4 (0733, 0734) Economics and Finance 1,2 (0569, 0570)† Organizational Leadership 1,2 (0505, 0506)	Business and Financial Markets (ROP)† Business Management and Ownership (ROP)† Business Statistics 1,2 (0541, 0542)** Contemporary Communications 1,2 (0651, 0652)§ Economics and International Business (ROP)†	SDCCD City College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement Miramar College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement • Certificate of Performance SDSU: <ul style="list-style-type: none"> • BS in Business Administration Sample Careers High school (diploma): <ul style="list-style-type: none"> • Collector • Office Manager Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Purchasing Agent • Treasurer College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Chief Financial Officer • Economist • Education Administrator • Human Resources Specialist

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's *g* (college preparatory elective) subject-area requirement.

§ This course meets the University of California's *b* (English) subject-area requirement.

** Business Statistics Math (0541) earns a half-year credit toward the University of California's *c* (Mathematics) subject-area requirement; Business Statistics Elective (0542) earns a half-year credit toward the UC *g* (college-preparatory elective) subject-area requirement. Both single-semester courses must be completed in order to receive UC credit for either one.

Financial Services Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Keyboarding Introduction 6th-8th (0520)	Accounting 1,2 (0731, 0732)* Business 100 1,2 (0514, 0515) Business Law 1,2 (0561, 0562) Computer Applications in Business 1,2 (0723, 0724)* Virtual Enterprise 1,2 (0581, 0582)	Accounting 3,4 (0733, 0734) Business and Management HL1 IB 1,2 (0591, 0592) Economics and Finance 1,2 (0569, 0570)† Organizational Leadership 1,2 (0505, 0506)	Advanced Accounting (ROP)† Business and Financial Markets (ROP)† Business Statistics 1,2 (0541, 0542)** Business Management and Ownership (ROP)† Contemporary Communications 1,2 (0651, 0652)§	SDCCD City College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement Miramar College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement • Certificate of Performance SDSU: <ul style="list-style-type: none"> • BS in Business Administration Sample Careers High school (diploma): <ul style="list-style-type: none"> • Accounts Payable Clerk Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Tax Preparer College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Accountant • Auditor • Budget Analyst • Investment Consultant • Tax Preparer

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's *g* (college preparatory elective) subject-area requirement.

§ This course meets the University of California's *b* (English) subject-area requirement.

** Business Statistics Math (0541) earns a half-year credit toward the University of California's *c* (Mathematics) subject-area requirement; Business Statistics Elective (0542) earns a half-year credit toward the UC *g* (college-preparatory elective) subject-area requirement. Both single-semester courses must be completed in order to receive UC credit for either one.

International Business Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Keyboarding Introduction 6th-8th (0520)	Accounting 1,2 (0731, 0732)* Business 100 1,2 (0514, 0515) Business Law 1,2 (0561, 0562) Computer Applications in Business 1,2 (0723, 0724)* Virtual Enterprise 1,2 (0581, 0582)	Accounting 3,4 (0733, 0734) Economics and Finance 1,2 (0569, 0570)† Organizational Leadership 1,2 (0505, 0506)	Business and Financial Markets (ROP)† Business Statistics 1,2 (0541, 0542)** Contemporary Communications 1,2 (0651, 0652)§ Economics and International Business (ROP)†	SDCCD City College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement Miramar College: <ul style="list-style-type: none"> • Associate Degree • Certificate of Achievement • Certificate of Performance SDSU: <ul style="list-style-type: none"> • BS in Business Administration Sample Careers High school (diploma): <ul style="list-style-type: none"> • Account Collector • Export Sales Representative Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • International Shipping Specialist College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Customs Broker • International Market Researcher

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's *g* (college preparatory elective) subject-area requirement.

§ This course meets the University of California's *b* (English) subject-area requirement.

** Business Statistics Math (0541) earns a half-year credit toward the University of California's *c* (Mathematics) subject-area requirement; Business Statistics Elective (0542) earns a half-year credit toward the UC *g* (college-preparatory elective) subject-area requirement. Both single-semester courses must be completed in order to receive UC credit for either one.

EDUCATION, CHILD DEVELOPMENT, AND FAMILY SERVICES INDUSTRY SECTOR

Career Pathways

- Child Development
- Consumer Services
- Education
- Family and Human Services

The Education, Child Development, and Family Services sector provides students with the academic and technical preparation to pursue high-skill, high-demand careers in these related and growing industries. The sector encompasses four distinct, yet interrelated, career pathways: Child Development, Consumer Services, Education, and Family and Human Services. The Child Development pathway provides students with the skills and knowledge they need to pursue careers in child care and related fields, and the Education pathway emphasizes the preparation of students to become teachers. The Family and Human Services pathway provides students with skills needed for careers related to family and social services. The standards are designed to integrate academic and career technical concepts. The anchor standards include Consumer and Family Studies comprehensive technical

knowledge and skills that prepare students for learning in the pathways. The knowledge and skills are acquired within a sequential, standards-based pathway program that integrates hands-on projects, work-based instruction, and leadership development—for example, through FHA-HERO, the California affiliate of Family, Career and Community Leaders of America (FCCLA). Standards in the Education, Child Development, and Family Services sector are designed to prepare students for technical training, postsecondary education, and entry to a career.

Small learning communities of the San Diego Unified School district with an emphasis on education are:

- Henry High School Teaching Academy

The following websites can provide more information about the sample post-secondary options shown in the following charts:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Education, Child Development, and Family Services Industry Sector

Child Development Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Explorations (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163) Infant and Toddler Development 1,2 (1171, 1172)	Human Psychology and Family Sociology 1,2 (1154, 1155)* Infant and Toddler Development Lab 1,2 (1175, 1176)	Developmental Psychology of Children (ROP)*† Infant and Toddler Development Lab 3–8 (1177–1182)	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Miramar College: <ul style="list-style-type: none"> • Associate in Arts Degree • Associate in Science Degree • Certificate of Achievement • Certificate of Performance SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences UCSD: <ul style="list-style-type: none"> • Bachelor's Degree Sample Careers High school (diploma): <ul style="list-style-type: none"> • Child Care Provider Postsecondary training (certificate and/or AA degree): <ul style="list-style-type: none"> • Child Development Specialist College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Child Psychologist

* This course meets the University of California's g (college preparatory electives) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

Consumer Services Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
<p>Consumer and Family Sciences Explorations (1032) Exploring Careers 6th-8th (8299)</p>	<p>Career and Life Management 1,2 (1169, 1163)</p>	<p>Human Psychology and Family Sociology 1,2 (1154, 1155)*</p>		<p>SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Miramar College: <ul style="list-style-type: none"> • Associate in Arts Degree • Associate in Science Degree • Certificate of Achievement • Certificate of Performance SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences UCSD: <ul style="list-style-type: none"> • Bachelor's Degree Sample Careers High school (diploma): <ul style="list-style-type: none"> • Customer Service Representative Postsecondary training (certificate and/or AA degree): <ul style="list-style-type: none"> • Personal Financial Advisor College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Accountant </p>

* This course meets the University of California's (college preparatory electives) subject-area requirement.

Education Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Explorations (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163)	Human Psychology and Family Sociology 1,2 (1154, 1155)*	Developmental Psychology of Children (ROP)*† Introduction to Teaching and Learning (ROP)*†	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BA Degree in Applied Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • Master of Education <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Before-/After-school Program Aide <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Teacher <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Primary/Secondary Teacher • Primary/Secondary Counselor

* This course meets the University of California's g (college preparatory electives) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

Family and Human Services Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Explorations (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163) Infant and Toddler Development 1,2 (1171, 1172)	Human Psychology and Family Sociology 1,2 (1154, 1155)* Infant and Toddler Development Lab 1,2 (1175, 1176)	Advanced Family Sociology (ROP) Developmental Psychology of Children (ROP)*† Introduction to Teaching and Learning (ROP)*† Infant and Toddler Development Lab 3–8 (1177–1182)	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate in Arts Degree • Associate in Science Degree • Certificate of Achievement • Certificate of Performance SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences UCSD: <ul style="list-style-type: none"> • Bachelor's Degree Sample Careers High school (diploma): <ul style="list-style-type: none"> • Human Services Program Assistant Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Social Outreach Director College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Social Worker

* This course meets the University of California's *g* (college preparatory electives) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

ENERGY, ENVIRONMENT, AND UTILITIES INDUSTRY SECTOR

Career Pathways

- Energy and Power Technology
- Environmental Resources

This sector is designed to provide a foundation of knowledge and skills in careers related to energy, environment, and utilities. The career pathways emphasize real-world, occupationally relevant knowledge, skills, and experiences of significant scope and depth in environmental resources, energy and power technology, and telecommunications. The standards integrate academic and technical preparation and focus on career awareness, career exploration, preparation for entry to technical-level employment, and alignment with postsecondary programs focused on energy, utilities, and related fields.

Small learning communities of the San Diego Unified School district with an emphasis on energy, environment, and utilities are:

- ENTEC Academy, Kearny School of Science, Connections and Technology
- SciTech Green Engineering Academy
- Scripps Ranch Engineering Program

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College:
studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University:
arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego:
www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Energy, Environment, and Utilities Industry Sector

Energy and Power Technology Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Construction Technology 6th-8th (3528) Exploring Careers 6th-8th (8299) Exploring Technology 6th-8th (3516) Gateway to Technology (3596)‡	Construction Technology 1,2 (3651, 3652) Introduction to Engineering Design I 1,2 (3542, 3544)*§ Introduction to Green Technology 1,2 (3763, 3764)†	Principles of Engineering (ROP)*§	Construction, General (ROP) Digital Electronics (ROP)* Engineering Design & Development (ROP)* Environmental Science 1,2 AP (ROP)†	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree SDSU: <ul style="list-style-type: none"> • BS in Construction UCSD: <ul style="list-style-type: none"> • BS in Construction Sample Careers High school (diploma): <ul style="list-style-type: none"> • Energy Generation/Power Distribution Specialist • Maintenance, Inspection, and Repair Technicians Postsecondary training (certificate and/or AA degree): <ul style="list-style-type: none"> • Energy/Building Retrofit Specialist College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Energy Engineer

* This course meets the University of California's *g* (college preparatory electives) subject-area requirement.

† This course meets the University of California's *d* (laboratory science) subject-area requirement.

§ This course is eligible for community college credit, if the student earns a grade of "B" or above.

Environmental Resources Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Exploring Technology 6th-8th (3516) Gateway to Technology (3596)‡	Introduction to Engineering Design I 1,2 (3542, 3544)* Introduction to Green Technology 1,2 (3763, 3764)†	Principles of Engineering (ROP)*	Digital Electronics (ROP)* Engineering Design and Development (ROP)* Environmental Science 1,2 AP (8448, 8449)*	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • AA Electricity Lineman <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • AA Engineering • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BA in Liberal Arts and Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS Degree <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Energy Management Worker <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Utilities Technician <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Energy Engineer • Environmental Engineer

* This course meets the University of California's *g* (college preparatory electives) subject-area requirement.

† This course meets the University of California's *d* (laboratory science) subject-area requirement.

ENGINEERING AND ARCHITECTURE INDUSTRY SECTOR

Career Pathways

- Architectural and Design
- Engineering Design
- Engineering Technology
- Environmental Engineering

The Engineering and Architecture sector follows the nationally recognized Project Lead the Way* curriculum. This sector is designed to provide students with a foundation in engineering design and architecture. Students are engaged in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and career preparation in four career pathways. The pathways emphasize real-world, occupationally relevant experiences of significant scope and depth. To prepare students for continued training, and advanced educational opportunities, the engineering, design, and architecture programs offer

the following components: classrooms, laboratories, and hands-on contextual learning; project- and work-based instruction; internships, community classrooms, and cooperative career technical education; work experience education; and leadership and interpersonal skills development.

Small learning communities of the San Diego Unified School district with an emphasis on engineering are:

- Academy of Engineering at Henry High School
- Stanley E. Foster Construction Tech Academy at the Kearny High Educational Complex

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

* Project Lead the Way (PLTW) and San Diego State University have a memorandum of understanding with local schools that offer PLTW engineering courses. The MOU guarantees admission to SUSU's College of Engineering if a student completes the following:

- Registers with the PLTW affiliate institute by the junior year
- Attains a 3.0 college-weighted GPA
- Completes all CSU *a-g* subject-area requirements, including four years of math
- Completes high school PLTW courses with a minimum grade of B
- Passes the Entry-Level Math Placement test and the Entry-Level English Placement test
- Takes the SAT 1 or the ACT test
- Submits a portfolio of engineering work
- Applies for PLTW scholarships

More information about the MOU may be found at:

www.pltwcalifornia.org/view-content/50/Engineering-Compact.html

Programs of Study for the Engineering and Design Industry Sector

Architectural and Design Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Exploring Technology 6th-8th (3516) Gateway to Technology (3596)	Introduction to Design 1,2 (3657, 3658) Introduction to Engineering Design I 1,2 (3542, 3544)*§ Introduction to Engineering Design II 1,2 (3547, 3548) Introduction to Green Technology 1,2 (3763, 3764)†	Design Technology SL IB 1,2 (3661, 3662)* Digital Electronics (ROP)* Principles of Engineering (ROP)*§	Civil Engineering and Architecture (ROP)* Engineering Design and Development (ROP)*	<p>SDCCD</p> City College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Engineering <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Engineering Sciences • BS in Structural Engineering <p>Sample Careers</p> High school (diploma): <ul style="list-style-type: none"> • Drafting Apprentice Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Estimator College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Architect

* This course meets the University of California's *g* (college preparatory electives) subject-area requirement.

† This course meets the University of California's *d* (laboratory science) subject-area requirement.

§ This course is eligible for community college credit, if the student earns a grade of "B" or above.

Engineering Design Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Exploring Technology 6th-8th (3516) Gateway to Technology (3596)	Introduction to Engineering Design I 1,2 (3542, 3544)*§ Introduction to Engineering Design II 1,2 (3547, 3548) Introduction to Green Technology 1,2 (3763, 3764)†	Design Technology SL IB 1,2 (3661, 3662)* Principles of Engineering (ROP)*§	Biotechnical Engineering 1,2 (8402, 8403)* Digital Electronics (ROP)* Engineering Design and Development (ROP)*	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement Miramar College: <ul style="list-style-type: none"> • Associate in Science Degree SDSU: <ul style="list-style-type: none"> • BS in Engineering UCSD: <ul style="list-style-type: none"> • BS in Engineering Sample Careers High school (diploma): <ul style="list-style-type: none"> • Construction Apprentice Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Engineering Technician College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Industrial Designer

* This course meets the University of California's *g* (college preparatory electives) subject-area requirement.

† This course meets the University of California's *d* (laboratory science) subject-area requirement.

§ This course is eligible for community college credit, if the student earns a grade of "B" or above.

Engineering Technology Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Exploring Technology 6th-8th (3516) Gateway to Technology (3596)	Introduction to Design 1,2 (3658, 3659) Introduction to Engineering Design I 1,2 (3542, 3544)*§ Introduction to Engineering Design II 1,2 (3547, 3548) Introduction to Green Technology 1,2 (3763, 3764)†	Design Technology SL IB 1,2 (3661, 3662)* Principles of Engineering (ROP)*§	Biotechnical Engineering 1,2 (8402, 8403)* Civil Engineering and Architecture (ROP)* Digital Electronics (ROP)* Engineering Design and Development (ROP)*	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement Miramar College: <ul style="list-style-type: none"> • Associate in Science Degree SDSU: <ul style="list-style-type: none"> • BS in Engineering UCSD: <ul style="list-style-type: none"> • BS in Engineering Sample Careers High school (diploma): <ul style="list-style-type: none"> • Electronic Technician Helper Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Facilities Technician College or university (bachelor’s degree or higher): <ul style="list-style-type: none"> • Engineer

* This course meets the University of California’s *g* (college preparatory electives) subject-area requirement.

† This course meets the University of California’s *d* (laboratory science) subject-area requirement.

§ This course is eligible for community college credit, if the student earns a grade of “B” or above.

Environmental Engineering Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Exploring Technology 6th-8th (3516) Gateway to Technology (3596)	Introduction to Design 1,2 (3657, 3658) Introduction to Engineering Design I 1,2 (3542, 3544)*§ Introduction to Engineering Design II 1,2 (3547, 3548) Introduction to Green Technology 1,2 (3763, 3764)†	Environmental Science 1,2 AP (ROP: 8448, 8449)† Principles of Engineering (ROP)*§	Biotechnical Engineering 1,2 (8402, 8403)* Biotechnology (ROP) Engineering Design and Development (ROP)* Environmental Science 3,4; 5,6 AP (ROP)	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree Miramar College: <ul style="list-style-type: none"> • Associate in Science degree SDSU: <ul style="list-style-type: none"> • BS in Environmental Engineering UCSD: <ul style="list-style-type: none"> • BS in Environmental Systems Sample Careers High school (diploma): <ul style="list-style-type: none"> • Environmental Sampling Assistant Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Water Quality Specialist College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Environmental Analyst • Environmental Engineer • Environmental Specialist

* This course meets the University of California's *g* (college preparatory electives) subject-area requirement.

† This course meets the University of California's *d* (laboratory science) subject-area requirement.

§ This course is eligible for community college credit, if the student earns a grade of "B" or above.

ENVIRONMENTAL SCIENCE AND NATURAL RESOURCES INDUSTRY SECTOR

Career Pathways

- Environmental Sciences and Resource Management

The Environmental Science and Natural Resources industry sector provides students with an in-depth overview of global environmental issues. Students engage in an instructional program that integrates academics, applied laboratory experiments, and field studies. The Environmental Sciences and Resource Management career pathway offers students career-related and real-world technical experiences with an in-depth concentration in hydro-science, global ecology, energy resources, urban environment, global climate change, and pollution control and waste management. The Environmental Sciences and Resource Management career pathway leads to advanced college educational opportunities and

prepares all students for the Advanced Placement (AP) Environmental Science examination.

Small learning communities of the San Diego Unified School district with an emphasis on environmental science are:

- Science Connections and Technology, Kearny High Educational Complex
- School of Science and Technology, San Diego High Educational Complex

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Environmental Science and Natural Resources Industry Sector

Environmental Sciences and Resource Management Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Introduction to Green Technology 1,2 (3763, 3764)*		Biotechnology (ROP) Environmental Science 1,2 AP (ROP: 8448, 8449)*	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in General Biology <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Research Assistant/Associate <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Plant Scientist • Water Quality Specialist <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Environmental Analyst

* This course meets the University of California's *d* (laboratory science) subject-area requirement.

FASHION AND INTERIOR DESIGN INDUSTRY SECTOR

Career Pathways

- Fashion Design and Merchandising
- Interior Design
- Personal Services

The Fashion and Interior Design sector contains three career pathways: Fashion Design and Merchandising, Interior Design, and Personal Services. These are growing industries that offer a wide variety of career choices. The career pathways prepare students with the knowledge, skills, and attitude necessary to pursue related careers and succeed in entry-level positions or pursue additional postsecondary education and training for technical and professional-level positions. Each pathway consists of a coherent sequence of courses that

begins with a foundation course, continues through one or more concentration courses and concludes with an advanced course. These standards-based courses are designed to integrate academic concepts with career technical concepts. Key components of the pathways support classroom and laboratory instruction or supervised work-based learning experiences and leadership development.

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College:
studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University:
arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego:
www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Fashion and Interior Design Industry Sector

Fashion Design and Merchandising Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Exploration (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163) Clothing and Design 1,2 (1135, 1136)*	Textile and Fashion Design 1,2 (1137, 1138)		SDCCD Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement Sample Careers High school (diploma): <ul style="list-style-type: none"> • Display or Sales Associate Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Merchandising Manager College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Fashion Designer

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

Interior Design Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Exploration (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163)			SDCCD Mesa College: • Associate in Science Degree • Certificate of Achievement Sample Careers High school (diploma): • Design Assistant Postsecondary training (certification and/or AA degree): • Set Director College or university (bachelor's degree or higher): • Interior Designer

Personal Services Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Exploration (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163) Clothing and Design 1,2 (1135, 1136)*	Textile and Fashion Design 1,2 (1137, 1138)		SDCCD Mesa College: • Associate in Science Degree • Certificate of Achievement Sample Careers High school (diploma): • Personal Assistant Postsecondary training (certification and/or AA degree): • Personal Shopper College or university (bachelor's degree or higher): • Personal Consultant

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

HEALTH SCIENCE AND MEDICAL TECHNOLOGY INDUSTRY SECTOR

Career Pathways

- Biotechnology
- Healthcare Administrative Services
- Healthcare Operational Support Services
- Mental and Behavioral Health
- Patient Care
- Public and Community Health

The standards in the Health Science and Medical Technology sector, one of the fastest growing industries nationwide, represent the academic and technical skills and knowledge students need to pursue a full range of career opportunities, from entry level to management, including technical and professional career specialties. The standards tell what workers need to know and be able to do to contribute to the delivery of safe and effective health care. The career pathways are grouped into functions that have a common purpose and require similar attributes. The career pathways are Biotechnology, Healthcare Administrative Services, Healthcare Operational Support Services, Mental and Behavioral Health, Patient Care, and Public and Community Health. Standards for each career path build on and continue the foundation standards with more complexity, rigor, and career specificity.

Internships in this program may occur in acute care hospitals, skilled, intermediate care facilities, and home care facilities, medical and dental offices, sub-acute facilities and medical research laboratories.

Small learning communities of the San Diego Unified School district with an emphasis on health and medical technology are:

- Academy for Health and Healthier Communities, Hoover High School
- Community Health and Medical Practices, Crawford High School
- MedTech Academy, School of Science and Technology, San Diego High Educational Complex
- Science Connections and Technology, Kearny High Educational Complex
- University City High School Biomedical Program

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Health Science and Medical Technology Industry Sector

Biotechnology Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Anatomy and Physiology for Health Careers 1,2 (3005, 3006)	Anatomy and Physiology for Health Careers 3,4 (3007, 3008)	Biotechnology (ROP)*†	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree • Associate in Science Degree • Certificate of Achievement <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Chemistry <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Glass washer <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Forensic Pathologist <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Clinical Trial Research Coordinator

* This course meets the University of California's *d* (laboratory science) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

Healthcare Administrative Services Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
<p>Exploring Careers 6th-8th (8299)</p>	<p>Anatomy and Physiology for Health Careers 1,2 (3005, 3006) Principals of Biomedical Science 1,2 (3311, 3312)*</p>	<p>Anatomy and Physiology for Health Careers 3,4 (3007, 3008) Healthcare Essentials (ROP)† Human Body Systems 1,2 (3313, 3314)*</p>	<p>Biomedical Innovation (ROP) Biotechnology (ROP)*† Healthcare Essentials (ROP)† Medical Intervention (ROP)</p>	<p>SDCCD City College: • Associate in Science Degree Mesa College: • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Miramar College: • Associate in Science Degree SDSU: • BS in Applied Arts & Sciences UCSD: • BS in General Biology Sample Careers High school (diploma): • Medical Records Clerk Postsecondary training (certification and/or AA degree): • Clinical Data Specialist • Medical Transcriber College or university (bachelor's degree or higher): • Ethicist • Health Care Administrator • Hospital/Nursing Home Administrator • Medical Illustrator</p>

* This course meets the University of California's *d* (laboratory science) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

Healthcare Operational Support Services Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Anatomy and Physiology for Health Careers 1,2 (3005, 3006) Principals of Biomedical Science 1,2 (3311, 3312)*	Anatomy and Physiology for Health Careers 3,4 (3007, 3008) Chemistry of Nutrition 1,2 (6178, 6179) Human Body Systems 1,2 (3313, 3314)*	Biomedical Innovation (ROP) Medical Intervention (ROP) Sports Medicine (ROP)†	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Environmental Services Assistant <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Central Support Technician • Clinical Simulator Technician • Materials Manager <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Environmental Health Specialist • Hospital Management Engineer

* This course meets the University of California's *d* (laboratory science) subject-area requirement.

† This course meets the University of California's *g* (college preparatory elective) subject-area requirement.

Mental and Behavioral Health Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Anatomy and Physiology for Health Careers 1,2 (3005, 3006) Principals of Biomedical Science 1,2 (3311, 3312)*	Anatomy and Physiology for Health Careers 3,4 (3007, 3008) Chemistry of Nutrition 1,2 (6178, 6179) Healthcare Essentials (ROP)† Human Body Systems 1,2 (3313, 3314)*	Biomedical Innovation (ROP) Biotechnology (ROP)*† Healthcare Essentials (ROP)† Medical Intervention (ROP) Sports Medicine (ROP)§	SDCCD City College: <ul style="list-style-type: none"> • Associate in Arts Degree • Associate in Science Degree • Certificate of Achievement Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Miramar College: <ul style="list-style-type: none"> • Associate in Science Degree SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences UCSD: <ul style="list-style-type: none"> • BS in Chemistry Sample Careers High school (diploma): <ul style="list-style-type: none"> • Medical Laboratory Aide Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Outreach Coordinator • Psychiatric Technician College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Mental Health Researcher • Mental Health Therapist • Psychologist

* This course meets the University of California's *d* (laboratory science) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

§ This course meets the University of California's *g* (college preparatory elective) subject-area requirement.

Patient Care Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Anatomy and Physiology for Health Careers 1,2 (3005, 3006) Principals of Biomedical Science 1,2 (3311, 3312)*	Anatomy and Physiology for Health Careers 3,4 (3007, 3008) Chemistry of Nutrition 1,2 (6178, 6179) Healthcare Essentials (ROP)† Human Body Systems 1,2 (3313, 3314)*	Biomedical Innovation (ROP) Biotechnology (ROP)*† Healthcare Essentials (ROP)† Medical Intervention (ROP) Sports Medicine (ROP)§	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree • Associate in Science Degree • Certificate of Achievement <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Chemistry <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Medical Laboratory Aide <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Dental Hygienist • Radiology Technician <p>College or university (bachelor’s degree or higher):</p> <ul style="list-style-type: none"> • Kinesiotherapist • Nurse Anesthesiologist • Respiratory Therapist

* This course meets the University of California’s *d* (laboratory science) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of “B” or above.

§ This course meets the University of California’s *g* (college preparatory elective) subject-area requirement.

Public and Community Health Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Anatomy and Physiology for Health Careers 1,2 (3005, 3006) Principals of Biomedical Science 1,2 (3311, 3312)*	Anatomy and Physiology for Health Careers 3,4 (3007, 3008) Chemistry of Nutrition 1,2 (6178, 6179) Human Body Systems 1,2 (3313, 3314)*	Biomedical Innovation (ROP) Medical Intervention (ROP) Sports Medicine (ROP)†	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences Sample Careers High school (diploma): <ul style="list-style-type: none"> • Community Health Worker • Physical Therapy Aid Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Pharmacy Technician College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Dentist • Epidemiologist • Health Educator

* This course meets the University of California's *d* (laboratory science) subject-area requirement.

† This course meets the University of California's *g* (college preparatory elective) subject-area requirement.

HOSPITALITY, TOURISM, AND RECREATION INDUSTRY SECTOR

Career Pathways

- Food Science, Dietetics, and Nutrition
- Food Service and Hospitality
- Hospitality, Tourism, and Recreation

The Hospitality, Tourism, and Recreation sector provides students with the academic and technical preparation necessary to pursue high-skill, high-demand careers in these related and growing industries. The sector encompasses three distinct, yet interrelated, career pathways: Food Science, Dietetics, and Nutrition; Food Service and Hospitality; and Hospitality, Tourism, and Recreation. The standards are designed to integrate academic and career technical concepts. The anchor standards include comprehensive technical

knowledge and skills from consumer and family studies that prepare students for learning in the pathways. The knowledge and skills are acquired within a sequential, standards-based pathway program that integrates hands-on projects, work-based instruction and leadership development such as that offered through FHA-HERO, the California affiliate of Family, Career and Community Leaders of America (FCCLA). Standards in this sector are designed to prepare students for technical training, postsecondary education, and entry to a career.

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Hospitality, Tourism, and Recreation Industry Sector

Food Science, Dietetics, and Nutrition Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Exploration (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163) Food Preparation and Nutrition 1,2 (1165, 1166)*	Nutrition 1,2 (1167, 1168)*	Culinary Arts and Management (ROP)*†	SDCCD City College: <ul style="list-style-type: none"> • Certificate of Achievement Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences Sample Careers High school (diploma): <ul style="list-style-type: none"> • Food Demonstrator Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Nutritionist College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Registered Dietitian

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's g (college preparatory elective) subject-area requirement.

Food Service and Hospitality Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Exploration (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163) Food Preparation and Nutrition 1,2 (1165, 1166)*	Hospitality, Introduction 1,2 (1198, 1199) Nutrition 1,2 (1167, 1168)*	Concepts in Hospitality and Tourism (ROP)* Culinary Arts and Management (ROP)*†	SDCCD Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences Sample Careers High school (diploma): <ul style="list-style-type: none"> • Food Expeditor Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Banquet and Catering Director College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Executive Chef

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's g (college preparatory elective) subject-area requirement.

Hospitality, Tourism, and Recreation Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Consumer and Family Sciences Exploration (1032) Exploring Careers 6th-8th (8299)	Career and Life Management 1,2 (1169, 1163) Food Preparation and Nutrition 1,2 (1165, 1166)*	Hospitality, Introduction 1,2 (1198, 1199) Nutrition 1,2 (1167)*	Concepts in Hospitality and Tourism (ROP)* Culinary Arts and Management (ROP)*†	SDCCD Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences Sample Careers High school (diploma): <ul style="list-style-type: none"> • Guest Services Agent Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Conference Services Director College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Certified Meeting/Event Planner

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's g (college preparatory elective) subject-area requirement.

INFORMATION AND COMMUNICATION TECHNOLOGIES INDUSTRY SECTOR

Career Pathways

- Games and Simulation
- Information Support and Services
- Networking
- Software and Systems Development

Rapidly emerging, evolving, and converging information and communication technologies (ICT) have expanded the need for employees who can understand, manage, and support today's computer, software, networking, telecommunications, internet, programming, and information systems. Essential skills for careers in the ICT sector include understanding systems that support the management and flow of data, the ability to work well and communicate clearly with people, and the ability to manage projects efficiently. The ICT sector meets national criteria for high demand, high wages,

and high skills and provides students with excellent opportunities for interesting work and good pay. More than 70 percent of jobs in this sector will require a bachelor's degree or higher by 2018.

Small learning communities of the San Diego Unified School district with an emphasis on information technology are:

- Hoover High School Academy of Information Technology

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Information and Communication Technologies Industry Sector

Games and Simulation Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Foundations in IT 1,2 (3705, 3706)	Computer Animation 1,2 (3639, 3640) Computer Graphics 1,2 (4425, 4426) Computer Science Principles 1,2 (4463, 4464)	Web Programming 1,2 (4430, 4431)	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Liberal Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Computer Science & Engineering <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Video Game Tester <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Video Game Tester <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Animator • Audio Engineer • Game Designer • Programmer • Quality Control Specialist • Writer

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

Information Support and Services Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Introduction to Technology Support Services (3761)	Computer Applications 1,2 (4421, 4422) Computer Science 1,2 (4411, 4412)* Foundations in IT 1,2 (3705, 3706)	Business 100 1,2 (0514, 0515) Computer Science 3,4 (4413, 4414)*	Geographic Information Systems and Global Technology (ROP)† Web Database Design (ROP)	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Liberal Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Computer Science & Engineering <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Administrative Assistant <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Technical Writer <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Database Administrator • GIS Analyst • GIS Developer • GIS Technician • Technical Support Representative

* This course meets the University of California's g (college preparatory elective) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

Networking Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Introduction to Technology Support Services (3761)	Computer Applications 1,2 (4421, 4422) Foundations in IT 1,2 (3705, 3706)	Technology Support Services 1,2 (ROP)*	Technology Support Services 3-6 (ROP)*	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Computer Science & Engineering <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Network System Assistant <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Telecommunications Specialist <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Network Administrator • Network Engineer • Network Manager/Director • Network Systems Manager • Network Technician

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

Software and Systems Development Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Introduction to Technology Support Services (3761)	Computer Applications 1,2 (4421, 4422) Computer Science 1,2 (4411, 4412)* Foundations in IT 1,2 (3705, 3706)	Computer Science 3,4 (4413, 4414)*	Computer Science A 1,2 AP (4461, 4462)*	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Computer Science & Engineering <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Programming Assistant <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Computer Support Specialist <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Chief Software Architect • Computer and Information Systems Management • Computer Programmer • Computer Scientist • Computer Systems Analyst • Quality Assurance Engineer • Software Engineer

* This course meets the University of California's g (college preparatory elective) subject-area requirement.

MANUFACTURING AND PRODUCT DEVELOPMENT INDUSTRY SECTOR

Career Pathways

- Graphic Production Technologies
- Machining and Forming Technologies Pathway
- Product Innovation and Design Pathway
- Welding and Materials Joining Pathway [not currently offered by the district]

The Manufacturing and Product Development sector provides a foundation for secondary students in California in manufacturing processes and systems, including graphic design production, machine tooling and forming, welding and materials joining, and product innovation and design. Students engage in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and skill preparation in four pathways. The pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in manufacturing. The

knowledge and skills are acquired within a sequential, standards-based pathway program that integrates hands-on, project-based, and work-based instruction. Standards in this sector are designed to prepare students for entry to a career, postsecondary education, or advanced technical training.

Small learning communities of the San Diego Unified School district with an emphasis on manufacturing and product development are:

- Construction Tech Academy, Kearny High Educational Complex
- Visual Arts and Technology Academy, University City High School

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Manufacturing and Product Development Industry Sector

Graphic Production Technologies Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Photography 6th-8th (3690)	Computer Graphics 1,2 (4425, 4426) Foundations in VAD 1,2 (3645, 3646) Graphic Communications Technology 1,2 (3621, 3622) Photography 1,2 (3691, 3692)*	Computerized Graphic Design 1,2 (8511, 8512)* Digital Art & Mixed Media 1,2 (8081, 8082)* Foundations in Visual Art and Design (VAD) 1,2 (3645, 3646) Photography 3,4 (3693, 3694) Screen Printing 1,2 (8882, 8883)*	Computerized Graphic Design 3,4 (8513, 8514)† Digital Art & Mixed Media 3,4 (8093, 8094) Photographic Imaging (ROP)*† Screen Printing 3,4 (8851, 8852)	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance Miramar College: <ul style="list-style-type: none"> • Associate in Arts Degree SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences UCSD: <ul style="list-style-type: none"> • BS in Computer Science Sample Careers High school (diploma): <ul style="list-style-type: none"> • Pre-Press Designer • Production Assistant Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Printing Press Operator • Production Manager College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Animator • Commercial Photographer • Digital/Graphic Artist

* This course meets the University of California's *f* (visual and performing arts) subject-area requirement.

† This course is eligible for community college credit, if the student earns a grade of "B" or above.

Machining and Forming Technology Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Exploring Technology 6th-8th (3516)	Manufacturing Technology 1,2 (3681, 3682)	Manufacturing Technology 3,4 (3683, 3684)	Machine Tool Technology (ROP)*	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Computer Science <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • CNC Machinist <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • CAD/CAM Specialist <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Materials/Supply Management Specialist • Quality Assurance Technician

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

Product Innovation and Design Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Gateway to Technology (3696)	Introduction to Design 1,2 (3657, 3658) Manufacturing Technology 1,2 (3681, 3682)	Principles of Engineering (ROP)*	Machine Tool Technology (ROP)	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Computer Science <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Plastics Assembler <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • CNC Machinist • Composite Fabricator • Production Inspector <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Fabrication Designer

* This course meets the University of California's g (college preparatory elective) subject-area requirement.

MARKETING, SALES, AND SERVICES INDUSTRY SECTOR

Career Pathways

- Entrepreneurship and Self-Employment
- Marketing
- Professional Sales

The Marketing, Sales, and Services sector is designed to align career-path course work with current and projected employment opportunities. There is a basic business foundation in this sector: marketing and innovation are two major competitive issues for business today. Marketing includes the processes and techniques of identifying, promoting, and transferring products or services to consumers and is a function of almost every business. It exists within an environment of rapidly changing technology, interdependent nations and economies, and increasing demands for ethical and social responsibility.

The three pathways in this sector (Marketing, Professional Sales, and Entrepreneurship and Self-Employment) emphasize training to meet the growing need for marketing professionals with skills in communication, small business, self-employment,

advertising, marketing strategies, product and service management, and promotion and selling concepts. These pathways provide a firm foundation for advanced education, entry to a career, and success in the global marketplace. All industry sectors include entrepreneurship and marketing, and therefore students in the Marketing, Sales, and Services sector have a variety of career options.

Small learning communities of the San Diego Unified School district with an emphasis on marketing, sales, and service are:

- Hoover High School
- San Diego High Educational Complex
- School of International Business, Kearny High Educational Complex

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College:
studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University:
arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego:
www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Marketing, Sales, and Service Industry Sector

Entrepreneurship and Self-employment Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Keyboarding Introduction 6th-8th (0520)	Accounting 1,2 (0731, 0732)* Business 100 1,2 (0514, 0515) Computer Applications in Business 1,2 (0723, 0724)* Marketing 1,2 (0801, 0802)	Accounting 3,4 (0733, 0734) Business Law 1,2 (0561, 0562) Marketing 3,4 (0803, 0804) Organizational Leadership (0505, 0506) Virtual Enterprise 1,2 (0581, 0582)	Business Management & Ownership (ROP)* Contemporary Communications 1,2 (0651, 0652)†	<p>SDCCD</p> City College: <ul style="list-style-type: none"> • Associate in Science Degree Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement Miramar College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>Sample Careers</p> High school (diploma): <ul style="list-style-type: none"> • Customer Service Representative • Travel Agent Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Marketing Manager • Meeting/Event Planner College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Business Owner • Consultant • Insurance Broker • National Account Manager

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's *b* (English) subject-area requirement.

Marketing Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Keyboarding Introduction 6th-8th (0520)	Accounting 1,2 (0731, 0732)* Business 100 1,2 (0514, 0515) Computer Applications in Business 1,2 (0723, 0724)* Marketing 1,2 (0801, 0802)	Accounting 3,4 (0733, 0734) Business Law 1,2 (0561, 0562) Marketing 3,4 (0803, 0804) Virtual Enterprise 1,2 (0581, 0582) Website Architecture 1,2 (4467, 4468) Web Site Design (ROP)*	Contemporary Communications 1,2 (0651, 0652)† Geographic Information Systems and Global Technologies (ROP)* Web Database Design (ROP)	SDCCD City College: <ul style="list-style-type: none"> • Associate in Science Degree Mesa College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement Miramar College: <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance SDSU: <ul style="list-style-type: none"> • BS in Applied Arts & Sciences Sample Careers High school (diploma): <ul style="list-style-type: none"> • Administrative Support Representative Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Account Supervisor • Public Relations Specialist College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Advertising Account Representative • Advertising Sales Manager • E-commerce Entrepreneur • Marketing Research Analyst

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's *b* (English) subject-area requirement.

Professional Sales Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299) Keyboarding Introduction 6th-8th (0520)	Accounting 1,2 (0731, 0732)* Business 100 1,2 (0514, 0515) Computer Applications in Business 1,2 (0723, 0724)* Marketing 1,2 (0801, 0802)	Accounting 3,4 (0733, 0734) Business Law 1,2 (0561, 0562) Marketing 3,4 (0803, 0804) Virtual Enterprise 1,2 (0581, 0582)	Business Management & Ownership (ROP)* Contemporary Communications 1,2 (0651, 0652)† Economics and International Business (ROP)§ Event Marketing (ROP) Geographic Information Systems & Global Technologies (ROP)* Modern Media Markets (ROP)§	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Science Degree <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement • Certificate of Performance <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Applied Arts & Sciences <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Customer Service Representative • Retail Sales Associate • Telemarketer <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Marketing Manager • Sales Manager <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Fashion Buyer • Public Relations Manager • Real Estate Broker

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

† This course meets the University of California's *b* (English) subject-area requirement.

§ This course meets the University of California's *g* (college preparatory elective) subject-area requirement.

PUBLIC SERVICES INDUSTRY SECTOR

Career Pathways

- Emergency Response
- Legal Practices
- Public Safety

A public service is one that is provided by government to its citizens, either directly or through the financing of another entity to provide that service. Careers in public service are unique because they center on challenging issues that define the public agenda and involve the provision of vital services to the public—from local to international levels. Public service professions offer many career opportunities, including the following career pathways: Public Safety, Emergency Response, and Legal Practices. Students engage in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, skill preparation in the industry, and preparation for postsecondary education and training. Knowledge and skills are learned and

applied within a sequential, standards-based pathway program that integrates classroom, laboratory, and project- and work-based instruction. Standards in this sector are designed to prepare students for technical training, postsecondary education, and entry-level employment.

Small learning communities of the San Diego Unified School district with an emphasis on public services are:

- Crawford High School
- Lincoln Center for Public Safety
- San Diego High Educational Complex

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Public Services Industry Sector

Emergency Response Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Fire Protection Technologies 1,2 (0671, 0672) Introduction to Criminal Justice Careers 1,2 (0503, 0504)	Fire Protection Technologies 3,4 (8253, 8254)	Criminal Justice Careers (ROP) Fire Protection Technologies 5–8 (ROP)	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree • Certificate of Performance <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree <p>SDSU:</p> <ul style="list-style-type: none"> • BA in Liberal Arts & Sciences <p>UCSD:</p> <ul style="list-style-type: none"> • BA in Political Science <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Firefighter <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Emergency Medical Technician • Emergency Response Dispatcher <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Fire Management Officer

Legal Practices Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
<p>Exploring Careers 6th-8th (8299)</p>	<p>Introduction to Criminal Justice Careers 1,2 (0503, 0504) Introduction to the Law (CPA) 1,2 (3767, 3768)</p>	<p>Business Law 1,2 (0561, 0562)</p>	<p>Criminal Justice Careers (ROP) Foundations of Legal Practice (ROP)</p>	<p>SDCCD City College: <ul style="list-style-type: none"> • Associate in Arts Degree • Certificate of Performance Mesa College: <ul style="list-style-type: none"> • Associate in Arts Degree Miramar College: <ul style="list-style-type: none"> • Associate in Arts Degree SDSU: <ul style="list-style-type: none"> • BA in Liberal Arts & Sciences Sample Careers High school (diploma): <ul style="list-style-type: none"> • Legal Secretary Postsecondary training (certification and/or AA degree): <ul style="list-style-type: none"> • Court Reporter • Paralegal College or university (bachelor's degree or higher): <ul style="list-style-type: none"> • Law Librarian • Lawyer • Legal Researcher </p>

Public Safety Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Introduction to Criminal Justice Careers 1,2 (0503, 0504)	Business Law 1,2 (0561, 0562)	Criminal Justice Careers (ROP)	<p>SDCCD</p> <p>City College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree • Certificate of Performance <p>Mesa College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Arts Degree <p>SDSU:</p> <ul style="list-style-type: none"> • BA in Liberal Arts & Sciences <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Animal Control Worker • Military Service • Security Guard <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Corrections/Probation Officer • Law Enforcement Officer <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Police Lieutenant/Captain/Chief

TRANSPORTATION INDUSTRY SECTOR

Career Pathways

- Structural Repair and Refinishing
- Systems Diagnostics and Service

This sector is designed to provide a foundation in transportation services for all industrial technology education students in California. The pathways in the Transportation sector emphasize real-world, occupationally relevant experiences of significant scope and depth in three areas: Operations (not currently offered by the district), Structural Repair and Refinishing, and Systems Diagnostics and Service. The standards are designed to integrate academic and technical preparation and focus on career awareness, career exploration, and skill

preparation in the pathways. Integral components include classroom, laboratory, and hands-on contextual learning; project- and work-based instruction; and leadership development. The standards in this sector prepare students for continued training, postsecondary education, and entry to a career.

The following websites can provide more information about the sample post-secondary options shown below:

- City College, Mesa College, Miramar College: studentweb.sdccd.edu/index.cfm?action=catalogs
- San Diego State University: arweb.sdsu.edu/es/catalog/quickref.html
- University of California, San Diego: www.ucsd.edu/catalog/front/courses.html

Programs of Study for the Transportation Industry Sector

Structural Repair and Refinishing Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Introduction to Auto Body 1,2 (3578, 3579) Transportation Technology 1,2 (3671, 3672)*	Transportation Technology 3,4 (3673, 3674)	Auto Body Repair & Refinishing (ROP)*	<p>SDCCD</p> <p>Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • AA for Auto Technology • Certificate of Achievement <p>SDSU:</p> <ul style="list-style-type: none"> • BS in Engineering <p>UCSD:</p> <ul style="list-style-type: none"> • BS in Mechanical Engineering <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Technician <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Claims Adjuster • Estimator <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Insurance Company Manufacturer's Representative

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

Systems Diagnostics and Service Career Pathway

Exploratory Courses	Foundation Courses Grades 9 and 10	Intermediate Courses Grades 10 and 11	Advanced Courses Grades 11 and 12	Sample Post-Secondary Options
Exploring Careers 6th-8th (8299)	Foundations of Transportation Technology 1,2 (3709, 3710)	Auto Technology 1,2 (8304, 8305) Transportation Technology 1,2 (3671, 3672)* Transportation Technology 3,4 (3673, 3674)	Auto Technology (ROP)	<p>SDCCD Miramar College:</p> <ul style="list-style-type: none"> • Associate in Science Degree • Certificate of Achievement <p>SDSU:</p> <ul style="list-style-type: none"> • BS Degree in Engineering <p>UCSD:</p> <ul style="list-style-type: none"> • BS Degree in Mechanical Engineering <p>Sample Careers</p> <p>High school (diploma):</p> <ul style="list-style-type: none"> • Service Technician <p>Postsecondary training (certification and/or AA degree):</p> <ul style="list-style-type: none"> • Technical Writer <p>College or university (bachelor's degree or higher):</p> <ul style="list-style-type: none"> • Engineer • Investigator • Inspector • Service Manager • Director

* This course is eligible for community college credit, if the student earns a grade of "B" or above.

The following course descriptions are arranged **alphabetically**.

ACCOUNTING 1,2 (0731, 0732)

Grade level: 10–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This introductory career technical education course is designed to prepare students for entry-level jobs in accounting and provide fundamentals needed by students who wish to pursue baccalaureate degrees in Business Administration or Accounting.

This program includes many personal finance skills and economic concepts. Students become acquainted with the principles of double-entry bookkeeping, including the preparation of financial statements for small, sole proprietorship and partnership businesses.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

Note: Students who complete this course with a grade of A or B are eligible to earn up to 3 units of community college credit.

BASIC TEXTS AND TEACHING GUIDES

Guerrieri, *Glencoe Accounting: Real-World Applications and Connections*, Glencoe/McGraw-Hill, 2012.

Using QuickBooks Pro with Glencoe Accounting, Glencoe/McGraw-Hill, 2012.

ACCOUNTING 3,4 (0733, 0734)

Grade level: 11–12

Prerequisites: Successful completion of Accounting 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This advanced, two-semester career technical education course builds on knowledge and skills acquired in Accounting 1,2. It is designed to prepare students for jobs in accounting and/or introduce those intending to pursue baccalaureate degrees to

advanced accounting fundamentals. Students use the double-entry bookkeeping system to prepare financial statements for sole proprietorships, partnerships, and corporations; keep accounting records using source documents and books; close and balance ledger accounts, and learn how to prepare income-tax returns.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Guerrieri, *Glencoe Accounting: Real-World Applications and Connections*, Glencoe/McGraw-Hill, 2012.

Using QuickBooks Pro with Glencoe Accounting, Glencoe/McGraw-Hill, 2012.

ANATOMY AND PHYSIOLOGY FOR HEALTH CAREERS 1,2 (3005, 3006)

Grade level: 9–10

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This course introduces students to concepts, laboratory techniques, and research tools for collecting data, analyzing results, and drawing conclusions from experiences as applied to careers in the healthcare industry. The course focuses on health promotion and disease prevention, with an emphasis on hands-on learning.

Students are exposed to four broad conceptual themes: (1) structural and functional characteristics of body systems; (2) disease and disorders; (3) health promotion and disease prevention; (4) emerging healthcare and biomedical careers.

BASIC TEXTS AND TEACHING GUIDES

Colbert, *Anatomy and Physiology and Disease: An Interactive Journey for Health Professionals*, Pearson, 2009.

ANATOMY AND PHYSIOLOGY FOR HEALTH CAREERS 3,4 (3007, 3008)

Grade level: 10–12

Prerequisites: Anatomy and Physiology for Health Careers 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This course extends the concepts, labs, and experiences of Anatomy and Physiology for Health Careers 1,2 as they relate to careers in the field of health and human services. The course explores additional body systems (integumentary, endocrine, and urinary), studying their structures and functions as well as diseases and their prevention. The course also studies the body's tissues and senses. Anatomy and Physiology for Health Careers 3,4 concludes with a study of geriatrics and how the body systems change with age.

BASIC TEXTS AND TEACHING GUIDES

Colbert, *Anatomy and Physiology and Disease: An Interactive Journey for Health Professionals*, Pearson, 2009.

BUSINESS 100 1,2 (0514, 0515)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This two-semester course provides an overview to all aspects of starting and operating a small business. Students obtain hands-on experience in human resources, finances, accounting, and marketing. The class includes instruction in economics, business ethics, leadership, management, the role of government in business, and developing a career plan. Students may participate in a trade fair to sell their products and services.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Dlabay, Burrow, Kleindl, *Principles of Business*, 8th ed., Cengage Learning, 2012.

BUSINESS LAW 1,2 (0561, 0562)

Grade level: 9–12

Prerequisites: None

Course duration: One or two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This course, which emphasizes the legal aspects of business, gives students an understanding of the complexity of law, the importance of recognizing legal implications in human relations, and points out situations requiring legal assistance. The first semester focuses on the law and its relationship to the individual as a citizen, employee, and member of the community. Contracts are introduced. The second semester presents an in-depth study of a variety of common contracts: employment, sales, warranties, credit, and real property. Insurance, commercial paper, and decision-making models are also discussed.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Brown, *Understanding Business and Personal Law*, Glencoe/McGraw-Hill, 2003.

Liuzzo, *Essentials of Business Law*, 7th ed., McGraw-Hill, 2010.

CAREER AND LIFE MANAGEMENT 1 (1169)

Grade level: 9–12

Prerequisites: None

Course duration: One semester. May be taught as a six-, nine-, or 12-week portion of an 18-week wheel course, with multiple credit allowed

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This comprehensive course is designed to act as a foundation course for career technical education industry sector programs of study. In addition to investigating career options, students explore personal finance, money management, consumer education, and housing and lifestyle decisions that will assist them in balancing career and personal life.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Consumer Education and Economics, Glencoe McGraw-Hill, 2003.

SUPPLEMENTARY RESOURCES

The Career Toolkit for High School Students, Prentice-Hall, 2001.

CAREER AND LIFE MANAGEMENT 2 (1163)

Grade level: 9–12

Prerequisites: Career and Life Management 1

Course duration: One semester. May be taught as a six-, nine-, or 12-week portion of an 18-week wheel course, with multiple credit allowed

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This comprehensive course is designed to act as a foundation course for all career technical education industry sector programs of study.

Students explore career opportunities, job market trends, and the skills necessary to find and keep a job. This course also stresses the importance of developing money management skills and ways to balance personal life, family life and career. This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Consumer Education and Economics, Glencoe McGraw-Hill, 2003.

SUPPLEMENTARY RESOURCES

The Career Toolkit for High Schools Students, Prentice-Hall, 2001.

CLOTHING AND DESIGN 1,2 (1135, 1136)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This two-semester course is designed to act as the foundation course for the Fashion and Interior Design

industry sector. Students develop basic knowledge and skills of clothing construction and effective consumer decision-making skills. Students explore careers in the fashion and interior design industry. In addition to laboratory experiences with fabrics, clothing design, and construction techniques, students research consumer textile information and clothing care and maintenance, and they are exposed to ways to use these skills to sell their products and services.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

Note: Students who complete this course with a grade of B or better are eligible to earn up to 4 units of college credit.

BASIC TEXTS AND TEACHING GUIDES

Successful Sewing, Goodheart-Willcox, 2008.

COMPUTER ANIMATION 1,2 (3639, 3640)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's f (visual and performing arts) subject-area requirement.

Computer Animation 1, 2 introduces students to the basic concepts of three-dimensional virtual environments using knowledge they have acquired in other subject areas, such as physics and mathematics. Students learn basic animation and lighting techniques, how to construct and place basic objects in a virtual environment, and how to storyboard a project. They use up-to-date industry software to produce their 3D animations to be displayed in student-produced games, websites, and video projects. This hands-on class is designed to prepare students for possible careers in the field of computer animation.

This course reinforces core academic content area and California Career Technical Education model curriculum standards in relevant, applied setting, appropriate to the subject and grade level. This course is part of the Media and Design Arts pathway.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

COMPUTER APPLICATIONS 1,2 (4421, 4422)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

Note: This course meets the district's computer literacy requirement for high school graduation.

COURSE DESCRIPTION

This course provides instruction in the following:

- word processing
- graphics
- page layout
- spreadsheets
- databases
- telecommunications
- Internet research
- multimedia and presentation software
- computer history, trends, and careers
- buying computers
- reading and understanding computer ads and periodicals
- computer networks
- Web design, development, and publishing
- audio file formats
- GIF animations
- keyboarding
- computer hardware (scanners, optical character readers, projection, etc.)

BASIC TEXTS AND TEACHING GUIDES

Discovering Computers 2003: Concepts for a Digital World, Thompson Learning, 2003.

Learning Microsoft Office 2000, DDC, 2000.

Software: *Microsoft Office 2001*, Microsoft, 2001.

Software: *Photoshop*, Adobe, 2002.

Software: *Dreamweaver*, Macromedia, 2002.

Software: *Office XP Pro Front Page*, Microsoft, 2002.

COMPUTER APPLICATIONS IN BUSINESS 1,2 (0723, 0724)

Grade level: 9–12

Prerequisites: Prior training in computers or keyboarding is recommended

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

Note: This course meets the district's computer literacy requirement for high school graduation.

COURSE DESCRIPTION

This course provides students with skills necessary to succeed in both college and career by introducing them to industry-standard productivity software to solve problems and complete projects. This course can be used for integrated interdisciplinary projects, giving students a chance to see the real-world applicability of the concepts and skills they are

learning in their required academic courses in mathematics, English, and science.

Students who complete this course will have the computer skills commonly required for entry-level employment.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

Note: Students who complete this course with a grade of A or B are eligible to earn up to 3 units of community college credit.

BASIC TEXTS AND TEACHING GUIDES

Learning Computer Applications: Projects and Exercises, 2nd ed., DDC, 2000.

Learning Microsoft 2000, DDC, 2000.

Learning Microsoft Office XP, DDC, 2000.

Learning Microsoft Publisher, DDC, 2000.

Learning Microsoft FrontPage, DDC, 2000.

COMPUTER SCIENCE 1,2 (4411, 4412)

Grade level: 9–12

Prerequisites: Successful completion of Pre-Algebra recommended.

Course duration: Two semesters

Type of graduation credit earned:

Practical Arts

Note: This course meets the district's computer literacy requirement for high school graduation.

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's g (college preparatory elective) subject-area requirement.

In Computer Science 1,2 students will increase their problem-solving skills and be able to differentiate between problems that computers can and cannot solve. Students will use a high-level programming language, which will expose them to the structured approach and object-oriented programming technique. In addition, this course will introduce students to the basic components of a computer, plus an individual computer's role in the functions of a computer system. Computer Science 1,2 will provide a basic understanding of how a computer works as well as how and where computers are used in today's society. Related careers will be explored. This course may be taught in the regular education setting as well as in a cluster setting.

BASIC TEXTS AND TEACHING GUIDES

Lambert and Osborne, *Fundamentals of Java, Comprehensive Course*, 2nd. ed., Thomson Course Technology, 2003.

COMPUTER SCIENCE 3,4 (4413, 4414)

Grade level: 10–12

Prerequisites: Computer Science 1,2 or consent of the instructor

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

Note: This course meets the district's computer literacy requirement for high school graduation.

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's g (college preparatory elective) subject-area requirement.

In Computer Science 3,4 students will write computer programs using data files and high-resolution graphics that require the construction and use of shape tables. They will also design programs that use animation in graphics as well as use machine language routines in a high-level computer language program. An emphasis will be placed on learning and developing programming techniques needed to solve more complicated problems on the computer. Students are taught to structure their programs as a set of modules, with each module performing a particular function. This course provides students with the necessary background for taking Advanced Placement Computer Science.

BASIC TEXTS AND TEACHING GUIDES

Horstmann, *Computing Concepts with Java Essentials*, 3rd. ed., Wiley, 2003.

COMPUTER SCIENCE A 1,2 ADVANCED PLACEMENT (4461, 4462)

Grade level: 9–12

Prerequisites: Grade of A or B in Computer Science 1,2; grade of A or B in Algebra 1-2 and Geometry 1-2, or grade of A or B in Algebra 1-2 Advanced and Geometry 1-2 Advanced; recommendation of AP computer science instructor.

Course duration: Two-semester course

Type of graduation credit earned: Practical Arts, weighted

Note: This course meets the district's computer literacy requirement for high school graduation.

COURSE DESCRIPTION

Honors Preparatory Course (HP). This course meets the University of California's g (college preparatory elective) subject-area requirement.

This course covers the writing of structured code in a procedural language using data types and algorithms. Designing and implementing computer-based solutions as well as learning well known algorithms and data structures will be included. Another component of the class will incorporate reading and understanding of a large program in addition to understanding the description of the design and development process of such a program. Students will be able to identify the major hardware and software components of a computer system, their relationship to one another, and the roles of these components within the system. In addition, students will develop and select appropriate algorithms and data structures to solve problems as well as to code fluently in a well-structured fashion. Recognizing the ethical and social implications of computer use will be stressed.

BASIC TEXTS AND TEACHING GUIDES

Horstmann, *Computing Concepts with Java Essentials*, 3rd. ed., Wiley, 2003.

CONSTRUCTION TECHNOLOGY 1,2 (3651, 3652)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Construction Technology 1,2 exposes students to the construction industry and its practices. The course follows the NCCER certification core curriculum, which provides a solid overview of the occupational and worksite safety, which is key to this industry. Students may obtain NCCER certificates of accomplishment in basic hand- and power-tool operation, interpretation of blueprints and plan checking, as well as basic construction principles and a number of related, hands-on, industry-recognized skill areas.

The course infuses math, English, and communication skills into instruction. On completion of this course, students will have mastered industry-recognized skills in basic construction and have a leading edge and exposure to various building trades and construction occupations. Optional units of instruction may encompass green and sustainable building materials

and the Leadership in Energy and Environmental Design construction applications.

BASIC TEXTS AND TEACHING GUIDES

NCCER Core Curriculum (Introductory Crafts Skills), Prentice-Hall, 2009.

Carpentry Fundamentals, Level 1, Pearson Prentice-Hall, 2006.

CONSTRUCTION TECHNOLOGY 3,4 (3653, 3654)

Grade level: 10–12

Prerequisites: Construction Technology 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Students are encouraged to work in one or more areas of woodworking including furniture construction, building construction, wood finishing, and machine operation. Emphasis is placed on skill development through the project-problem approach. Instruction in the use and maintenance of woodworking machines and equipment is provided. Cooperative working relationships are emphasized. Special attention also is given to the development of safety habits, budgeting, and the economical use of time and materials. Career exploration is an integral part of the instruction. On successful completion of this course, students may obtain NCCER certificates of accomplishment in level one carpentry skills.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

NCCER Core Curriculum (Introductory Crafts Skills), Prentice-Hall, 2009.

Carpentry Fundamentals, Level 1, Pearson Prentice-Hall, 2006.

CONSTRUCTION TECHNOLOGY 6TH–8TH (3528)

Grade level: 6–8

Prerequisites: None

Course duration: One or two semesters. May be taught as a six-, nine-, or 12-week portion of an 18-week wheel course, with multiple credit allowed

Type of graduation credit earned: Does not apply

COURSE DESCRIPTION

This basic introductory course in woodworking emphasizes correct and safe use of hand tools and materials. Students are required to pass a safety test. Student interest in woodworking is developed through construction of practical projects. Emphasis is also placed on cooperative working relationships and career exploration.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Videotape series: *Woodworking Power Tools; Table Saw & Accessories; Band Saw, Jointer/Surfacers*, Aavim, 1989.

Wagner, *Modern Woodworking*, Goodheart-Willcox, 1990.

Feirer, *Industrial Arts Woodworking*, rev. ed., Bennett Publishing, 1982.

CONSUMER AND FAMILY SCIENCES EXPLORATIONS (1032)

Grade level: 6–8

Prerequisites: None

Course duration: One semester. May be taught as a six-, nine-, or 12-week portion of an 18-week wheel course, with multiple credit allowed

Type of graduation credit earned: Does not apply

COURSE DESCRIPTION

In this exploratory course students are actively engaged in the study of personal, family, and peer relationships; child care and development; consumer decision making; personal image; foods and nutrition; living environments; careers related to family and consumer sciences; and roles as participants in school and community.

This course is designed to reinforce core academic content areas and California CTE model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Kelly-Plate and Eubanks, *Today's Teen*, Glencoe, 2004.

SUPPLEMENTARY RESOURCES

Middle Grades Home Economics Curriculum Guide, Volume II, Units III–V, California Department of Education, 2000.

Bailey, *Discovering Life Skills*, Glencoe, 2004.

CONTEMPORARY COMMUNICATIONS 1,2 (0651, 0652)

Grade level: 12

Prerequisites: Passing grade in grade 11 English or previous English teacher's recommendation.

Course duration: Two semesters

Type of graduation credit earned: English Language Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's **b** (English) subject-area requirement.

Traditional and contemporary literature is the basis for integrating reading, writing, listening, and speaking skills. The literature includes core works, selected reading, and recreational/motivational reading that reflects a business-related theme. In addition, this literature includes a variety of genres, such as novels, expository books, autobiographies, short stories, essays, drama, poetry, and selections from current written media. A theme such as personal effectiveness, teamwork, communications, leadership, or entrepreneurship is selected, based on the core literature and selected literature. These themes and ideas are the basis for the contemporary writing and speaking assignments.

Students study vocabulary and conventions in context with their reading and writing. Students will prepare various business correspondences as part of their writing assignments.

A culminating activity linked to senior exhibitions will consist of a multimedia presentation by individual students.

This course is designed to reinforce the English Language Arts core academic content area and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Beers, *Elements of Literature, Sixth Course, Literature of Britain with World Classics*, Holt, Rinehart, & Winston, 2003.

ECONOMICS & FINANCE 1,2 (0569, 0570)

Grade level: 11–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Economics & Finance 1 (0569): Economics; Economics & Finance 2 (0570): Government

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's **g** (college preparatory elective) subject-area requirement.

This yearlong course may be taken as an alternative to Economics 1 and Government 1. The course covers the basic concepts of macro- and microeconomics, and provides an understanding of how market economies function in a global setting. Topics include the roles of capital markets and securities in the U.S. economic framework, and principles and practices of banking and credit in the United States, including credit risk management.

This course is designed to reinforce Social Science core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Schiller, *The Economy Today*, Irwin McGraw-Hill, 1997.

EXPLORATIONS IN TECHNICAL THEATRE 1,2 (1407, 1408)

Grade level: 6–8

Prerequisites: None

Course duration: Two-semester course; multiple credit allowed

COURSE DESCRIPTION

This introductory course covers the basic use and design of sets, costumes, lighting, make-up, props, sound, and special effects in theatre. As the school year progresses, students are given opportunities to serve in technical capacities for school and classroom productions. They also are required to compare and connect theatre to other art forms and disciplines, and to career exploration. Priority is given to technical theatre students for placement on school stage crews.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

EXPLORATORY WORK EXPERIENCE EDUCATION (8501)

Grade level: 9–12

Prerequisites: None

Course duration: One semester; multiple credit allowed

Type of graduation credit earned: Elective

COURSE DESCRIPTION

Exploratory Work Experience Education is nonpaid work experience. Its purpose is career guidance and career planning assistance for students. It offers students opportunities to systematically explore various work stations in order to ascertain their suitability for employment in these occupations.

The work experience is not intended to teach production skills of any kind, and the student must not take the place of a paid employee. A maximum of 75 hours within one semester is required for the student to receive one credit. A maximum of four credits may be applied toward elective graduation requirements. The course qualifies the student for California Scholarship Federation (CSF) eligibility. The student is considered an employee of the San Diego Unified School District, and the district carries workers' compensation insurance while the student is enrolled. The equivalent of one period a week of related instruction or counseling is required for students enrolled in this program.

BASIC TEXTS AND TEACHING GUIDES

Related Instruction Packets, *RIP 1-30*, San Diego City Schools, updated annually.

EXPLORING TECHNOLOGY 6TH–8TH (3516)

Grade level: 6–8

Prerequisites: None

Course duration: One semester. May be taught as a six-, nine-, or 12-week portion of an 18-week wheel course, with multiple credit allowed

Type of graduation credit earned: Does not apply

COURSE DESCRIPTION

Exploring Technology is designed to introduce students to a wide variety of industrial technology and related careers through a series of hands-on experiences, while reinforcing the academic core. The program consists of 16 self-directed instruction modules. Each module is 10 days long. The modules deal with topics such as robotics, electronics,

pneumatics, hydraulics, desktop publishing, engineering, aerospace, and computer-aided drafting.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

TechCenter21, Applied Educational Systems (computer-based curricula).

FOOD PREPARATION AND NUTRITION 1,2 (1165, 1166)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Food Preparation and Nutrition is designed as the introductory course for the Hospitality, Tourism and Recreation industry sector program of study. Students examine food selection and preparation procedures, basic nutrition, food management techniques related to both individual and family living, and principles of sound consumer economics. They develop skills essential for meeting nutritional needs through experiences that involve them with food and ecology, special food/nutrient needs, consumer responsibilities, kitchen organization and management, and food customs/traditions of different regions in the United States. Career opportunities in the food industry are explored.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

Note: Students who complete this course with a grade of A or B are eligible to earn up to 7 units of community college credit when Nutrition 1,2 is taken the following school year.

BASIC TEXTS AND TEACHING GUIDES

Food for Today, Glencoe, 2007.

FOUNDATIONS IN VISUAL ART & DESIGN (VAD) 1,2 (3645, 3646)

Grade level: 9–10

Prerequisites: Art 1,2

Course duration: Two semesters

Type of graduation credit earned: Visual and Performing Arts

COURSE DESCRIPTION

This course engages students in an exploration of art and design in contemporary life. It is designed to be an intermediate course for Design, Visual, and Media Arts career pathway in the Arts, Media, and Entertainment industry sector. The course curriculum addresses state standards in both career technical education and visual and performing arts.

Students in this course will investigate the numerous ways in which art and design evince themselves in the student's personal life, as well as in the local, regional, and global community. Students develop skills in the viewing of art, and learn how to create original works of art themselves. They are introduced to a wide range of industry related careers, and are provided the opportunity to get hands-on experience in several. By the end of the course, students will have mastered the skills necessary to pursue advanced-level courses in the Design, Visual, and Media Arts career pathway or intermediate/advanced courses in visual art.

BASIC TEXTS AND TEACHING GUIDES

Each site selects resources from current publications.

GENERAL WORK EXPERIENCE EDUCATION (8502)

Grade level: 10–12

Prerequisites: See below

Course duration: One semester; multiple credit allowed

Type of graduation credit earned: Elective

COURSE DESCRIPTION

General Work Experience Education offers students supervised part-time paid employment with the intent of assisting them in acquiring desirable work habits and attitudes in real jobs. Students must be 16 years old or older, except when this requirement is waived on the principal's recommendation. Part-time jobs held by students need not be related to their occupational goals. To earn credit, a student must work an average of 15 hours per week with at least nine hours between Monday and Friday and a minimum of 200 hours over a 10-week period. The equivalent of one period a week of related instruction or counseling is required for all students enrolled in this program. One credit per semester may be

granted, with a maximum of eight credits. These credits may be applied to elective graduation requirements, and qualify students for California Scholarship Federation (CSF) eligibility.

BASIC TEXTS AND TEACHING GUIDES

Related Instruction Packets, *RIP 1-30*, San Diego City Schools, updated annually.

GENERAL WORK EXPERIENCE EDUCATION (2) (8505)

Grade level: 10–12

Prerequisites: See below

Course duration: One semester; multiple credit allowed

Type of graduation credit earned: Elective; two units of credit per semester

COURSE DESCRIPTION

Requirements are the same as for 8502 with the exception that students may earn two credits per semester on completion of 300 hours of work.

BASIC TEXTS AND TEACHING GUIDES

Related Instruction Packets, *RIP 1-30*, San Diego City Schools, updated annually.

GRAPHIC COMMUNICATIONS TECHNOLOGY 1,2 (3621, 3622)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Instructional content provides broad experiences in the areas of color and black-and-white photography, digital photography, screen process printing, offset lithography, and finishing procedures. Career guidance activities are an integral part of the instruction, along with the teaching of good cooperative relationships and economical use of time and materials. Students are encouraged to combine graphic reproduction methods where applicable and to work on both group and individual projects.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Broekhuizen, *Graphic Communications*,
Glencoe/McGraw-Hill, 1999.

GRAPHIC COMMUNICATIONS TECHNOLOGY 3,4 (3623, 3624)

Grade level: 10–12

Prerequisites: Graphic Communications Technology 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Instruction provides for advanced experiences in the areas of color and black-and-white photography, digital photography, screen process printing, offset lithography, and finishing procedures. Career guidance activities are an integral part of the instruction, along with the teaching of good cooperative relationships and economical use of time and materials. Students are encouraged to combine graphic reproduction methods, where applicable, to work on both group and individual projects.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Broekhuizen, *Graphic Communications*,
Glencoe/McGraw-Hill, 1999.

HOSPITALITY INTRODUCTION 1,2 (1198, 1199)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Hospitality Introduction 1,2 offers an overview of career opportunities in the hospitality and tourism industries, including event planning and management, lodging operations, tourism, destination and resort marketing, and food and beverage management. The course helps students build a strong foundation in business management. Students participate in job shadows, field trips, and other activities in one of the fastest growing industries in California.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Redman, *Lodging Management Program*, Educational Institute of the American Hotel and Motel Association, 2000.

HUMAN BODY SYSTEMS 1,2 (3313, 3314)

Grade level: 10

Prerequisites: Principles of Biomedical Sciences 1,2, and concurrent enrollment in Biology 1,2 or Advanced Biology 1,2, and a college-prep mathematics course.

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's **d** (laboratory science) subject-area requirement.

Note: This is a Project Lead the Way (PLTW) course that utilizes prescribed lesson plans and project ideas. Teachers must complete a mandatory PLTW training program in order to teach the course.

Human Body Systems is the second course in a four-year sequence of courses comprising the PLTW Biomedical Sciences Program. It also serves as an intermediate-level career-path course in the Health Sciences and Medical Technology industry sector.

This course continues instruction begun in the introductory Principles of Biomedical Sciences course, while narrowing its area of focus to human body systems, and how they interact to maintain homeostasis (internal balance) and good health. Students learn about the processes, structures, and connections of the human body systems through hands-on investigation: they design experiments to explore modes of communication within the human body; investigate how the human body systems obtain, distribute and processes energy; and get a close-up look at how locomotion (movement) is achieved. It also prepares students for the third year of the program, where the focus will be medical intervention.

BASIC TEXTS AND TEACHING GUIDES

Project Lead the Way provides all course material online at no cost.

HUMAN PSYCHOLOGY AND FAMILY SOCIOLOGY 1,2 (1154, 1155)

Grade level: 10–12

Prerequisites: none

Course duration: Two-semester course

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California’s g (college preparatory elective) subject-area requirement.

This course covers the physical, cognitive, and psychosocial development of the child through adolescence, as well as the structure of the family, its composition and culture. Cross-cultural social influences and values to the family are recognized and analyzed. Programs of study and exploration include careers in the Education, Child Development, and Family Services industry sector.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Understanding Psychology, Glencoe/McGraw-Hill, 2008.

Ryder and Harter, *Contemporary Living*, Goodheart-Willcox, 2004.

INFANT & TODDLER DEVELOPMENT 1,2 (1171, 1172)

Grade level: 9–12

Prerequisites: None

Course duration: Two-semester course

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Infant and Toddler Development 1,2 focuses on the theoretical aspects of infant development and parenting skills. The course curriculum covers prenatal care, human development, consumer skills, decision making, and health and safety education. Students also explore careers in education, child development, and family services.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

INFANT & TODDLER DEVELOPMENT LAB 1,2; 3,4 (1175, 1176; 1177, 1178)

INFANT & TODDLER DEVELOPMENT LAB 5,6; 7,8 (1179, 1180; 1181, 1182)

Grade level: 9–12 (1175, 1176); 10–12 (1177, 1178); 11–12 (1179, 1180); 12 (1181, 1182)

Prerequisites: Infant and Toddler Development 1,2

Course duration: Two- to four-semester courses

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

These courses form the laboratory component of the Infant and Toddler Development curriculum and are designed to follow the Infant and Toddler Development 1,2 theory course (1171, 1172). The lab courses provide students with hands-on experience with infants and toddlers at various stages of development. Career opportunities in the field are also explored.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

INTERNSHIP (8014)

Grade level: 9–12

Prerequisites: See below

Course duration: One semester; may be repeated

Type of graduation credit earned: None

COURSE DESCRIPTION

Internship is listed in the district’s official course file as a means of granting internship recognition on student transcripts. Accordingly, Internship is not a course in the customary sense, and completion of an internship does not confer credit.

According to Administrative Procedure 4127, an internship is a work-based learning experience tied to a student’s educational and career goals. An internship consists of a minimum of 30 hours of paid

or unpaid work for career exploration and on-the-job training.

There are four ways in which students may earn internship recognition on their transcripts:

- Students may enroll in a Regional Occupational Program (ROP) course that has a community classroom (unpaid internship) or cooperative vocational education (paid internship) component.
- Students may enroll in one of the following Work Experience Education courses: General Work Experience Education (8502), Exploratory Work Experience Education (8501), Vocational Work Experience Education (8503), or the Student Apprenticeship Program (7366 and 7369).
- Students may participate in an unpaid internship through a district-approved course other than those listed above if (1) their preparation prior to the internship experience includes instruction on appropriate dress and behavior at an internship site; (2) a formal agreement is signed by the student, his or her parent or guardian, the employer, and the course teacher; (3) Work Preparedness Training Units on such topics as resumes, job applications, and personal appearance are completed prior to or during the internship; 30–75 hours of unpaid internship is completed at a worksite; and the student receives at least a satisfactory evaluation from the internship/worksite sponsor; and (4) the teacher makes at least two visits to the internship site during the semester (or at least one visit during a summer session).
- During the summer vacation period students may be eligible for an internship through the Summer Internship Program, upon verification that all the requirements were met.

INTRODUCTION TO ARTS, MEDIA, & ENTERTAINMENT (AME) PRODUCTION 1,2 (0681, 0682)

Grade level: 9–10

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This two-semester foundational course in the Arts, Media, and Entertainment industry sector introduces students to careers in theatrical staging while demonstrating practical applications of science, technology, engineering, and math (STEM) concepts. It provides instruction in conceptualization, design, engineering, fabrication, production, and project

management for theatres, sports arenas, concert halls, trade expositions, festivals, and other events that require staging. An emphasis on inter-industry transferable skills allows it to serve as an introduction to a number of different intermediate and advanced CTE courses.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

INTRODUCTION TO CAREERS 1,2 (8103, 8104)

Grade level: 9–12

Prerequisites: None

Course duration: Six-, nine-, or 12-week wheels, or one or two semesters; multiple credit allowed

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Students explore education and career opportunities in a variety of industry sectors. The course increases students' awareness of current career paths, the educational requirements of those careers, various job skills, and job market trends. Students relate high school programs to career interests linking them to career pathways.

BASIC TEXTS AND TEACHING GUIDES

Home Economics Education Model Curriculum Standards and Program Frameworks, California Department of Education, Home Economics Education Unit, 1994.

SUPPLEMENTARY RESOURCES

Work Preparedness Training Packets, San Diego City Schools, updated annually.

Home Economics Education Career Path Guide and Model Curriculum Standards, California Department of Education, 1994.

INTRODUCTION TO ENGINEERING DESIGN I 1,2 (3542, 3544)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's g (college preparatory elective) subject-area requirement.

This first-year Project Lead the Way course is designed to provide students with an introduction to engineering design as well as to careers the field. Engineering students are introduced to the history of design and the design process. Students work through units on sketching and visualization, geographic relationships, physical and mathematical modeling, 3-D computer modeling, model analysis, and documentation. Students complete authentic engineering design projects, create portfolios, and present their results to industry partners. The related practical applications of arts, mathematics, science, and language arts are also emphasized.

This course is designed to reinforce core academic content areas and CTE Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

Note: Students who complete this course with a grade of A or B are eligible to earn up to 3 units of community college credit.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

INTRODUCTION TO ENGINEERING DESIGN II 1,2 (3547, 3548)

Grade level: 9–12

Prerequisites: Introduction to Engineering Design I 1,2

Course duration: Two semesters

Type of graduation credit earned: Elective

COURSE DESCRIPTION

Introduction to Engineering Design II continues the instruction begun in Introduction to Engineering Design I. In this second-year course, students select two areas of engineering they wish to examine in detail and participate in competitive projects that expand their knowledge in these areas. Students also shadow engineers in their fields of interest to better understand the day-to-day requirements of their jobs. The related practical applications of mathematics, science, and language arts are also emphasized.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

INTRODUCTION TO GREEN TECHNOLOGY 1,2 (3763, 3764)

Grade level: 9–10

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Physical Science

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's d (laboratory science) subject-area requirement.

This course is envisioned as the first in a sequence of courses that eventually will create career pathways in the new Energy and Utilities industry sector. This foundational laboratory science course introduces students to the fast-growing fields of green engineering, renewable energy, and environmental technology. The academic focus of the course is on physics, with the curriculum emphasizing project-based learning. A core goal is for students to demonstrate their understanding of physics by designing and building an alternative-energy solar-powered boat for the National Solar Cup Competition.

BASIC TEXTS AND TEACHING GUIDES

Litowitz and Brown, *Energy, Power and Transportation Technology*, Brown, Goodheart-Willcox.

INTRODUCTION TO MUSIC PRODUCTION TECHNOLOGY 1,2 (3765, 3766)

Grade level: 9–10

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's f (visual and performing arts) subject-area requirement.

This is an introductory course in music creation and development. It is designed to serve as the foundational course for the Production and Managerial Arts career path of the Arts, Media, and Entertainment industry sector.

Students in this course learn how to create original pieces of music, and develop foundational skills and knowledge in preparation for taking higher-level courses that will lead to a career in music. Topics covered include: music theory, music vocabulary, an overview of the recording industry, studio skills,

basic recording techniques, product proposals, and product creation.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

INTRODUCTION TO TECHNICAL THEATRE 1,2 (1407, 1408)

Grade level: 9–12

Prerequisites: None

Course duration: Two-semester course; multiple credit allowed

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This introductory course covers the basic use and design of sets, costumes, lighting, make-up, props, sound, and special effects in theatre. As the school year progresses, students are given opportunities to serve in technical capacities for school and classroom productions. They also are required to compare and connect theatre to other art forms and disciplines, and to career exploration. Priority is given to technical theatre students for placement on school stage crews.

This course incorporates the five strands identified in the VAPA framework for fine arts instruction; artistic perception, creative expression, historical and cultural context, aesthetic valuing, and connections, relationships, and applications to other disciplines.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

INTRODUCTION TO TECHNOLOGY SUPPORT SERVICES (3761)

Grade level: 6–8

Prerequisites: None

Course duration: One semester

Type of graduation credit earned: Does not apply

Note: This course meets the district's computer literacy requirement for high school graduation.

COURSE DESCRIPTION

This course is designed to expose middle-school students to the different career paths in the Information Technology industry sector, and help them develop a beginning understanding of the various components that make up an organizational technology plan. Students get hands-on experience in

information literacy, software and hardware troubleshooting, computer repair and maintenance, help desk and telephone support systems, and networking essentials.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

INTRODUCTION TO VIDEO PRODUCTION 6TH–8TH (8370)

Grade level: 6–8

Prerequisites: None

Course duration: One semester. May also be taught as a six-, nine-, or 12-week portion of an 18-week wheel course, with multiple credit allowed.

Type of graduation credit earned: Does not apply

COURSE DESCRIPTION

This course introduces students to the operation of video and computer equipment and program production. Instruction emphasizes scriptwriting, equipment operation, and production techniques. Career orientation is also emphasized. The course serves as an orientation and introduction to the senior high course, Video Production 1–4.

BASIC TEXTS AND TEACHING GUIDES

Brelak, *Television Production Today*, National Textbook, 1995.

KEYBOARDING INTRODUCTION 6TH–8TH (0520)

Grade level: 6–8

Prerequisites: None

Course duration: One semester. May also be taught as a six-, nine-, or 12-week portion of an 18-week wheel course, with multiple credit allowed.

Type of graduation credit earned: Does not apply

COURSE DESCRIPTION

This course will train middle-grade students to touch-type keyboards. Instructional strategies and materials are specifically designed for students in the middle grades, and promote the fast acquisition of elementary keyboarding skills.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Keyboarding and Applications, Houghton Mifflin, 1987.

MANUFACTURING TECHNOLOGY 1,2 (3681, 3682)

Grade level: 9–12

Prerequisites: Transportation Technology 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This course develops in students basic skills and knowledge in metalworking . Students acquire knowledge and skills in the use of hand tools and machines in the areas of machine work, welding, forging, metal casting, and sheet metal. Students are given safety instruction and are expected to work safely with tools and materials. Students plan and build metal projects and figure costs involved. Attention is given to the development of planning, skill, accuracy, and craftsmanship. Emphasis is placed on cooperative working relationships and career exploration in the building trades, construction or engineering industries.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Machine Tool Practice, 7th ed., Prentice Hall, 2002.

MANUFACTURING TECHNOLOGY 3,4 (3683, 3684)

Grade level: 10–12

Prerequisites: Manufacturing Technology 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

The Manufacturing Technology 3,4 program allows students to continue and expand the knowledge and skills developed in Manufacturing Technology 1,2. In this course, students are encouraged to work in one or more of several areas of metalworking. Areas generally offered are metal machining, welding, foundry, forging, heat treating, art metal, and sheet metal. Instruction and practice in using complex machines and equipment are provided. Information concerning the requirements and opportunities in

occupations related to metalworking trades is provided. The time involved in completing a job is repeatedly stressed and methods of obtaining accuracy in mass production are studied and used. Emphasis is placed on cooperative working relationships in the management and operation of the shop.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Machine Tool Practice, 7th ed., Prentice Hall, 2002.

MARKETING 1,2 (0801, 0802)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This course introduces students to the world of marketing, both theoretical and practical. Students learn marketing principles and practices, become aware of the fundamentals of world economics, and prepare themselves for both careers and higher education. This is the first-level course in a sequence of three designed to fully prepare the student for marketing positions in a wide variety of settings, including small business, corporate, and nonprofit. It is recommended that students plan to participate in at least two of the three courses in order to become proficient in the competencies required in the field.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Farese, *Marketing Essentials*, Glencoe/McGraw-Hill, 2006.

MARKETING 3,4 (0803, 0804)

Grade level: 9–12

Prerequisites: Successful completion of Marketing 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This course is the second-level course in a series of three and provides students opportunities to acquire higher-level skills in the areas of product planning, buying, pricing, promotion, and distribution; understanding customer needs and handling questions and objections; knowledge of different sales techniques and strategies; use of management marketing research information; financial and management skills needed in owning a business; and product services and risk management. This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Farese, *Marketing Essentials*, Glencoe/McGraw-Hill, 2006.

NUTRITION 1,2 (1167, 1168)

Grade level: 11–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This course is an intermediate course for the Hospitality, Tourism and Recreation industry sector program of study. In this course students analyze the principles of nutrition as related to optimum health throughout life, and develop a rationale for food choices that promote health and wellness for a variety of individual needs. Career opportunities in the field of nutrition are also explored.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

Note: Students who complete this course with a grade of A or B are eligible to earn up to 4 units of community college credit.

BASIC TEXTS AND TEACHING GUIDES

Largen and Bence, *Guide to Good Food*, 12th ed., Goodheart-Willcox, 2012.

PHOTOGRAPHY 1,2 (3691, 3692)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's f (visual and performing arts) subject-area requirement.

Students acquire the ability to complete all of the processes involved in taking various kinds of photographs and producing finished prints. Understanding of the principles of good composition and of the application of photographic principles to industrial processes is stressed. This course uses advances in photographic technology to produce and to display digital photos. Students develop interests and abilities in photography to the point that they have a good foundation for an avocation. Consideration is given to the career opportunities photography opens.

This course reinforces core academic content area and California Career Technical Education model curriculum standards in relevant, applied setting, appropriate to the subject and grade level. This course is part of the Design, Visual, and Media Arts career pathway.

BASIC TEXTS AND TEACHING GUIDES

Joyner and Monaghan, *Focus on Photography*, Davis, 2007.

PHOTOGRAPHY 3,4 (3693, 3694)

Grade level: 10–12

Prerequisites: Photography 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

Photography 3,4 allows advanced application of previously acquired skills and gives students more detailed knowledge of the many areas of photography. Photographic processes used for industrial purposes are stressed. This course uses advances in photographic technology to produce and to display digital photos. Emphasis is placed on the development of entry-level skills for professional photography.

This course reinforces core academic content area and California Career Technical Education model curriculum standards in relevant, applied setting, appropriate to the subject and grade level. This course is part of the Media and Design Arts pathway.

BASIC TEXTS AND TEACHING GUIDES

Joyner and Monaghan, *Focus on Photography*, Davis, 2007.

PHOTOGRAPHY 6TH–8TH (3690)

Grade level: 6–8

Prerequisites: None

Course duration: One semester

Type of graduation credit earned: Does not apply

COURSE DESCRIPTION

Photography 6th–8th is an exploratory course that provides students with a broad overview of the field of photography while also focusing on the formal and aesthetic elements of capturing still images. Students learn the history of photography including its development as an art form, the contributions and advancements made by early pioneers in the field, and the impact of photography on society. Students explore career fields including commercial, medical, and freelance photography and photojournalism. They also learn the physical properties of light in conjunction with the mechanical, chemical, and digital processes for capturing and developing images. Students are introduced to the elements of art and principles of design through the study of photographic composition and lighting. Postproduction processes pertaining to formatting and photo correction are also explored.

This course reinforces core academic content area and California Career Technical Education model curriculum standards in relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

PRINCIPLES OF THE BIOMEDICAL SCIENCES 1,2 (3311, 3312)

Grade level: 9

Prerequisites: Concurrent enrollment in grade-level science and mathematics courses

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's d (laboratory science) subject-area requirement.

Note: This is a Project Lead the Way (PLTW) course that uses a prescribed curriculum.

Principles of Biomedical Sciences is a foundation course in the Health Sciences and Medical Technology industry sector, and the first course in a four-year sequence of courses comprising the PLTW Biomedical Sciences Program. Students in this introductory course are introduced to the study of human medicine, including research processes, and bioinformatics. Hands-on projects enable students to investigate the human body systems and various health conditions, including: heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. They investigate lifestyle choices and medical treatments that may prolong the lives of people living with these diseases. Other topics include metabolism, inheritance of traits, feedback systems, and defense against disease. This course is designed to lay the scientific foundation for the rest of the courses in the PLTW Biomedical Sciences Program, and provide students with a general overview of the concepts and ideas they will explore in greater detail later.

BASIC TEXTS AND TEACHING GUIDES

Project Lead the Way provides all course material online at no cost.

TECHNICAL THEATRE 1,2 (1413, 1414)

Grade level: 9–12

Prerequisites: None

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's f (visual and performing arts) subject-area requirement.

Note: Participation in extracurricular theater productions is required as part of the course curriculum.

Students will create designs for sets, lights, costumes, and sound for school productions, including sketches, ground plans, renderings, color charts/swatches, and models. Students will work as crew chiefs and will supervise the Tech I students during construction and production. Stage management responsibilities, with

full prompt books, will also be required for each production. Students will investigate the history of theatre architecture and stage design. Problem solving and working under pressure will be stressed.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

TECHNICAL THEATRE 3,4 (1462, 1463)

Grade level: 9–12

Prerequisites: Successful completion of Technical Theater 1,2 (1413, 1414) with a grade of B or better. Students also must pass a district-required safety test.

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's f (visual and performing arts) subject-area requirement.

Note: Participation in extracurricular theater productions is required as part of the course curriculum.

This two-semester course continues instruction begun in Technical Theatre 1,2 and forms part of a sequential course of study in technical theater and production. Students who take this course will develop their own designs for school productions and execute them for performance. They will create designs for the sets, lighting, costumes, and sound of these productions—including sketches, ground plans, renderings, color charts/swatches, and models—and work with other designers and the director to develop a unified design scheme for each one. Students also will serve as crew chiefs during construction, supervising the work of Technical Theatre 1,2 students. Stage-management responsibilities with full prompt books also will be required for all productions.

BASIC TEXTS AND TEACHING GUIDES

Each site selects its own resources from available publications.

TEXTILE AND FASHION DESIGN 1,2 (1137, 1138)

Grade level: 11–12

Prerequisites: Clothing and Design 1,2

Course duration: Two semesters

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This is a two-semester course for the Fashion and Interior Design industry sector. Students focus on construction techniques and develop design projects in fashion, home décor, and recreational furnishings. Careers in the fashion and interior design industries are explored, as are textile-related consumer issues, color theory, wardrobe planning, and the skills required of an entrepreneur.

This course is designed to reinforce core academic content areas and CTE Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

None.

SUPPLEMENTARY RESOURCES

Wolf, *Fashion*, Goodheart-Willcox, 2012.

VIDEO PRODUCTION 1,2; 3,4 (8373, 8374, 8375, 8376)

VIDEO PRODUCTION 1-2,3-4 (8385, 8386)

Grade level: 9–12

Prerequisites: None

Course duration: Four-semester, single-period course or two-semester, double-period course

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

College Preparatory Course (P). This course meets the University of California's f (visual and performing arts) subject-area requirement.

This course develops student skills in video production. Areas of emphasis include scriptwriting, equipment operation, studio and remote production techniques, on-camera oral communication skills, critical television viewing, and occupational opportunities in video.

BASIC TEXTS AND TEACHING GUIDES

Zettl, *Video Basics 7*, Cengage, 2013.

VIRTUAL ENTERPRISE 1,2 (0581, 0582)

Grade level: 10–12

Prerequisites: Any two business courses, or permission of instructor.

Course duration: Two semesters; multiple credit allowed

Type of graduation credit earned: Practical Arts

COURSE DESCRIPTION

This course provides students with practical experience in creating a start-up business while competing in the Virtual Enterprise Network, a world-wide educational economic system. Students create an organizational chart, develop pay scales, apply and interview for positions, create and present business plans to potential investors, develop employee policies, develop sales tools, and manage day-to-day operations. Through the program students gain increased knowledge of business interaction, accounting standards, knowledge of current business software, and Internet research skills, along with improved communication skills and the ability to give business presentations. They may also participate in trade fairs.

This course is designed to reinforce core academic content areas and California Career Technical Education model curriculum standards in a relevant, applied setting, appropriate to the subject and grade level.

BASIC TEXTS AND TEACHING GUIDES

All curriculum is available on the following Web site: www.virtualenterprise.org.

VOCATIONAL WORK EXPERIENCE EDUCATION (8503)

Grade level: 11–12

Prerequisites: See below

Course duration: One semester; multiple credit allowed

Type of graduation credit earned: Elective

COURSE DESCRIPTION

Vocational Work Experience Education extends the student's vocational learning opportunities through part-time employment in a job related to a career technical education (CTE) course in which the student is or has been enrolled. An auto mechanics major

working in an auto repair garage is an example of the type of part-time employment offered in this program. Although in most cases students enrolled in Vocational Work Experience Education must be 16 years of age or older and in grades 11 or 12, exceptions can be made on the principal's recommendation. High school students who are currently enrolled in, or have completed, an approved CTE course or courses related to their jobs and are employed for four or more hours per day are entitled to one credit per semester on completion of 150 hours of work. The equivalent of one period a week of related instruction or counseling is required for students enrolled in this program. A maximum of eight credits, which qualify students for California Scholarship Federation (CFS) eligibility, may be earned toward elective graduation requirements.

BASIC TEXTS AND TEACHING GUIDES

Related Instruction Packets, *RIP 1-30*, San Diego City Schools, updated annually.

VOCATIONAL WORK EXPERIENCE EDUCATION (2) (8506)

Grade level: 11–12

Prerequisites: See below

Course duration: One semester; multiple credit allowed

Type of graduation credit earned: Elective; two units of credit per semester

COURSE DESCRIPTION

Requirements are the same as for 8503 with the exception that students may earn two credits per semester on completion of 300 hours of work.

BASIC TEXTS AND TEACHING GUIDES

Related Instruction Packets, *RIP 1-30*, San Diego City Schools, updated annually.