LITERATURE

(See courses under English, Literature and Reading)

MANAGEMENT

MGMT 100 INTRODUCTION TO BUSINESS MANAGEMENT
Telecourse: Units 3; Class Hours: Minimum of 48 lecture hours/ semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Study of the principal functions of modern management, including planning, organizing, staffing, controlling, and decision making. Transfer: CSU.

MGMT 204 MANAGING EMPLOYEES EFFECTIVELY
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/ semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Study of the effective techniques used to manage human resources in the workplace. Globalization of work and its implications, workforce diversity, reengineering work process for improved productivity, total quality management, and continuous improvement methods are covered also. Transfer: CSU.

MGMT 206 LEGAL ASPECTS OF PERSONNEL MANAGEMENT
Units (Grade Option) 2; Class Hours: Minimum of 32 lecture hours/ semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Topics include laws affecting discriminatory practices: age, vocational rehabilitation, pregnancy, Americans with Disabilities Act, sexual harassment, family and medical leave, relevant executive order, the role of the EEOC, and providing a response to an EEO charge. Transfer: CSU.

MGMT 208 INTERVIEWING, HIRING, EVALUATING, AND TERMINATING EMPLOYEES
Units (Grade Option) 2; Class Hours: Minimum of 32 lecture hours/ semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** This course is an overview of effective techniques used for interviewing, hiring, evaluating, and terminating employees. Other topics include job descriptions, job specifications, recruiting, and reference checking. Transfer: CSU.

MGMT 215 MANAGEMENT OF HUMAN RESOURCES
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/ semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Introductory course on the personnel function. Topics include selection and placement, wage and salary procedures, affirmative action programs, performance appraisals, training, and staff development. Transfer: CSU.

MGMT 220 ORGANIZATIONAL BEHAVIOR
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/ semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** This course is an overview of work and organizational behavior and individual behavior. Topics include motivation, fundamentals of communication, leadership and power, group dynamics, decision making concepts, managing organizational conflict, organization change, impact of computer technology, and international aspects of organization behavior. Transfer: CSU.

MGMT 222 FINANCIAL BUDGETING AND CONTROL
Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/ semester; Recommended: Eligibility for READ 836, ENGL 836 or ESL 400, and MATH 110 or 111; Prerequisite(s): None. **Description:** An introduction to financial budgeting for managers. Budgetary planning topics include program budgeting, forecasting, purchasing/materials management, capital planning, program appraisal, and decision-making. Activity-based budgeting and a step-by-step guide to budget preparation are also included. Transfer: CSU.

MGMT 235 TECHNIQUES OF SUPERVISION
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/ semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Introduction to effective techniques of supervision in the work place. Topics include good management techniques, group dynamics, small group behavior, leadership, creativity, and effective communications in the workplace. Transfer: CSU.

MGMT 304 PROPERTY MANAGEMENT
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/ semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Study of the skills needed to manage property efficiently. Topics covered include resident relations and effective communications, office procedures, occupancy and budget goals, monitoring staff, property appearance, and agency compliance. Transfer: CSU.

MATHEMATICS

A normal sequence of mathematics courses at Cañada College is shown in the diagram below. A student who qualifies for a particular mathematics course is eligible for any course lower in the sequence. If the student has not taken a mathematics course during the previous two years, it is strongly recommended that the student enroll in a course below the one for which he/she would normally be eligible. In general, eligibility of an incoming freshman for a mathematics course is determined by an evaluation of his/her transcript and scores on the District mathematics placement test.

Questions regarding the equivalency of college preparatory mathematics beginning with elementary algebra, taken in elementary or secondary school, should be referred to the Division Dean.

MATH 110 ELEMENTARY ALGEBRA
Units 5; Class Hours: Minimum of 80 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 811, or appropriate score on District math placement test and other measures as appropriate. **Description:** This is the first course in a 2-part series covering elementary and intermediate algebra. Topics include the real number system, linear equations, linear inequalities, graphing, systems of equations, integer exponents, polynomials, factoring, proportions, rational expres-

sions, and problem solving. Students who complete this course with a C or better are advised to enroll in MATH 120.

MATH 111 ELEMENTARY ALGEBRA I

Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): 3 units of MATH 811, or appropriate score on District math placement test and other measures as appropriate. **Description:** This course is equivalent to the first half of MATH 110. Topics include the real number system, linear equations, linear inequalities, graphing, and systems of equations. Students who complete this course with a C or better are advised to enroll in MATH 112.

MATH 112 ELEMENTARY ALGEBRA II

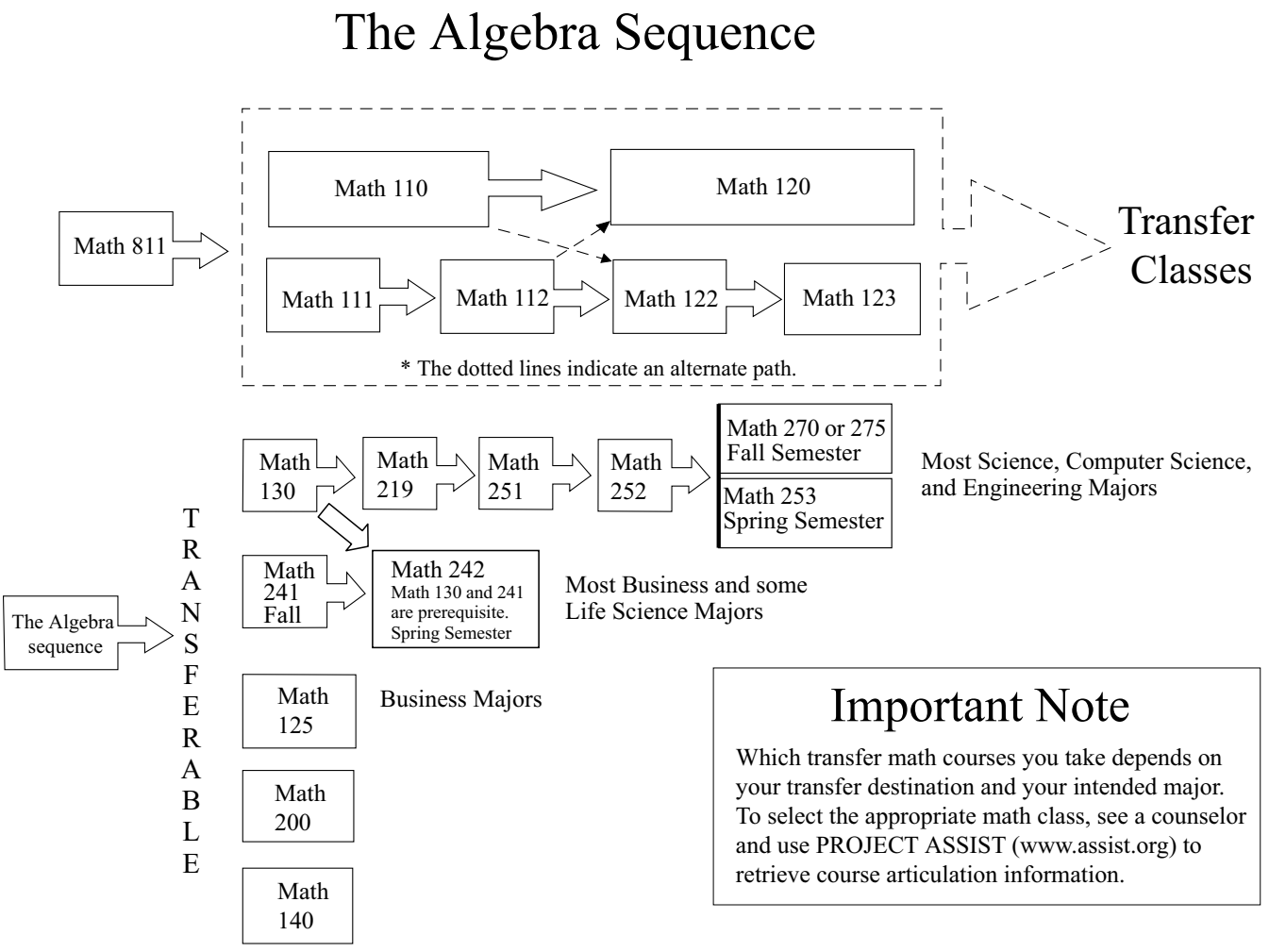
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 111. **Description:** This course is equivalent to the second half of MATH 110 and is a continuation of MATH 111. Topics include integer exponents, polynomials, factoring, proportions, and rational expressions. Students who complete this course with a C or better are advised to enroll in MATH 122.

MATH 115 GEOMETRY

Units 5; Class Hours: Minimum of 80 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 110 or 112, or appropriate score on District math placement test and other measures as appropriate. **Description:** This course is a study of the properties of plane and solid figures, using formal logic and the real number system. Some non-Euclidean, projective and topological elements are included.

MATH 120 INTERMEDIATE ALGEBRA

Units 5; Class Hours: Minimum of 80 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 110 or 112, or appropriate score on District math placement test and other measures as appropriate. **Description:** This is the second course in a 2-part series covering elementary and intermediate algebra and is a continuation of MATH 110. Topics include a review of equations, absolute value, lines and graphs, functions, rational exponents, radical expressions and equations, quadratic equations and graphs, exponential functions, and logarithmic functions. Additional topics may include conic sections and systems of equations.



**With limitations. Refer to pages 53 and 54 or see your counselor.*

MATH 122 INTERMEDIATE ALGEBRA I
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 110 or 112, or appropriate score on District math placement test and other measures as appropriate. **Description:** This is the third course in a 4 part series covering elementary and intermediate algebra and is a continuation of MATH 112. Topics include a review of equations, absolute value, lines and graphs, functions, rational exponents, radical expressions and equations, and complex numbers. Students who complete this course with a C or better should enroll in MATH 123.

MATH 123 INTERMEDIATE ALGEBRA II
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 122. **Description:** This is the last course in a 4 part series covering elementary and intermediate algebra and is a continuation of MATH 122. Topics include quadratic equations, inverse functions, exponential functions, and logarithmic functions. Optional topics include the conic sections and nonlinear systems.

MATH 125 ELEMENTARY FINITE MATHEMATICS
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 120 or 121 or 123, or appropriate score on District math placement test and other measures as appropriate. **Description:** This is an introduction to finite mathematics with attention to set theory, counting theory, probability, systems of equations, vector and matrix theory, inequalities and linear programming. Transfer: CSU: B4, UC. (IGETC: 2)

MATH 130 ANALYTICAL TRIGONOMETRY (CAN MATH 8)
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 115, and 120 or 121 or 123, or appropriate score on District math placement test and other measures as appropriate. **Description:** This course covers trigonometric functions of real numbers and angles, their graphs and periodicity; reduction formulas; functions of multiple angles; identities and equations; radian measure; inverse functions, logarithms and exponents, solution of triangles; complex numbers and De Moivre's theorem. Transfer: CSU: B4.

MATH 140 MATHEMATICS FOR GENERAL EDUCATION (CAN MATH 2)
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 120 or 121 or 123, or appropriate score on District math placement test and other measures as appropriate. **Description:** This course fulfills the general education requirements in mathematics, and is designed for majors with no specific math requirement. The goal is to develop in students an appreciation for the beauty and utility of mathematics. Topics can include logic, problem solving, probability, statistics, geometry, mathematics of finance, systems of numeration, mathematical modeling, and computers. Transfer: CSU: B4, UC.

MATH 150 MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 115 and 120. **Description:** This course is intended for future elementary school teachers. Topics covered include elementary set theory, numeration, number systems and operations, and elementary number theory, with emphasis on problem solving. Transfer: CSU, UC.

MATH 200 ELEMENTARY PROBABILITY AND STATISTICS (CAN STAT 2)
Units 4; Class Hours: Minimum of 64 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 120 or 121 or 123, or appropriate score on District math placement test and other measures as appropriate. **Description:** This course presents the basic concepts underlying statistical methods and covers descriptive statistics, probability, probability distributions, hypothesis testing, estimates and sample sizes, correlation and regression, chi-square tests, analysis of variance, and nonparametric statistics. Computer analysis of statistical data is integrated into the course. Applications of statistics to business, life sciences and other areas are included. Transfer: CSU: B4, UC. (IGETC: 2)

MATH 219 PRE-CALCULUS COLLEGE ALGEBRA/TRIGONOMETRY (CAN MATH 16)
Units 5; Class Hours: Minimum of 80 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 130, or appropriate score on District math placement test and other measures as appropriate. **Description:** Unification of college algebra and analytical trigonometry based on the function concept. Topics include: properties of the real number system, inequalities, theory of equations, complex numbers, logarithmic and exponential functions, matrices, binomial theorem, sequence inverse functions. Transfer: CSU: B4, UC*. (IGETC: 2)

MATH 241 APPLIED CALCULUS I (CAN MATH 30) (CAN MATH SEQ D = MATH 241 + 242)
Units 5; Class Hours: Minimum of 80 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 120 or 123, or appropriate score on District math placement test and other measures as appropriate. **Description:** The first class in a two semester calculus sequence designed for business, social science, technology, and life science majors. Topics include a review of functions, the derivative, applications of the derivative, and an introduction to the integral. Transfer: CSU: B4, UC*. (IGETC: 2)

MATH 242 APPLIED CALCULUS II (CAN MATH 32) (CAN MATH SEQ D = MATH 241 + 242)
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 130 and 241. **Description:**

The second half of a two-semester calculus sequence designed for business, social sciences, technology, and life sciences majors. Topics include the integral, techniques of integration, multivariable calculus, and differential equations. Transfer: CSU, UC*. (IGETC: 2)

MATH 251 ANALYTICAL GEOMETRY AND CALCULUS I (CAN MATH 18) (CAN MATH SEQ B = MATH 251 + 252) (CAN MATH SEQ C = MATH 251 + 252 + 253)
Units 5; Class Hours: Minimum of 80 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 219 or appropriate score on District math placement test and other measures as appropriate. **Description:** This course is an introduction to calculus and analytic geometry including limits, continuity of functions, definition of differentiation, derivation of formulas, applications, anti-differentiation and the fundamental theorem of calculus. Transfer: CSU: B4, UC*. (IGETC: 2)

MATH 252 ANALYTICAL GEOMETRY AND CALCULUS II (CAN MATH 20) (CAN MATH SEQ B = MATH 251 + 252) (CAN MATH SEQ C = MATH 251 + 252 + 253)
Units 5; Class Hours: Minimum of 80 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): MATH 251. **Description:** This course is the second in a series of calculus and analytic geometry. This course covers the Fundamental Theorem of Calculus, antiderivatives, integral applications and techniques, power series and infinite series topics such as series testing and analysis of Taylor and power series. Transfer: CSU, UC*. (IGETC: 2)

MATH 253 ANALYTICAL GEOMETRY AND CALCULUS III (CAN MATH 22) (CAN MATH SEQ C = MATH 251 + 252 + 253)
Units 5; Class Hours: Minimum of 80 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): MATH 252. **Description:** This course is the third in a series of calculus and analytic geometry. This is the calculus of multivariable functions. The course covers topics in vectors, partial derivatives, double and triple integrals, line integrals and vector analysis theory such as Green's, Stokes', and Gauss' Theorems. Transfer: CSU, UC. (IGETC: 2)

MATH 268 DISCRETE MATHEMATICS
Units (Grade Option) 4; Class Hours: Minimum of 64 lecture hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): MATH 251. **Description:** Covers topics in discrete mathematics with particular emphasis on computer science applications. Includes logic, sets, functions and relations mathematical induction, recursion, Boolean algebra, elementary number theory, probability, algebraic structures, statistics, graphs, counting and combinatorics. Transfer: CSU, UC.

MATH 270 LINEAR ALGEBRA
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MATH 252. **Description:** Application of vectors and matrices to systems of linear equations, linear transformations, eigenvectors and eigenvalues, vector spaces and inner products. Transfer: CSU, UC. (IGETC: 2)

MATH 275 ORDINARY DIFFERENTIAL EQUATIONS (CAN MATH 24)
Units 3; Class Hours: Minimum of 48 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): MATH 252. **Description:** Applications involving differential equations and analytical, graphical and numerical solutions of linear differential equations and systems of linear differential equations, power-series solutions of nonlinear differential equations, and solution of linear differential equations with constant coefficients by Laplace Transforms. Transfer: CSU, UC. (IGETC: 2)

MATH 811 PRE-ALGEBRA
Units (Grade Option) 1-3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): None. **Description:** Covers the fundamental processes in arithmetic: reading mathematical notation, translating words into symbols, and properties of the real number system. Introduction to geometry and algebra. May be repeated for credit up to 3 units. Units do not apply toward AA/AS degree.

MEDICAL ASSISTING

MEDA 100 INTRODUCTION TO MEDICAL ASSISTING
Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Duties and responsibilities of a medical assistant, transcriptionist, and billing specialist in a physician's office, clinic, hospital or other medical facility. Emphasizes desirable personality traits and human relationships as well as medical ethics, specialties in the medical field, and office maintenance. Transfer: CSU.

MEDA 110 BASIC MEDICAL TERMINOLOGY I
Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Introduction to the development of a medical vocabulary that includes medical abbreviations and symbols through the study of the principles of word construction and word analysis, with emphasis on spelling and pronunciation. Transfer: CSU.

MEDA 111 BASIC MEDICAL TERMINOLOGY II
Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MEDA 110. **Description:** Continuation of MEDA 110. Intermediate development of medical vocabulary through the study of the principles of word construction and word analysis, with emphasis on spelling/pronunciation, diagnosis, disease process, pathology and their interrelationship with body systems. Transfer: CSU.

MEDA 115 MEDICAL WORD PROCESSING
Units 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): CBOT 415 or equivalent skill level. **Description:** Training in production typing of medical letters, reports, and forms using the computer. Transfer: CSU.

MEDA 120 CLINICAL PROCEDURES I
Units 4; Class Hours: Minimum of 48 lecture/48 lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): BIOL 130 and MEDA 110. **Description:** Examination room techniques, asepsis and sterilization procedures, laboratory procedures and specimen collection, and electrocardiograms (Extra supplies may be required). Transfer: CSU.

MEDA 121 CLINICAL PROCEDURES II
Units 4; Class Hours: Minimum of 48 lecture/48 lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MEDA 120. **Description:** Administering medications, injections and venipuncture, eye and ear lavage, electroencephalograms, removal of sutures and staples, bandaging and dressings, and other examination and clinical procedures. (Extra supplies may be required). Transfer: CSU.

MEDA 140 MEDICAL TRANSCRIPTION: BASIC
Units 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MEDA 110 and 115. **Description:** Machine transcription of patient medical chart progress notes, history and physicals, letters, consultations, surgical and autopsy reports, and discharge summaries utilizing computers. Course includes analyzing, editing, proper documentation, and compliance requirements. BIOL 130 is recommended. Transfer: CSU.

MEDA 141 MEDICAL TRANSCRIPTION: ADVANCED
Units 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MEDA 140. **Description:** Intensive transcription using computers, of hospital-type medical reports including history and physical examinations, surgeries, discharge summaries, and radiologic and nuclear medicine reports. MEDA 190 and BIOL 130 are recommended. Transfer: CSU.

MEDA 150 MEDICAL OFFICE PROCEDURES
Units 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): completion of or concurrent enrollment in MEDA 100 and 110. **Description:** Fundamental office procedures applied to the medical field. Decision-making, setting priorities, finding information, coping with interruptions, and producing under pressure in medical office simulations. Transfer: CSU.

MEDA 160 MEDICAL INSURANCE PROCEDURES
Units 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): CBOT 415 or equivalent. **Description:** Covers Blue Cross, Blue Shield, Medicare, Medi-Cal, Worker's Compensation and other insurance programs. Coding resources used in claims preparation. Billing and bookkeeping methods using the computer. Transfer: CSU.

MEDA 161 ICD (International Classification of Diseases)-9-CM (Clinical Modification) BEGINNING CODING
Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Development of nomenclature and classification of diseases. Basic coding principles of diseases and symptoms according to ICD-9-CM with emphasis on the coding of medical records. Use of indexes, sequencing of code numbers, and preparation of documents to increase competency. May be repeated once for credit. Transfer: CSU.

MEDA 162 ICD (International Classification of Diseases)-9-CM (Clinical Modification) INTERMEDIATE CODING
Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MEDA 161. **Description:** Intermediate principles and philosophy of coding logic according to ICD-9-CM. Emphasizes the use of UHDDS, source documents, multiple coding, sequencing, V codes, tables, neoplasms, and mental disorders. Transfer: CSU.

MEDA 163 ICD (International Classification of Diseases)-9-CM (Clinical Modification) ADVANCED CODING
Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MEDA 162. **Description:** Advanced principles and philosophy of coding logic according to ICD-9-CM. Emphasizes diseases by body systems, complications, injuries, and adverse effects of drugs. Transfer: CSU.

MEDA 164 CPT (Current Procedural Terminology) BEGINNING CODING
Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Basic coding principles of medical procedures according to Current Procedural Terminology (CPT). Use of CPT, modifiers, appendices, and preparation of documents. Transfer: CSU.

MEDA 165 CPT (Current Procedural Terminology) INTERMEDIATE CODING
Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MEDA 164. **Description:** Continuation of MEDA 164. Intermediate principles and philosophy of coding logic according to CPT (Current Procedural Terminology). Emphasizes the understanding of terms and processes. Transfer: CSU.

MEDA 166 CPT (Current Procedural Terminology) ADVANCED CODING
Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MEDA 165. **Description:** Continuation of MEDA 165. Advanced principles and philosophy of coding logic according to CPT (Current Procedural terminology). Emphasizes the understanding of terms and process. Transfer: CSU.

MEDA 190 INTRODUCTION TO PHARMACOLOGY
Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Designed for medical assistants, medical transcribers and other allied health professionals includes recognition and identification of commonly used drugs; classification of drugs according to action; modes of administration of drugs; and care and storage of drugs according to regulations of the Food and Drug Administration (FDA). Transfer: CSU.

MEDA 801 COMPUTERIZED MEDICAL BILLING/MEDICAL ASSISTING EXAM PREPARATION
Units (Grade Option) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Preparation for Medisoft or Medical Manager, or UB 92, or Medical Assisting certification testing offered by various organizations. May be repeated twice for credit.

MULTIMEDIA

(Previously listed under ART)

MART 314 INTRODUCTION TO COMPUTER GRAPHICS
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** State of the art computer graphics software are introduced with respect to print, web and motion graphics. Introduction to typography graphic layout/design fundamentals, as well as web design skills and other computer graphics software applications. As this is a fine arts course, students generate their own creative content for publication. Transfer: CSU, UC.

MART 325 DIGITAL PAINTING
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/48 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Using Procreate's Painter software and digital painting tablets, students use digital tools for the artistic expression of the concepts and techniques of traditional painting. Some painting and computer knowledge desirable. May be repeated twice for credit. Transfer: CSU.

MART 361 DIGITAL VIDEO
Units (Grade Option) 3; Class Hours: Minimum of 32 lecture/16 lab/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** This course covers the creation of short videos utilizing desktop video software. Techniques for the effective use of transitions, titles, story line, and artistic creativity are covered. Also covered are video file formats, digital video cameras, and digitizing analog video. The student is expected to produce a short video piece as a final project for transferring to VHS tape, compact disk, or publishing on the WEB. Transfer: CSU.

MART 362 DIGITAL PHOTOGRAPHY I
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** An introduction to the theory and technology of digital photography. Exploration of the digital camera in both professional and consumer use. Techniques of taking a photograph, types of storage, transferring of images, image editing, and optimizing final output are evaluated. May be repeated once for credit. Transfer: CSU, UC*.

MART 363 DIGITAL PHOTOGRAPHY II
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 362. **Description:** Intermediate photographic technologies covering the complete cycle of production from image setup to output. Emphasis is placed on developing skill in creating digital photographic imagery for creative, cultural and professional expression. May be repeated once for credit. Transfer: CSU.

MART 365 PHOTOGRAPHIC RETOUCHING AND RESTORATION
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 376 or equivalent. **Description:** Understand the theory and learn the skills necessary for restoration and retouching both vintage and problem photographs. Assess photographs for image, tone, exposure, and color cast correction. Successfully remove dust, mold and texture: rebuild, refine and polish photographs. Transfer: CSU.

MART 366 COLOR MANAGEMENT AND DIGITAL PRINTING
Units (Grade Option) 1.5; Class Hours: Minimum of 24 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 376 or equivalent. **Description:** Create a successful color management workflow from digital image to digital print. Understand and use color, calibration, and create profiles to get the desired color output. Topics include pre-press file management, RGB to 4-color ink, paper, output, proofing, and industry standards. Transfer: CSU.

MART 368 WEB DESIGN I
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** This course teaches the fundamentals of creating a website through a mixture of hands-on exercises, lecture, and demonstration. Topics include site layout principles, a discussion of HTML, color and image preparation, for the web, browser compatibility, graphic user interface design, usability and internet ethics and copyright issues. Students build a basic website following accepted design layout standards. The class focuses on Dreamweaver®, but also uses Adobe Photoshop®, ImageReady® and a basic demonstration of Flash®. Transfer: CSU.

MART 369 WEB DESIGN II
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 368. **Description:** Students learn advanced concepts and techniques to create elaborate and visually appealing websites. User centered design, graphic user interface customization, Internet ethics, and copyright issues are taught as well as a review of basic color, layout and typography theory and practice. Some HTML, JavaScript, and CGI concepts are demonstrated to incorporate some basic interactivity. This course is taught using Macromedia Dreamweaver®, Adobe Photoshop® and ImageReady®. Other software may be utilized. Transfer: CSU.

MART 372 DIGITAL ILLUSTRATION
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** This course teaches the fundamentals of digital illustration with Adobe Illustrator, through a mixture of hands on exercises, lecture, and demonstration. Topics include design, layout, typography, and color principles, vector graphics versus raster graphics and project preparation for print. By the end of the class the student finishes at least five different kinds of projects ranging from promotional posters and business cards, to bottle labels and restaurant menus. Transfer: CSU.

MART 373 DIGITAL AUDIO I
Units (Grade Option) 1; Class Hours: Minimum of 16 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Introduction to digital audio production utilizing Digidesign's Pro Tools to familiarize students with diverse production techniques, most common file formats, and compression methods used in multimedia applications. The course focuses on digital audio for the web, CD-ROM based productions, and digital video projects. The fundamentals of digital audio theory, digital sound recording, editing, mixing, and encoding sound files are also covered. May be repeated once for credit. Transfer: CSU.

MART 376 DIGITAL IMAGING I
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** An introduction to the theory and technology of digital imaging. Students work with digital images using Adobe Photoshop®. Students work with image correction tools and learn the toolset necessary to create and manipulate digital photographs, scanned images, and those files created directly in the computer. Students' images become part of a basic portfolio. Transfer: CSU, UC*.

MART 377 DIGITAL IMAGING II
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 376. **Description:** Using Adobe Photoshop® and other digital design software, students develop strategies for content development, visual cohesiveness and graphic production techniques. Topics include design, layout, typography, and color principles, vector graphics versus raster graphics and project preparation for print. The student creates projects ranging from promotional posters and business cards, to bottle labels and restaurant menus. Transfer: CSU.

MART 378 DIGITAL PAGE LAYOUT
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** This is an introductory course in page layout for graphic design, using computers to design and layout text and graphics for publication. Through projects and assignments, students integrate sound design principles and desktop publishing skills. Both Macintosh and Windows environments are supported. Transfer: CSU.

MART 379 DIGITAL ANIMATION I: FLASH®
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** A project-based course in which both traditional and digital animation techniques such as storyboarding and frame-by-frame animation are explored through the use of Macromedia Flash® as a medium for the development of creative computer-based animations. Other topics included in this course deal with the implementation of successful graphic user interface solutions for web design and stand-alone applications using the scripting capabilities of the software. Transfer: CSU.

MART 380 DIGITAL ANIMATION II: FLASH®
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 379 or equivalent. **Description:** This course utilizes Macromedia Flash® as a medium for the development and exploration of computer-based cinematic animations, advanced interactive projects as well as the application of basic scripting principles. The class is project-based and geared towards the creation of interactive, self-contained and optimized Flash® applications, both for a web media and CD-ROM presentations. Student projects are developed through the integration of rich media such as audio and video with ActionScript and advanced animation techniques. Further independent instruction is encouraged through a wide range of sources such as internet tutorials, books and experimentation. May be repeated twice for credit. Transfer: CSU.

MART 389 MULTIMEDIA CAREERS
Units (Grade Option) 1.5; Class Hours: Minimum of 24 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): None. **Description:** Introduction to the multimedia job market and employment niches. The class describes multimedia and the varied work environments including full time and contract opportunities, as well as job search techniques, resume and cover letter writing skills. Transfer: CSU.

MART 390 PORTFOLIO CREATION
Units (Grade Option) 1.5; Class Hours: Minimum of 24 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Portfolio creation is the culminating course for those students interested in the various Certificates of Completion, Certificates of Proficiency, and Associate of Arts Degree in Multimedia. Students develop a portfolio consisting of work accomplished to date. The portfolio may be print based, web based or on CD following a format appropriate with the student's career/academic goals. The students also include a résumé that is appropriate for their field of interest and learn the skills necessary to conduct a successful job interview. May be repeated once for credit. Transfer: CSU.

MART 400 MOTION GRAPHICS
Units (Grade Option) 1.5; Class Hours: Minimum of 24 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Digital integration of audio, video and motion graphics through the creation of experimental short narrative scenes. Covers preproduction and production techniques, emphasizing editing and compression methods for web, CD-ROM or DVD delivery. Successful story-telling through the use of story boarding, camera composition and scene sequencing techniques. May be repeated once for credit. Transfer: CSU.

MART 405 STORYBOARD DEVELOPMENT FOR ANIMATION AND INTERACTIVE MEDIA
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): None. **Description:** Introduction to storyboarding and the planning processes of visual storytelling. Translation of concepts such as shot types, continuity, pacing, transitions and sequencing into a visual narrative. Exploration of cinematic vocabulary and story board technique in the creation of both personal and professional expression. Transfer: CSU.

MART 420 3D MODELING AND ANIMATION I
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 376 or equivalent. **Description:** Basic concepts of 3D modeling and animation using Alias' Maya including the production of three-dimensional computer animations and the different approaches to modeling in a 3D environment. Familiarization with both the interface and the production process of 3D animation. Texture mapping, lighting and rendering of simple animations and environments. May be repeated once for credit. Transfer: CSU.

MART 421 3D MODELING AND ANIMATION II
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 420 or equivalent. **Description:** Continuation of MART 420. Further development of concepts and techniques introduced in MART 420 to establish a solid foundation in storytelling, modeling, animation, texture creation and lighting. Rendering professional final scenes state-of-the-art 3D animation software such as Alias' Maya. Also covered is the production process and pipeline used in video game companies and animation studios and the final delivery of projects created for various media. May be repeated once for credit. Transfer: CSU.

MART 430 3D CHARACTER CREATION AND ANIMATION
Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/32 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 420 or equivalent. **Description:** Character animation concepts including character thinking, changes of emotion, speaking (lip-sync animation) and walking cycles. Cartooning effects such as squash and stretch as well as using Alias' Maya controls to create a more humanistic character animation. Basic concepts dealing with character planning and character sheets. Character rigging and the effect of weight and gravity when animating biped, quadruped or any anthropomorphic character. May be repeated once for credit. Transfer: CSU.

MART 431 SPECIAL EFFECTS AND COMPOSITING IN 3D
Units (Grade Option) 1.5; Class Hours: Minimum of 24 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 377 and 420 or equivalent. **Description:** Techniques for the creation of special effects and 3D graphics through digital compositing for film and video. Merging original 2D images such as photographs or other still images generated in Photoshop or Corel Painter with 3D models created in Alias' Maya program. Different output formats and uses for these compositing techniques in diverse industries. May be repeated once for credit. Transfer: CSU.

MART 432 3D ENVIRONMENTS AND HARD SURFACE MODELING
Units (Grade Option) 1.5; Class Hours: Minimum of 24 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 377 and 420 or equivalent. **Description:** Course covers the creation of 3D worlds and modeling of non-organic forms such as vehicles, surroundings, architecture and mechanical devices as well as developing the look and feel of 3D environments where characters interact. Students learn to use different reference materials and research inspirational resources when generating a world concept. Various rendering techniques and the creative presentation of final work are also covered. May be repeated once for credit. Transfer: CSU.

MART 440 VIDEO GAME 3D PRODUCTION TECHNIQUES
Units (Grade Option) 1.5; Class Hours: Minimum of 24 lecture/16 by arrangement lab hours/semester; Recommended: Eligibility for READ 836, and ENGL 836 or ESL 400; Prerequisite(s): MART 377 and 420 or equivalent. **Description:** Video game art-specific production techniques, asset delivery, and workflow. Texture, bump, specular, and alpha maps to create the illusion of complexity in models. Focus on low polygon modeling techniques, tiling, photorealistic textures, and character animation loops. Basic Mel scripting, workflow and asset delivery methods to increase productivity and efficiency when generating game graphics. May be repeated once for credit. Transfer: CSU.