



OFFICE OF INSTRUCTION

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Catalog Update for 2020-21 College Catalog Last Updated: November 10, 2020

Programs

The following programs shall be considered included in the 2020-21 College Catalog, with the effective dates noted below.

Department	Program	Effective Date
Behavioral Sciences	Associate in Arts in Cannabis Studies (AA-T) - NEW	Spring 2021
Behavioral Sciences	Associate in Arts in Social Work for Transfer (AA-T) - NEW	Spring 2021
Broadcast Electronic Media Arts	Certificate of Achievement in Entrepreneurship and Innovation in Broadcast Media - NEW	Spring 2021
Broadcast Electronic Media Arts	Certificate of Achievement in Sound Recording Arts - REVISED	Fall 2020
Business	Associate in Science in Business Administration for Transfer (AS-T) -REVISED	Fall 2020
Business	Certificate of Completion in Business Communication - NEW	Spring 2021
Business	Certificate of Achievement in Entrepreneurship and Innovation in Business - NEW	Spring 2021
Communication Studies	Associate in Arts in Communication Studies for Transfer (AA-T) - REVISED	Spring 2021
Computer Networking & Information Technology	Certificate of Achievement in Computer Technical Support - REVISED	Spring 2021
Computer Networking & Information Technology	Certificate of Achievement in Network Security - REVISED	Spring 2021
Computer Networking & Information Technology	Certificate of Achievement in Routing and Switching (Cisco) - REVISED	Spring 2021
Culinary Arts & Hospitality Studies	Certificate of Achievement in Culinary Arts and Hospitality - NEW	Spring 2021
Culinary Arts & Hospitality Studies	Associate of Science in Culinary Arts Management (AS) - REVISED	Spring 2021
Culinary Arts & Hospitality Studies	Certificate of Achievement in Entrepreneurship and Innovation in Hospitality Management - NEW	Spring 2021
Culinary Arts & Hospitality Studies	Associate of Science in Hospitality Management (AS) - REVISED	Spring 2021
Engineering & Technology	Certificate of Achievement in Biotechnology - NEW	Spring 2021
Engineering & Technology	Certificate of Achievement in Biotechnology Lab Assistant - NEW	Spring 2021
Engineering & Technology	Certificate of Achievement in Biotechnology Work Experience - NEW	Spring 2021

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Department	Program	Effective Date
English as a Second Language	Certificate of Achievement in Guided Pathways ESL Milestone in Child Development - NEW	Spring 2021
Environmental Horticulture & Floristry	Certificate of Achievement in Oriental Floral Design - NEW	Spring 2021
Fashion	Certificate of Achievement in Apparel Construction - NEW	Spring 2021
Fashion	Certificate of Achievement in Entrepreneurship and Innovation in Fashion Design and Merchandising - NEW	Spring 2021
Fashion	Associate of Science in Fashion Design (AS) - REVISED	Spring 2021
Fashion	Certificate of Achievement in Fashion Design - REVISED	Spring 2021
Fashion	Certificate of Achievement in Fashion Styling and Personal Styling - REVISED	Spring 2021
Fashion	Certificate of Achievement in Patternmaking - NEW	Fall 2020
Health Care Technology	Associate of Science in Electrocardiography Technician (AS) - NEW	Spring 2021
Health Care Technology	Certificate of Achievement in Health Unit Coordinator - NEW	Spring 2021
Health Care Technology	Associate of Science in Medical Assisting (AS) - REVISED	Spring 2021
Health Care Technology	Certificate of Achievement in Medical Assisting - REVISED	Spring 2021
Health Care Technology	Associate of Science in Pharmacy Technician (AS) - NEW	Spring 2021
Health Care Technology	Certificate of Achievement in Phlebotomy - NEW	Spring 2021
Health Education	Associate in Science in Nutrition and Dietetics for Transfer (AS-T) - NEW	Spring 2021
Health Education	Certificate of Achievement in Peer Health Educator - NEW	Fall 2020
Music	Certificate of Achievement in Music and Technology - NEW	Spring 2021
Theater Arts	Certificate of Achievement in Technical Theater Production - NEW	Spring 2021
Theater Arts	Associate in Arts in Theatre Arts for Transfer (AA-T) - REVISED	Spring 2021
Visual Media Design	Certificate of Achievement in Entrepreneurship in Visual Media Design - NEW	Spring 2021
Women's and Gender Studies	Certificate of Achievement in Sexual Health Educator - REVISED	Fall 2020
World Languages and Cultures	Certificate of Achievement in Chinese (Mandarin) - REVISED	Spring 2021
World Languages and Cultures	Certificate of Achievement in Japanese - REVISED	Spring 2021

BEHAVIORAL SCIENCES

Associate in Arts in Cannabis Studies (AA) - NEW

The Cannabis Studies Major is an introduction to the complex biopsychosocial relationship of humans to cannabis in multiple cultural, institutional, and interpersonal contexts. This major is grounded in Behavioral Sciences and addresses how intersecting identities, geography, and historicity frame the conversations and implications of cannabis and its use. This major incorporates anthropology, biological psychology, and sociology. It provides a unique examination of the constructions of cannabis as a product, a psychoactive substance, a behavior, and a form of deviance, revolution, criminality, spirituality, and ethnomedicine; depending upon cultural standpoint, time and global location. It also uses a social justice framework to analyze public policy, rhetoric, and health.

Learning Outcomes

Upon completion of this program, students will be able to:

- Analyze the assumptions and diverse perspectives underlying behavioral science methods of investigation.
- Explain how cannabis laws, policies, and dominant social values establish and perpetuate social inequalities

Courses Required for the Major in Cannabis Studies

Course	Units
Required Courses	
SOC 55 Introduction to Cannabis Studies.....	3.0
ANTH 50 Anthropology of Cannabis.....	3.0
PSYC 50 Psychology of Psychoactive Drugs.....	3.0
ADMJ 65 Criminal Justice, Drugs, Crime and the Law	3.0
ANTH 8 Magic, Witchcraft, and Religion	3.0
HLTH 30 Drugs, Health, and Society	3.0
LALS 11 Drug Wars in the Americas	3.0
Total:.....	18.0

Associate in Arts in Social Work for Transfer (AA-T)

The Social Work degree is designed to prepare students for transfer into the CSU system and employment in the human services field. Social Work is an applied behavioral science and focuses on the essential information for understanding and critically analyzing behavior, social forces and conditions in diverse environments. Students will gain essential skills and hands-on experience in providing human services. The program will enable students to develop an analysis of how social conditions contribute to inequality and the need for social services.

Learning Outcomes

Upon completion of this program, students will be able to:

- Critique major theories related to the understanding of social problems and social welfare policy.
- Apply various methods of inquiry including statistical analysis to examine social welfare issues.
- Apply the biopsychosocial model to understand real life experiences of persons from diverse backgrounds.

Students who wish to earn the Associate in Arts in Social Work for Transfer (AA-T) must complete 60 CSU transferable units with at least a 2.0 grade point average. This must include the units required for full completion of the IGETC or CSU GE curriculum and the units for the major as specified below. Each course in the major must be completed with a grade of "C" or better. Courses used to meet the major requirement may also be used to meet IGETC or CSU GE requirements.

Assuming students start this AA-T program with transfer-level math and English eligibility, the minimum time for completion is 4 semesters. Completion time will vary based on student preparation and number of units completed per semester. Students must complete a minimum of 3 of 7 required courses at City College of San Francisco.

Courses Required for the AA-T in Social Work

Course	Units
Required Social Work Courses	
SOC 11 Intro to Social Work and Human Services	3.0
SOC 12 Fieldwork/Practicum: Social Work and Human Services.....	3.0
Required Behavioral Sciences Courses	
PSYC 1 General Psychology.....	3.0
SOC 1 Introduction to Sociology.....	3.0
Required Critical Analysis Courses	
PSYC 5 Statistics for Behavioral Sciences.....	5.0
or LALS 5 Introduction to Statistical Methods in Latin American and Latino/a Studies	5.0
or ECON 5 Introductory Statistics for Economics, Business and Social Sciences.....	5.0
or MATH 80 Probability and Statistics.....	5.0

Required Human Biology Course

BIO 9 Human Biology	4.0
or BIO 11 Science of Living Organisms	4.0

Electives (select two)

ADMJ 57 Introduction to Administration of Justice	3.0
ANTH 3 Introduction to Social and Cultural Anthropology	3.0
CDEV 53 Child Growth and Development.....	3.0
CDEV 67 Child, Family, and Community	3.0
CMST 5 Intercultural Communication	3.0
HIST 17B The United States	3.0
PSYC 10 Abnormal Psychology	3.0
PSYC 21 Lifespan Development	3.0
HLTH 30 Drugs, Health, and Society	3.0
SOC 3 Social Problems.....	3.0
Total:.....	30.0 – 31.0

BROADCAST ELECTRONIC MEDIA ARTS

Entrepreneurship and Innovation in Broadcast Media Certificate of Achievement

This certificate program is designed to prepare students in Broadcast Electronic Media Arts to engage in the world of entrepreneurship. The program's interdisciplinary approach to entrepreneurship equips students with relevant tools in exploring various pathways to entrepreneurship such as full-time business ownership, sub-contracting (freelancing), consulting, corporate intrapreneurship or mission-driven social entrepreneurship.

Students will utilize common tools and techniques to create effective and engaging internet content. They will be able to conceptualize, produce, and deliver meaningful multimedia material. Those who complete this program can apply for entry level social media positions or media content creator positions, or use these skills to improve their creative portfolio and express opinions effectively in online campaigns.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply an entrepreneurial mindset that breeds creativity and innovation in broadcast and electronic media arts.
- Use terms and concepts related to functional areas of entrepreneurship and innovation necessary for startups.
- Analyze the marketing environment to identify entrepreneurial opportunities and areas for growth and development.
- Develop an agile and lean business plan for a startup project/enterprise that is ready for pitching.
- Compare different entrepreneurship pathways in relation to a project or business idea.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Entrepreneurship and Innovation in Broadcast Media Course

Course	Units
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Required Courses:

ENTR 101 Introduction to Entrepreneurship	3.0
ENTR 102 Applied Design Thinking for Entrepreneurship	1.5
MRKT 140 Introduction to Marketing	3.0

Broadcast and Electronic Media Arts Required Courses

BCST 119 Digital Media Skills	3.0
BCST 135 Audio for the Web	1.0
BCST 136 Video for the Web	1.0
BCST 158 Social Media for Professionals.....	3.0

BCST 159 Digital Media Portfolio	1.0
Recommended Additional Coursework	
BCST 141 Field Video Production	3.0
BCST 143A Avid Video Editing Beginning	4.0
BCST 144A Video Editing Premiere Intro	4.0
Total:	18.0

Sound Recording Arts Certificate of Achievement

The Sound Recording Arts Certificate teaches the craft and techniques of multi-track recording. Students gain hands-on recording skills, and learn how to operate the equipment used in recording popular music. Courses include hands-on exposure to production processes such as tracking, overdubbing, mixing and mastering by participating in recording sessions. Students are prepared for entry-level positions at recording studios, sound reinforcement companies, mobile on-site music recording companies, radio production facilities, and audio post-production facilities including sound for video games.

Learning Outcomes

Upon completion of this program, students will be able to:

- Plan and execute the studio set-up for a multi-track recording session with microphone and line-level devices.
- Configure and engineer multi-track control room equipment to track and monitor a music recording session.
- Plan, mix, and troubleshoot a multi-track mixdown session.
- Apply mastering techniques to a final audio product for distribution using industry-standard outputs formats.
- Demonstrate professionalism and effective application of recording industry workforce protocol, communication skills, and behavior in the recording studio environment

Students must complete at least 10 units from the courses listed below at City College of San Francisco.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Sound Recording Arts

Course	Units
Core courses:	
BCST 120 Audio Production.....	4.0
BCST 124A Pro Tools Editing Essentials.....	2.0
BCST 124B Pro Tools Mixing with Plugins.....	2.0
BCST 125A Beginning Sound Recording Studio.....	5.0
BCST 125B Intermediate Sound Recording Studio.....	5.0
BCST 163 Media Internship Preparation.....	1.0
Choose 2 units from the following course electives:	
BCST 160 College Internship	1.0-2.0
BCST 165 Industry Internship.....	1.0-2.0
Total:	21.0

BUSINESS

Associate in Science in Business Administration for Transfer (AS-T)

The Associate in Science in Business Administration for Transfer is designed to prepare students who wish to transfer to pursue a baccalaureate degree in Business Administration, particularly to the California State University system. This program provides the academic foundation required for various areas of business, such as accounting, management, finance, and marketing.

Learning Outcomes

Upon completion of this program, students will be able to:

- Use business terms and concepts related to functional areas of business.
- Examine the external forces that impact business decisions.
- Apply high standards of professional practice, demonstrating awareness of ethical and social responsibilities in today's business environment.

Degree Requirements: Students who wish to earn the Associate in Science in Business Administration for Transfer (AS-T) must complete 60 CSU transferable units with at least a 2.0 grade point average. This must include the units required for full completion of the IGETC or CSU GE curriculum and the units for the major as specified below. Each course in the major must be completed with a grade of "C" or better. Courses used to meet the major requirement may also be used to meet IGETC or CSU GE requirements.

The minimum time for completion is 4 semesters. Completion time will vary based on student preparation and number of units completed per semester.

Courses Required for the AS-T in Business Administration-T

Course **Units**

Required courses:

ACCT 1 Financial Accounting.....	5.0
ACCT 2 Managerial Accounting.....	5.0
ECON 3 Principles of Microeconomics	3.0
ECON 1 Principles of Macroeconomics	3.0
BSL 1 Business Law I	3.0

Choose one of these statistics options:

ECON 5 Introductory Statistics for Economics, Business and Social Sciences.....	5.0
LALS 5 Introduction to Statistical Methods in Latin American and Latino/a Studies	5.0
MATH 80 Probability and Statistics.....	5.0
PSYC 5 Statistics for Behavioral Sciences.....	5.0

Select TWO among the following courses:

GNBS 119 Introduction to Business.....	3.0
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and One of the following computer courses:

MABS 60 Introduction to Computer Applications for Business.....	3.0
CNIT 100 Intro to Computers Using PC's.....	3.0

Total:..... **30.0**

Business Communication Certificate of Completion

The Business Communication certificate provides essential skill development in workplace communication. Students strengthen skills in written, verbal, and digital communication for business settings.

Learning Outcomes

Upon completion of this program, students will be able to:

- Produce well-organized business correspondence with a minimum of grammatical and formatting mistakes.
- Generate authentic and compelling text for business use on various digital platforms.

The minimum time for completion is 1 semester. Completion time will vary based on student preparation and number of units completed per semester.

Courses Required for the Certificate of Completion in Business Communication

Course **Hours**

Required courses:

BOSS 4500 Business English I.....	45.0
BOSS 4501 Business English II.....	45.0
BOSS 4510 Business Communications	45.0

BOSS 4515 Business Writing for Digital Media	45.0
Total:	180.0

Entrepreneurship and Innovation in Business Certificate of Achievement

This certificate program is designed to prepare Business students to engage in the world of entrepreneurship. The program’s interdisciplinary approach to entrepreneurship equips students with relevant tools in exploring various pathways to entrepreneurship such as full-time business ownership, sub-contracting (freelancing), consulting, corporate intrapreneurship or mission-driven social entrepreneurship.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply an entrepreneurial mindset that breeds business creativity and innovation.
- Use terms and concepts related to functional areas of entrepreneurship necessary for startups.
- Analyze the marketing environment to identify entrepreneurial opportunities and areas for growth and development.
- Develop an agile and lean business plan for startup project/enterprise that is ready for pitching.
- Compare different entrepreneurship pathways in relation to a project or business idea.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Entrepreneurship and Innovation in Business

Course	Units
Required Courses	
ENTR 101 Introduction to Entrepreneurship	3.0
ENTR 102 Applied Design Thinking for Entrepreneurship	1.5
DSGN 105 Design Thinking.....	1.5
MRKT 140 Introduction to Marketing	3.0
Business (Choose a minimum of 9 units from the following courses)	
BSL 1 Business Law I	3.0
GNBS 119 Introduction to Business.....	3.0
MGT 231 Introduction to Supervision and Management.....	3.0
MABS 60 Introduction to Computer Applications for Business.....	3.0
MRKT 122 Professional Selling	3.0
SMBS 135 Ownership and Operation of a Small Business.....	3.0
Total:	18.0

COMMUNICATION STUDIES

Associate in Arts in Communication Studies for Transfer (AA-T)

Communication studies majors learn about the communication process and acquire the skills needed to effectively communicate with others--both within and across cultural boundaries--in a variety of public, small group, and interpersonal settings. Students develop organizational, critical thinking, research, and active listening skills as they craft messages that are adapted for the audience, context, and communication modality.

Learning Outcomes

Upon completion of this program, students will be able to:

- Articulate an understanding of the communication process and the ways communication practices shape perceptions of civic, social, and environmental issues.

- Identify and use culturally competent communication practices.
- Deliver presentations with effective verbal and nonverbal communication.
- Apply advanced critical thinking skills to structure logical, credible, and well researched arguments that address complex social problems.
- Critique the communication practices of others and demonstrate critical listening skills that further the constructive exchange of ideas.

Students who wish to earn the Associate of Arts in Communication Studies for Transfer (AA-T) must complete 60 CSU transferable units with at least a 2.0 grade point average. This must include the units required for full completion of the IGETC or CSU GE curriculum and the units for the major as specified below. Each course in the major must be completed with a grade of “C” or better. Courses used to meet the major requirement may also be used to meet IGETC or CSU GE requirements.

The minimum time for completion is 4 semesters. Completion time will vary based on student preparation and number of units completed per semester.

Courses Required for the AA-T in Communication Studies

Course	Units
Required course:	
CMST 1A Elements of Public Speaking	3.0
List A Choose 2 courses (6 units)	
CMST 3 Argumentation and Debate	3.0
CMST 4 Group Communication	3.0
CMST 20 Interpersonal Communication	3.0
List B Choose 2 courses (6 units)	
CMST 2 Introduction to Rhetorical Criticism.....	3.0
CMST 5 Intercultural Communication	3.0
CMST 7 Oral Interpretation of Literature	3.0
CMST 38 Forensics Competition	3.0
Any course not selected from List A	
C List Choose 1 course (3 units)	
ANTH 3 Introduction to Social and Cultural Anthropology	3.0
CMST 8 Rhetoric of Popular Culture.....	3.0
ENGL 1B Writing about Literature	4.0
ENGL 1C Writing about Nonfiction.....	4.0
JOUR 21 News Reporting and Writing.....	3.0
PSYC 1 General Psychology.....	3.0
SOC 1 Introduction to Sociology.....	3.0
Any course not selected from lists A or B	
Total:	18.0 – 19.0

COMPUTER NETWORKING & INFORMATION TECHNOLOGY

Computer Technical Support Certificate of Achievement

This certificate includes instruction in the support of a modern workplace computer environment including hardware, operating systems, online environments, and application programs. Students in this program practice modern diagnostic troubleshooting, technical and logical problem solving, end-user training, and customer relations skills. Students completing this certificate program will be qualified for entry-level computer technical support, IT, and help desk positions.

Learning Outcomes

Upon completion of this program, students will be able to:

- Evaluate components and configure a functional computer system.
- Troubleshoot and repair defective computer systems.
- Configure and diagnose basic network connectivity.

Students must complete each course with a grade of “C” or higher.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Computer Technical Support

Course	Units
Required courses:	
CNIT 100 Intro to Computers Using PC's.....	3.0
CNIT 101 Operating Systems I Windows	3.0
CNIT 102 Operating Systems II Command Line	3.0
CNIT 103 Computer Hardware	3.0
CNIT 104 Operating Systems Technologies	3.0
CNIT 105 IT Customer Support	3.0
CNIT 106 Introduction to Networks.....	3.0
Choose one of the following courses:	
CNIT 197 Internship and Work Experience	1.0
CNIT 103L Computer Hardware Lab	1.0
CNIT 105L Computer Technical Support	1.0
Total:	22.0

Network Security Certificate of Achievement

This certificate includes instruction in the measures that must be taken to detect and prevent network security mistakes and vulnerabilities, and includes descriptions of common attacks and methods to configure operating systems, servers, routers, firewalls, and email. Students completing this certificate program will be qualified for employment in entry-level network security positions and be able to prepare for CompTIA Security+ exam.

Learning Outcomes

Upon completion of this program, students will be able to:

- Explain the basics of network security.
- Protect the IT environment using hacking techniques.
- Assess confidentiality, integrity, availability, and non-repudiation (CIAN).
- Apply strategies for network defense.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Network Security

Course	Units
Required courses:	
CNIT 40 DNS Security	1.0
CNIT 106 Introduction to Networks.....	3.0
CNIT 120 Network Security	3.0
CNIT 122 Firewalls.....	3.0
CNIT 123 Ethical Hacking & Network Defense.....	3.0
Choose one of the following courses:	
CNIT 121 Computer Forensics	3.0
CNIT 124 Advanced Ethical Hacking	3.0
CNIT 125 Information Security Professional Practices	3.0
Total:	16.0

Routing and Switching (Cisco) Certificate of Achievement

This certificate includes instruction and practice in the theory, design, configuration, and operation of simple Local and Wide Area Networks. Students completing this certificate program will be qualified for employment in entry-level positions in network administration and be able to prepare for the Cisco Certified Entry Networking Technician (CCENT) and the Cisco Certified Network Associate (CCNA) certification exam.

Learning Outcomes

Upon completion of this program, students will be able to:

- Compare OSI and TCP/IP networking models and their related protocols
- Explain the importance of addressing and naming schemes of various layers of data
- Compare and configure various internal routing protocols
- Analyze, configure, and troubleshoot switch configurations including LANs and VLANs
- Describe and configure a variety of WAN protocols in routers
- Define basic network security issues and possible solutions

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Routing and Switching (Cisco)

Course **Units**

Required courses:

CNIT 103 Computer Hardware	3.0
CNIT 201C Introduction to Cisco Networks	3.0
CNIT 202C Routing and Switching Essentials.....	3.0
CNIT 203C Scaling Networks	3.0
CNIT 204C Connecting Networks	3.0
CNIT 120 Network Security	3.0
CNIT 417 Administering Windows Server 2016	3.0
Total:	21.0

CULINARY ARTS AND HOSPITALITY STUDIES

Culinary Arts and Hospitality Certificate of Achievement

This certificate program is designed to prepare students in the Culinary Arts. The program's approach equip students with the relevant skills to enter a robust hospitality job market in the bay area. Students completing the curriculum with an average final grade of C+ or higher (2.5 GPA) will receive a Certificate of Achievement in Culinary Arts and Hospitality. This credit certificate provides short-term culinary and service skills training for entry into the labor market.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply front of the house operations and methods of service to a variety of tasks in the food service industry.
- Apply the concept and techniques of sanitation, personal hygiene and professional attire to hospitality environments.
- Anticipate and perform the responsibilities of a line and/or pastry cook in a professional kitchen.

Completion of ESL 186 or placement in ESL 188 or ENGL 1A+1AS or higher.

The minimum time for completion of this certificate is 3 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Course	Units
Required Courses	
CAHS 10A Culinary Fundamentals I.....	5.0
CAHS 10B Culinary Fundamentals I.....	5.0
CAHS 20A Culinary Fundamentals II A.....	3.0
CAHS 20B Culinary Fundamentals II B.....	3.0
CAHS 20C Culinary Fundamentals II C.....	3.0
CAHS 30A Restaurant Operations.....	4.5
CAHS 30B Restaurant Operations.....	4.5
CAHS 100 Introduction to Hospitality.....	3.0
BIO 121 Sanitation Principles and Practices.....	2.0
Total:	33.0

Associate in Science Culinary Arts Management (AS)

Students may earn an Associate in Science Degree with a concentration in Culinary Arts. This major is offered to prepare students for a culinary career. This is a two-year program and includes management-related courses in the Culinary Industry. It is a rigorous, full time, day program. Students are advised to be well-prepared to commit themselves to being in school 8 hours per day, 5 days a week for the duration of the program. Students must complete 12 units of A.S. degree requirements before continuing to the second year.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply the concept and techniques of sanitation, personal hygiene and professional attire to hospitality environments.
- Use costing principles and trends to profitably operate hospitality establishments
- Anticipate and perform the responsibilities of a line and/or pastry cook in a professional kitchen.

There is a separate application form for the CAHS program. Applicants should contact the Culinary Arts and Hospitality Studies department for deadline dates.

Recommended preparation for entry into the program: ENGL 88 or ESL 186 or placement in ESL 188 or readiness for college-level English; MATH 30 or equivalent

The minimum time for completion is 4 semesters. Completion time will vary based on student preparation and number of units completed per semester.

Courses Required for the Major in Culinary Arts Management

Course	Units
Required introductory course:	
CAHS 100 Introduction to Hospitality.....	3.0
Choose one of the following required options:	
OPTION ONE	
CAHS 10A Culinary Fundamentals I.....	5.0
CAHS 10B Culinary Fundamentals I.....	5.0
OPTION TWO	
CAHS 10N Culinary Fundamentals 1.....	4.0
CAHS 10NL Culinary Fundamentals 1 Laboratory.....	6.5
Required Courses:	
CAHS 30A Restaurant Operations.....	4.5
CAHS 30B Restaurant Operations.....	4.5
CAHS 20A Culinary Fundamentals II A.....	3.0

CAHS 20B Culinary Fundamentals II B.....	3.0
CAHS 20C Culinary Fundamentals II C	3.0
CAHS 40W Work Experience	5.0
<i>* CAHS 40W to be taken in student's final semester and by consent of instructor</i>	
<i>Note: CAHS 10A-B/N-NL, 30A-B, 20A-B-C and 40W must be taken in sequence.</i>	
CAHS 21 Meat Analysis	2.0
BIO 121 Sanitation Principles and Practices	2.0
BIO 130 Nutrition and Culinary Arts	2.0
CAHS 33 Procurement and Costing	3.0
CAHS 42 Fundamentals of Hospitality Financial Reports	3.0
MGT 231 Introduction to Supervision and Management.....	3.0
CMST 1A Elements of Public Speaking	3.0
or CMST 6 Workplace Communication	3.0
or CMST 20 Interpersonal Communication	3.0
Choose one of the following required courses	
PSYC 26 Applied Psychology.....	3.0
LBCS 96C Labor Relations in the Modern American Workplace	3.0
PLUS: Students are required to take 3 units of the following courses:	
CAHS 60A Sous Vide Cooking.....	1.0
CAHS 60B Classic & Modern Sauces.....	1.0
CAHS 60D Advanced Pantry/Cold Kitchen Preparations.....	1.0
CAHS 60E Charcuterie, Force-meats, and Pates.....	1.0
CAHS 60F Principles of Food Carving.....	1.0
CAHS 60G Global Cuisines: France.....	1.0
CAHS 60H Global Cuisines: Italy.....	1.0
CAHS 60J Global Cuisines: United States.....	1.0
CAHS 60L Advanced Pastry Doughs, Batters, and Creams.....	1.0
CAHS 60M Chocolate and Confections	1.0
CAHS 60N Mousses: Cakes and Desserts	1.0
CAHS 60O Wedding Cakes.....	1.0
CAHS 60P Plated Desserts: Presentations & Techniques.....	1.0
CAHS 53A Cuisines of Mexico: Oaxaca	3.0
Total:	60.0 – 60.5

Entrepreneurship and Innovation in Hospitality Management Certificate of Achievement

This certificate program is designed to prepare students in Hospitality Management to engage in the world of entrepreneurship. The program's interdisciplinary approach to entrepreneurship equips students with relevant tools in exploring various pathways to entrepreneurship such as full-time business ownership, sub-contracting (freelancing), consulting, corporate intrapreneurship or mission-driven social entrepreneurship.

The interdisciplinary focus provides basic culinary and service skills training for business startups. While generally designed for those interested in attaining a certificate in hospitality field, this skillset allows students to participate in today's gig economy as a freelance chef, a food blogger, or a content creator in the hospitality industry.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply an entrepreneurial mindset that breeds creativity and innovation in hospitality management.
- Use terms and concepts related to functional areas of entrepreneurship necessary for startups.
- Analyze the marketing environment to identify entrepreneurial opportunities and areas for growth and development.

- Develop an agile and lean business plan for a startup project or enterprise that is ready for pitching.
- Compare different entrepreneurship pathways that are available for people venturing into food and beverage industry.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Entrepreneurship and Innovation in Hospitality Management

Course Units

Required Courses:

ENTR 101 Introduction to Entrepreneurship	3.0
ENTR 102 Applied Design Thinking for Entrepreneurship	1.5
DSGN 105 Design Thinking.....	1.5
MRKT 140 Introduction to Marketing	3.0

Culinary Arts and Hospitality (Choose a minimum of 9 units from the following courses)

CAHS 32 Hospitality Marketing.....	3.0
CAHS 34 Fundamentals of Contemporary Hospitality Law.....	3.0
CAHS 42 Fundamentals of Hospitality Financial Reports	3.0
CAHS 100 Introduction to Hospitality.....	3.0
CAHS 205 Introduction to Wine.....	3.0
CAHS 208 Intro to Event and Meeting Planning.....	4.0
CAHS 209 Food Business Entrepreneurship	3.0
CAHS 222 Beverage Management.....	3.0
BIO 121 Sanitation Principles and Practices	2.0
BIO 130 Nutrition and Culinary Arts.....	2.0

Total:..... 18.0

Associate in Science in Hospitality Management (AS)

The Associate of Science in Hospitality is designed to prepare students who wish to enter the hospitality industry with the skills to succeed in entry level positions, as well as prepare those who wish to transfer to a four-year college. This program provides the academic foundation required for various areas of hospitality, such as hotel administration, restaurant operations, hospitality law, finance, marketing, meetings, conventions and special events and culinary arts. Note--There is a separate application form for the CAHS program. Applicants should contact the Culinary Arts and Hospitality Studies Department for deadline dates.

Learning Outcomes

Upon completion of this program, students will be able to:

- Categorize the different departments within a hotel and explain the interactions between them.
- Enhance organizational performance through use of industry specific technology.
- Apply costing principles and trends to profitably operate hospitality establishments.
- Apply the concept and techniques of sanitation, personal hygiene and professionalism to hospitality environments.

Recommended preparation for entry into the program: ENGL 88 or ESL 186 or placement in ESL 188 or readiness for college-level English; MATH 30 or equivalent skills.

Note that the program description below outlines only how students fulfill the major requirement for an associate degree. The CCSF associate degree has several other components, including general education requirements. Please meet with a counselor and read the Associate Degree Requirements chapter of the CCSF Catalog for complete information. Generally, minimum time for completion of an AA or AS degree is four semesters, depending on student preparation and the number of units completed per semester.

Courses Required for the Associate of Science (AS) in Hospitality Management

Course	Units
Required Introductory course	
CAHS 100 Introduction to Hospitality	3.0
OPTION ONE	
CAHS 10A Culinary Fundamentals I	5.0
CAHS 10B Culinary Fundamentals I	5.0
OPTION TWO	
CAHS 10N Culinary Fundamentals 1	4.0
CAHS 10NL Culinary Fundamentals 1 Laboratory	6.5
Required Courses:	
CAHS 32 Hospitality Marketing	3.0
CAHS 33 Procurement and Costing	3.0
CAHS 34 Fundamentals of Contemporary Hospitality Law	3.0
CAHS 42 Fundamentals of Hospitality Financial Reports	3.0
CAHS 43 Principles of Hotel Administration	3.0
CAHS 40W Work Experience*	5.0
*To be taken in the student's final semester and with consent of the instructor	
BIO 121 Sanitation Principles and Practices	2.0
CMST 1A Elements of Public Speaking	3.0
or CMST 6 Workplace Communication	3.0
or CMST 20 Interpersonal Communication	3.0
Choose one of the following required courses:	
PSYC 26 Applied Psychology	3.0
LBCS 96C Labor Relations in the Modern American Workplace	3.0
Choose one of the following required courses:	
MGT 231 Introduction to Supervision and Management	3.0
MGT 233 Human Resources Management	3.0
Choose one of the following required options:	
OPTION ONE	
CAHS 30A Restaurant Operations	4.5
and CAHS 30B Restaurant Operations	4.5
OPTION TWO	
CAHS 208 Intro to Event and Meeting Planning	4.0
Total:	48.0 – 53.5

ENGINEERING AND TECHNOLOGY

Biotechnology Certificate of Achievement

The Biotechnology certificate program is designed to prepare students for employment in the biotechnology industry, research laboratories and biomanufacturing. The program emphasizes hands-on training and skills necessary for a successful career as a technician or research associate.

Learning Outcomes

Upon completion of this program, students will be able to:

- Record and communicate accurate records of laboratory work.
- Design and perform basic procedures and techniques used in the biotechnology and related industries.

- Discuss current scientific and ethical concepts in biotechnology.
- Apply and practice industry regulations and processes.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Course	Units
Required courses:	
BTEC 12A GLP and GMP Principles	1.0
BTEC 20 Mammalian Cell Culture	3.0
BIO 11 Science of Living Organisms	4.0
CHEM 32 Introduction to Medical Chemistry.....	4.0
Choose one of the following courses or course combinations:	
BTEC 115 Recombinant DNA Biotechnology.....	5.0
or BTEC 24 Introduction to PCR.....	1.0
and BTEC 25 Analytical PCR Technology	1.0
Choose one of the following course or course combinations:	
BTEC 120 Cell Biotechnology	5.0
or BTEC 22 Enzyme Linked Immunosorbent Assay (ELISA).....	1.0
and BTEC 23 Western Blotting Techniques	1.0
Choose 3 additional units from the following elective courses not completed above:	
BTEC 115 Recombinant DNA Biotechnology.....	5.0
BTEC 22 Enzyme Linked Immunosorbent Assay (ELISA).....	1.0
BTEC 120 Cell Biotechnology	5.0
BTEC 23 Western Blotting Techniques.....	1.0
BTEC 5 Briefings in Biotechnology	1.0
BTEC 24 Introduction to PCR.....	1.0
BTEC 25 Analytical PCR Technology	1.0
BTEC 21C Stem Cell Technology.....	3.0
Total:	19.0 – 27.0

Biotechnology Lab Assistant Certificate of Achievement

The Bay Area is the birthplace of biotechnology. The high density of biotechnology companies and universities in this area has generated an increased demand for entry-level jobs. This program is designed to give a rigorous and engaging hands-on introduction to the biosciences while strengthening the math and language skills needed for success in these entry-level positions. The Biotechnology Lab Assistant Certificate will prepare students for jobs such as laboratory aides & assistants, laboratory safety monitors and laboratory testing. No previous science coursework or experience is necessary for entry into this program. Students do need to have completed Math 40, or the equivalent. Students will gain valuable experience with laboratory work, documentation, and collaborative work with their peers. Students will also get an overview of the biotechnology industry and survey different careers. After successful completion of this certificate, students will be ready for an entry level position or a Biotechnology Program-supported internship. Some courses for this certificate also satisfy requirements for the AS in Biotechnology and for transfer to a four-year university.

Learning Outcomes

Upon completion of this program, students will be able to:

- Perform basic mathematical calculations and follow laboratory protocols used in common procedures and techniques in biotechnology and other related industries.
- Apply knowledge of cGMP (current Good Manufacturing Practices) and GLP (Good Laboratory Practices) to complete work in a regulated biotechnology operation.

- Record and communicate accurate records of laboratory work.
- Describe career skills in different fields in the biotechnology and other related industries.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of units or classes completed per semester.

Courses Required for the Certificate of Achievement in Biotechnology Lab Assistant

Course	Units
Required Courses:	
BTEC 12A GLP and GMP Principles	1.0
BTEC 14A Biotechnology Laboratory Techniques.....	3.0
BTEC 15 Career Exploration in Bioscience.....	2.0
BTEC 108A Practical Mathematics for Laboratory Science	2.0
BIO 11 Science of Living Organisms	4.0
CMST 1A Elements of Public Speaking.....	3.0
CHEM 32 Introduction to Medical Chemistry.....	4.0
Choose one of the following courses:	
BTEC 4 Introduction to Biotechnology	3.0
BTEC 5 Briefings in Biotechnology	1.0
Choose 2 units from the following electives:	
BTEC 20 Mammalian Cell Culture	3.0
BTEC 22 Enzyme Linked Immunosorbent Assay (ELISA).....	1.0
BTEC 23 Western Blotting Techniques.....	1.0
BTEC 24 Introduction to PCR.....	1.0
BTEC 25 Analytical PCR Technology	1.0
Total:	22.0 – 25.0

Biotechnology Work Experience Certificate of Achievement

The high density of biotechnology industry and research laboratories in the Bay area has generated an increased demand for jobs in biotechnology fields. This program is designed to provide laboratory skills and real-life work experience through internships for the students who are exploring careers in biotechnology. In addition to technical laboratory skills, the students will gain essential career skills with focus on workplace success. The internships are closely monitored by the faculty through a support class where the students share their experiences, discuss laboratory work etiquettes and practice scientific communication. The program provides networking opportunities for the students with biotechnology industry professionals. The program allows the students to gain valuable real-life work experience that prepares them for entry level careers such as research and laboratory assistants and technicians in industry and academic laboratories.

Learning Outcomes

Upon completion of this program, students will be able to:

- Communicate accurate records of laboratory work including objectives, procedures, and analysis of the results.
- Design and perform basic procedures and techniques used in the biotechnology industry.
- Research and communicate scientific concepts and principles to describe different fields of biotechnology industry and applications, as well as impacts on society.
- Practice professional skills, workplace etiquette and integrity in a biotechnology industry setting.

The Biotechnology Work Experience certificate may be a stand-alone program for the more advanced students or a capstone program for the students who have completed the Biotechnology or the introductory Biotechnology Lab Assistant Certificates of Achievement and wish to gain relevant work experience through internships.

The minimum time for completion of this certificate is 2 semesters. Students who have already completed the Biotechnology Lab Assistant certificate may complete this certificate in 1 semester. Completion time will vary based on the student's preparation and number of units or classes completed per semester.

Courses Required for the Certificate of Achievement in Biotechnology Work Experience

Course	Units
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Required Courses:

BTEC 93 Biotechnology Work experience	3.0
BIO 11 Science of Living Organisms	4.0
CHEM 32 Introduction to Medical Chemistry.....	4.0

Choose one of the following course combinations

BTEC 15 Career Exploration in Bioscience.....	2.0
and BTEC 14B Biotechnology Internship Support.....	4.0
or BTEC 21D Introductory Stem Cell Internship Support.....	4.0
and BTEC 21E Advanced Stem Cell Internship Support	4.0
BTEC 14A Biotechnology Laboratory Techniques.....	3.0
BTEC 20 Mammalian Cell Culture	3.0
BTEC 21A Mammalian Cell Culture.....	2.0
BTEC 21B Fluorescent Cell Technology.....	2.0
BTEC 21C Stem Cell Technology.....	3.0
BTEC 22 Enzyme Linked Immunosorbent Assay (ELISA).....	1.0
BTEC 23 Western Blotting Techniques.....	1.0
BTEC 24 Introduction to PCR.....	1.0
BTEC 25 Analytical PCR Technology	1.0
BTEC 115 Recombinant DNA Biotechnology.....	5.0
BTEC 120 Cell Biotechnology	5.0

Total:.....21.0 – 24.0

ENGLISH AS A SECOND LANGUAGE

Guided Pathways ESL Milestone in Child Development Certificate of Achievement

The Guided Pathway ESL Milestone Certificate in Child Development is designed as an on-ramp to prepare English language learners for the academic rigor of degree-applicable coursework in child development. It provides students, employers, and others with documented evidence of persistence and academic accomplishment in English and success in introductory coursework in child development. These two elements combine to demonstrate significant achievement of a milestone along students' pathways to child development certificates and degrees.

Learning Outcomes

Upon completion of this program, students will be able to:

- Produce comprehensible spoken English, including pronunciation.
- Produce comprehensible written English, employing a variety of vocabulary, grammar, and sentence structures.
- Analyze and interpret authentic written texts in English, using a range of strategies.
- Analyze child development and how various factors affect children and families.
- Evaluate early childhood practices that promote positive development in young children.
- Critique strategies to support and empower children and their families, including those with diverse characteristics.

The minimum time for completion is 2 semesters. Completion time will vary based on student preparation and number of units completed per semester.

Courses Required for the Certificate of Achievement in Guided Pathways ESL Milestone in Child Development

Course	Units
Choose one of the following courses:	
ESL 69 Accent Improvement	3.0
ESL 79 Advanced Speaking and Pronunciation	3.0
Choose a minimum of 9 units from the following courses:	
ESL 66 Advanced Listening and Reading	3.0
ESL 67 Practical Writing for ESL Students	3.0
ESL 184 High Intermediate Academic ESL	6.0
ESL 186 ESL Introduction to College Reading and Writing	6.0
ESL 188 ESL College Reading and Writing	6.0
Choose 6 units from the following courses:	
CDEV 53 Child Growth and Development	3.0
CDEV 65 Orientation to ECE Principles and Practice	3.0
CDEV 66 Introduction to Early Childhood Curriculum	3.0
CDEV 67 Child, Family, and Community	3.0
Total:	18.0

ENVIRONMENTAL HORTICULTURE AND FLORISTRY

Oriental Floral Design Certificate of Achievement

Sogetsu Ikebana is offered in cooperation with the Sogetsu Ikebana, Soho Study Group, Ikebana International, Japan Ministry of Education, The American Institute of Floral Designers, San Francisco Bay Area Master Florists Association and California State Florists Association.

This two-year course of study is designed to give students thorough and well-balanced training in buying flowers, and the art of arranging in the Sogetsu Style.

This curriculum satisfactorily qualifies individuals to teach Sogetsu Ikebana on a private level.

The course of study includes instruction in beginning, intermediate and advanced levels of the Sogetsu curriculum under the guidance of experienced instructors. Students who complete the curriculum and other graduation requirements receive the Environmental Horticulture/Floristry, Certificate of Accomplishment-Sogetsu and qualifies the student to apply for a level 5 Sogetsu School Certificate.

Learning Outcomes

Upon completion of this program, students will be able to:

- Arrange Oriental style floral projects proficiently and artistically.
- Identify, select, and purchase plants and flowers appropriate for oriental floral design projects.
- Identify and execute oriental arrangement styles and communicate the interpretive meanings and applications.

The minimum time for completion of this certificate is 4 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Oriental Floral Design

Course	Units
Required courses:	
R F 85A Introduction to Floral Design Spring	2.0
R F 86A Beginning Oriental Flower Arrangement	2.0
R F 82 Interior Plant Identification	3.0
R F 81A Fall and Winter Flower and Foliage Identification/Culture and Care	2.0
R F 86B Oriental Flower Arrangement II	2.0

R F 86C Oriental Flower Arrangement III.....	2.0
R F 86D Oriental Flower Arrangement IV.....	2.0
R F 86E Oriental Flower Arrangement V.....	2.0
Total:	17.0

FASHION

Apparel Construction Certificate of Achievement

The Apparel Construction Certificate of Achievement takes students from basic sewing skills through the advanced construction techniques and sequences used to sew complex garments in the fashion industry. Students learn both home and industry methods for proper garment construction and fitting. Certain segments of the fashion industry use specialized skills and materials not used in other forms of garment production. The specialized and advanced techniques also prepare the student to utilize them in either production or custom settings.

Learning Outcomes

Upon completion of this program, students will be able to:

- Interpret and apply a fashion production pattern.
- Construct multiple types of garments from a wide variety of fabrics.
- Analyze and apply the appropriate order of construction, techniques, and equipment to complete a variety of garments.
- Employ appropriate hand and machine techniques for a variety of apparel.
- Achieve proper fit for multiple garments.

The minimum time for completion of this certificate is 3 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Apparel Construction

Course	Units
Fall semester first year courses:	
FASH 15A Apparel Construction 1.....	3.0
FASH 22 Textile Analysis	3.0
Spring semester first year courses:	
FASH 15B Apparel Construction 2.....	3.0
FASH 16 Garment Fitting Techniques	3.0
Fall semester second year courses:	
FASH 15C Apparel Construction 3	3.0
FASH 26 Flat Pattern Design I.....	3.0
or FASH 27 Fashion Draping.....	3.0
FASH 73 Sewing with Knit and Stretch Fabrics.....	1.0
Spring semester second year course (if needed and not taken previously):	
FASH 26 Flat Pattern Design I.....	3.0
or FASH 27 Fashion Draping.....	3.0
Total:	22.0

Entrepreneurship & Innovation in Fashion Design & Merchandising Certificate of Achievement

This certificate program is designed to prepare students in Fashion Design and Merchandising to engage in the world of entrepreneurship. The program's interdisciplinary approach to entrepreneurship equips students with relevant tools in exploring various pathways to entrepreneurship such as full-time business ownership, sub-

contracting (freelancing), consulting, corporate intrapreneurship or mission-driven social entrepreneurship.

This interdisciplinary certificate provides students with basic fashion merchandising concepts, understanding of industry terminology, clothing construction, presentations, and illustration techniques. Fashion merchandising training can lead to careers as full-time or freelance fashion illustrators, designers, technical designers, patternmakers, product developers and entrepreneurs.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply an entrepreneurial mindset that breeds creativity and innovation in the field of fashion merchandising.
- Use terms and concepts related to functional areas of entrepreneurship necessary for startups.
- Analyze the marketing environment to identify entrepreneurial opportunities and areas for growth and development.
- Develop an agile and lean business plan for a startup project/enterprise that is ready for pitching.
- Compare different entrepreneurship pathways in relation to a project or business idea related to fashion merchandising.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Entrepreneurship and Innovation in Fashion Design and Merchandising

Course Units

Required Courses:

ENTR 101 Introduction to Entrepreneurship	3.0
ENTR 102 Applied Design Thinking for Entrepreneurship	1.5
DSGN 105 Design Thinking.....	1.5
MRKT 140 Introduction to Marketing	3.0

Fashion Design and Merchandising

FASH 45A Personal Styling.....	3.0
FASH 48 Fashion Show Production.....	4.0
FASH 54A Fashion Styling	3.0
Total:.....	19.0

Associate in Science in Fashion Design (AS)

The Fashion Design Associate degree builds on the Fashion Design Certificate, adding required general education courses. The Design degree gives students a strong basis in design concepts, industry terminology, clothing construction, presentations, and illustration techniques. Fashion design training can lead to careers as fashion illustrators, designers, technical designers, patternmakers, product developers, and entrepreneurs. With the additional general education courses, students will enhance their writing and social awareness skills.

Learning Outcomes

Upon completion of this program, students will be able to:

- Create fashion garments from initial design concept to final product.
- Analyze and select appropriate raw materials and techniques for fashion products.
- Relate the history and social context of fashion to the current fashion zeitgeist.
- Apply technical and professional skills expected of an employee or an entrepreneur in the fashion industry.

The minimum time for completion is 4 semesters. Completion time will vary based on student preparation and number of units completed per semester.

Students are encouraged to apply for both the Fashion Design Certificate of Achievement and the AS degree.

Courses Required for the Major in Fashion Design

Course	Units
Fall semester first year required courses:	
FASH 15A Apparel Construction 1.....	3.0
FASH 22 Textile Analysis	3.0
FASH 35A Fashion Illustration I.....	3.0
FASH 42 Introduction to the Fashion Industry.....	3.0
Spring semester first year required courses:	
FASH 15B Apparel Construction 2.....	3.0
FASH 27 Fashion Draping.....	3.0
FASH 36A Fashion Design I.....	3.0
Fall semester second year required courses:	
FASH 26 Flat Pattern Design I.....	3.0
FASH 36B Fashion Design II.....	3.0
FASH 63 Fashion Design & Production Internship.....	2.0
Spring semester second year required courses:	
FASH 23 Fashion History	3.0
FASH 137 Fashion Portfolio	1.0
FASH 138 Fashion Workplace and Career Essentials	3.0
Choose six units from the following courses:	
FASH 16 Garment Fitting Techniques	3.0
FASH 35B Fashion Illustration II.....	3.0
FASH 37 Flat Pattern Design II.....	3.0
FASH 112 Digital Illustration for Fashion	3.0
Total:	42.0

Fashion Design Certificate of Achievement

The Fashion Design certificate gives students a strong basis in design concepts, industry terminology, clothing construction, presentations, and illustration techniques. Fashion design training can lead to careers as fashion illustrators, designers, technical designers, patternmakers, product developers, and entrepreneurs.

Learning Outcomes

Upon completion of this program, students will be able to:

- Create fashion garments from initial design concept to final product.
- Analyze and select appropriate raw materials and techniques for fashion products.
- Relate the history and social context of fashion to the current fashion zeitgeist.
- Apply technical and professional skills expected in the fashion industry, as an employee or an entrepreneur.

The minimum time for completion of this certificate is 4 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Fashion Design

Course	Units
Fall semester first year required courses:	
FASH 15A Apparel Construction 1.....	3.0
FASH 35A Fashion Illustration I.....	3.0
Spring semester first year required courses:	
FASH 27 Fashion Draping.....	3.0
FASH 36A Fashion Design I.....	3.0
Fall semester second year required courses:	
FASH 26 Flat Pattern Design I.....	3.0
FASH 112 Digital Illustration for Fashion	3.0

Spring semester second year required courses:

FASH 23 Fashion History	3.0
FASH 16 Garment Fitting Techniques	3.0
Total:	24.0

Fashion Styling and Personal Styling Certificate of Achievement

The Certificate of Achievement in Fashion Styling and Personal Styling is a hands-on, field-based program that teaches students the requisite skills to become fashion stylists, personal stylists, personal shoppers, and sales associates, for a retailer or as independent contractors. Coursework includes instruction in assembling a styling kit, the different aspects of merchandise styling, color and wardrobe selection, figure analysis, and setting up a business. Students completing this certificate will be qualified for employment as a photo, fashion show, film, video, and personal stylist.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply the principles of design, skills, and styling techniques to diverse styling roles.
- Communicate using standard fashion terminology and references to fashion icons and designers, and visually through styling methods.
- Create and present digital mood boards.
- Assemble and maintain a fashion styling kit.
- Create a digital and printed styling portfolio for entrepreneurial business and entry-level employment.

The minimum time for completion of this certificate is 3 semesters. Completion time will vary based on student preparation and number of units completed per semester.

Courses Required for the Certificate of Achievement in Fashion Styling and Personal Styling

Course	Units
Fall semester first year required courses:	
FASH A Introduction to Sewing	1.0
FASH 45A Personal Styling.....	3.0
FASH 57 Fabric Glossary	1.0
Spring semester first year required courses:	
FASH 45B Advanced Personal Styling	3.0
FASH 53 Fashion Forecasting.....	3.0
FASH 54A Fashion Styling	3.0
Fall semester second year required courses:	
FASH 54B Advanced Fashion Styling.....	3.0
FASH 60 Fieldwork Fashion Shows and Events	1.0
FASH 62 Work Experience in Personal Styling	1.0 - 3.0
Total:	19.0 – 21.0

Patternmaking Certificate of Achievement

The Patternmaking Certificate of Achievement prepares students to create patterns for a variety of garments that meet industry standards for production. Students learn different methodologies of developing patterns from sketches or samples. The certificate prepares students for employment, creative fulfillment, or entrepreneurship.

Learning Outcomes

Upon completion of this program, students will be able to:

- Create an industrial-grade pattern that uses a variety of methodologies and is based on an interpreted design.

- Create patterns that employ standard industry pattern terminology and symbols for garment production.
- Apply the principles of pattern grading to develop a full size range for patterns.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Patternmaking

Course	Units
Fall semester required courses:	
FASH 15A Apparel Construction 1.....	3.0
FASH 16 Garment Fitting Techniques	3.0
FASH 22 Textile Analysis	3.0
FASH 26 Flat Pattern Design I.....	3.0
Spring semester required courses:	
FASH 27 Fashion Draping.....	3.0
FASH 29 Pattern Grading.....	1.0
FASH 37 Flat Pattern Design II.....	3.0
FASH 57 Fabric Glossary	1.0
Spring semester choose one of the following courses:	
FASH 67A Computerized Pattern Development: PAD.....	3.0
or FASH 67B Computerized Pattern Development: Gerber.....	3.0
Total:	23.0

HEALTH CARE TECHNOLOGY

Associate in Science in Electrocardiography Technician (AS)

The Electrocardiography program prepares students to operate various ECG equipment and devices as well as obtain and process different types of bloodwork. The students would be able to work as an ECG and a Phlebotomy Technician in physicians' offices, non-invasive cardiac diagnostic departments in hospitals, and medical clinics or other medical facilities. Graduates are eligible to sit for the national registry examination: Cardiovascular Credentialing International (CCI). The certificate in Phlebotomy provides students with the theoretical knowledge and skills competencies necessary to meet California regulatory requirements for phlebotomy technicians and prepares students to take the CPT-1 examination.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply clinical knowledge necessary to fulfill the role of an entry-level ECG Technician and Phlebotomy Technician.
- Perform clinical tasks on ECG machines, Holter monitor systems, and exercise stress test equipment.
- Communicate and interact with patients and members of the healthcare team according to employer expectations and standards of the healthcare profession.
- Compare the various national registry examinations for Electrocardiography and Phlebotomy Technician.

NOTE--While students have some choice in how to fulfill their General Education and graduation requirements, the Electrocardiography Technician Program recommends the following course work be completed in the first year: ENGL 1A or ENGL 1A+1AS and MATH 60. It is also suggested that ASAM 20 or LALS 1 or AFAM 60 or HIST 12B are taken prior to degree completion.

The minimum time for completion of this program is 4 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Major in Electrocardiography Technician

Course	Units
First Semester	
ECGT 101 ECG Technician I.....	4.0
HIT 50A Medical Terminology I.....	3.0
BIO 106 Introduction to Human Anatomy and Physiology	4.0
EMT 14 First Aid and Cardiopulmonary Resuscitation	3.0
Second Semester	
ECGT 102 ECG Technician II.....	4.0
HCT 67 Computer Applications in the Health Care Setting.....	2.0
HIT 50B Medical Terminology II.....	2.0
HIT 57 Disease Process.....	3.0
MED 62 Communication and Professionalism in Health Care	2.0
Third Semester	
ECGT 103A Electrocardiography Professional Experience	1.0
ECGT 103B Electrocardiography Professional Practice	3.0
HIT 75 Organization and Management in Health	3.0
HLTH 10 Health and Aging.....	3.0
MED 55 The Electronic Health Record	3.0
Fourth Semester	
PSYC 1 General Psychology.....	3.0
HCT 104 Phlebotomy Technician	5.5
Total:	48.5

Health Unit Coordinator Certificate of Achievement

This program is designed to introduce the student to the clerical duties of the hospital unit coordinator. The unit coordinator serves as the liaison between the hospitalized patient and the medical professionals in an acute care or other medical facility environment. Students will gain the knowledge and communication skills necessary for this entry-level position.

Learning Outcomes

Upon completion of this program, students will be able to:

- Describe the various health care departments and delivery systems.
- Explain the role and responsibilities of a unit coordinator in a nursing care unit of a hospital.
- Recall and apply appropriate medical terminology on the clinical site.
- Demonstrate professional behavior and team work skills in the health care environment.
- Apply principles of rescue breathing, first aid, and cardiopulmonary resuscitation to scenarios of patients of all age groups.

The minimum time for completion of this certificate is 1 semester. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Accomplishment in Health Unit Coordinator

Course	Units
Required Courses	
HCT 110 Health Unit Coordinator.....	4.0
EMT 12 Basic Life Support for Healthcare Providers.....	0.5
Total:	4.5

Associate in Science in Medical Assisting (AS)

Students who complete their training satisfactorily are prepared to hold positions as a medical assistant, medical receptionist, or office manager in the physician's office, hospital outpatient clinic, medical clinics, and health centers. The Medical Assisting Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 US Highway 19 North, Suite 158, Clearwater, FL 33763, (727) 210-2350, www.caahep.org, on recommendation of the Medical Assisting Education Review Board (MAERB). Graduates who complete the Associate of Science in Medical Office Assisting also receive the Certificate of Achievement and are eligible to take the Certified Medical Assistant examination given by the American Association of Medical Assistants (AAMA). Students must hold a valid AHA Healthcare Provider CPR and First Aid card to complete the Internship.

Learning Outcomes

Upon completion of this program, students will be able to:

- Perform clinical procedures, laboratory tests, phlebotomy, and diagnostic studies.
- Use computer applications to create documents and perform medical record and billing activities.
- Practice infection control and adhere to OSHA and HIPAA regulations.
- Receive, communicate with, and support patients and staff.
- Collaborate in a culturally diverse health care environment and apply the principles of health care ethics and professional conduct with patients, staff, and the community.
- Compare the various certification exams for medical assistants.
- Describe the procedure for applying for the phlebotomy certifying exam and license.

The minimum time for completion is 4-6 semesters. Completion time will vary based on student preparation and number of units, major and GE, completed per semester.

Courses Required for the Major in Medical Assisting

Course **Units**

Choose one of the following Anatomy and Physiology options:

OPTION 1:

BIO 106 Introduction to Human Anatomy and Physiology 4.0

OPTION 2:

BIO 108 General Human Anatomy 4.0

AND choose one of the following Physiology options:

BIO 111 Human Physiology..... 5.0

BIO 112 Introduction to Human Physiology..... 4.0

First Semester:

HCT 61 Introduction to Health Care..... 2.0

HIT 50A Medical Terminology I..... 3.0

HCT 67 Computer Applications in the Health Care Setting..... 2.0

EMT 14 First Aid and Cardiopulmonary Resuscitation 3.0

MED 55 The Electronic Health Record 3.0

MED 56 Administrative Procedures 3.5

Second Semester:

HIT 50B Medical Terminology II..... 2.0

HIT 57 Disease Process..... 3.0

HIT 76 CPT Coding..... 3.0

MED 49 Clinical Procedures..... 5.5

MED 62 Communication and Professionalism in Health Care 2.0

MED 70 Medical Insurance Billing 2.0

MED 71 Electronic Management of Financial Medical Records..... 2.0

Summer Session:

HCT 82 Professional Practice Internship/ Certification 5.0

Third Semester:

HIT 73A ICD-10-CM Coding..... 3.0

HIT 75 Organization and Management in Health	3.0
MED 73 Advanced Medical Manager.....	1.5
PSYC 1 General Psychology.....	3.0
HCT 104 Phlebotomy Technician	5.5
Total:	61.0 – 66.0

Medical Assisting Certificate of Achievement

The certificate in Medical Office Assisting provides students with both clinical and administrative training. Students who complete their training satisfactorily are prepared to hold positions as a medical assistant, medical receptionist, or office manager in a physician’s office, hospital outpatient clinic, medical clinic, and health centers. The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 US Highway 19 North, Suite 158, Clearwater, FL 33763, (727) 210-2350, www.caahep.org, on recommendation of the Medical Assisting Education Review Board (MAERB). Graduates who complete the Certificate of Achievement are eligible to take the Certified Medical Assistant examination given by the American Association of Medical Assistants (AAMA).

Learning Outcomes

Upon completion of this program, students will be able to:

- Perform clinical procedures, laboratory tests, phlebotomy, and diagnostic studies.
- Use computer applications to create documents and perform medical record and billing activities.
- Practice infection control and adhere to OSHA and HIPAA regulations.
- Receive, communicate with, and support patients and staff.
- Collaborate in a culturally diverse health care environment and apply the principles of health care ethics and professional conduct with patients, staff, and the community.
- Compare the various certification exams for medical assistants.
- Describe the procedure for applying for the phlebotomy certifying exam and license.

Program recommended preparation: ENGL 88 or ESL 186 or placement in ESL 188 or readiness for college-level English.

Students must complete each course with a grade of “C” or higher. Students must hold a valid AHA HealthCare Provider CPR and First Aid card to complete the Internship.

The minimum time for completion of this certificate is 3 semesters (plus Summer internship). Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Medical Assisting

Course	Units
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Choose one of the following Anatomy and Physiology options:

OPTION 1:

BIO 106 Introduction to Human Anatomy and Physiology	4.0
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OPTION 2:

BIO 108 General Human Anatomy	4.0
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AND one of the following Physiology courses:

BIO 111 Human Physiology.....	5.0
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BIO 112 Introduction to Human Physiology.....	4.0
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Required Course

EMT 14 First Aid and Cardiopulmonary Resuscitation	3.0
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First Semester:

HCT 61 Introduction to Health Care.....	2.0
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HIT 50A Medical Terminology I.....	3.0
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HCT 67 Computer Applications in the Health Care Setting.....	2.0
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MED 55 The Electronic Health Record	3.0
MED 56 Administrative Procedures	3.5
HCT 104 Phlebotomy Technician	5.5
Second Semester:	
HIT 50B Medical Terminology II.....	2.0
HIT 57 Disease Process.....	3.0
HIT 73A ICD-10-CM Coding.....	3.0
HIT 76 CPT Coding.....	3.0
MED 49 Clinical Procedures.....	5.5
MED 62 Communication and Professionalism in Health Care	2.0
MED 70 Medical Insurance Billing	2.0
MED 71 Electronic Management of Financial Medical Records.....	2.0
Summer Session:	
HCT 82 Professional Practice Internship/ Certification	5.0
Total:	53.5 – 58.5

Associate in Science in Pharmacy Technician (AS)

Students may obtain the Associate of Science in Pharmacy Technician by successfully completing the courses in the major program and general education requirements. The Pharmacy Technician Program starts in the fall semester each year. The curriculum is designed to prepare students to work under the direct supervision of a pharmacist in hospitals, community-based pharmacies, and other institutional settings.

Learning Outcomes

Upon completion of this program, students will be able to:

- Perform the administrative and clinical skills necessary for entry-level employment as a pharmacy technician in a hospital, retail pharmacy, or other institutional setting.
- Provide professional customer service to patients and clients in a pharmacy setting.
- Apply for a license as a Pharmacy Technician to the California State Board of Pharmacy.
- Apply to take the Pharmacy Technician Certification Board National examination.

To be considered for admission to the program, applicants must:

1. Complete the pre-requisites to the program: MATH 60 or placement into MATH 80+80S or higher and ENGL 88 or ESL 188 or readiness for college-level English.
2. Attend the orientation session and pick up the Application to the Pharmacy Technician Program.
3. Complete and submit the Application to the Pharmacy Technician Program to the Pharmacy Technician Office, Room 111, Gym Building, John Adams Campus, by the application deadline date.
4. Attend the individual orientation session scheduled with the Pharmacy Technician instructors to review prerequisite compliance and clinical placement requirements
5. File with the Office of Admissions and Records a completed credit application for admission to City College.

Successful applicants are required to submit evidence of a recent tuberculin skin test or chest x-ray, proof of immunizations, and a physical examination that indicates they are in good physical health, including the following:

- 20/100 vision correctable to 20/30 in both eyes with normal color perception
- the ability to stand unassisted for long periods of time
- the ability to walk, bend, reach, lift product, and stoop frequently
- normal hearing or corrected hearing within the normal range
- the ability to manipulate stationary and mobile medical equipment

All applicants who meet the above requirements are eligible for the program. Classroom space and clinical site placements limit the class size to 30 students.

Background Check. A background check may be required by the assigned clinical sites. The cost of this will be incurred by the student. Students must complete this background check prior to clinical placement.

Drug Screening. Drug screening may be required by the clinical placement site. The student is responsible for this cost.

Immunization Screening. Certain immunizations may be required by the clinical placement site. The student is responsible for this cost.

NOTE--While students have some choice in how to fulfill their General Education and graduation requirements, the Pharmacy Technician Program recommends the following course work to be completed: ENGL 1A or ENGL 1A+1AS and MATH 80 or MATH 80+80S or ECON 5 or PSYC 5 or LALS 5. It is also suggested that ASAM 20 or LALS 1 or AFAM 60 or HIST 12B are taken prior to degree completion.

The minimum time for completion of this program is 4 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Major in Pharmacy Technician

Course	Units
First Semester	
PHTC 101 Pharmacy Technician I Theory	9.0
PHTC 102 Pharmacy Technician I Clinical.....	7.0
Second Semester	
PHTC 103 Pharmacy Technician II Theory	9.0
PHTC 104 Pharmacy Technician II Clinical.....	5.0
EMT 12 Basic Life Support for Healthcare Providers.....	0.5
Third Semester	
BIO 108 General Human Anatomy	4.0
BIO 112 Introduction to Human Physiology.....	4.0
CMST 5 Intercultural Communication	3.0
PSYC 1 General Psychology.....	3.0
Total:	44.5

Phlebotomy Certificate of Achievement

The certificate in Phlebotomy provides students with the theoretical knowledge and skills competencies necessary to meet California regulatory requirements for phlebotomy technicians and prepares students to take the CPT-1 examination. Students who complete their training satisfactorily are prepared to hold a position as a phlebotomist in a physician’s office, hospital, hospital outpatient clinic, medical clinic, and health centers. Students will also receive an AHA BLS Health Care Provider CPR card by successfully completing EMT 12. Students who successfully complete EMT 14 will receive an AHA BLS Health Care Provider CPR and first aid cards.

Learning Outcomes

Upon completion of this program, students will be able to:

- Perform venipuncture procedures safely and professionally within the scope of practice of a phlebotomist.
- Communicate effectively with patients, families, and healthcare providers.
- Qualify to apply for the Certified Phlebotomy Technician Examination (CPT-I).
- Collaborate in a culturally diverse health care environment and apply the principles of health care ethics and professional conduct with patients, staff, and the community.
- Apply current basic life support (BLS) standards of practice to simulations of adult, child, and infant patients in need of cardiopulmonary resuscitation.

The minimum time for completion of this certificate is one semester. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Accomplishment in Phlebotomy

Course	Units
Required courses:	
HCT 104 Phlebotomy Technician	5.5
EMT 12 Basic Life Support for Healthcare Providers..... or EMT 14 Advanced First Aid and Basic Life Support.....	0.5 2.0
Total:	6.0 – 7.5

HEALTH EDUCATION

Associate in Science in Nutrition and Dietetics (AS)

The Associate in Science in Nutrition and Dietetics for Transfer degree (AS-T in Nutrition and Dietetics) prepares students for success in a baccalaureate degree in Nutrition and Dietetics with the lower-division coursework required to transfer into the CSU system. This degree prepares students for careers in the field of nutrition and dietetics, and pathways to become a Registered Dietitian Nutritionist (RDN), working in clinical settings such as hospitals, HMOs, private practice or other health care facilities; or in community and public health settings, academia, research; or other non-traditional settings such as in the food and nutrition industry, business, journalism, sports nutrition, or corporate wellness programs.

The AS-T in Nutrition and Dietetics prepares students to transfer to the California State University (CSU) System in the field of nutrition and dietetics, and other health-related majors. Students who earn this degree and meet the CSU minimum eligibility requirements are guaranteed admission to a CSU, but not to a particular campus or major. Students who wish to earn the AS-T must complete 60 CSU transferable units with at least a 2.0 grade point average. This must include the units required for full completion of the IGETC or CSU General Education (GE) curriculum and the units for the major as specified below. Each course in the major must be completed with a grade of "C" or better. Courses used to meet the major requirement may also be used to meet IGETC or CSU GE requirements.

Learning Outcomes

Upon completion of this program, students will be able to:

- Integrate scientific concepts of biology and chemistry related to the functioning of the nutrients in the human body.
- Apply knowledge of metabolism and nutrient functions, food sources, and physiologic systems to communicate evidence-based nutrition information.
- Analyze the relationship between diet, lifestyle, and health outcomes within the framework of the social determinants of health.

The Associate in Science in Nutrition and Dietetics for Transfer degree (AS-T in Nutrition and Dietetics) is open to all students who are admitted to City College of San Francisco and have satisfied any prerequisites required for classes listed in the major.

The minimum time to completion is 4 semesters. Completion time will vary based on student preparation and number of units completed each semester.

Courses Required for the-T in Nutrition and Dietetics

Course	Units
Required Core:	
BIO 134 Introduction to Nutrition for Health Sciences.....	3.0
PSYC 1 General Psychology.....	3.0
CHEM 101A General College Chemistry	6.0
and CHEM 101B General College Chemistry.....	5.0
BIO 120 Introduction to Microbiology	4.0

LIST A: Select one course

CHEM 208A Chemical Structure and Reactivity I.....	4.0
or CHEM 212A Organic Chemistry	6.0
BIO 108 General Human Anatomy	4.0
or BIO 111 Human Physiology.....	5.0
or BIO 112 Introduction to Human Physiology.....	4.0
ECON 5 Introductory Statistics for Economics, Business and Social Sciences.....	5.0
or LALS 5 Introduction to Statistical Methods in Latin American and Latino/a Studies	5.0
or MATH 80 Probability and Statistics.....	5.0
or PSYC 5 Statistics for Behavioral Sciences.....	5.0

LIST B: Select one course (or any science course from LIST A not already completed)

BIO 31/GEOG 31 Introduction to Environmental Science.....	3.0
CHEM 40 Introduction to Chemical Principles.....	5.0
SOC 1 Introduction to Sociology.....	3.0
SOC 35 Sex, Marriage, and Family Relationships.....	3.0
ANTH 3 Introduction to Social and Cultural Anthropology	3.0
ECON 1 Principles of Macroeconomics	3.0
ECON 3 Principles of Microeconomics	3.0
CDEV 53 Child Growth and Development.....	3.0
Total:	28.0 – 32.0

Peer Health Educator Certificate of Achievement

The Peer Health Educator Certificate is designed for students who are interested in entering the health field and supporting the health of their communities. The coursework includes health topics that most impact young people today, including personal wellness, harm reduction and drug use, and sexual and reproductive health. The certificate also provides skills in leadership development, facilitation and conflict resolution. The certificate is based on public health principles from an equity perspective to support students in working within their own diverse communities.

Learning Outcomes

Upon completion of this program, students will be able to:

- Integrate public health and equity principles and perspectives to support the health of diverse communities
- Assess and integrate professional skills necessary for entry level employment in health-related fields
- Develop and facilitate health education presentations that address relevant issues in diverse communities

The Peer Health Educator Certificate is open to all students who are admitted to City College of San Francisco and have satisfied any prerequisites required for classes listed in the certificate.

The minimum time for completion of this certificate is two (2) semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Recommended sequence:

- First semester HLTH 30, HLTH 33, HLTH 65, HLTH 90B
- Second semester HLTH 64, HLTH 116, HLTH 300, WGST 55.

Courses Required for the Certificate of Achievement in Peer Health Educator

Course	Units
Required Courses	
HLTH 33 Introduction to Health and Wellness.....	2.0
HLTH 30 Drugs, Health, and Society	3.0
HLTH 64 Health Education Training: Skills and Practice	3.0
HLTH 65 Youth Development & Leadership	3.0
HLTH 90B Harm Reduction and Health	0.5
HLTH 116 Conflict Resolution Skills in Health.....	1.0

HLTH 300 Work Experience in Health and Social Services	1.0
WGST 55 Ending Sexual Violence: Peer Education.....	3.0
Total:	16.5

MUSIC

Music and Technology Certificate of Achievement

The Music Technology certificate provides students with the foundation for composing and performing music using a range of technology such as music software, computer coding, analog synthesizers, as well as a variety of creative approaches. Students learn how to incorporate traditional and contemporary electronic music techniques into their own work as well as analyze the way that other artists utilize these techniques for concert performances and other mediums. Students who complete this certificate are prepared for entry-level work in electronic music facilities, musical performance spaces, and other music technician-related fields.

Learning Outcomes

Upon completion of this program, students will be able to:

- Analyze the processes involved in composing a piece of electronic music.
- Describe the work of electronic musicians on a creative, technical level.
- Create effective, playable electronic music projects for performance or recording
- Apply the technical and fundamental skills necessary for effective use of contemporary electronic music tools
- Display professionalism and effective application of workforce protocol, communication skills, and behavior in the music technology environment

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of units or classes completed per semester.

Courses Required for the Certificate of Achievement in Music and Technology

Course	Units
Required Courses	
MUS 100 Music Fundamentals.....	3.0
MUS 29 Electronic Music I.....	3.0
MUS 30 Electronic Music II.....	3.0
BCST 119 Digital Media Skills.....	3.0
BCST 120 Audio Production.....	4.0
MUS 128 Survey of Contemporary and Electronic Music	3.0
Total:	19.0

THEATER ARTS

Technical Theater Production Certificate of Achievement

The Technical Theater Production Certificate with a concentration in stagecraft or costume and makeup is designed to prepare students for entry level occupations as a theater technician in educational, community, and resident theater venues. Technical theater technicians may work on set construction, carpentry, lighting design, light board operation, stage lighting, scenery, costumes, props, and various degrees of entry level management positions, such as hours management and stage management. This program is designed to prepare individuals who work in technical production areas with a range of skills, enabling them to select, adapt and transfer skills to different work

situations throughout their career in technical theater. This program prepares students, through coursework and hands on experience, for work in technical theater. The certificate includes a wide range of topics designed to give students basic skills and knowledge to work behind the scenes in theater and other venues.

Career opportunities available to someone completing a technical theater certificate include lighting designer, lighting operator, scenic painter, stage/set designer, stage manager, costume/make-up assistant, costume/make-up designer, or stage hand.

Learning Outcomes

Upon completion of this program, students will be able to:

- Collaborate with other design and crew members in theatrical productions.
- Apply fundamental techniques of stagecraft when participating in the backstage functions of a performance.
- Construct theatrical elements using common materials and techniques.

The minimum time for completion of this certificate is 3 semesters. Completion time will vary based on student preparation and number of units or classes completed per semester.

Courses Required for the Certificate of Achievement in Technical Theater Production

Course	Units
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Required courses

TH A 30 Introduction to Theatre.....	3.0
TH A 150A Beginning Acting Fundamentals	3.0
TH A 61 Technical Theatre Production	1.0 3.0

Choose either the Stagecraft Concentration (10 units) or the Costume and Makeup Concentration (9 units):

Stagecraft Concentration (10 units)

TH A 60 Stagecraft.....	3.0
TH A 62 Introduction to Stage Design.....	3.0
TH A 63 Introduction to Lighting Design.....	4.0

Or

Costume and Makeup Concentration (9 units)

TH A 80 Introduction to Costume Design.....	3.0
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Recommended additional course

FASH A Introduction to Sewing	1.0
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Total:	16.0 – 19.0
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Associate in Arts in Theatre Arts for Transfer (AA-T)

The AA-T in Theatre Arts offers students a comprehensive lower division program in Theatre revolving around a basic core program. The AA-T prepares students for transfer to upper division theatre programs at four-year colleges and universities, particularly to California State University (CSU) campuses.

Learning Outcomes

Upon completion of this program, students will be able to:

- Analyze and apply acting skills, including physical, vocal, imaginative, analytic, and emotional levels.
- Differentiate and analyze theatrical periods and styles of acting, directing, playwriting, and technical elements.
- Analyze theatre as a dynamic art form influencing society.
- Apply technical processes, including lighting, set, costume, and make-up design and production, as they pertain to a given dramatic script.

Degree Requirements: Students who wish to earn the AA-T in Theatre Arts must complete 60 CSU transferable units with at least a 2.0 grade point average. This must include the units required for full completion of the IGETC or CSU GE curriculum and units for the major as specified below. Each course in the major must be completed with a grade of “C” or better. Courses used to meet the major requirement may also be used to meet IGETC or CSU GE requirements.

The minimum time for completion is 4 semesters. Completion time will vary based on student preparation and number of units completed per semester.

Courses Required for the AA-T in Theatre Arts-T

Course	Units
Required core courses:	
TH A 30 Introduction to Theatre.....	3.0
TH A 150A Beginning Acting Fundamentals	3.0
Choose 3 units from Group 1 or 3 units from Group 2 courses:	
Group 1: Play Rehearsal and Presentation	
TH A 201A Ensemble Role Comedy Play Rehearsal and Presentation	1.0
TH A 201B Supporting Role Comedy Play Rehearsal Presentation.....	2.0
TH A 201C Principal Role Comedy Play Rehearsal and Presentation.....	3.0
TH A 202A Ensemble Role Drama Play Rehearsal and Presentation.....	1.0
TH A 202B Supporting Role Drama Play Rehearsal Presentation	2.0
TH A 202C Principal Role Drama Play Rehearsal and Presentation.....	3.0
TH A 203A Ensemble Role Classical Play Rehearsal Presentation	1.0
TH A 203B Supporting Role Classic Play Rehearsal Presentation	2.0
TH A 203C Principal Role Classic Play Rehearsal and Presentation.....	3.0
TH A 204A Ensemble Role Tragedy Play Rehearsal Presentation.....	1.0
TH A 204B Supporting Role Tragedy Play Rehearsal Presentation.....	2.0
TH A 204C Principal Role Tragedy Play Rehearsal and Presentation	3.0
Group 2: Technical Theatre Production	
TH A 61 Technical Theatre Production	3.0
Choose a minimum of 9 units from the following elective courses:	
TH A 150B Intermediate Acting Fundamentals	3.0
TH A 63 Introduction to Lighting Design.....	4.0
TH A 80 Introduction to Costume Design.....	3.0
TH A 60 Stagecraft.....	3.0
Group 1 or Group 2 courses not already completed (3 units max)	
Total:	18.0 – 19.0

VISUAL MEDIA DESIGN

Entrepreneurship in Visual Media Design Certificate of Achievement

This certificate program is designed to prepare Visual Media Design students to engage in the world of entrepreneurship. The program’s interdisciplinary approach to entrepreneurship equips students with relevant tools in exploring various pathways to entrepreneurship such as full-time business ownership, sub-contracting (freelancing), consulting, corporate intrapreneurship or mission-driven social entrepreneurship.

This interdisciplinary certificate provides basic knowledge, processes, principles and skills for visual design and production for print and interactive communications.

Learning Outcomes

Upon completion of this program, students will be able to:

- Apply an entrepreneurial mindset that breeds creativity and innovation in the field of visual media design.
- Use terms and concepts related to functional areas of entrepreneurship necessary for startups.
- Analyze the marketing environment to identify entrepreneurial opportunities and areas for growth and development.
- Develop an agile and lean business plan for startup project/enterprise that is ready for pitching.

- Compare different entrepreneurship pathways in relation to a project or business idea.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Entrepreneurship in Visual Media Design

Course Units

Required Courses

ENTR 101 Introduction to Entrepreneurship	3.0
ENTR 102 Applied Design Thinking for Entrepreneurship	1.5
DSGN 105 Design Thinking.....	1.5
MRKT 140 Introduction to Marketing	3.0
and The VMD Prerequisites for VMD Electives	
VMD 105 Visual Media Digital Skills	3.0
and VMD 101/DSGN 101/PHOT 100 Design Fundamentals	3.0
or DSGN 101/PHOT 100/VMD 101 Design Fundamentals.....	3.0
or PHOT 100/DSGN 101/VMD 101 Design Fundamentals.....	3.0

Visual Media Design Electives (Choose a minimum of 6 units from the following courses.)

VMD 120 Graphic Design I.....	3.0
VMD 140 Web Production I.....	3.0
VMD 150 Illustrator I.....	3.0
VMD 154 Photoshop I.....	3.0
VMD 192 Professional Practice	1.0
Total:.....	21.0

WOMEN'S AND GENDER STUDIES

Sexual Health Educator Certificate of Achievement

The curriculum for the Sexual Health Educator Certificate will train students as paraprofessionals in safe and healthy sexuality including violence prevention and intervention, HIV/STI prevention, and the promotion of mature intimate relationships.

The integrated program offers students an opportunity to identify various markers of sexual health, which will enable them to promote healthy and safer sexual relationships in their client populations. They will be able to teach others to negotiate sexual situations with more confidence, knowing their limits, recognizing danger zones, assessing risk factors, and respecting their own and their partners' needs.

Learning Outcomes

Upon completion of this program, students will be able to:

- Identify the biological, psychological, and social aspects of human sexuality including issues pertaining to reproductive rights and health
- Demonstrate and apply client-centered approaches to providing sexual wellness information, systems navigation and relevant referrals to diverse communities
- Utilize an intersectional feminist lens to analyze how systems of oppression perpetuate abuses of power in interpersonal relationships and identify strategies for prevention and healing from sexual violence
- Use peer education techniques to teach about healthy, non-violent relationships and to raise awareness of how personal experiences are impacted by social and political realities

Requirements for the Certificate of Achievement. The certificate requires completion of 16 units, which can be completed in one semester. Each course must be completed with a final grade of “C” or higher or Pass.

Credit toward Graduation. Credit earned to obtain the Certificate of Achievement satisfies the G1 and H2 graduation requirements, and course work is transferable to the California State University.

Credit toward other CCSF Certificates. Several of the required and elective courses of the Certificate satisfy required or elective courses of the Community Health Worker, Infectious Disease Prevention in Priority Populations, and Trauma Prevention and Recovery Certificates.

The minimum time for completion of this certificate is 1 semester. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Sexual Health Educator

Course Units

Required courses:

WGST 54 The Politics of Sexual Violence	3.0
WGST 55 Ending Sexual Violence: Peer Education.....	3.0
IDST 17 Human Sexuality	3.0
HLTH 67 HIV and Hepatitis Navigation Skills.....	3.0
or HLTH 54 Introduction to Public Health.....	3.0

Choose 4 units from the following courses, unless already taken above:

ANTH 20 Queer Anthropology.....	3.0
ANTH 25 Culture, Gender and Sexuality	3.0
HLTH 38 Trauma Response and Recovery	3.0
HLTH 48 Violence as a Public Health Issue: Prevention Strategies.....	3.0
HLTH 54 Introduction to Public Health.....	3.0
HLTH 64 Health Education Training: Skills and Practice.....	3.0
HLTH 67 HIV and Hepatitis Navigation Skills.....	3.0
HLTH 95 Transgender Health: Working with Clients and Communities	1.0
IDST 80A Diversity and Social Justice: Racism	0.5
IDST 81B Diversity and Social Justice: Anti-Semitism/Anti-Arabism.....	1.0
IDST 80C Diversity and Social Justice: Sexism	0.5
IDST 80D Diversity and Social Justice: Heterosexism.....	0.5
IDST 80E Diversity and Social Justice: Ableism.....	0.5
IDST 80F Diversity and Social Justice: Class and Classism.....	0.5
IDST 80G Diversity and Social Justice: Transphobia	0.5
LGBT 21 Issues in Lesbian Relationships.....	3.0
LGBT 24 Intimacy and Relationships between Men	3.0
PSYC 9 Psychology of Stress	3.0
PSYC 14 Psychology of Shyness	1.0
PSYC 15 Assertive Behavior	1.0
PSYC 17 Psychology of Eating, Food, and Weight.....	1.0
PSYC 25 Psychology of Gender.....	3.0
SOC 25 Sex and Gender in the U.S.	3.0
SOC 35 Sex, Marriage, and Family Relationships.....	3.0
WGST 35 Introduction to Masculinity Studies	3.0
Total:.....	16.0

WORLD LANGUAGES AND CULTURES

Chinese (Mandarin) Certificate of Achievement

The Certificate of Achievement in Chinese (Mandarin) provides students, prospective employers, and others with documented evidence of persistence and academic achievement in Mandarin Chinese at an intermediate level.

Note that CHIN 2A + 2B = CHIN 2; CHIN 3A + 3B = CHIN 3; CHIN 4A + 4B = CHIN 4

Learning Outcomes

Upon completion of this program, students will be able to:

- Interpret the main points of standard spoken and written Chinese relating to everyday matters.
- Communicate in spoken Mandarin Chinese using a range of vocabulary, language functions, and sentence structures.
- Compare and analyze aspects of Chinese culture and society.
- Write simple connected text using a range of intermediate Chinese vocabulary, grammar, and sentence structures.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Chinese (Mandarin)

Course **Units**

Choose 5 or 6 units from the following core courses:

CHIN 3 Intermediate Chinese	5.0
or CHIN 3A Intermediate Chinese	3.0
and CHIN 3B Intermediate Chinese	3.0

Choose at least 11 units from the following elective courses:

CHIN 2 Continuation of Elementary Chinese	5.0
or CHIN 2A Continuation of Elementary Chinese	3.0
and CHIN 2B Continuation of Elementary Chinese	3.0
CHIN 4 Continuation of Intermediate Chinese	5.0
or CHIN 4A Continuation of Intermediate Chinese	3.0
and CHIN 4B Continuation of Intermediate Chinese	3.0
CHIN 12B Continuation of Beginning Conversational Mandarin	3.0
CHIN 14B Conversational Mandarin for Other Dialect Speakers	3.0
CHIN 14C Advanced Conversational Mandarin for Speakers of Other Chinese Dialects	3.0
CHIN 30A Advanced Intermediate Chinese	3.0
CHIN 30B Continuation of Advanced Intermediate Chinese	3.0
CHIN 30C Advanced Intermediate Chinese	3.0
CHIN 31A Pre-Advanced Mandarin Chinese for Bilingual Students	3.0
CHIN 31B Continuation of Pre-Advanced Mandarin Chinese for Bilinguals	3.0
CHIN 32 Chinese Grammar and Chinese Culture	3.0
CHIN 36 Chinese Idioms and Proverbs	3.0
CHIN 38 Translation Foundation in Chinese	3.0

Total: **16.0 – 17.0**

Japanese Certificate of Achievement

The Certificate of Achievement in Japanese provides students, prospective employers and others with documented evidence of persistence and academic achievement in the Japanese language at an intermediate level.

Note that JAPA 1A + 1B = JAPA 1; JAPA 2A + 2B = JAPA 2; JAPA 3A + 3B = JAPA 3; JAPA 4A + 4B = JAPA 4

Learning Outcomes

Upon completion of this program, students will be able to:

- Interpret the main points of standard spoken and written Japanese relating to everyday matters.
- Communicate in spoken Japanese by using a range of vocabulary, language functions, and sentence structures at an intermediate level.
- Write simple connected text using a range of intermediate Japanese vocabulary, grammar, and sentence structures.

- Compare aspects of Japanese culture and society.

The minimum time for completion of this certificate is 3 semesters. Completion time will vary based on student preparation and number of classes completed per semester.

Courses Required for the Certificate of Achievement in Japanese

Course	Units
Choose 5 to 6 units from the following core courses:	
JAPA 3 Intermediate Japanese	5.0
or JAPA 3A Intermediate Japanese	3.0
and JAPA 3B Intermediate Japanese	3.0
Choose at least 11 units from the following courses:	
JAPA 1 Elementary Japanese	5.0
or JAPA 1A Elementary Japanese	3.0
and JAPA 1B Elementary Japanese	3.0
JAPA 2 Continuation of Elementary Japanese	5.0
or JAPA 2A Continuation of Elementary Japanese	3.0
and JAPA 2B Continuation of Elementary Japanese	3.0
JAPA 4 Continuation of Intermediate Japanese	5.0
or JAPA 4A Continuation of Intermediate Japanese	3.0
and JAPA 4B Continuation of Intermediate Japanese	3.0
JAPA 10A Beginning Conversational Japanese	3.0
JAPA 10B Beginning Conversational Japanese	3.0
JAPA 10C Intermediate Conversational Japanese	3.0
JAPA 16 Beginning Kanji for Reading and Writing	3.0
JAPA 17 Continuation of Beginning Kanji for Reading and Writing	3.0
JAPA 18 Intermediate Kanji for Reading and Writing	3.0
JAPA 39 Japanese Culture and Civilization	3.0
Total:.....	16.0 – 17.0