MGMT 111  Starting a Small Business  
Units: 3 Hours: 3 Lecture  
Advisory: Eligible for English 250 and English 260.  
Transferable: CSU  
The course provides an introduction to the fundamentals of starting (or purchasing) and managing a small business. The student will prepare a comprehensive business plan, in a business of their choice, during the course. Financing, merchandising, and franchising will be covered; with emphasis on decision-making through maintenance and interpretation of accounting data.

MGMT 190  Occupational Work Experience/Management-Supervision  
Units: 1-4 Hours: 12 Laboratory  
Required: Declared vocational major. Concurrent enrollment in seven or more units (including CWE units, except for summer school. For summer school, enrollment in one other class is required). Minimum 2.00 G.P.A.  
Transferable: CSU  
College credit for learning experience obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student. 75 hours per semester per unit or 60 hours per semester for unpaid experience. This is a pass/no pass course. May be taken for a maximum of 16 work experience units.

MGMT 611  Topics in Starting a Small Business  
Units: 5 Hours: 3 Lecture  
Advisory: Eligible for English 250 and English 260.  
Transferable: No  
This entry represents a cluster of six modules: Benefits of Small Business, Starting the Small Business, Small Business Marketing, Managing Small Business Operations, Financial and Administrative Controls, Status and Future of Small Business (Management clusters of nine hours each). May be repeated to a maximum of 3 units. Units earned in this course do not count toward the associate degree and/or certain certificate requirements. This is a pass/no pass course.

MARKETING

MKTG 100  Principles of Marketing  
Units: 3 Hours: 3 Lecture  
Advisory: Eligible for English 250 and English 260.  
Transferable: CSU  
An introduction to the economic and social problems involved with moving goods and services from the producer to the consumer. This course covers topics such as marketing institutions, channels of distribution, pricing, and government relationships.

MKTG 102  Techniques of Selling  
Units: 3 Hours: 3 Lecture  
Advisory: Eligible for English 250 and English 260.  
Transferable: CSU  
The principles and techniques involved in creative selling of products and services. Characteristics of effective selling, reports, territories, and quotas. Emphasis on securing prospects, the selling process, handling objections and inquiries, closing the sale, and follow-up.

MKTG 103  Principles of Advertising  
Units: 3 Hours: 3 Lecture  
Advisory: Eligible for English 250 and English 260.  
Transferable: CSU  
The basic principles and techniques of business promotion. An exploration of the media as used in communicating to the market.

MKTG 190  Occupational Work Experience/Marketing  
Units: 1-4 Hours: 24 Laboratory  
Required: Declared vocational major. Concurrent enrollment in seven or more units (including CWE units, except for summer school. For summer school, enrollment in one other class is required). Minimum 2.0 G.P.A.  
Transferable: CSU  
College credit for learning experience obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student. 75 hours per semester per unit or 60 hours per semester for unpaid experience. This is a pass/no pass course. May be taken for a maximum of 16 work experience units.

MATHEMATICS

MATH 1A  Single-Variable Calculus and Analytic Geometry  
Units: 4 Hours: 4 Lecture  
Prerequisite: Mathematics 10 or Mathematics 9B with a grade of 'C' or better.  
Transferable: CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: MATH 18, MATH SEQ. B  
Limits and continuity, analyzing the behavior and graphs of functions, derivatives, implicit differentiation, higher order derivatives, related rates and optimization word problems, Newton's Method, Fundamental Theorem of Calculus, and definite and indefinite integrals.

MATH 1B  Single-Variable Calculus and Analytic Geometry  
Units: 4 Hours: 4 Lecture  
Prerequisite: Mathematics 1A with a grade of 'C' or better.  
Transferable: CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: MATH 20, MATH SEQ. B  
This course is a standard second semester Calculus course covering methods of integration, applications of the integral, differential equations, parametric and polar equations, and sequences and series.

MATH 1C  Multivariable Calculus  
Units: 4 Hours: 4 Lecture  
Prerequisite: Mathematics 1B with a grade of 'C' or better.  
Transferable: CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: MATH 22, MATH SEQ. C  
A standard third semester Calculus course covering functions of several variables, vectors, surfaces, vector-valued functions, partial derivatives, multiple and line integrals, Green’s Theorem, Stokes’ Theorem, and the Divergence Theorem.

MATH 2  Linear Algebra  
Units: 3 Hours: 3 Lecture  
Prerequisite: Mathematics 1C with a grade of 'C' or better.  
Transferable: CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: MATH 26  
A standard one semester Linear Algebra course covering systems of linear equations, vectors and matrices, determinants, vector spaces, linear transformations, eigenvalues, and eigenvectors. Graphing calculators and computers will be used.

MATH 2C  Differential Equations  
Units: 3 Hours: 3 Lecture  
Prerequisite: Mathematics 1C with a grade of 'C' or better.  
Transferable: CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: MATH 24  
Introduction to ordinary differential equations, first-order differential equations, linear differential equations of higher order, vibration models, power-series solutions, the Laplace transform, and systems of linear differential equations.
MATH 5  Introduction to Statistics  
Units: 3  Hours: 3 Lecture, 1 Laboratory  
Prerequisite:  Mathematics 233 with a grade of 'C' or better.  
Transferable:  CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: STAT 2  
This course provides a general understanding of the fundamental principles and techniques of statistics. Topics will include descriptive statistics, probability distributions, normal probability distributions, sample variability, statistical inference, and the analysis of data. Statistical software will be extensively integrated as a tool in the description and analysis of data.

MATH 6  Calculus for Business/Social Science  
Units: 3  Hours: 3 Lecture  
Prerequisite:  Mathematics 233 with a grade of 'C' or better.  
Transferable:  CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: MATH 34  
This course applies the fundamental principles and techniques of calculus to problems in business, economics, the life sciences and the social sciences. Topics will include limits, and differentiation and integration of linear, quadratic, polynomial, exponential and logarithmic functions. This course is not intended for students majoring in engineering, the physical sciences or math. Using a calculator is required. Graphing calculator is recommended.

MATH 7  Finite Mathematics  
Units: 3  Hours: 3 Lecture  
Prerequisite:  Mathematics 233 with a grade of 'C' or better.  
Transferable:  CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: MATH 12  
Systems of linear equations and matrices, introduction to linear programming, finance, counting techniques and probability, properties of probability and applications of probability.

MATH 8  Precalculus  
Units: 5  Hours: 5 Lecture  
Prerequisite:  Mathematics 233 with a grade of 'C' or better.  
Transferable:  CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4; CAN: MATH 16  
This course is designed to prepare students for the study of Mathematics 1A. Topics covered include graphs and functions, polynomial functions and theory of equations, exponential functions and logarithmic functions, trigonometric functions, trigonometric identities and conditional equations, analytic trigonometry, introduction to analytic geometry, systems of equations and inequalities, introduction to matrix theory and linear programming. Principle of Mathematical Induction, sequences and series, and introduction to probability. (Not currently offered.)

MATH 8A  First Half of Precalculus  
Units: 4  Hours: 4 Lecture  
Prerequisite:  Mathematics 233 with a grade of 'C' or better.  
Transferable:  CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4  
Math 8A prepares the student for the study of calculus by providing important skills in algebraic manipulation, interpretation, and problem solving at the college level. Topics will include basic algebraic concepts, complex numbers, equations and inequalities of the first and second degree, functions, and graphs. Hand-held graphing calculators will be used extensively to highlight their strengths and their limitations as a problem-solving tool. Real world applications will be numerous.

MATH 8B  Second Half of Precalculus  
Units: 4  Hours: 4 Lecture  
Prerequisite:  Mathematics 8A with a grade of 'C' or better.  
Advisory:  Math 208 Survey of Practical Geometry.  
Transferable:  CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4  
Math 8B prepares students for the study of calculus by providing important skills in algebraic manipulation, interpretation, and problem solving at the college level. Topics will include trigonometric functions, identities, inverse trigonometric functions, and equations; applications of trigonometry, vectors, complex numbers, polynomial and parametric equations; conic sections; sequences, series, counting principles, permutations, mathematical induction; analytic geometry, and an introduction to limits.

MATH 9  College Algebra and Trigonometry  
Units: 5  Hours: 5 Lecture  
Prerequisite:  Mathematics 233 with a grade of 'C' or better.  
Transferable:  CSU; UC; CSU-GE: B4; IGETC: 2A; GAV-GE: B4  
Math 9 is the first course in preparing students for the study of calculus by providing important skills in algebraic manipulation and interpretation at the college level. Topics will include a review of basic algebraic concepts; lines; polynomial and rational functions; exponential and logarithmic functions; trigonometric functions, identities, inverse functions and equations; applications of trigonometry; systems of equations and matrices; conic sections; sequences, series and combinatorics. Hand-held graphing calculators will be used extensively to highlight their strengths and their limitations as a problem-solving tool. Real world applications will be numerous.
MATH 201A Math for Science and Engineering
Units: 1 Hours: 1 Lecture
Corequisite: Enrollment in appropriate section of Math 205 which is part of a learning community.
Transferable: No
This course will provide a combination of math study skills, introduction to scientific equipment and technology for mathematics, analysis of data from various branches of science, one or more field trips, investigation of educational plans and program choices at the transfer level.

MATH 201B Math for Science and Engineering
Units: 1 Hours: 1 Lecture
Corequisite: Enrollment in appropriate section of Math 233 which is part of a learning community.
Transferable: No
This course will provide a combination of math study skills, introduction to scientific equipment and technology for mathematics, collection and analysis of data from various branches of science, one or more field trips, investigation of science careers and program choices at the transfer level.

MATH 205 Elementary Algebra
Units: 5 Hours: 5 Lecture
Prerequisite: MATH 402 with a grade of 'C' or better or assessment test recommendation.
Transferable: No; GAV-GE: B4
This course is a standard beginning algebra course, including algebraic expressions, linear equations and inequalities in one variable, graphing, equations and inequalities in two variables, integer exponents, polynomials, radical expressions and equations, radicals and rational exponents, and quadratic equations. Mathematics 205, 205A and 205B, and 206 have similar course content. This course may not be taken by students who have completed Mathematics 205B or 206 with a grade of 'C' or better. This course may be taken for Mathematics 205B credit (2.5 units) by those students who have successfully completed Mathematics 205A with a grade of 'C' or better.

MATH 205A First Half of Elementary Algebra
Units: 2.5 Hours: 4 Lecture
Prerequisite: MATH 402 with a grade of 'C' or better or assessment test recommendation.
Advisory: Concurrent enrollment in Guidance 563A is advised.
Transferable: No; GAV-GE: B4
This course is the first half of the Elementary Algebra course. It will cover signed numbers, evaluation of expressions, ratios and proportions, solving linear equations, and applications. Graphing of lines, the slope of a line, graphing linear equations, solving systems of equations, basic rules of exponents, and operations on polynomials will be covered.

MATH 205B Second Half of Elementary Algebra
Units: 2.5 Hours: 4 Lecture
Prerequisite: MATH 205A with a grade of 'C' or better.
Advisory: Concurrent enrollment in Guidance 563B is advised.
Transferable: No; GAV-GE: B4
This course contains the material covered in the second half of the Elementary Algebra course. It will cover factoring, polynomials, solving quadratic equations by factoring, radical expressions and equations, complex fractions, radicals and radical equations, solving quadratic equations by completing the square and the quadratic formula. Application problems are integrated throughout the topics.

MATH 206 Beginning Algebra for Tech Prep
Units: 5 Hours: 4 Lecture, 3 Laboratory
Advisory: Mathematics 402 with a grade of 'C' or better within the past 2 years or pass placement exam.
Transferable: No
This course covers all the material of Math 205 along with some basic geometry. It includes lecture, practical problems, and hands-on laboratory work. It covers operations with signed numbers, evaluation of expression containing numbers and letters, simplifying Algebraic expressions, equations, word problems, exponents, polynomials, factoring and special products, fractions, graphing, systems of equations, radicals, and quadratic equations working with lines and angles, shapes in 2 and 3 dimensions, and right triangles. This course is intended for students who will enter into any Associate Degree Technical program. Mathematics 205, 205A, 205B and 206 have similar course content. This course may not be taken by students who have completed Mathematics 205 or 205B with a grade of 'C' or better. This course may be taken for Mathematics 205B credit (2.5 units) by those students who have successfully completed Mathematics 205A with a grade of 'C' or better.

MATH 208 Plane Geometry
Units: 3 Hours: 3 Lecture
Prerequisite: Math 205 or Math 205A and Math 205B with a grade of 'C' or better.
Transferable: No
This course introduces the vocabulary and principles of Euclidean Geometry. Methods of proof including inductive and deductive reasoning will be developed. Concepts of congruence and similarity, angles, lines, polygons, and circles will be covered. Additional topics such as solid geometry, analytical geometry, transformations, and basic trigonometry may be included as time allows.

MATH 209 Introduction to Graphing Calculators and Computers
Units: 5 Hours: 3 Lecture, .7 Laboratory
Advisory: Mathematics 205
Transferable: No
An introduction to the use of the graphing calculator in mathematical applications such as functions, graphing, matrices, statistics, and applications to other mathematics courses, business, and natural sciences. Students will also use a personal computer for basic operations such as drawing and text editing. The focus will be on application programs for statistics, science, and technical courses. This is a 9 week course.

MATH 233 Intermediate Algebra
Units: 5 Hours: 5 Lecture
Prerequisite: Mathematics 205 or Mathematics 205A and 205B or Mathematics 206 with a grade of 'C' or better.
Transferable: No; GAV-GE: B4
Review of basic concepts, linear equations and inequalities, graphs and functions, systems of linear equations, polynomials and polynomial functions, factoring, rational expressions and equations, roots, radicals, and complex numbers, solving quadratic equations, exponential and logarithmic functions, and problem solving strategies. Mathematics 233B, 233A, and 233B have similar course content. This course may not be taken by students who have completed Mathematics 233B with a grade of 'C' or better. This course may be taken for Mathematics 233B credit (2.5 units) by those students who have successfully completed Mathematics 233A with a grade of 'C' or better.

MATH 233A First Half of Intermediate Algebra
Units: 2.5 Hours: 4 Lecture
Prerequisite: Completion of Mathematics 205 or the equivalent with a grade of 'C' or better.
Transferable: No
This course will become active for the fall 2007 semester.
The course will start with a review of basic concepts and then cover the following topics with an emphasis on applications and problem solving strategies: solving linear equations; solving linear, compound, and absolute value inequalities; equations and graphs of line; functions and function notation including composition of functions; solving systems of linear equations and inequalities; an introduction to matrices and Cramer’s rule; operations with polynomials; factoring polynomials; and solving polynomial equations.

All courses listed here are part of Gavilan College’s approved curriculum. All courses are not offered every semester. Check the Class Schedule for current offerings.
MATH 233B Second Half of Intermediate Algebra
Units: 2.5 Hours: 4 Lecture
Prerequisite: Transferable: No
This course will become active for the spring 2008 semester.
This course will start with a review factoring polynomials, and then cover the following topics with an emphasis on applications and problem solving strategies: solving polynomial equations by factoring; adding, subtracting, multiplying, dividing and simplifying rational expressions and solving rational equations; adding, subtracting, multiplying, dividing and simplifying roots, radicals and complex numbers and solving radical equations; the various methods of solving quadratic equations and inequalities; graphing quadratic functions; and working with exponential and logarithmic functions, equations and expressions.

MATH 400 Elements of Arithmetic
Units: 3 Hours: 3 Lecture, 1 Laboratory
Transferable: No
Essential arithmetic operations, whole numbers, integers, fractions, decimals, ratio, proportion, percent, applications of arithmetic, and critical thinking, as well as math-specific study skills. Units earned in this course do not count toward the associate degree and/or other certain certificate requirements.

MATH 402 Pre-Algebra
Units: 3 Hours: 3 Lecture, 1 Laboratory
Prerequisite: Completion of Math 400 with a ‘C’ or better, or assessment test recommendation.
Transferable: No
This course covers operations with integers, fractions and decimals and associated applications, percentages, ratio, and geometry and measurement, critical thinking and applications. Elementary algebra topics such as variables, expressions, and solving equations are introduced.

MATH 404C Self-Paced Basic Math
Units: 1 Hours: 1 Lecture, .3 Laboratory
Transferable: No
This is a remedial, modular, self-paced course. Applications and critical thinking skills are developed in each module. Module A covers operations with whole numbers, equivalent fractions, multiplying and dividing fractions. Module B covers adding and subtracting fractions, and operations with decimals. Module C covers ratio and proportion, percent and units of measurement. Module D reviews fractions, decimals, percentages, and covers operations with integers, and working with variables. Module E covers real numbers, fractions, exponents, scientific notation, and order of operations. Module F covers expressions, polynomials, and equations. Module G covers geometric figures, perimeter and area, surface area and volume, triangles and parallelograms, and similar figures. This course has the option of a letter grade or pass/no pass.

MATH 404D Self-Paced Basic Math
Units: 1 Hours: 1 Lecture, .3 Laboratory
Transferable: No
This course is a remedial modular, self-paced course. Applications and critical thinking skills are developed in each module. Module A covers operations with whole numbers, equivalent fractions, multiplying and dividing fractions. Module B covers adding and subtracting fractions, and operations with decimals. Module C covers ratio and proportion, percent and units of measurement. Module D reviews fractions, decimals, percentages, and covers operations with integers, and working with variables. Module E covers real numbers, fractions, exponents, scientific notation, and order of operations. Module F covers expressions, polynomials, and equations. Module G covers geometric figures, perimeter and area, surface area and volume, triangles and parallelograms, and similar figures. This course has the option of a letter grade or pass/no pass.

MATH 404E Self-Paced Basic Math
Units: 1 Hours: 1 Lecture, .3 Laboratory
Transferable: No
This course is a remedial, modular, self-paced course. Applications and critical thinking skills are developed in each module. Module A covers operations with whole numbers, equivalent fractions, multiplying and dividing fractions. Module B covers adding and subtracting fractions, and operations with decimals. Module C covers ratio and proportion, percent and units of measurement. Module D reviews fractions, decimals, percentages, and covers operations with integers, and working with variables. Module E covers real numbers, fractions, exponents, scientific notation, and order of operations. Module F covers expressions, polynomials, and equations. Module G covers geometric figures, perimeter and area, surface area and volume, triangles and parallelograms, and similar figures. This course has the option of a letter grade or pass/no pass.

MATH 404F Self-Paced Basic Math
Units: 1 Hours: 1 Lecture, .3 Laboratory
Transferable: No
This course is a remedial, modular, self-paced course. Applications and critical thinking skills are developed in each module. Module A covers operations with whole numbers, equivalent fractions, multiplying and dividing fractions, Module B covers adding and subtracting fractions, and operations with decimals. Module C covers ratio and proportion, percent and units of measurement. Module D reviews fractions, decimals, percentages, and covers operations with integers, and working with variables. Module E covers real numbers, fractions, exponents, scientific notation, and order of operations. Module F covers expressions, polynomials, and equations. Module G covers geometric figures, perimeter and area, surface area and volume, triangles and parallelograms and similar figures. This course has the option of a letter grade or pass/no pass.

General Education Requirements, pages 48-49
MATH 404G Self-Paced Basic Math
Units: 1 Hours: 1 Lecture, 3 Laboratory
Transferable: No
This course is a remedial, modular, self-paced course. Applications and critical thinking skills are developed in each module. Module A covers operations with whole numbers, equivalent fractions, multiplying and dividing fractions, Module B covers adding and subtracting fractions, and operations with decimals. Module C covers ratio and proportion, percent, and units of measurement. Module D reviews fractions, decimals, percentages, and covers operations with integers, and working with variables. Module E covers real numbers, fractions, exponents, scientific notation, and order of operations. Module F covers expressions, polynomials, and equations. Module G covers geometric figures, perimeter and area, surface area and volume, triangles and parallelograms, and similar figures. This course has the option of a letter grade or pass/no pass.

MATH 414 Basic Math Skills
Units: 5-3 Hours: 9 Laboratory
Transferable: No
A remedial mathematics course designed for those students who need to learn, or re-learn, the basic concepts of math. The primary emphasis is on whole numbers, fractions, decimals, percents, and measurements. This course may be repeated three times for credit. This is a pass/no pass course. Units earned in this course do not count toward the associate degree and/or certain certificate requirements.

Medical Terminology: see Business

MUSIC

MUS 1A Music History and Literature
Units: 3 Hours: 3 Lecture
Advisory: Eligible for English 250 and English 260.
Transferable: CSU; UC; CSU-GE: C1; IGETC: 3A; GAV-GE: C1; CAN; MUS 8
A survey of the development of music in western civilization including representative composers from the Medieval to the present. Music 1A will study the music and styles from the Medieval to the Romantic period.

MUS 1B Music History and Literature
Units: 3 Hours: 3 Lecture
Advisory: Eligible for English 250 and English 260.
Transferable: CSU; UC; CSU-GE: C1; IGETC: 3A; GAV-GE: C1
A survey of the development of music in western civilization including representative composers from the Medieval to the present. Music 1B will study the music and the styles from the late Romanticism to the present.

MUS 3A Harmony - Theory - Musicianship
Units: 4 Hours: 4 Lecture, 2 Laboratory
Advisory: Must be taken in sequence.
Transferable: CSU; UC; GAV-GE: C1
Fundamentals of music, beginning harmony.

MUS 3B Harmony - Theory - Musicianship
Units: 4 Hours: 4 Lecture, 2 Laboratory
Advisory: Must be taken in sequence.
Transferable: CSU; UC; GAV-GE: C1
Fundamentals of music, beginning harmony.

MUS 3C Intermediate Harmony - Theory
Units: 4 Hours: 4 Lecture, 2 Laboratory
Advisory: Music 3B
Transferable: CSU; UC; GAV-GE: C1
Continuation of Music 3AB. Chromatic harmony, analysis and composition.

MUS 3D Intermediate Harmony - Theory
Units: 4 Hours: 4 Lecture, 2 Laboratory
Advisory: Music 3C
Transferable: CSU; UC; GAV-GE: C1
Continuation of Music 3C. Analysis and composition.

MUS 4B Beginning Piano
Units: 2 Hours: 1 Lecture, 2 Laboratory
Advisory: Must be taken in sequence.
Transferable: CSU; UC; CSU-GE: C1; GAV-GE: C1
Introduction to music fundamentals and keyboard technique. Development of beginning keyboard skills including note reading in bass and treble clef, fingering, rhythm, key signatures, primary chords and inversions.

MUS 5C Advanced Piano
Units: 2 Hours: 1 Lecture, 2 Laboratory
Advisory: Music 5B
Transferable: CSU; UC; GAV-GE: C1
Continuation of Music 5B. continuation of Music 5B. Continuation of Music 5B.

MUS 5D Advanced Piano
Units: 2 Hours: 1 Lecture, 2 Laboratory
Advisory: Music 5C
Transferable: CSU; UC; GAV-GE: C1
Development of advanced keyboard skills through means of scales, chords, and technical studies. Continuation of music fundamentals and keyboard technique.

www.gavilan.edu