

ANIMATION

FEATURED OCCUPATION

3D MODELER

3D Modelers build 3D characters and environments online that are used for video games, 3D movies, and the "metaverse", as well as images and modeling for websites, graphic designs, animation, and film effects. 3D modelers paint and wrap 2D textures on a digital frame, and also create character skeletons, which animators then control.



IS THIS FOR ME?

Are you creative
and like to draw?

Do you like cartoons
and animated
movies?

Are you good
with technology?



WHAT IS IT?

Animation is the process of taking 3D models or drawings to create an illusion of sequential movement, usually taking 25-50 frames per second to create a smooth, seamless motion. Industries that heavily use animation include film and TV, video game development, architecture, engineering, manufacturing and healthcare.

WHAT WILL I DO?

3D modelers build 3D objects and environments that are based on sketches or real-world objects using specialized computer software. Animators take 3D objects and bring them to life, giving them movement and animation using computer-generated imagery (CGI) software.

OFFERED AT THIS MVLA SCHOOL:



CONNECTS TO PROGRAMS AT:

- De Anza College (AA)
- Foothill College (AA)
- CAL State - Chico, Fresno, Fullerton, Long Beach, San Jose
- UCLA
- CA College of the Arts
- Loyola Marymount

LEADS TO THESE JOBS:

- 3D Modeler
- Animator
- Concept Artist
- Game Designer
- Graphic Designer
- Illustrator
- Multi-Media Artist
- Production Designer

IN DEMAND OCCUPATIONS

IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
Associate Degree	Web Developer	\$128,908	19%	3,320
Bachelor's Degree	Graphic Designer	\$88,380	7%	2,690
	Multimedia Artist and Animator	\$116,995	6%	4,810
	Art Director	\$169,685	8%	1,770
	Software Developer - Applications	\$173,446	25%	54,780

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **ANIMATION** talk to your high school counselor or teachers about what classes to take.

DESIGN, VISUAL AND MEDIA ARTS

IS THIS FOR ME?

Are you creative and like working with technology?

Do you have an eye for details?

Do you collaborate well with others?



WHAT IS IT?

Design, visual and media arts can help you take your creative talent, combine it with skills and technology, and turn you in to an in-demand multimedia or graphic designer. Multimedia design involves computers, animation, photography, video and printing, creating all sorts of things from posters and magazines, to websites and online video games, to photos and videos.

WHAT WILL I DO?

Design, visual and media arts professionals work in the entertainment, video game, or advertising industries, or "in-house" at a traditional business. Animators create visuals for computer programs or games. Marketing departments design artwork and campaigns for presentations or marketing materials. Graphic designers create designs for print, video, and online applications.

OFFERED AT THIS MVLA SCHOOL:



CONNECTS TO PROGRAMS AT:

- De Anza College (AA)
- Foothill College (AA)
- Fullerton State
- UC Irvine
- UCLA
- UC San Diego

LEADS TO THESE JOBS:

- 2D & 3D Animator
- Creative Director
- Desktop Publisher
- Digital Media Designer
- Filmmaker
- Graphic Designer
- Marketing Specialist
- Photographer
- Social Media Manager

FEATURED OCCUPATION

DIGITAL MEDIA DESIGNER

Digital Media Designers work with computers, animation, video, and photography to create digital and online products that engage the user, including websites, online advertising and marketing campaigns, and interactive video games.



IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
High School Diploma	Photographer	\$79,575	0%	310
Associate Degree	Web Developer	\$128,908	19%	3,320
Bachelor's Degree	Graphic Designer	\$88,380	7%	2,690
	Multimedia Artist and Animator	\$116,995	6%	4,810
	Art Director	\$169,685	8%	1,770
	Software Developer - Applications	\$173,446	25%	54,780

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **DESIGN, VISUAL AND MEDIA ARTS** talk to your high school counselor or teachers about what classes to take.

GRAPHIC DESIGN / COMMERCIAL ART

FEATURED OCCUPATION

ART DIRECTOR

Art Directors oversee the creative, visual style, and production process for developing websites, games, apps, film, magazines, marketing campaigns, and product packaging. They often will coordinate across different art departments to make sure everyone is working in unison.



IS THIS FOR ME?

Are you creative and like working with colors?

Are you detail-oriented?

Do you like to design and build things?



WHAT IS IT?

Media arts can help you take your creative talent, combine it with skills and technology, and turn you in to an in-demand multimedia or graphic designer. Multimedia design involves computers, animation, photography, video, and printing to create all sorts of things from posters and magazines, to websites and online video games, to photos and videos.

WHAT WILL I DO?

Graphic designers typically work for an entertainment, video game, or advertising agency, or "in-house" at a traditional business, or even free-lance working on their own. Animators create visuals for computer programs or games. If you work in a marketing department you might design artwork and campaigns for presentations or marketing materials. Graphic designers will be fluent in computer skills such as Adobe or HTML to help create online content and websites.

OFFERED AT THESE MVLA SCHOOLS:



CONNECTS TO PROGRAMS AT:

- De Anza College (AA)
- Foothill College (AA)
- Porterville College (AA)
- San Jose State
- Art Center of College and Design
- New York University
- Univ. of the Pacific

LEADS TO THESE JOBS:

- 2D & 3D Animator
- Creative Director
- Desktop Publisher
- Digital Media Designer
- Filmmaker
- Graphic Designer
- Marketing Specialist
- Photographer
- Social Media Specialist

IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
High School Diploma	Photographer	\$79,575	0%	310
Associate Degree	Web Developer	\$128,908	19%	3,320
Bachelor's Degree	Interior Designer	\$81,284	10%	570
	Graphic Designer	\$88,380	7%	2,690
	Commercial and Industrial Designer	\$115,378	3%	310
	Multimedia Artist and Animator	\$116,995	6%	4,810
	Art Director	\$169,685	8%	1,770

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **GRAPHIC DESIGN / COMMERCIAL ART** talk to your high school counselor or teachers about what classes to take.

FILM AND VIDEO PRODUCTION

IS THIS FOR ME?

Do you love the movies?

Are you a visual story teller?

Do you like taking photos and videos?



WHAT IS IT?

Film and video production is the process of making a film, from the initial idea and storyline, to screenwriting, shooting film, sound recording, and post-production editing. Films today appear not only in theaters, but broadcast TV, cable, streaming services, and multiple internet platforms like YouTube. While it's easier than ever today to make a film with available technology, there are techniques and skills that are still required to achieve high quality production.

WHAT WILL I DO?

Film directors are in charge of making, leading, and developing a film production, including funding, screenwriting, casting, film locations, filming, editing, and distribution. Camera operators are responsible for managing camera equipment and filming the scenes. Film editors organize digital footage with software to create the final film production.

LEADS TO THESE JOBS:

- Audio and Video Technician
- Assistant Camera Operator, TV, Video, Film
- Producer
- Multimedia Artist and/or Animator
- Film and Video Editor
- Cinematographer
- Casting Agent
- Location Manager
- Broadcast Technician
- Special Effects Coordinator
- Director
- Boom Operator

CONNECTS TO PROGRAMS AT:

- De Anza College (AA)
- Foothill College (AA)
- San Francisco State
- UC - Berkeley, Irvine, Los Angeles, Santa Barbara, Santa Cruz
- CA Institute of the Arts
- Stanford
- USC

OFFERED AT THIS MVLA SCHOOL:



FEATURED OCCUPATION

AUDIO AND VIDEO TECHNICIAN

Audio and Video Technicians help operate and set-up video cameras, lighting, sound equipment, broadcast equipment, and film editing software to create films, music, broadcasts, and podcasts. Careers can be found within the film, media, and marketing industries as well as business, hospitality, schools, and working for yourself.



IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
High School Diploma	Photographer	\$79,575	0%	310
Certification	Sound Engineering Technician	\$65,620	9%	130
	Audio and Video Equipment Technician	\$67,329	13%	680
Associate Degree	Broadcast Technician	\$60,979	8%	150
Bachelor's Degree	Camera Operator - TV, Video, Film	\$69,867	11%	300
	Film and Video Editor	\$78,808	38%	450

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **FILM AND VIDEO PRODUCTION** talk to your high school counselor or teachers about what classes to take.

BUSINESS MANAGEMENT

FEATURED OCCUPATION

BUSINESS INFORMATION ANALYST

Business Information Analysts gather, analyze, and provide curated data and information to businesses and organizations to make better business decisions. Jobs include the use of data and technology to help sales teams, finance departments, and general operations to help businesses become more efficient and strategic.



IS THIS FOR ME?

Do you like to organize things and make decisions?

Are you good with numbers and like analyzing data?

Are you a strong motivator and leader?



WHAT IS IT?

Business management involves managing the day-to-day operations of business organizations, whether managing the company as an owner, executive or general manager, overseeing administration as an operations manager, or helping to support the business as an administrative assistant or receptionist.

WHAT WILL I DO?

Managers and owners oversee day-to-day business operations, decide what products to make, and increase productivity of their business. Accountants and bookkeepers track invoices, payments, and revenue. Human resource and training professionals help employees find their full potential. Market research analysts gather and analyze data on clients and the marketplace.

OFFERED AT THIS MVLA SCHOOL:



CONNECTS TO PROGRAMS AT:

- De Anza College (AA)
- Foothill College (AA)
- CAL State - San Diego, San Francisco, San Jose
- UCLA
- Cornell
- Harvard
- Univ. of Pennsylvania

LEADS TO THESE JOBS:

- Accountant
- Administrative Support
- Business Intelligence Management
- Executive / Owner
- General Manager
- Human Resources Specialist
- Operations Management
- Training Supervisor

IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
High School Diploma	Bookkeeping, Accounting, and Auditing Clerk	\$54,418	-2%	12,170
	Training and Development Specialist	\$97,543	14%	3,520
Bachelor's Degree	Human Resources Specialist	\$105,647	9%	6,210
	Compensation, Benefits, and Job Analysis Specialist	\$107,079	10%	1,140
	Accountant and Auditor	\$116,192	9%	14,970
	Budget Analyst	\$118,087	6%	570
	Market Research Analyst	\$122,731	24%	19,730
	Management Analyst	\$128,200	14%	13,100
	Financial Analyst	\$136,778	11%	5,550
	Project Management Specialist	\$137,942	33%	1,410

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **BUSINESS MANAGEMENT** talk to your high school counselor or teachers about what classes to take.

ARCHITECTURAL DESIGN

IS THIS FOR ME?

Do you enjoy building things with your hands?

Are you creative and detail-oriented?

Are you comfortable working both inside and outside?



WHAT IS IT?

Architectural design is the process of creating and designing plans for a residential home, building, office, structure, or landscape. It involves gathering important information on the needs, style, and wants for the project, and then crafting design options for the client or architect to review. Architectural design delivers blueprints for the construction team that will eventually build the project.

WHAT WILL I DO?

Architects create plans, drawings, and layouts for homes, buildings, and landscapes. They will meet with clients to discuss the project requirements and budget, as well as drafting layouts that reflect their client's needs and personality. Architectural designers work with CAD software to create blueprint designs, including technical specs that comply with local building regulations.

OFFERED AT THIS MVLA SCHOOL:



CONNECTS TO PROGRAMS AT:

- Chabot College (AA)
- City College of San Fran. (AA)
- College of San Mateo (AA)
- West Valley College (AA)
- UC Berkeley
- UCLA
- Academy of Art Univ.
- Cal Poly
- Southern CA Institute of Architecture

LEADS TO THESE JOBS:

- Architect
- Architectural Designer
- Architectural Drafter
- Civil Drafter
- Civil Engineer
- Drafting Technician
- Landscape Architect
- Structural Drafter
- Urban Planner

FEATURED OCCUPATION

ARCHITECT

Architects create designs and visual concepts for new construction projects including residential homes, commercial building, schools, and landscapes. In addition to knowing the feasibility of how their design will eventually be constructed, they also must be aware of local safety and structural ordinances to make sure their designs are compliant.



IN DEMAND OCCUPATIONS

IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
High School Diploma	Surveying and Mapping Technician	\$87,759	4%	660
Associate Degree	Architectural and Civil Drafter	\$74,467	1%	790
	Civil Engineering Technician	\$84,164	6%	350
Bachelor's Degree	Landscape Architect	\$88,329	5%	160
	Architect	\$112,550	7%	480
	Surveyor	\$116,404	3%	220
	Civil Engineer	\$124,029	5%	1,940
	Environmental Engineer	\$128,877	7%	460
	Construction Manager	\$148,466	8%	3,270
Master's Degree	Urban and Regional Planner	\$116,818	11%	410

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **ARCHITECTURAL DESIGN** talk to your high school counselor or teachers about what classes to take.

ENGINEERING TECHNOLOGY / DESIGN

FEATURED OCCUPATION

CIVIL ENGINEER

Civil Engineering involves the design and construction of large infrastructure projects, such as roads, bridges, tunnels, airports, subway systems, and dams. Civil engineers draft plans and drawings for the construction of projects, as well as monitor the progress of onsite construction to ensure projects are going according to plan.



IS THIS FOR ME?

Are you curious how products are made?

Do you enjoy math, science, and technology?

Are you detail-oriented and a problem solver?



WHAT IS IT?

Engineering design is the process of creating a plan that will be used to build or make something, whether a small electronic device, a vacuum cleaner, or a machine that makes parts. The engineering design process involves multiple teams that work in tandem with one another, iterating and testing the process over-and-over, delivering a final process, solution, or prototype to be built or executed based on what's needed.

WHAT WILL I DO?

Engineers, engineering technicians, drafters, designers, and others work together through an iterative process that usually includes: defining the problem or what needs to be built; identifying possible constraints; brainstorming different possible solutions; prototyping the most promising solution; testing and evaluating; iterating to make improvements; and communicating and delivering the final solution or plan.

OFFERED AT THESE MVLA SCHOOLS:



CONNECTS TO PROGRAMS AT:

- El Camino College (AA)
- Foothill College (AA)
- CAL State - Chico, Northridge, San Diego
- UC - Berkeley, Davis, Los Angeles
- Cal Maritime
- Cal Poly
- MIT
- Stanford
- USC

LEADS TO THESE JOBS:

- Biomedical Engineer or Technician
- Computer Engineer
- Electrical Engineer or Technician
- Electro-Mechanical Technician
- Industrial Engineer or Technician
- Materials Engineer
- Mechanical Engineer or Technician
- Robotics Engineer
- Robotics Programmer

IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
Associate Degree	Mechanical Engineering Technician	\$78,715	7%	440
	Electrical and Electronics Engineering Technician	\$79,802	1%	5,440
Bachelor's Degree	Biomedical Engineer	\$116,477	9%	370
	Civil Engineer	\$124,029	5%	1,940
	Chemical Engineer	\$136,585	14%	110
	Mechanical Engineer	\$142,490	4%	3,430
	Aerospace Engineer	\$152,539	5%	1,210
	Electrical Engineer	\$154,228	7%	4,080
	Electronics Engineer	\$157,533	4%	4,370
	Computer Hardware Engineer	\$189,918	4%	6,820

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **ENGINEERING TECHNOLOGY / DESIGN** talk to your high school counselor or teachers about what classes to take.

MENTAL AND BEHAVIORAL HEALTH

This pathway has changed to **Patient Care** as of August 2023. Please speak with your counselor for more information.

FEATURED OCCUPATION

MARRIAGE AND FAMILY THERAPIST

Marriage and Family Therapy focuses on inter-relationships between spouses, family members, friends, and coworkers, and how these relationships influence one's thoughts and actions. Marriage and family therapists diagnose and treat mental and emotional disorders including depression, anxiety, marital problems, and individual behavioral problems.



IS THIS FOR ME?

Do you enjoy helping and serving those in need?

Are you empathetic and patient with others?

Do people come to you with their problems?



WHAT IS IT?

Mental health focuses on a person's state of mind, referring to one's emotional, social, and psychological wellness. Behavioral health often includes mental health, but also refers to how daily cognitive habits affect one's overall well-being, emotions, body, and behavior. Poor behavioral health habits, such as lack of sleep or eating disorders, often lead to poor mental and physical wellness.

WHAT WILL I DO?

Psychologists conduct interviews and assessments with their patients, give diagnostic tests, perform therapy, and administer programs to help patients with their mental health issues. Behavioral therapists strive to understand the underlying habits and behaviors of their patients, and create personalized strategies to eliminate poor behaviors at the root of the problem.

OFFERED AT THIS MVLA SCHOOL:



CONNECTS TO PROGRAMS AT:

- Chabot College (AA)
- De Anza College (AA)
- Foothill College (AA)
- MiraCosta College (AA)
- CAL State - Fullerton, San Jose
- Cal Poly Pomona
- California Baptist Univ.
- Palo Alto Univ.
- Southern New Hampshire Univ.
- USC

LEADS TO THESE JOBS:

- Behavioral Health Specialist
- Marriage and Family Therapist
- Mental Health Nurse
- Psychiatric Technician
- Psychiatrist
- Psychologist
- Social Worker
- Substance Abuse Counselor

IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
High School Diploma	Community Health Worker	\$68,489	7%	350
	Behavioral and Mental Health Counselor	\$77,244	22%	1,910
Bachelor's Degree	Child, Family, and School Social Worker	\$79,253	4%	1,430
	Health Education Specialist	\$94,627	10%	500
	School and Guidance Counselor	\$91,022	16%	3,030
Master's Degree	Mental Health and Substance Abuse Social Worker	\$91,343	16%	610
	Healthcare Social Worker	\$109,401	13%	1,260
Professional Degree	Psychologist	\$139,030	16%	820
	Psychiatrist	\$373,827	8%	50

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **MENTAL AND BEHAVIORAL HEALTH** talk to your high school counselor or teachers about what classes to take.

CULINARY ARTS

IS THIS FOR ME?

Are you passionate about making people happy?

Do you love to cook for other people?

Would you like to work in a fast-paced environment?



WHAT IS IT?

Culinary arts is the preparation, cooking, and presentation of food and meals. You will usually work in restaurants, most likely as a cook or chef in the kitchen, but also in "front of the house" roles as a server, greeter, or maitre d. Catering for private events is a big business that involves preparing food for large events like weddings, conventions, or corporate meetings.

WHAT WILL I DO?

As a cook or chef you will plan menus, prepare food to be used for meals, cook and bake meals, and prepare the final presentation for the customer. Servers and hosts greet customers, take their orders, serve their food, and deliver great customer service. Nutritionists develop meal plans and menus that focus on improving diet and nutrition for their customers.

CONNECTS TO PROGRAMS AT:

- Cabrillo College (AA)
- City College of San Fran. (AA)
- College of the Canyons (AA)
- Los Angeles Trade-Tech College (AA)
- Mission College (AA)
- Orange Coast College (AA)
- Santa Rosa Jr. College (AA)
- CAL State - East Bay, Long Beach, Northridge, San Diego, San Fran., San Jose
- Cal Poly
- Culinary Institute of America at Greystone
- Institute of Culinary Education

LEADS TO THESE JOBS:

- Caterer
- Chef and Head Cook
- Dietician Technician
- Food Scientist
- Food Service Worker
- Meeting, Convention, and Event Planner
- Manager - Hotel, Club or Resort
- Registered Dietitian & Nutritionist

FEATURED OCCUPATION

EXECUTIVE CHEF

An Executive Chef oversees all operations at a restaurant, including kitchen operations, menu planning, food and beverage purchasing, hiring and training of personnel, restaurant decor, marketing, and finance. Most executive chefs have years of experience working in the kitchen, and many times oversee operations at multiple restaurant locations owned by the same restaurant group.



IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
High School Diploma	Food Service Manager	\$78,007	13%	3,970
	Lodging Manager	\$82,415	6%	200
	Chef and Head Cook	\$84,858	10%	1,460
Bachelor's Degree	Meeting, Convention, and Event Planner	\$84,588	12%	1,730
	Dietitian and Nutritionist	\$106,956	11%	410

Source - State of California Employment Development Department, 2023

OFFERED AT THIS MVLA SCHOOL:



NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **CULINARY ARTS** talk to your high school counselor or teachers about what classes to take.

GAMES AND SIMULATION

IS THIS FOR ME?

Do you like to play video games?

Do you have a lively imagination?

Are you good at working with computers?



WHAT IS IT?

Game design is the use of creativity and design to develop video games for entertainment or educational purposes. It involves creating compelling stories, characters, environments, rules, and challenges that drive interactions with other characters, users or objects. Game design crosses the fields of computer programming, creative writing, graphic design and animation.

WHAT WILL I DO?

Game designers are the creative force responsible for bringing a video game to life. They design the characters in the game, assist with the storyline and goals for the game, create the "world" or environment where the game takes place, and create goals that users must achieve to make the game more engaging.

CONNECTS TO PROGRAMS AT:

- Cabrillo College (AA)
- CAL State - Chico, East Bay
- UC - Berkeley, Irvine, Los Angeles, Santa Cruz
- Academy of Art Univ., SF
- Univ. of Silicon Valley
- USC

LEADS TO THESE JOBS:

- 3D Modeler
- Animator
- Film Editor
- Game Artist
- Game Writer and Developer
- Graphic Designer
- Illustrator
- Interface Designer
- Producer
- Software Programmer



FEATURED OCCUPATION

SOFTWARE DEVELOPER

Software Developers use computer code to create, design, deploy, and support computer software and video game development. Examples of computer software applications include productivity software to create documents, gaming software to play video video games, and video conferencing software to increase productivity for remote workers.



IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
Associate Degree	Web Developer	\$128,908	19%	3,320
Bachelor's Degree	Graphic Designer	\$88,380	7%	2,690
	Multimedia Artist and Animator	\$116,995	6%	4,810
	Software Developer - Applications	\$173,446	25%	54,780

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **GAMES AND SIMULATION** talk to your high school counselor or teachers about what classes to take.

SOFTWARE AND SYSTEMS DEVELOPMENT

FEATURED OCCUPATION

COMPUTER NETWORK ARCHITECT

Computer Network Architects create and maintain computer networks within or between organizations, allowing computer users to share data with one another. They will often troubleshoot performance problems when they arise, monitor security systems like "firewalls", and make sure remote workers have proper access to necessary applications and data when working outside the building.



IS THIS FOR ME?

Do you naturally "get" computers and technology?

Are you creative and strong at math?

Are you focused, patient, and persistent?



WHAT IS IT?

Software development refers to using computer code to create, design, deploy and support computer software. Computer software applications range from productivity software to create documents, gaming software to play video games, and video conferencing software to stay connected at school. Computer systems refer to the hardware, software, and networking systems that an organization uses to generate information and be productive.

WHAT WILL I DO?

Software developers write, test, and fix code, which is the underlying language that creates software, games, and applications used by users on their computers and devices. Computer systems analysts investigate organizational needs and recommend and install new computer hardware and software systems that help the organization achieve their goals.

OFFERED AT THESE MVLA SCHOOLS:



CONNECTS TO PROGRAMS AT:

- De Anza College (AA)
- Foothill College (AA)
- CAL State - Sacramento, San Diego, San Jose
- UC - Berkeley, Irvine, Merced
- Cal Poly
- Harvard
- MIT
- Santa Clara Univ.
- Stanford
- USC

LEADS TO THESE JOBS:

- Computer and Information Systems Manager
- Computer Network Architect
- Computer Network Support Specialist
- Computer Systems Analyst
- Information Security Analyst
- Network and Computer Systems Administrator
- Software Developer
- Systems Administrator
- Web Developer

IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
High School Diploma	Computer User Support Specialist	\$79,264	13%	13,040
Associate Degree	Computer Network Support Specialist	\$90,494	10%	2,140
Bachelor's Degree	Database Administrator	\$125,800	14%	1,840
	Network and Computer Systems Administrator	\$140,315	8%	4,690
	Computer Systems Analyst	\$146,375	10%	11,060
	Information Security Analyst	\$156,248	34%	1,350
	Software Developer - Applications	\$173,446	25%	54,780
	Computer Network Architect	\$183,992	9%	3,070

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **SOFTWARE AND SYSTEMS DEVELOPMENT** talk to your high school counselor or teachers about what classes to take.

PRODUCT INNOVATION AND DESIGN

FEATURED OCCUPATION

MECHANICAL ENGINEERING TECHNICIAN

Mechanical Engineering Technicians use computer-aided design software like AutoCAD and SolidWorks to produce detailed design plans for various products, machinery parts, and tools to be manufactured. They collaborate with industrial engineers and designers on what materials to use, how products will be manufactured, and cost and time estimates.



IS THIS FOR ME?

Do you like to come up with new ideas and inventions?

Are you creative and like to build things?

Do you think about how to make things better?



WHAT IS IT?

Product innovation and design refers to the development of new products or improvements in the design, components, or manufacturing process of existing products. Product innovation can create brand new categories, like the invention of smart phones, or iterate on established products like using lighter, more durable materials in products.

WHAT WILL I DO?

Product designers work to understand the needs of customers by observing user behavior and conducting market research in order to solve problems in the marketplace. They use computer-aided design (CAD) software to build renderings of new products and produce various prototypes to test, analyze, and iterate upon.

OFFERED AT THIS MVLA SCHOOL:



CONNECTS TO PROGRAMS AT:

- City College of San Fran. (AA)
- San Diego City College (AA)
- Solano Community College (AA)
- CAL State - Fullerton, Long Beach, San Fran., San Jose
- Cal Poly
- California College of the Arts
- Otis College of Art and Design
- Stanford

LEADS TO THESE JOBS:

- 3D Modeler
- Industrial Designer
- Materials Engineer
- Mechanical Drafter
- Mechanical Engineering Technician
- Product Designer
- Product Manager
- UX (User Experience) Designer

IN DEMAND OCCUPATIONS IN AROUND SANTA CLARA COUNTY

Education Needed	Occupation	Average Salary	Job Growth Projected Over Next 10 Years	Job Openings Projected Over Next 10 Years
Associate Degree	Electro-Mechanical Technician	\$72,343	-4%	480
	Mechanical Engineering Technician	\$78,715	7%	440
	Electrical and Electronics Engineering Technician	\$79,802	1%	5,440
	Industrial Engineering Technician	\$83,791	-2%	460
	Electrical and Electronics Drafter	\$101,921	1%	880
Bachelor's Degree	Commercial and Industrial Designer	\$115,378	3%	310
	Industrial Engineer	\$126,992	8%	3,920
	Materials Engineer	\$139,569	4%	370
	Mechanical Engineer	\$142,490	4%	3,430
	Industrial Production Manager	\$158,445	1%	1,550

Source - State of California Employment Development Department, 2023

NEXT STEPS

IF YOU ARE INTERESTED IN PURSUING A CAREER IN **PRODUCT INNOVATION AND DESIGN** talk to your high school counselor or teachers about what classes to take.