SAN BERNARDINO VALLEY COLLEGE
SUBMITTED FOR BOARD OF TRUSTEE APPROVAL

NEW COURSES			
COURSE ID		EFF DATE	RATIONALE
ARCH 100	Course Title: Environmental Design I Units: 3 Lecture Hours: 2 Laboratory Hours: 3 Prerequisite: None Co-requisite: None Departmental Advisory: None Catalog and Schedule Description: An introduction to the design process, to the vocabulary of design and the basic principles of environmental design, landscape design, and urban planning.	FA05	The introductory year courses at most transfer institutions are described as Environmental Design and serve as an introduction to Architecture, Landscape Architecture, Interior Architecture and Design, and Urban and Regional Planning. Environmental Design I and Environmental Design II were developed after careful analysis of similar classes at transfer institutions. These courses are designed to prepare students to study and succeed in the more rigorous Architectural Design series that comprises the second year of study.
ARCH 101	Course Title: Environmental Design II Units: 3 Lecture Hours: 2 Laboratory Hours: 3 Prerequisite: ARCH 100 Co-requisite: None Departmental Advisory: None Catalog and Schedule Description: A continuation of ARCH 100, with an emphasis on composition and basic design as applied to both architecture and art. A series of projects will introduce students to the use of line, color, form and materials, and will promote awareness of environmental concerns.	FA05	SEE ABOVE
ARCH 120	Course Title: Introduction to Computer Aided Drafting Units: 4 Lecture Hours: 2 Laboratory Hours: 6 Prerequisite: None Co-requisite: None Deptartmental Advisory: CS 110 Catalog and Schedule Description: An introduction to the theories and principles of computer-aided design/drafting (CAD) using AutoCAD and to its principal applications in the fields of architecture, design, manufacturing, construction, and planning are explored. The technical aspects of generating, evaluating, modeling, drafting, and rendering design solutions will be introduced.	FA05	This course covers entry level operations required for students interested in drafting, manufacturing and urban planning and design.
ARCH 250	Course Title: Materials and Construction Units: 4 Lecture Hours: 3 Laboratory Hours: 3 Prerequisite: ARCH 146 Corequisite: None Deptartmental Advisory: None Catalog and Schedule Description: A survey of sources, properties and production of the common materials used in construction such as steel, iron, non-ferrous metals and their alloys, concrete, brick and wood. Construction projects will give students knowledge and experience in building construction as it relates to architecture.	FA05	After review by the department's advisory committee, as ARCH 130 and ARCH 170 have significantly similar curricula, a new course was developed that combines elements of both courses into a single course. ARCH 130 and ARCH 170 are submitted for deletion.
ARCH 270	Course Title: Portfolio Design Units: 1 Lecture Hours: 0 Laboratory Hours: 3 Prerequisite: ARCH 200 Corequisite: None Deptartment Advisory: None Catalog and Schedule Description: This course is designed to assist architecture students in the preparation of their portfolio. The design portfolio is required to transfer to most four-year/five-year Architecture programs. Students should be enrolled in their last semester at Valley College before enrolling in this course.	FA05	For a student to successfully transfer, a viable design portfolio is required. Because many four-year Architecture programs are impacted it is important that the portfolio convincingly demonstrate the student's creativity and mastery of concepts of design. Our students require guidance in this area. This one-unit course is designed to help students present their best work and guides the students in the selection of work that is appropriate for a transfer portfolio.

MODIFY COURSES			
COURSE ID		EFF DATE	RATIONALE
ANTHRO 107	☒ TITLE: The North American Indians ☒ REMOVE CROSS-LIST	FA05	To reflect changes in curriculum
ANTHRO 222	☒ TITLE: Independent Study In Anthropology ☒ DESCRIPTIONS: Catolog Description: Assigned projects involving research and analysis of selected topics or directed study for students who are interested in furthering their knowledge of Anthropology on an independent study basis. For each unit earned, students are required to devote three hours per week throughout the semester. Enrollment limited to those who meet independent study criteria. Prior to registration, a contract must be prepared. See instructor for details. Schedule Description: Assigned projects involving research and analysis of selected topics or directed study for students who are interested in furthering their knowledge of Anthropology on an independent study basis. For each unit earned, students are required to devote three hours per week throughout the semester. Enrollment limited to those who meet independent study criteria. Prior to registration, a contract must be prepared. See instructor for details. ☒ UNITS: 1-3 ☒ LAB HOURS: 3-9 ☒ PREREQ: ANTHRO 100, 102 or 106	FA05	To reflect changes in curriculum
ARCH 141	☒ NUMBER: ARCH 220 ☒ TITLE: Architectural Computer Aided Drafting I ☒ DESCRIPTIONS: Catolog and Schedule Description: An introduction to the theories and principles of computer aided design/drafting (CAD) using AutoCAD and to its principal applications in the field of architecture by generating, evaluating, modeling, drafting and rendering design solutions. ☒ PREREQ: ARCH 120	FA05	To reflect changes in curriculum
ARCH 145	☒ TITLE: History Of Architecture: Early Design To Gothic ☒ DESCRIPTIONS: Catalog and Schedule Description: A survey of Western architectural history from the early Egyptians to the Gothic Period, including a comparative study of architecture and architects with emphasis on the people, locations, structures, materials, and methods of construction.	FA05	To reflect changes in curriculum
ARCH 146	☒ TITLE: History Of Architecture: Renaissance To Modern ☒ DESCRIPTIONS: Catalog Description: Survey of Western architectural history, including a comparative study of architecture and architects, with emphasis on the people, locations, structures, materials, and methods of construction. Includes Renaissance, Mannerist, Baroque, Rococo, Native American, American Colonial, Neoclassicism, Romantic Revival, 19th Century Industrialization, Ecole des Beaux Arts, Late 19th Century, Chicago School, Sullivanesque, Arts and Crafts, International Style, Art Nouveau, Art Deco, Art Moderne, German Expressionism, Neo-Expressionism, Late Modernism, and Postmodernism. Schedule Description: Survey of Western architectural history, including a comparative study of architecture and architects with emphasis on the people, locations, structures, materials, and methods of construction. Includes Renaissance architecture through Art Deco and Postmodernism.	FA05	To reflect changes in curriculum
ARCH 200	☒ TITLE: Architectural Design I ☒ DESCRIPTIONS: Catalog and Schedule Description: An Introduction to design skills and problem-solving techniques as they apply to the architectural profession. ☒ LECT HOURS: 3 ☒ LAB HOURS: 3 ☒ PREREQ: ARCH 101	FA05	To reflect changes in curriculum
ARCH 201	☒ TITLE: Architectural Design II ☒ DESCRIPTIONS: Catalog and Schedule Description: A continuation of ARCH 200. Architectural design processes are explored, including advanced problem-solving in spatial relationships, structures and human requirements. Includes advanced model building.	FA05	To reflect changes in curriculum
ARCH 230	☒ NUMBER: ARCH 221 ☒ TITLE: Architecture Computer Aided Drafting II ☒ DESCRIPTIONS: Catolog and Schedule Description: A continuation of ARCH 220 and continues to familiarize students with the preparation of preliminary studies, construction drawings, detail drawing and building code applications. This includes complete construction drawings of light wood frame and heavy timber construction and utilizes computer aided design drafting (CAD). ☒ UNITS: 4 ☒ LECTURE HOURS: 2 ☒ PREREQ: ARCH 220	FA05	To reflect changes in curriculum
CIT 210	☒ PREREQ: CIT 101	FA05	To reflect changes in curriculum
CS 120	☒ DESCRIPTIONS: Catolog and Schedule Description: An introduction to a Web-based programming language, Visual Basic.NET as it applies to scientific, business and manufacturing settings. Topics include problem solving, graphical user interface, program design, software tools, structured logic, object-oriented programming, graphics and animation, procedures, arrays, files, and Web projects. ☒ LAB HOURS: 3	FA05	To reflect changes in curriculum
CS 170	☒ LAB HOURS: 3	FA05	To reflect changes in curriculum
CS 190	☒ LAB HOURS: 3	FA05	To reflect changes in curriculum
CS 215	☒ LAB HOURS: 3	FA05	To reflect changes in curriculum

MODIFY COURSES (CONTINUED)			
CS 220	☒ TITLE: Visual Basic.NET Programming II ☒ DESCRIPTIONS: Catolog and Schedule Description: Advanced programming using Visual Basic.NET with emphasis on software development and maintenance. Topics include object-oriented design, multiple class modules, interface and linking, windows and Internet controls, and database access. ☒ LAB HOURS: 3	FA05	To reflect changes in curriculum
CS 265	☒ LAB HOURS: 3	FA05	To reflect changes in curriculum
MACH 061A	☒ NUMBER: MACH 061B ☒ PREREQ: MACH 021B, MACH 120B	FA05	To reflect changes in curriculum
MACH 070A	☒ NUMBER: MACH 070B ☒ DESCRIPTIONS: Catolog Description: Beginning Computer Numerical Control (CNC) programming covering programming concepts, Cartesian coordinate systems, geometric principles, and manual programming on Machining Centers. Schedule Description: Beginning Computer Numerical Control (CNC) programming covering programming concepts, Cartesian coordinate systems, geometric principles, and Machining Centers.	FA05	To reflect changes in curriculum
MACH 071A	☒ NUMBER: MACH 071B ☒ PREREQ: MACH 070B	FA05	To reflect changes in curriculum
MACH 074A	☒ NUMBER: MACH 074B ☒ PREREQ: MACH 070B	FA05	To reflect changes in curriculum
MACH 090A	☒ NUMBER: MACH 090B ☒ DESCRIPTIONS: Catolog and Schedule Description: Blueprint interpretation with emphasis on terminology, Coordinate Measuring Machines (CMM), and concepts related to engineering drawing standards, geometric dimensioning and tolerancing language ANSI Y14.5, and how these apply to the engineering blueprint inspection processes.	FA05	To reflect changes in curriculum
MACH 120A	☒ NUMBER: MACH 120B ☒ DESCRIPTIONS: Catolog Description: The basic cutting concepts of machine tools are described and diagramed with cutting tool geometric and variations examined. New technologies in manufacturing are explored as well as discussion of National Industry Metal Skill Standards (NIMS). Schedule Description: Describes basic cutting concepts of machine tools and examines how National Industry Metal Skill Standards (NIMS) correlate with manufacturing.	FA05	To reflect changes in curriculum
MACH 129A	☒ NUMBER: MACH 129B	FA05	To reflect changes in curriculum
MIS 200	☒ NUMBER: CIT 150 ☒ TITLE: Office Application Development ☒ DESCRIPTIONS: Catolog and Schedule Description: An introduction to Visual Basic for Application, Microsoft's application scripting language for Microsoft office applications. Topics include: programming basics; automated formatting of spreadsheet and word processor documents; design and construction of customized data entry screens for databases. ☒ LAB HOURS: 3 ☒ PREREQ: CIT 101 ☒ DEPT ADVISORY: CIT 102	FA05	To reflect changes in curriculum

DELETE COURSES		
COURSE ID	EFF DATE	RATIONALE
ARCH 130	FA05	To reflect changes in curriculum
ARCH 150	FA05	To reflect changes in curriculum
ARCH 151	FA05	To reflect changes in curriculum
ARCH 159	FA05	To reflect changes in curriculum
ARCH 160	FA05	To reflect changes in curriculum
ARCH 165	FA05	To reflect changes in curriculum
ARCH 170	FA05	To reflect changes in curriculum
ARCH 180	FA05	To reflect changes in curriculum
ARCH 231	FA05	To reflect changes in curriculum
CIT 201	FA05	To reflect changes in curriculum

DISTRIBUTED EDUCATION		
COURSE ID	EFF DATE	MODE
ANTHRO 107	FA05	100% ONLINE
ANTHRO 109	FA05	100% ONLINE
ARCH 145	FA05	100% ONLINE
ARCH 146	FA05	100% ONLINE
CS 120	FA05	HYBRID
CS 130	FA05	100% ONLINE
CS 170	FA05	HYBRID
CS 190	FA05	HYBRID
CS 215	FA05	HYBRID
CS 220	FA05	HYBRID
CS 265	FA05	HYBRID

MODIFY DEGREE

DEGREE		EFF DATE	RATIONALE
ARCHITECTURE AA	Architectural Design Studies To graduate with a specialization in Architectural Design Studies, a student must complete the following courses in addition to the general breadth requirements for an Associate's Degree. For transfer students, these courses will provide students with the tools needed to construct a portfolio that will be required to transfer into Architecture Programs at 4-year institutions. Along with a successful portfolio, these courses should also constitute the first two years of an Architecture Program. In addition, these courses should help students interested in transferring to 4-year institutions as Environmental Design, Landscape Architecture, Interior Design and Urban Planning majors. Architectural Design Studies Associates Degree Required Courses — Units ARCH 100 Environmental Design I — 3 ARCH 101 Environmental Design II — 3 ARCH 145 History of Architecture: Ancient to Gothic — 3 ARCH 146 History of Architecture: Renaissance to Modern — 3 ARCH 200 Architectural Design I — 4 ARCH 201 Architectural Design II — 4 ARCH 220 Architectural CAD I — 4 ARCH 250 Materials and Construction — 4 ARCH 270 Portfolio Design — 1 PHYSIC 150A or PHYSIC 200 General Physics — 5-6 ART 132 Life Drawing — 3 Total Units — 37-38 Recommended Courses: Students are encouraged to take these courses as part of their General Education program: Units CS 110 Introduction to Computer Science — 3 ART 120 Two-Dimensional Design — 3 ART 145 Graphic Design — 3 MATH 093 Plane Geometry — 3 MATH 103 Trigonometry — 4	FA05	To reflect changes in curriculum
REFRIDGERATION AND AIR CONDITIONING AS	REFRIGERATION AND AIR CONDITIONING ASSOCIATE OF SCIENCE DEGREE To graduate with a specialization in Refrigeration and Air Conditioning, students must complete all requirements for the certificate with a grade of C or better plus the general breadth requirements for the Associate Degree (minimum total = 60 units). REFRIGERATION AND AIR CONDITIONING CERTIFICATE This certificate is designed to prepare students with the necessary knowledge and skills to obtain entry-level employment in the field of refrigeration and air conditioning by providing them with the training to install, maintain, and repair such systems. Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select. Required Courses — Units TECALC 087 Technical Calculations — 4 REFRIG 101x3 Refrigeration I — 4 REFRIG 102x3 Refrigeration II — 4 REFRIG 103x3 Refrigeration III — 4 REFRIG 104x3 Refrigeration Electricity I — 4 REFRIG 105x3 Refrigeration Electricity II — 4 REFRIG 106x3 Air Conditioning & Heating — 4 WELD 123 Oxy-Acetylene Welding — 3 EPA Universal Certification (608) Total Units — 31 Recommended Courses: Students are encouraged to take this course as part of their General Education program: Units AUTO 056 Auto Heating & Air Conditioning — 4	FA05	To reflect changes in curriculum

MODIFY CERTIFICATE			
CERTIFICATE		EFF DATE	RATIONALE
COMPUTER-AIDED DRAFTING TECHNICIAN	COMPUTER-AIDED DRAFTING TECHNICIAN CERTIFICATE This certificate is designed to prepare students for entry-level work in the fields of architecture, urban planning, interior design, electronics design and manufacturing design. Computer Aided Drafting, CAD, is the primary tool used to produce and present work completed in these fields. Students completing this certificate will most likely work for a licensed architect, structural engineer, mechanical engineer or for local, state or federal governmental agencies or urban planning commissions. Computer-Aided Drafting Technician Certificate Required Courses — Units ARCH 120 Intro to Computer-Aided Drafting — 4 ARCH 146 History of Architecture: Renaissance to Modern — 3 ARCH 220 Architectural CAD I — 4 ARCH 221 Architectural CAD II — 4 ARCH 250 Materials and Construction — 4 MATH 093 Plane Geometry — 3 ENGL 015 Preparation for College Writing — 4 ART 132 Life Drawing — 3 Total Units — 29 Recommended Courses: Students are encouraged, but not required, to enroll in the following: Units CS 110 Introduction to Computer Science — 3 INSPECT 010 Fundamentals of Construction Inspection I — 3 INSPECT 011 Fundamentals of Construction Inspection II — 3 INSPECT 012 Fundamentals of Construction Inspection III — 3	FA05	To reflect changes in curriculum

MODIFY CERTIFICATE (continued)

ELECTRICITY / ELECTRONICS	ELECTRICITY/ELECTRONICS CERTIFICATES These certificates are designed to provide students with the fundamentals of electronics technology by offering courses common to electricity, communications and computers. This preparation can be for transfer to the university or for further study in areas of communications, computers, electricity, and aircraft electronics. It can also prepare students for entry-level positions in electronics maintenance, installation, field service, networking, and apprenticeship in the field of electronics technology. Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select. Students should have normal color vision, hand/eye coordination and the ability to lift over 50 pounds.	FA05	To reflect changes in curriculum

1. ELECTRONICS TECHNOLOGY

(Core Courses required for all specializations)

Required Courses	Units
TECALC 087 Technical Calculations	4
ELECTR 110 Direct Current Circuit Analysis	3
ELECTR 111 Direct Current Circuit Laboratory	1
ELECTR 115 Alternating Current Circuit Analysis	3
ELECTR 116 Alternating Current Circuit Lab	1
ELECTR 155 Electronic Drawing and Assembly	3
ELECTR 230 Semiconductor Devices	3
ELECTR 235 Solid State Circuit Analysis	4
ELECTR 265 Digital Logic Design	4
ELECTR 266 Microprocessor Technology	4
ELECTR 270 Linear Integrated Circuit Analysis	4
Total Units	34

2. COMMUNICATION ENGINEERING TECHNOLOGY

This certificate is designed to provide students with the fundamentals of electronics technology as it applies to communications engineering. The curriculum prepares students for entry-level positions in electronics communications maintenance, installation, field service, networking, and apprenticeship in the field of communications engineering technology. Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

Complete the REQUIRED COURSES for Electronics Technology plus:

Required Courses	Units
ELECTR 220B F.C.C. Rules and Regulations	3
ELECTR 250B Radio Transmitters, Receivers and Antennas	4
ELECTR 255B Telephone Networking	4
Total Units	45

3. COMPUTER ENGINEERING TECHNOLOGY

This certificate is designed to provide students with the fundamentals of electronics technology as it applies to computer engineering. The curriculum prepares students for entry-level positions in computer maintenance, installation, field service, networking, and apprenticeship in the field of computer engineering technology. Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

Complete the REQUIRED COURSES for Electronics Technology plus:

Required Courses	Units
ELEC 217B Industrial Electricity	4
ELECTR 158 Microcomputer Operation	2
ELECTR 280B Computer Operations and Maintenance	4
Total Units	44

(certificate continues on next page)

MODIFY CERTIFICATE (continued)			
CERTIFICATE		EFF DATE	RATIONALE
	4. ELECTRIC POWER TECHNOLOGY This certificate is designed to provide students with the fundamentals of electronics technology as it applies to industrial electricity. The curriculum prepares students for entry-level positions in electrical maintenance, installation, field service, networking, and apprenticeship in the field of electronic power technology. Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select. Complete the REQUIRED COURSES for Electronics Technology plus: Required Courses — Units ELEC 216B Introduction to Industrial Electricity — 4 ELEC 217B Industrial Electricity — 4 ELEC 218B Controlling Industrial Electricity — 4 Total Units — 46 5. AVIONICS TECHNOLOGY This certificate is designed to provide students with the fundamentals of electronics technology as it applies to avionics. The curriculum prepares students for entry-level positions in aircraft electricity, maintenance, installation, field service, networking, and apprenticeship in the field of avionics technology. Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select. Complete the REQUIRED COURSES for Electronics Technology plus: Required Courses — Units AERO 121* Aviation Fundamentals — 3 AERO 140C* Instrument Ground School & Flight Simulators — 4 ELECTR 220B FCC Rules and Regulations — 3 ELECTR 250B Radio Transmitters, Receivers & Antennas — 4 ELECTR 257B Navigation & Communication Systems — 4 Total Units — 52 *AERO 102 & 103 can be substituted for AERO 121 & 140		
REFRIGERATION AND AIR CONDITIONING	REFRIGERATION AND AIR CONDITIONING CERTIFICATE This certificate is designed to prepare students with the necessary knowledge and skills to obtain entry-level employment in the field of refrigeration and air conditioning, installing, maintaining, and repairing such systems. Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select. Required Courses — Units TECALC 087 Technical Calculations — 4 REFRIG 101x3 Refrigeration I — 4 REFRIG 102x3 Refrigeration II — 4 REFRIG 103x3 Refrigeration III — 4 REFRIG 104x3 Refrigeration Electricity I — 4 REFRIG 105x3 Refrigeration Electricity II REFRIG 106x3 Air Conditioning & Heating — 4 WELD 123 Oxy-Acetylene Welding — 3 EPA Universal Certification (608) Total Units — 31 Recommended Courses: Students are encouraged to take this course as part of their General Education program: Units AUTO 056 Auto Heating & Air Conditioning — 4	FA05	To reflect changes in curriculum

MODIFY CERTIFICATE (continued)			
WELDING	WELDING INSPECTION TECHNOLOGY CERTIFICATE This certificate is designed to prepare students for the AWS and/or ICBO Welding Inspector examination. Required Courses — Units WELD 065A Welding Inspection Visual — 4 WELD 067A Structural Steel Special Inspection (ICBO) — 2 WELD 127 Strength of Materials Testing: Destructive — 3 WELD 128 Strength of Materials Testing: Non-destructive — 3 WELD 145 Shielded Metal Arc Welding — 3 Total Units — 15	FA05	To reflect changes in curriculum

DELETE CERTIFICATE			
CERTIFICATE		EFF DATE	RATIONALE
CONSTRUCTION ENGINEERING TECHNOLOGY		FA05	To reflect changes in curriculum