IPM 2634
Management of Diseases and Weeds
3.00 Credits
The course will focus on the diseases and weeds that impact Florida's agriculture. Emphasis will be placed on identification, classification and signs and symptoms of disease organisms. Management strategies to reduce impact of weeds and diseases of the landscape will be addressed. Characteristics essential to management such as disease occurrence, causative organisms, pathogenicity, development and transmission will be discussed. Weed characteristics, identification, classification, control strategies will be discussed. Principles and methods crucial to the management of weed and diseases will be covered, including legal, chemical, cultural, mechanical and biological. Emphasis will be placed on scouting and IPM strategies used in the horticultural industry.

ISC 1004C
Integrated Natural Science I
3.00 Credits
Students will examine integrative concepts in earth system science and environmental science. Topics include: the scientific method, the origin of the earth and life, geologic time processes/ phenomena, evolution, ecology, and biological/geochemical cycles. This course is inquiry based and fully integrated with both laboratory and field experiences which emphasize active learning strategies.

ISC 1005C
Integrated Natural Science II
3.00 Credits
Students will examine integrative concepts in earth system science and environmental science. Topics include: fossils and earth history, natural catastrophic events, classification of organisms, ecosystems and how they work, the atmosphere and environment. This course is inquiry based and fully integrated with both laboratory and field experiences which emphasize active learning strategies.
Prerequisite: ISC 1004C.

ISS 2930
Special Topics Interdisciplinary Social Science
3.00 Credits
This course focuses on in depth coverage of one or more topics that are not covered in great detail in other Social Science courses. The course stresses an interdisciplinary approach. Course content varies according to the interests of students and faculty. This course may be repeated one time for credit under a different topic.
Prerequisites: College level reading and writing skills are required.

ITA 1120
Elementary Italian I
4.00 Credits
Covers the fundamentals of reading, writing, listening and speaking the Italian language while developing an understanding of the Italian culture. Native speakers of Italian are encouraged to seek credit by exam test. College level reading and writing skills are required.

ITA 1121
Elementary Italian II
4.00 Credits
A continuation of ITA 1120, this course enhances skills learned in ITA 1120. Native speakers of Italian are encouraged to seek credit by exam test. College level reading and writing skills are required.
Prerequisite: ITA 1120 with a minimum grade of "C" or instructor's permission.

JOU 1400L
Journalism Lab
1.00 Credit
Provides practical experience through work on college publications under faculty supervision. This course may be repeated six times for credit.
Prerequisites: ENC 1101.

JOU 1949
Journalism Internship
3.00 Credits
A coordinated work study course involving classwork and field experience. Objectives determined by the student and the teacher coordinator will be used to evaluate the student. This course may be repeated six times for credit.
Prerequisite: ENC 1101.

LAH 1020
Survey Latin American History
3.00 Credits
To examine the major events in the history of Latin American countries from the colonial period to the present with special emphasis on social, cultural, political, and economic development.

LDE 1310
Irrigation & Water Management
3.00 Credits
Focuses on the major aspects of irrigation. Topics include water quality and treatment, irrigation design, installation tools and techniques, drainage and retention ponds, watering techniques for turf and plant quality, and conservation.

LIN 1670
English Grammar & Usage
3.00 Credits
Provides an intensive study of traditional grammar usage and mechanics for those students who desire to improve both their understanding and use of English. Provides an in depth review of grammar to returning students. Complements English composition courses. College level reading and writing skills are required.

LIN 1670H
Honors English Grammar & Usage
3.00 Credits
Same as LIN 1670 with honors content. Honors Institute permission required. College level reading and writing skills are required.
LIS 1004
Introduction Internet Research
1.00 Credit
This course is delivered via the World Wide Web and Internet mail. The course focuses on the methods of accessing information resources available through the Internet. Students will learn to design search strategies, retrieve resources, electronic journals, and electronic text, evaluate and cite Internet sources valuable for research purposes.

MAC 1105H
Honors College Algebra
3.00 Credits
Same as MAC 1105 with honors content.
Prerequisite: MAT 1033 with a minimum grade of C.

LIT 2110
World Literature to 1650
3.00 Credits
Focuses on the major periods and forms in literature from Greek and Roman Classicism through the Renaissance, excluding British and American literature. Topics will include the cultural background of each period and the distinctive characteristics of each style and genre.
Prerequisites: College level reading and writing skills required.

MAC 1114
Trigonometry
3.00 Credits
Major topics include trigonometric functions, their properties and graphs; inverse trigonometric functions, their properties and graphs; conditional trigonometric functions; solutions of triangles; vector algebra parametric equations; polar coordinates; applications. Previous credit for MAC 1147 precludes credit for MAC 1114.
Prerequisite: MAC 1105 with a minimum grade of C.

LIT 2110H
Honors World Literature to 1650
3.00 Credits
Same as LIT 2110 with honors content. Honors Institute permission required.
Prerequisites: College level reading and writing skills required.

MAC 1140
Pre Calculus Algebra
3.00 Credits
Major topics include polynomial, rational, and other algebraic functions, their properties and graphs; polynomial and rational inequalities; exponential and logarithmic functions, their properties and graphs; piecewise defined functions; conic sections; matrices and determinants; sequences and series; mathematical induction; binomial theorem; applications. Previous credit for MAC 1147 precludes credit for MAC 1140.
Prerequisites: MAC 1105 with a minimum grade of C.

LIT 2120
World Literature: 1650 to Present
3.00 Credits
Focuses on literature from the Renaissance to now. Prerequisites: College level reading and writing skills required.

MAC 1147
Pre Calculus Algebra and Trigonometry
5.00 Credits
Major topics include polynomial, rational, and other algebraic functions, their properties and graphs; polynomial and rational inequalities; exponential and logarithmic functions, their properties and graphs; piece wise defined functions; trigonometric functions of real numbers; radians and angles; identities in one and two variables; applications to right triangles and oblique triangles; trigonometric equations; polar representation of complex numbers; conic sections; matrices and determinants; vectors in the plane; parametric equations; sequences and series; mathematical induction; binomial theorem; applications. NOTE: A graphing calculator is required. College level math skills required. (Previous credit for MAC 1104, MAC 1114, MAC 1135, MAC 1140, precludes credit for MAC 1147.)
Prerequisite: MAC 1105 with a minimum grade of B.

MAC 2233
Calculus for Business and Social Science
3.00 Credits
Provides a review of functions and an introduction to limits, with an emphasis on differentiation and integration of algebraic, exponential and logarithmic functions. Topics are directed toward applications in business, economic, social and behavioral sciences. NOTE: A graphing calculator is required. Credit in MAC 2311 precludes credit for MAC 2233.
Prerequisite: MAC 1105 or MAC 1140 with a minimum grade of C.

LIT 2120H
Honors World Literature: 1650 to Present
3.00 Credits
Same as LIT 2120 with honors content. Honors Institute permission required.
Prerequisites: College level reading and writing skills required.

LIT 2370
Introduction Bible as Literature
3.00 Credits
Introduces the student to the study of the Bible from a literary point of view using current critical writings as a resource. As such, the course will establish a foundation for an understanding of the Old and New Testaments from an historical, philosophical and literary perspective. Alternative prerequisite: permission of the instructor.
Prerequisite: ENC 1101.

MAC 1114
Pre Calculus Algebra
3.00 Credits
Major topics include polynomial, rational, and other algebraic functions, their properties and graphs; polynomial and rational inequalities; exponential and logarithmic functions, their properties and graphs; piecewise defined functions; trigonometric functions of real numbers; radians and angles; identities in one and two variables; applications to right triangles and oblique triangles; trigonometric equations; polar representation of complex numbers; conic sections; matrices and determinants; vectors in the plane; parametric equations; sequences and series; mathematical induction; binomial theorem; applications. NOTE: A graphing calculator is required. College level math skills required. (Previous credit for MAC 1104, MAC 1114, MAC 1135, MAC 1140, precludes credit for MAC 1147.)
Prerequisite: MAC 1105 with a minimum grade of B.

MAC 1105
College Algebra
3.00 Credits
Provides students with the opportunity to gain algebraic knowledge needed for many fields such as engineering, business, science, computer technology, and mathematics. Graphical and numerical methods support the study of functions and their corresponding equations and inequalities. Students will study linear, quadratic, polynomial, rational, exponential, logarithmic, inverse, composite, radical, and absolute value functions; systems of equations and inequalities; modeling applied problems; and curve fitting techniques. Previous credit in any MAC class precludes credit in MAC 1105.
Prerequisite: MAT 1033 with a minimum grade of C.
MAC 2241
Calculus for the Life Sciences
5.00 Credits
This is a Calculus I course with a heavy emphasis on applications to biological systems. The basic concepts of Calculus, such as limits, continuity, derivatives, extreme value theorem, differentials, integration and the fundamental theorem, will be developed together with solutions techniques of both analytical and numerical nature. Differentiation and integration of algebraic, trigonometric, exponential, and logarithmic functions with applications to life sciences and other topics of interest to biology, psychology, pre medical, pre pharmacy, pre dental, and pre veterinary students will be covered. Students cannot receive credit for this course and also for MAC 2311 (Calculus I) or MAC 2233 (Calculus for Business). Prerequisites: MAC 1140, MAC 1114 or MAC 1147 with a minimum grade of C.

MAC 2311
Calculus and Analytic Geometry I
5.00 Credits
Focuses on limits, continuity, derivatives, extreme value theorem, mean value theorem, differentials, integration and the fundamental theorem, with an emphasis on sine, cosine and algebraic functions. Topics include rate of change, related rates, extreme values, curve sketching, areas, arc length, work, moments and center of mass, rectilinear motion, liquid pressure and volumes. NOTE: A graphing calculator is required. Prerequisites: College level math skills are required with a minimum grade of C.

MAC 2311H
Honors Calculus and Analytical Geometry I
5.00 Credits
Same as MAC 2311 with honors content. Honors Institute permission required.

MAC 2312
Calculus and Analytical Geometry II
5.00 Credits
A continuation of MAC 2311. Focuses on differentiation and integration of trigonometric, logarithmic, exponential and hyperbolic functions, integration techniques, indeterminate forms and improper integrals, sequences and series, polar coordinates, conics, rotation of axes and parametric equations. Prerequisite: MAC 2311 with a minimum grade of C.

MAC 2312H
Honors Calculus and Analytical Geometry II
5.00 Credits
Same as MAC 2312 with honors content. Honors Institute permission required. Prerequisite: MAC 2311 with a minimum grade of C.

MAC 2313
Calculus and Analytical Geometry III
5.00 Credits
A continuation of MAC 2312. Focuses on arc length and surface area, vectors in two and three dimensional space, planes, lines and surfaces in three dimensional space, functions of more than one variable, partial derivatives, double and triple integrals and their applications, cylindrical and spherical coordinates, vector fields, line integrals, Green’s theorem and Stoke’s theorem. Prerequisites: MAC 2312 with a minimum grade of C.

MAN 1021
Principles of Management
3.00 Credits
Presents basic management principles, including managerial duties and sound management practices.

MAN 1949
Management Internship
3.00 Credits
A coordinated work study course involving classwork and field experience. Objectives determined by the student and teacher coordinator will be used to evaluate the student. This course may be repeated six times for credit. Credit for this course does NOT apply to the Associate in Arts degree.

MAN 2604
Intercultural Relations in Business
3.00 Credits
Prepares students for entry level positions in international business; for those in the international business environment to broaden their knowledge and to acquire additional skills required for career advancement; and to provide academic opportunities for understanding intercultural relations in international business in the global economy of the world. Prerequisite: PSY 2012 or ANT 2000.

MAN 2761
Strategic Business Management & Leadership
3.00 Credits
This course examines techniques to creatively vision and analyze the future to prepare individuals and organizations for future opportunities and threats. Designed to familiarize students with techniques for analyzing the future, critical issues, how the future will impact them as individuals. This course will expand the concepts in MAN 1021, Principles of Management by focusing on strategies for effective planning management and leadership.

MAP 2302
Differential Equations
3.00 Credits
Covers first order differential equations including those with separable variables, homogeneous and exact equations and equations made by an integrating factor. Topics include linear differential equations of higher order and their solutions including both homogeneous and non homogeneous equations, differential operators, Laplace transforms, and series solutions and applications. Designed for engineering and mathematics majors. Prerequisite: MAC 2312 with a minimum grade of C.

MAR 1011
Principles of Marketing
3.00 Credits
An introduction to marketing, covering consumers, product development and pricing with an emphasis on decision making and marketing strategy.
MAR 2150
International Marketing
3.00 Credits
Offered as a required course for the International Business student to provide an understanding of international marketing concepts, trade organizations, cultural elements, business customs and practices, political and legal environment related to the international marketplace, marketing and distribution channels, promotions, market research, and market entry strategies. Credit for this course does NOT apply to the Associate in Arts degree.
Prerequisite: MAR 1011.

MAS 2103
Linear Algebra
3.00 Credits
Prerequisite: MAC 2312 with a minimum grade of C.

MAT 0012
Pre Algebra
4.00 Credits
Focuses on manipulative skills. Topics include prime numbers, prime factorization, the base ten number system, fractions, decimals and integers, square roots, exponents, use of percent, formulas, measurement, properties of triangles, order of operations, basic linear equations, and introductory algebra. Designed as a preparation for Beginning Algebra. This course does not satisfy general education requirements in math and is awarded compensatory credit only. All students who successfully complete this course are required to complete MAT 0024 and MAT 1033 before enrolling in their first general education mathematics course and are encouraged to do so in consecutive semesters.
Prerequisites: College level reading and writing skills are required.

MAT 0020
Integrated Arithmetic & Algebra
6.00 Credits
This course combines the arithmetic and algebra skills of MAT 0012 and MAT 0024. This course includes all mathematics skills necessary for entry into college level mathematics. Arithmetic topics include operations with real numbers, fractions, decimals, exponents, geometry measurement systems, percents and ratios. Algebra topics include polynomial operation, factoring, solving and graphing linear equations and inequalities, operations with quadratic equations, and applications of all concepts. This course does not satisfy general education requirements and generates compensatory credit only. Permission from instructor required.

MAT 0024
Beginning Algebra
4.00 Credits
Provides an introduction to algebra. Topics include basic linear equations, properties of real numbers, operations involving exponents and polynomials, factoring, quadratic equations, literal equations, systems of linear equations, rational expression equations, applications, graphing equations and inequalities, radical simplification and radical equations. This course does not satisfy general education requirements in math and is awarded compensatory credit only. All students who successfully complete this course are required to complete MAT 1033 before enrolling in their first general education mathematics course and are encouraged to do so in consecutive semester.
Prerequisite: MAT 0012.

MAT 1033
Intermediate Algebra
3.00 Credits
Topics include sets, relations, functions, polynomial operations, factoring, absolute value, rational expressions, equations (linear, quadratic, radical, rational), systems of equations, inequalities, exponents, radicals, graphs of linear equations and inequalities in two variables, complex numbers, and applications. Elective credit only. No credit given if student has prior credit for any MAC course. Prerequisites: MAT 0024C with a grade of C or better, or appropriate score on HCC placement test.

MCB 1000
Microbiology and Human Disease
3.00 Credits
Intended for Biology and Allied Health majors. Focuses on disease states, bacteria, viruses, fungi, rickettsiae and other pathogenic organisms. Topics will include problems of sterilization, infections, resistance, diagnostic testing and immunization.
Prerequisites: College level reading and writing skills are required.
Corequisite: MCB 1000L.

MCB 1000L
Microbiology Lab
1.00 Credits
A special fee will be charged for this course.
Prerequisites: College level reading and writing skills are required.
Corequisite: MCB 1000.

MCB 1060
Food Microbiology
3.00 Credits
This course offers detailed examination of the principles of food microbiology and their application to current food technology. Additional topics covered will be food and enzymes produced by microorganisms, food in relation to disease, food sanitation control and inspection and the Food Additives Amendment of the Federal Food, Drug and Cosmetic Act.
Corequisite: MCB 1060L.
**MCB 1060L**  
**Food Microbiology Lab**  
1.00 Credits  
This course is designed to accompany MCB 1060. Aseptic techniques and the culturing of microorganisms are presented. Various techniques for culturing foods, performing food counts, preparing food using microorganisms, and sampling the environment for microorganisms are presented.  
Corequisite: MCB 1060.

**MCB 2010**  
**General Microbiology**  
3.00 Credits  
Focuses on a survey of general topics in microbiology needed by students majoring in biology, microbiology and allied health. Emphasis is given to the structures, functions, classification, metabolism and genetics of microorganisms. The course explores the interaction between infectious microorganisms and the human body including a survey of typical infectious diseases.  
Prerequisite: BSC 1010.  
Corequisite: MCB 2010L.

**MCB 2010L**  
**Gen Microbiology Lab**  
1.00 Credit  
Prerequisites: BSC 1010L.  
Corequisites: MCB 2010.

**MET 2010C**  
**Meteorology**  
3.00 Credits  
A one semester course for non science majors that focuses on the physical properties and dynamics of the atmosphere. Topics include the origin and evolution of the atmosphere, storms and severe weather, weather forecasting and analysis, and the impact of weather and climate on mankind.  
Prerequisites: College level reading, writing and math skills are required.

**MGF 1106**  
**Math for Liberal Arts I**  
3.00 Credits  
Topics include finite and infinite sets, logic, deductive and inductive reasoning, geometry, counting methods, probability and statistics. Studying these topics will develop a broader base of mathematical knowledge and prepare students for the mathematics portion of the College Level Academic Skills Test (CLAST). This course may be used to satisfy part of the mathematics general education requirement for the A.A. degree.  
Prerequisite: MAT 1033.

**MGF 1106H**  
**Honors Math Liberal Arts I**  
3.00 Credits  
Same as MGF 1106 with honors content. Honors Institute permission required. Topics include finite and infinite sets, logic, deductive and inductive reasoning, geometry, counting methods, probability, statistics, and bases of number systems. These topics will be helpful in developing a broader base of mathematical knowledge and help prepare for the math portion of the CLAST. This course may be used to satisfy part of the mathematics general education requirement for the A.A. degree. 3 credit hours.  
Prerequisite: MAT 1033.

**MGF 1107**  
**Math for Liberal Arts II**  
3.00 Credits  
Topics will be chosen from the following: financial mathematics; sequences and series; elementary number theory; history of mathematics; linear and exponential growth; voting theory; chaos and fractals; reflections and translations in geometry; graph theory; game theory; and mathematical use of calculators and computers. These topics will be helpful in developing a broader base of mathematical knowledge. This course may be used to satisfy part of the mathematics general education requirement for the A.A. degree.  
Prerequisites: MAT 1033 with a minimum grade of C.

**MGF 1107H**  
**Honors Math Liberal Arts II**  
3.00 Credits  
Same as for MGF 1107 with honors content. Honors Institute permission required.

**MGF 1119**  
**Introduction Math with Applications**  
3.00 Credits  
This course is designed to provide a survey of mathematics topics to serve the AS degree programs. Focuses on sets, probability, statistics, metric measurement, geometry, syllogisms and consumer mathematics with an emphasis on problem solving, reasoning, and the use of a calculator. This course does NOT satisfy the general education mathematics requirement of AA and AS students and does not contain the CLAST topics of MGF 1106.  
Prerequisites: MAT 0024 with a minimum grade of C.

**MGF 2118**  
**CLAST Math Review**  
1.00 Credits  
Provides preparation for the College Level Academic Skills Test (CLAST), with an emphasis on CLAST competencies. Recommended for students who have failed the computational portion of the Progress Assessment Test.

**MKA 1041**  
**Introduction to Retailing**  
3.00 Credits  
Covers the retailing field from the perspective of a retail manager and is directed toward new employees and those involved in the total operation of the store. Topics include personnel, inventory and accounting management, buying, selling and displays. Credit for this course does NOT apply to the Associate in Arts degree.

**MKA 1949**  
**Marketing Internship**  
3.00 Credits  
A coordinated work study course involving class work and field experience. Objectives determined by the student and teacher coordinator will be used to evaluate the student. This course may be repeated six times for credit. Credit for this course does NOT apply to the Associate in Arts degree.
MKA 2021
Salesmanship
3.00 Credits
Covers the basic principles of selling, with an emphasis on finding and qualifying prospects, obtaining the sale and closing it. Techniques are taught through demonstrations, projects and case studies. Credit for this course does NOT apply to the Associate in Arts degree.

MKA 2105
Marketing Problems
3.00 Credits
Focuses on using marketing methods to solve merchandising problems. Credit for this course does NOT apply to the Associate in Arts degree.

MKA 2162
Creative Selling
3.00 Credits
Provides a comprehensive review of effective techniques and procedures for selling customer services. Upon successful completion of this course, the student should be able to describe the process of successful selling in the customer services environment. In addition, the student should be able to define the steps of selling and identify appropriate application. The student will also be able to apply selling principles through role play. Credit for this course does NOT apply to the Associate in Arts degree.

Prerequisites: College reading skills are required.

MMC 2000
Introduction Mass Communications
3.00 Credits
Provides an overview of the background, role, and responsibilities of the mass media; focuses on analyzing and evaluating techniques. Topics include print and electronic media and film.

MMC 2100
Writing for Mass Communication
3.00 Credits
Covers the basic techniques used in preparing copy for mass media including the fundamental journalistic skills used in writing for newspapers, magazines, radio, television, public relations and advertising. Prerequisites: MMC 2000 and college writing skills are required.

MNA 1162
Introduction Customer Service Technology
3.00 Credits
Describes the process of functioning effectively in a services economy. Defines and describes the nature and characteristics of services and the ways services need to be marketed due to their intangible core. Topics include service quality, the foundation of services marketing, and the success factors in service marketing. Credit for this course does NOT apply to the Associate in Arts degree.

MNA 1320
HR Recruitment Interviewing & Selecting
3.00 Credits
Provides a detailed overview of staffing activities crucial to organization performance. Within the context of current law and regulations, the focus will be on the assessment of staffing needs, recruitment strategies, interviewing techniques, selection tools and methods, planning and implementation of staffing policies. Credit for this course does NOT apply to the Associate in Arts degree.

MNA 1325
HR Statistical Analysis, Compensation and Benefits
3.00 Credits
An examination of the compensation systems in large and small organizations, the methods and implications of making wage and salary decisions, and the use of statistical analysis in decision making. Topics include: job analysis, job evaluation, wage surveys, incentives, pay equity, benefits and compensation strategy, and legal perspectives. Credit for this course does NOT apply to the Associate in Arts degree.

MSL 1001
Foundations of Officership
2.00 Credits
Examines the unique duties and responsibilities of officers, organization and role of the Army, review skills pertaining to fitness and communication, analyze Army values and expected ethical behavior.

MSL 1001L
Foundations of Officership Lab
Examine the unique duties and responsibilities of officers, organization and role of the Army, review skills pertaining to fitness and communication, analyze Army values and expected ethical behavior.

MSL 1002
Basic Leadership
2.00 Credits
Presents fundamental leadership concepts and doctrine, practice basic skills that underlie effective problem solving, examine the officer experience.

MSL 1002L
Basic Leadership Lab
Presents fundamental leadership concepts and doctrine, practice basic skills that underlie effective problem solving, examine the officer experience.

MSL 2101
Individual Leadership Studies
2.00 Credits
Develops knowledge of self, self confidence, and individual leadership skills, develop problem solving and critical thinking skills, apply communication, feedback, and conflict resolution skills.

MSL 2101L
Individual Leadership Lab
Develops knowledge of self, self confidence, and individual leadership skills, develop problem solving and critical thinking skills, apply communication, feedback, and conflict resolution skills.
MSL 2102
Leadership and Teamwork
2.00 Credits
Focuses on self development guided by knowledge of self and group processes, challenges current beliefs, knowledge, and skills.

MSL 2102L
Leadership and Teamwork Lab
Focuses on self development guided by knowledge of self and group processes, challenges current beliefs, knowledge, and skills.

MSL 2900
Army Physical Readiness
1.00 Credit
This course will train students in the unique role of Army physical readiness in sustaining military operations. Students will plan, prepare and conduct military fitness training. Student can receive one credit per semester for up to four semesters.

MTB 1103
Math for Business
3.00 Credits
Focuses on depreciation, overhead allocation, sales and property taxes, insurance, wages and payrolls, trade and cash discounts, markup and markdown, simple and compound interest, present value, bank discount, installment purchasing and annuities Credit for this course does NOT apply to the Associate in Arts degree.
Prerequisites: College level math skills are required.

MTB 1304
Graphing Calculator
1.00 Credits
Covers the basic use of graphing calculators with an emphasis on the TI86 calculators. Topics include: basic operations, evaluating expressions, tables, solving linear and nonlinear equations and inequalities, graphs of linear, polynomial, rational and piece wise defined functions, and identifying the characteristics of graphs. Graphing calculator required.
Prerequisites: College level math skills are required.

MTB 1327
Electronics Math
4.00 Credits
Focuses on the basic algebraic and trigonometric skills required in the study of electronics. Topics include algebraic operations, equations, and fractions. Also included are solving simultaneous linear equations, trigonometric functions, right triangle applications, vectors, phasor algebra, and logarithms. Credit for this course does NOT apply to the Associate in Arts degree. Prerequisites: College level math skills are required.

MTG 2204
Geometry for Teachers
3.00 Credits
Designed for middle and high school teachers, emphasizes Euclidean geometries. The problems, proofs, and constructions involve line segments, angles, triangles, polygons, circles, parallel lines and similarities. Credit for this course may not be used to meet General Education requirement for the A.A. degree.

MUL 1010
Introduction to Music
3.00 Credits
Covers the basic principles of music and techniques for listening to music, with an emphasis on Western music from the 17th century to the present.
Prerequisites: College level reading and writing skills are required.

MUM 1623
Electronic Music: Introduction MIDI
3.00 Credits
An introduction to electronic music composition through lecture and studio instruction, with an emphasis on the MIDI system, in conjunction with computers and the digital synthesizer.
Prerequisite: MUT 1111.

MUN 1120
Concert Band I
1.00 Credits
Provides for participation in a concert band which performs traditional and contemporary music. This course may be repeated four times for credit.

MUN 1310
Chorus
1.00 Credit
Provides for participation in a chorus which performs a variety of music at college and public functions. This course may be repeated four times for credit.

MUN 1340
Vocal Ensemble
1.00 Credits
Provides for participation in small performing groups and includes the study of traditional and contemporary music. This course may be repeated four times for credit.

MUN 1410
String Ensemble
1.00 Credit
Provides for participation in small instrumental groups and includes the study of traditional and contemporary music. This course may be repeated four times for credit.

MUN 1420
Woodwind Ensemble
1.00 Credits
Provides for participation in small instrumental groups and includes the study of traditional and contemporary music. This course may be repeated four times for credit.

MUN 1430
Brass Ensemble
1.00 Credits
Provides for participation in small instrumental groups and includes the study of traditional and contemporary music. This course may be repeated four times for credit.

MUN 1440
Percussion Ensemble
1.00 Credits
Provides for participation in small instrumental groups and includes the study of traditional and contemporary music. This course may be repeated four times for credit.
MUN 1450  
**Piano Ensemble**  
1.00 Credits  
Designed to assist the pianist in learning how to perform in ensemble with other musicians. Repertoire will include piano duet and duo piano works from the standard repertoire. May be repeated for credit each semester. Prerequisite: Approval of instructor.

MUN 1480  
**Classical Guitar Ensemble**  
1.00 Credits  
Open to all students, faculty and members of the community who play guitar. Enrollment is determined by the director through audition. Participants will study and perform music from all periods in preparation for public performance. May be taken six times for credit.  

MUN 1710  
**Stage Band I**  
1.00 Credit  
Provides for participation with a select group of musicians who perform contemporary jazz and stage band music. This course may be repeated four times for credit.  

MUO 1001  
**Musical Theatre Workshop I Theatre Workshop**  
2.00 Credits  
Open to those interested in Musical Theatre with approval of the instructor. Includes development of musical theatre repertoire, acting and movement performance skills. May include mock auditions or a public performance. This class is a performance class and participation is required. May be repeated for credit.  

MUS 1010  
**Recital Attendance**  
Students in this course are required to attend recitals and concerts approved by the Hillsborough Community College, Ybor City School of Visual and Performing Arts Music Department. This course is required of all students enrolled in Applied Music, principal instrument (or voice) courses. It is a non credit S/U (Satisfactory/Unsatisfactory) course.  

MUT 1001  
**Fundamentals of Music**  
3.00 Credits  
Focuses on music fundamentals for non music majors, with an emphasis on reading music, keys, scales, simple chords and their practical application.  

MUT 1111  
**Music Theory I**  
3.00 Credits  
Covers the rudiments of music, with an emphasis on major and minor scales, rhythmic and melodic notation, triads, intervals, cadences, chords and inversions and four part music writing. Topics include the development of aural and visual skills in music reading, rhythmic, melodic and harmonic dictation and the practical application of basic harmonic principles. Corequisite: MUT 1241L.  

MUT 1112  
**Music Theory II**  
3.00 Credits  
A continuation of MUT 1111. Corequisite: MUT 1242L.  

MUT 1241L  
**Sight Singing and Ear Training I**  
1.00 Credits  
Trains students to visually and aurally recognize the melodic, rhythmic and harmonic patterns studied in Theory I, translate patterns from aural stimulus to notation and visual/cognitive stimulus to performance in real time. Corequisite: MUT 1111.  

MUT 1242L  
**Sight Singing and Ear Training II**  
1.00 Credit  
Trains students to visually and aurally recognize the melodic, rhythmic and harmonic patterns studied in Theory II, translate patterns from aural stimulus to notation and visual/cognitive stimulus to performance in real time. Corequisite: MUT 1112.  

MUT 2116  
**Music Theory III**  
3.00 Credits  
Focuses on the development of music from Beethoven through the 20th century, with an emphasis on the techniques of four part harmonization, including triads and chords, with an introduction to counterpoint. Corequisite: MUT 2246L.  

MUT 2117  
**Music Theory IV**  
3.00 Credits  
A continuation of MUT 2116. Corequisite: MUT 2247L.  

MUT 2246L  
**Sight Singing/Ear Training III**  
1.00 Credit  
Trains students to visually and aurally recognize the melodic, rhythmic and harmonic patterns studied in Theory III, translate patterns from aural stimulus to notation and visual/cognitive stimulus to performance in real time. Corequisite: MUT 2116.  

MUT 2247L  
**Sight Singing/Ear Training IV**  
1.00 Credit  
Trains students to visually and aurally recognize the melodic, rhythmic and harmonic patterns studied in Theory IV, translate patterns from aural stimulus to notation and visual/cognitive stimulus to performance in real time. Corequisite: MUT 2117.
MVB 1011
Pre Principal Freshman Trumpet A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010, MUT 1001.

MVB 1011
Pre Principal Freshman Trumpet B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVB 1012
Pre Principal Freshman Horn A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010, MUT 1001.

MVB 1012
Pre Principal Freshman Horn B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVB 1013
Pre Principal Freshman Trombone A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010, MUT 1001.

MVB 1013
Pre Principal Freshman Trombone B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVB 1014
Pre Principal Freshman Baritone A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010, MUT 1001.

MVB 1014
Pre Principal Freshman Baritone B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.
MVB 1015
Pre Principal Freshman Tuba A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010, MUT 1001.

MVB 1015
Pre Principal Freshman Tuba B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVB 1211
Secondary Freshman Trumpet
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVB 1212
Secondary Freshman Horn
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVB 1213
Secondary Freshman Trombone
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVB 1214
Secondary Freshman Baritone
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVB 1215
Secondary Freshman Tuba
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVB 1311
Principles Freshman Trumpet
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVB 1312
Principles Freshman Horn
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVB 1313
Principles Freshman Trombone
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVB 1314
Principles Freshman Baritone Horn
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVB 1315
Principles Freshman Tuba
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.
MVB 2221
Secondary Sophomore Trumpet
1.00 Credits
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVB 2222
Secondary Sophomore Horn
1.00 Credits
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVB 2223
Secondary Sophomore Trombone
1.00 Credit
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVB 2224
Secondary Sophomore Baritone
1.00 Credit
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVB 2225
Secondary Sophomore Tuba
1.00 Credits
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVB 2322
Principles Sophomore Horn
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisites: MVB 1312.
Corequisite: MUS 1010.

MVB 2323
Principles Sophomore Trombone
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVB 1313.
Corequisite: MUS 1010.

MVB 2324
Principles Sophomore Baritone Horn
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVB 1314.
Corequisite: MUS 1010.

MVB 2325
Principles Sophomore Tuba
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVB 1315.
Corequisite: MUS 1010.

MVK 1011
Pre Principal Freshman Piano A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010, MUT 1001.

MVK 1011
Pre Principal Freshman Piano B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.
MVK 1111
Freshman Classical Piano
1.00 Credits
Covers beginning piano skills for non keyboard music majors by combining lecture and outside practice. This course may be repeated once for credit.

MVK 1211
Secondary Freshman Piano
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVK 1311
Principles Freshman Piano
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated four times for credit.

MVK 1811
Classical Piano/Non Music Majors
1.00 Credit
Beginning piano for the non music major. This course may be repeated once for credit.

MVK 2121
Sophomore Class Piano
1.00 Credit
Prepares the non keyboard music major in basic piano proficiency. This course may be repeated once for credit.
Prerequisite: MVK 1111.

MVK 2221
Secondary Sophomore Piano
1.00 Credit
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVK 2321
Principles Sophomore Piano
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVK 1311.
Corequisite: MUS 1010.

MVP 1011
Pre Principal Freshman Percussion A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010, MUT 1001.

MVP 1011
Pre Principal Freshman Percussion B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVP 1211
Secondary Freshman Percussion
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVP 1311
Principles Freshman Percussion
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated 1 time(s) for credit.
Corequisite: MUS 1010.

MVP 2221
Secondary Sophomore Percussion
1.00 Credits
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.
MVP 2321  
**Principles Sophomore Percussion**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.  
Prerequisite: MVP 1311.  
Corequisite: MUS 1010.

**MVS 1011**  
**Pre Principal Freshman Violin A**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisite: MUS 1010, MUT 1001.

**MVS 1011**  
**Pre Principal Freshman Violin B**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisite: MUS 1010.

**MVS 1012**  
**Pre Principal Freshman Viola A**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisites: MUS 1010, MUT 1001.

**MVS 1012**  
**Pre Principal Freshman Viola B**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisite: MUS 1010.

**MVS 1013**  
**Pre Principal Freshman Cello A**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisites: MUS 1010, MUT 1001.

**MVS 1013**  
**Pre Principal Freshman Cello B**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisite: MUS 1010.

**MVS 1014**  
**Pre Principal Freshman String Bass A**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisites: MUS 1010, MUT 1001.
MVS 1014  
**Pre Principal Freshman String Bass B**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisite: MUS 1010.

MVS 1016  
**Pre Principal Freshman Guitar A**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisites: MUS 1010, MUT 1001.

MVS 1016  
**Pre Principal Freshman Guitar B**  
2.00 Credits  
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'  
Corequisite: MUS 1010.

MVS 1116  
**Classical Guitar**  
1.00 Credit  
Guitar class: group instruction in beginning classical guitar techniques. May be repeated four times for credit.

MVS 1211  
**Secondary Freshman Violin**  
1.00 Credits  
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 1212  
**Secondary Freshman Viola**  
1.00 Credit  
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 1213  
**Secondary Freshman Cello**  
1.00 Credit  
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 1214  
**Secondary Freshman String Bass**  
1.00 Credit  
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 1216  
**Secondary Freshman Guitar**  
1.00 Credits  
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 1311  
**Principles Freshman Violin**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 1312  
**Principles Freshman Viola**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.  
Corequisite: MUS 1010.
MVS 1313  
**Principles Freshman Cello**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 1316  
**Principles Freshman Guitar**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 2211  
**Secondary Sophomore Violin**  
1.00 Credit  
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 2222  
**Secondary Sophomore Viola**  
1.00 Credit  
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 2223  
**Secondary Sophomore Cello**  
1.00 Credit  
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 2224  
**Secondary Sophomore String Bass**  
1.00 Credit  
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 2226  
**Secondary Sophomore Guitar**  
1.00 Credit  
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.  
Corequisite: MUS 1010.

MVS 2321  
**Principles Sophomore Violin**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contract hour weekly. This course may be repeated once for credit.  
Prerequisite: MVS 1311.  
Corequisite: MUS 1010.

MVS 2322  
**Principles Sophomore Viola**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.  
Prerequisite: MVS 1312.  
Corequisite: MUS 1010.

MVS 2323  
**Principles Sophomore Cello**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contract hour weekly. This course may be repeated once for credit.  
Prerequisite: MVS 1313.  
Corequisite: MUS 1010.

MVS 2324  
**Principles Sophomore String Bass**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.  
Prerequisite: MVS 1314.  
Corequisite: MUS 1010.

MVS 2326  
**Principles Sophomore Guitar**  
2.00 Credits  
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.  
Prerequisite: MVS 1316.  
Corequisite: MUS 1010.
MVV 1011
Pre Principal Freshman Voice A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010, MUT 1001.

MVV 1011
Pre Principal Freshman Voice B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVV 1111
Elementary Voice
1.00 Credit
Covers the fundamentals of voice production; designed as a secondary study for the applied piano music major, or as an elective for the non music major. This course may be repeated four times for credit.

MVV 1211
Secondary Freshman Voice
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_ 10XX level but still does not meet the requirements for entry to the MV_ 13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVV 1311
Principles Freshman Voice
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once.
Corequisite: MUS 1010.

MVV 2221
Secondary Sophomore Voice
1.00 Credit
This course is a continuation of MV_ 222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_ 10XX level but still does not meet the requirements for entry to the MV_ 13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVV 2321
Principles Sophomore Voice
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVV 1311.
Corequisite: MUS 1010.

MVW 1011
Pre Principal Freshman Flute A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisites: MUS 1010, MUT 1001.

MVW 1011
Pre Principal Freshman Flute B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVW 1012
Pre Principal Freshman Oboe A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisites: MUS 1010, MUT 1001.

MVW 1012
Pre Principal Freshman Oboe B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.
MVW 1013
Pre Principal Freshman Clarinet A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisites: MUS 1010, MUT 1001.

MVW 1013
Pre Principal Freshman Clarinet B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVW 1014
Pre Principal Freshman Bassoon A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisites: MUS 1010, MUT 1001.

MVW 1014
Pre Principal Freshman Bassoon B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVW 1015
Pre Principal Freshman Saxophone A
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisites: MUS 1010, MUT 1001.

MVW 1015
Pre Principal Freshman Saxophone B
2.00 Credits
This course is for the student who intends to be a music major, but who lacks the technique, music reading skills and/or performance experience proficiencies expected of a student wishing to register for the first semester college freshman level of applied music instruction. The course also serves those who are not music majors, but who wish to study an instrument on the college level. In such cases, enrollment is subject to space availability and instructor approval. Students may take two semesters, designated 'A' and 'B.'
Corequisite: MUS 1010.

MVW 1211
Secondary Freshman Flute
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVW 1212
Secondary Freshman Oboe
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVW 1213
Secondary Freshman Clarinet
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated once for credit.
Corequisite: MUS 1010.
MVW 1214
Secondary Freshman Bassoon
1.00 Credit
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVW 1215
Secondary Freshman Saxophone
1.00 Credits
This course is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVW 1311
Principles Freshman Flute
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVW 1312
Principles Freshman Oboe
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVW 1313
Principles Freshman Clarinet
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVW 1314
Principles Freshman Bassoon
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVW 1315
Principles Freshman Saxophone
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Corequisite: MUS 1010.

MVW 2221
Secondary Sophomore Flute
1.00 Credit
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVW 2222
Secondary Sophomore Oboe
1.00 Credits
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVW 2223
Secondary Sophomore Clarinet
1.00 Credit
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVW 2224
Secondary Sophomore Bassoon
1.00 Credit
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVW 2225
Secondary Sophomore Saxophone
1.00 Credit
This course is a continuation of MV_222X and is designed for the music major who wishes to study a secondary instrument, or for a student who has completed the MV_10XX level but still does not meet the requirements for entry to the MV_13XX level course. This course may be repeated 1 time for credit.
Corequisite: MUS 1010.

MVW 2321
Principles Sophomore Flute
2.00 Credits
Students must audition for placement in this course and will receive private instruction on one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVW 1311.
Corequisite: MUS 1010.
MVW 2322
Principles Sophomore Oboe
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVW 1312.
Corequisite: MUS 1010.

MVW 2323
Principles Sophomore Clarinet
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVW 1313.
Corequisite: MUS 1010.

MVW 2324
Principles Sophomore Bassoon
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVW 1314.
Corequisite: MUS 1010.

MVW 2325
Principles Sophomore Saxophone
2.00 Credits
Students must audition for placement in this course and will receive private instruction of one contact hour weekly. This course may be repeated once for credit.
Prerequisite: MVW 1315.
Corequisite: MUS 1010.

NMT 1002
Introduction Nuclear Medicine
3.00 Credits
Focuses on the history of nuclear medicine, nuclear medicine procedures, basic concepts of radioactivity, radiation detection, instrumentation, radiation safety and production of radio pharmaceuticals. Field trips to nuclear medicine training facilities are included. Credit for this course does NOT apply to the Associate in Arts degree.

NMT 1051
Nuclear Medicine Data Analysis
3.00 Credits
Presents concepts dealing with data acquisition and reduction relative to the practice of nuclear medicine technology. Credit for this course does NOT apply to the Associate in Arts degree.

NMT 1103
Introduction Patient Care
2.00 Credits
Covers the basic concepts of patient care with an overview of proper patient management. Credit for this course does NOT apply to the Associate in Arts degree.

NMT 1312
Radiation Safety and Health Physics
3.00 Credits
Covers proper techniques in the safe handling of radioactive materials, with an emphasis on proper receipt, usage, storage and disposal of radioactive materials. Topics include rules, standards, regulations and biological effects of radiation. Credit for this course does NOT apply to the Associate in Arts degree.
Prerequisite: NMT 1613

NMT 1534
Nuclear Instrumentation
3.00 Credits
Covers the basic operation of various radiation detection instruments including the Geiger Muller detector, analyzers, ionization chambers, scanners and cameras. Credit for this course does NOT apply to the Associate in Arts degree.
Corequisite: NMT 1534L

NMT 1534L
Nuclear Instrumentation Lab
1.00 Credits
Accompanies NMT 1534. Laboratory exercises include plotting gamma spectra, instrument calibration, detector resolution, simultaneous and radio nuclide quantification. Credit for this course does NOT apply to the Associate in Arts degree.
Corequisite: NMT 1543

NMT 1613
Nuclear Physics
3.00 Credits
Covers the basic concepts of atomic, nuclear and radiation physics with an emphasis on the interaction of radiation with matter. Alpha, beta and gamma sources are used with various detection devices to demonstrate these concepts. Credit for this course does NOT apply to the Associate in Arts degree.
Prerequisite: NMT 1051 or NMT 1002
Corequisite: NMT 1534

NMT 1713
Nuclear Medicine Methodology I
4.00 Credits
Teaches the foundations of nuclear medicine procedures. Emphasis is given to radiotracer methodology, preparation and properties of radiopharmaceuticals, routine imaging techniques, and radioimmunoassays. Prepares NMT students for the nuclear medicine practicum courses. Credit for this course does NOT apply to the Associate in Arts degree.

NMT 1723
Nuclear Medicine Methodology II
4.00 Credits
Teaches non imaging nuclear medicine procedures as well as some basic imaging methodologies. Special emphasis is given to hematology, ferrokinetics, endocrine functions, and the radioimmunoassay of hormones and drugs. The students are guided in the preparation of their term papers. Credit for this course does NOT apply to the Associate in Arts degree.
Prerequisite: NMT 1713