

INTL 21 History of Art: Native Arts of Mesoamerica and South America 4 Units

(Formerly International Studies 67.)

(See general education pages for the requirements this course meets.)

Advisory: English Writing 1A or English as a Second Language 5.

(Also listed as Arts 2H. Student may enroll in either department, but not both, for credit.)

Four hours lecture.

A general introduction to the visual arts of the indigenous cultures of Mesoamerica, an area extending from northern Mexico through Central America, and the Andean region of South America. This course covers diverse art forms, including architecture, ceramics, weaving, painting and sculpture from antiquity to the present. Topics addressing the religious, cultural, social, economic and political contexts of the art will be explored. Compares indigenous arts of the Americas to other world art traditions and assesses the contributions of indigenous cultures in a global context.

INTL 22 History of Art: Indigenous Arts of the World 4 Units

(See general education pages for the requirement this course meets.)

Advisory: English Writing 1A or English as a Second Language 5.

(Also listed as Arts 2J. Student may enroll in either department, but not both, for credit.)

Four hours lecture.

A general introduction to some of the many indigenous art traditions around the world, with emphasis placed upon traditional arts created for use in small-scale communities from the Americas, South Pacific region and Africa. Diverse art forms covered will include sculpture, painting, performance, ceramics, textiles and architecture from antiquity through the colonial period to the present. Topics addressing the religious, cultural, social, economic and political contexts of the art will be explored. Compares arts from indigenous peoples to other world art traditions and assesses the contributions of indigenous arts in a global context.

INTL 23 History of Art: Visual Arts of Islam 4 Units

(See general education pages for the requirement this course meets.)

Advisory: English Writing 1A or English as a Second Language 5.

(Also listed as Arts 2K. Student may enroll in either department, but not both, for credit.)

Four hours lecture.

An exploration of the visual arts of Islam in a global context, including comparative analysis of the arts from diverse regions of the Islamic world. Examines artistic traditions of calligraphy, miniature painting, textiles, decorative arts and architecture from the beginnings of the Islamic faith to the present, and Islamic contributions to world art history. Includes interdisciplinary analysis of Islamic visual arts, emphasizing the cultural and religious contexts, as well as issues related to gender and social class.

INTL 24 History of Art: Visual Arts of Africa 4 Units

(See general education pages for the requirement this course meets.)

Advisory: English Writing 1A or English as a Second Language 5.

(Also listed as Arts 2L. Student may enroll in either department, but not both, for credit.)

Four hours lecture.

A general introduction to the visual arts of Africa, covering diverse art forms, including sculpture, painting, performance, ceramics, textiles and architecture from antiquity through the colonial period to the present. Topics addressing the religious, cultural, social, economic and political contexts of the art will be explored. Compares arts from Africa to other world art traditions and assesses the contributions of African arts in a global context.

INTL 50 Global Issues and the United Nations 4 Units

(See general education pages for the requirement this course meets.)

Advisory: English Writing 1A or English as a Second Language 5.

Four hours lecture.

Overview of the origins, history, structure, and functions of the United Nations system. Processes, decisions, and actions by the United Nations for solving global problems pertaining to disarmament, peace, economic and social development, human rights, environment, poverty, health, education, women's rights, and decolonization will be examined.

Internet

See Computer Applications and Office Systems, Computer Information Systems, and Learning Center.)

Italian

ITAL 1 Elementary Italian (First Quarter) 5 Units

(See general education pages for the requirement this course meets.)

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Introduction to the language and cultures of the Italian speaking-countries. Basic speaking, listening, reading, and writing of Italian will be introduced and practiced within a cultural framework. Italian will be the primary language of instruction.

Emphasis will be on language as an expression of culture. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.

ITAL 2 Elementary Italian (Second Quarter) 5 Units

(See general education pages for the requirement this course meets.)

Prerequisite: Italian 1.

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Further development of material presented in Italian 1. Continuation of introduction to the language and cultures of the Italian-speaking countries. Elementary speaking, listening, reading, and writing of Italian will be continued and practiced within a cultural framework. Emphasis will be on language as an expression of culture. Language laboratory will be practiced to reinforce pronunciation, grammar, and syntax.

ITAL 3 Elementary Italian (Third Quarter) 5 Units

(See general education pages for the requirement this course meets.)

Prerequisite: Italian 2.

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Further development of material presented in Italian 1 and 2. Continuation of introduction to the language and cultures of the Italian-speaking countries. Elementary speaking, listening, reading, and writing of Italian will be continued and practiced within a cultural framework. Emphasis will be on language as an expression of culture. Language laboratory will be practiced to reinforce pronunciation, grammar, and syntax.

ITAL 4 Intermediate Italian (First Quarter) 5 Units

(See general education pages for the requirement this course meets.)

Prerequisite: Italian 1, 2, and 3.

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Further development of material presented in Italian 1, 2 and 3. Continuation of introduction to the language and cultures of the Italian-speaking countries. Intermediate speaking, listening, reading, and writing of Italian will be continued and practiced within a cultural framework. Emphasis will be on language as an expression of culture. Language laboratory will be practiced to reinforce pronunciation, grammar, and syntax.

Japanese

JAPN 1 Elementary Japanese (First Quarter) 5 Units

(Formerly Japanese 91.)

(See general education pages for the requirement this course meets.)

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Introduction to the language and the culture of Japan. Emphasis will be on language as the primary expression of culture. Practice of four basic skills of language (speaking, listening, reading and writing) within a cultural framework. Japanese will be the major language of instruction. Oral practice based on understanding of the language structure. Master one of the Japanese syllabic writing systems, hiragana. Begin to understand a second writing system, katakana. Language laboratory practice to reinforce pronunciation, grammar, syntax, and listening skills.

JAPN 2 Elementary Japanese (Second Quarter) 5 Units

(Formerly Japanese 92.)

(See general education pages for the requirement this course meets.)

Prerequisite: Japanese 1 or equivalent.

Five hours lecture, one hour laboratory.

Further development of material presented in Japanese 1. Continuation of introduction to the language and the culture of Japan. Emphasis will be on language as the primary expression of culture. Practice of four basic skills of language (speaking, listening, reading and writing) within a cultural framework. Oral practice based on understanding of the language structure. Continuation of the two Japanese syllabic writing systems, hiragana, and katakana. Start to recognize the third writing system, kanji--Sino-Japanese characters. Language laboratory practice to reinforce pronunciation, grammar, syntax, and listening skills.

JAPN 3 Elementary Japanese (Third Quarter) 5 Units

(Formerly Japanese 93.)

(See general education pages for the requirement this course meets.)

Prerequisite: Japanese 2.

Five hours lecture, one hour laboratory.

Further development of material presented in Japanese 1 and 2. Continuation of introduction to the language and culture of Japan. Emphasis will be on language as the primary expression of culture. Practice of four basic skills of language (speaking, listening, reading and writing) within a cultural framework. Oral practice based on understanding of the language structure. Increase in learning of the kanji writing system. Language laboratory practice to reinforce pronunciation, grammar, syntax, and listening skills.

JAPN 4 Intermediate Japanese (First Quarter) 5 Units*(Formerly Japanese 94.)**(See general education pages for the requirement this course meets.)**Prerequisite: Japanese 3.**Five hours lecture, one hour laboratory.*

Further development of material presented in Elementary Japanese. Continuation of studying the language and culture of Japan. Emphasis will be on language as the primary expression of culture. Practice of four skills of language (speaking, listening, reading and writing) within a cultural framework. Oral practice based on understanding of the language structure. Increase in learning of the kanji writing system. Language laboratory practice to reinforce pronunciation, grammar, syntax, and listening skills.

JAPN 5 Intermediate Japanese (Second Quarter) 5 Units*(Formerly Japanese 95.)**(See general education pages for the requirement this course meets.)**Prerequisite: Japanese 4.**Five hours lecture, one hour laboratory.*

Further development of material presented in Japanese 4. Continuation of studying the language and culture of Japan. Emphasis will be on language as the primary expression of culture. Practice of four skills of language (speaking, listening, reading and writing) within a cultural framework. Oral practice based on understanding of the language structure. Increased use of kanji in the writing system. Increase in learning idiomatic expressions that are uniquely Japanese. Language laboratory practice to reinforce pronunciation, grammar, syntax, and listening skills.

JAPN 6 Intermediate Japanese (Third Quarter) 5 Units*(Formerly Japanese 96.)**(See general education pages for the requirement this course meets.)**Prerequisite: Japanese 5.**Five hours lecture, one hour laboratory.*

Further development of material presented in Japanese 5. Continuation of studying the language and culture of Japan. Emphasis will be on language as the primary expression of culture. Practice of four skills of language (speaking, listening, reading and writing) within a cultural framework. Oral practice based on understanding of the language structure. Increased use of kanji in the writing system. Increase in learning idiomatic expressions that are uniquely Japanese. Language laboratory practice to reinforce pronunciation, grammar, syntax, and listening skills.

JAPN 50A Intermediate Conversation (First Quarter) 3 Units*Prerequisite: Japanese 90C.**Three hours lecture.*

The next course in the sequence following Japanese 90C. Designed for students who desire to learn natural spoken Japanese in a limited amount of time. Students use the language through speaking, listening, reading, and writing at the intermediate level. Aspects of business life and practical daily occurrences are dealt within this course. Third writing system Kanji is introduced.

JAPN 50B Intermediate Conversation (Second Quarter) 3 Units*Prerequisite: Japanese 50A.**Three hours lecture.*

The next course in the sequence following Japanese 50A. Designed for students who desire to learn natural spoken Japanese in a limited amount of time. Students use the language through speaking, listening, reading, and writing at the intermediate level. Aspects of business life and practical daily occurrences are dealt within this course. More Kanji characters are introduced.

JAPN 50C Intermediate Conversation (Third Quarter) 3 Units*Prerequisite: Japanese 50B.**Three hours lecture.*

The next course in the sequence following Japanese 50B. Designed for students who desire to learn natural spoken Japanese in a limited amount of time. Students use the language through speaking, listening, reading, and writing at the intermediate level. Aspects of business life and practical daily occurrences are dealt within this course. More Kanji characters are introduced.

JAPN 90A Introductory Japanese (First Quarter) 3 Units*Three hours lecture.*

A practical course designed for students with no previous background of Japanese language. The primary focus of this course is on the development of conversational skills. Lesson 1 through Lesson 10 will be covered. One of the three writing systems, Hiragana, is introduced.

JAPN 90B Introductory Japanese (Second Quarter) 3 Units*Prerequisite: Japanese 90A.**Three hours lecture.*

The next course in the introductory Japanese sequence following Japanese 90A. The primary focus of this course is on the development of conversational skills. Aspects of business life and practical, daily occurrences are dealt with. Lesson 11 through Lesson 20 will be covered. The second writing system, Katakana, is introduced.

JAPN 90C Introductory Japanese (Third Quarter) 3 Units*Prerequisite: Japanese 90B.**Three hours lecture.*

The next course in the introductory Japanese sequence following Japanese 90B. The primary focus of this course is on the development of conversational skills. Aspects of business life and practical, daily occurrences are dealt with. Lesson 21 through Lesson 30 will be covered.

Journalism

JOUR 2 Mass Communication and Its Impact On Society 4 Units*(See general education pages for the requirement this course meets.)**Advisory: English Writing 1A or English as a Second Language 5.**Four hours lecture, one additional hour to be arranged working in the Technical Writing/Journalism and Publications Laboratory and/or the English Writing Laboratory and/or the Writing and Reading Center.*

A survey of the mass media and measurement of its impact on culture and society. Mass media effects on global and American institutions. Theories of mass communications in the context of each medium: books, newspapers, magazines, movies, radio, recordings, television and the Internet. Ethical and legal implications of media and their effects on the individual and society. Influences of the media on gender, ethnic and minority issues.

*(CAN JOUR 4)***JOUR 21A News Writing and Reporting 3 Units***Prerequisite: Ability to keyboard; English Writing 1A or English as a Second Language 5.**Three hours lecture, one additional hour to be arranged working in the Technical Writing/Journalism and Publications Laboratory and/or the English Writing Laboratory and/or the Writing and Reading Center.*

Instruction and practice in reporting and the fundamentals of news writing, with analysis of typical news stories. Concentration on the language and style of news writing; organization and structure of news stories; the lead and basic story types. Practical writing experience.

JOUR 21B Feature Writing and Reporting 3 Units*Prerequisite: Ability to keyboard; English Writing 1A or English as a Second Language 5.**Three hours lecture, one additional hour to be arranged working in the Technical Writing/Journalism and Publications Laboratory and/or the English Writing Laboratory and/or the Writing and Reading Center.*

Fundamentals in feature writing for newspapers and magazines with instruction and practice in profile, human interest, consumer and interpretive news features. Practical experience in interviewing, writing special story types and revising. Freelancing a story for publication.

Journalism Production

Students are encouraged to enroll in only one of the 60 series courses per quarter; any deviation must be approved in advance by the instructor. San Jose State University will accept for journalism credit no more than 12 per quarter units in the Journalism 60 series. Any course in the series is open to non-journalism majors. While previous publications experience is desirable, it is not mandatory. See description of individual course for prerequisites.

JOUR 61 Newspaper Staff 3 Units*Prerequisite: Ability to typewrite.**Advisory: Journalism 21A or 21B.**Nine hours laboratory, one additional hour to be arranged working in the Technical Writing/Journalism and Publications Laboratory and/or the English Writing Laboratory and/or the Writing and Reading Center.**(May be taken six times, not to exceed 18 units, for credit.)*

Practical experience in covering and reporting news and features as members of the college newspaper staff. Staff includes reporters, editors, photojournalists and graphic artists.

JOUR 62 Newspaper Freelancing 1 Unit*Three hours laboratory, one additional hour to be arranged working in the Technical Writing/Journalism and Publications Laboratory and/or the English Writing Laboratory and/or the Writing and Reading Center.**(May be taken six times for credit.)*

Practical experience contributing as a freelancer to the college newspaper as a reporter, copy editor, columnist, graphic artist, photographer or other freelance position.

JOUR 63 Newspaper Advertising Staff 1 Unit*Three hours laboratory, one additional hour to be arranged working in the Technical Writing/Journalism and Publications Laboratory and/or the English Writing Laboratory and/or the Writing and Reading Center.**(May be taken six times for credit.)*

Experience in advertising as it relates to the college newspaper. Combines functions of advertising and business management. Introduction to advertising sales, design, production and billing.

JOUR 66W Special Topics in Journalism 1 Unit
JOUR 66X 2 Units
JOUR 66Y 3 Units
JOUR 66Z 4 Units

One hour lecture for each unit of credit, one additional hour to be arranged working in the Technical Writing/Journalism and Publications Laboratory and/or the English Writing Laboratory and/or the Writing and Reading Center. Complexity of topic determines number of units assigned.

(Any combination of Journalism 66W, 66X, 66Y and 66Z may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)

Pass-No Pass (P-NP) course.

Intensive study and analysis of a special topic in Journalism. Subjects vary.

JOUR 70W Special Projects in Journalism 1 Unit
JOUR 70X 2 Units
JOUR 70Y 3 Units
JOUR 70Z 4 Units

One hour lecture for each unit of credit.

(Any combination of Journalism 70W, 70X, 70Y, and 70Z may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)

Pass-No Pass (P-NP) course.

Special research, writing or study projects in Journalism as determined in consultation with the department chair.

Korean

KORE 1 Elementary Korean (First Quarter) 5 Units

(Formerly Korean 91.)

(See general education pages for the requirement this course meets.)

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Introduction to the Korean historical and cultural background of the language. Intensive oral practice of basic everyday language functions, written practice, including Hangul, to further understand grammatical and syntactical structures. Language laboratory practice to reinforce pronunciation, grammar and syntax.

KORE 2 Elementary Korean (Second Quarter) 5 Units

(Formerly Korean 92.)

(See general education pages for the requirement this course meets.)

Prerequisite: Korean 1 or one year of high school Korean.

Five hours lecture, one hour laboratory.

Further development of material presented in Korean 1. Intensive oral practice broadening the functions presented in Korean 1 and adding new ones. Greater emphasis on student generated discussion. More emphasis on cultural and historical background in the use of language. Written practice to further understanding of the underlying grammatical and syntactical structures. Language laboratory practice to reinforce pronunciation, grammar and syntax.

KORE 3 Elementary Korean (Third Quarter) 5 Units

(Formerly Korean 93.)

(See general education pages for the requirement this course meets.)

Prerequisite: Korean 2 or two years of high school Korean.

Five hours lecture, one hour laboratory.

Further development of material presented in Korean 1 and 2. Continuation of elementary language skills for oral and written communication in targeted language functions, with focus on greater structural accuracy and communicative competence. Understanding of Korean culture through the analysis of literature. Language laboratory practice to reinforce pronunciation, grammar and syntax.

KORE 4 Intermediate Korean (First Quarter) 5 Units

(Formerly Korean 94.)

(See general education pages for the requirement this course meets.)

Prerequisite: Korean 3 or three years of high school Korean.

Five hours lecture, one hour laboratory.

Review of grammar and discussion of grammatical features beyond the elementary level. Development of reading, writing, speaking and listening skills at the first intermediate level. Reading and discussion of texts dealing with Korean literature, arts, history and culture. Language laboratory practice.

KORE 5 Intermediate Korean (Second Quarter) 5 Units

(Formerly Korean 95.)

(See general education pages for the requirement this course meets.)

Prerequisite: Korean 4.

Five hours lecture, one hour laboratory.

Review of grammar and discussion of grammatical features beyond the elementary level. Development of reading, writing, speaking and listening skills at the second intermediate level. Reading and discussion of texts dealing with Korean literature, arts, history and culture. Language laboratory practice.

KORE 6 Intermediate Korean (Third Quarter) 5 Units

(Formerly Korean 96.)

(See general education pages for the requirement this course meets.)

Prerequisite: Korean 5.

Five hours lecture, one hour laboratory.

Continuation of Korean 5. Review of grammar and discussion of grammatical features beyond the elementary level. Development of reading, writing, speaking and listening skills at the third intermediate level. Reading and discussion of texts dealing with Korean literature, arts, history and culture. Language laboratory practice.

Language Arts

LART 100 Integrated Reading and Writing 10 Units

Prerequisite: Qualifying score on Reading and Writing placement test or

successful completion of Language Arts 200, or Reading 200, and/or English Writing 200.

Corequisite: Language Arts 100 students must also enroll in Language Arts 170 or English Writing 101 and Reading 101 according to schedule.

Ten hours lecture.

Pass-No Pass (P-NP) course.

Integration of reading and writing skills necessary for success in college level courses. Emphasis on analysis and criticism of assigned readings and written responses to critical questions about those readings.

LART 170 Guided Practice in Developmental Reading and Writing 1 Unit

Prerequisite: Qualifying score on the English placement test or successful completion of English Writing 200/201 and Reading 200/202.

Corequisite: Language Arts 170 students must also enroll in English Writing 100 and/or Reading 100, or Language Arts 100.

Two hours lecture-laboratory.

Pass-No Pass (P-NP) course.

Development and integration of reading and writing skills necessary for college level reading and essay writing. Includes critical thinking, inferential reading comprehension, and analytical response essay writing.

LART 200 Developing Reading and Writing Connections 10 Units

Credit course - Does not apply to De Anza Associate degree.

(Not open to students who have completed Reading 200 and/or English Writing 200.) Prerequisite: Qualifying score on the Reading and Writing placement test.

Ten hours lecture.

(May be taken twice for credit.)

Pass-No Pass (P-NP) course.

Development of reading and writing abilities to the level necessary to be successful in Reading 100 and English Writing 100. Comprehension of assigned readings. Writing focused on a central idea, developed with specific examples, organized according to a reasonably clear progression of ideas and largely free of major grammatical, syntactic, usage and diction errors.

Learning Assistance

LRNA 77 Special Projects in Learning Assistance 1 Unit
LRNA 77X 2 Units

(Formerly Learning Assistance 99 and 99W.)

Credit course - Does not apply to De Anza Associate degree.

Two hours lecture-laboratory for each unit of credit.

(Any combination of Learning Assistance 77 and 77X may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)

Pass-No Pass (P-NP) course.

Special reading, writing, or study projects in Learning Assistance as determined in consultation with the instructor. Student must concurrently work as a tutor (for pay or volunteer) at the De Anza College Tutorial Center, or similar organization, as determined by the instructor.

LRNA 97 Introduction to Peer Tutoring in Writing 3 Units

Advisory: English Writing 1A or English as a Second Language 5.

(Also listed as English Writing 97. Student may enroll in either department, but not both, for credit.)

Three hours lecture.

Required training for De Anza writing tutors. Introduction to the theory and practice of tutoring writing, including strategies and approaches to help students from diverse linguistic backgrounds at various stages of the writing process. Students read about, observe, discuss, write about and practice the craft of tutoring writing. After an initial orientation, students in the class begin tutoring, and reflect on their tutoring experiences as part of the class.

LRNA 98 Tutor Training 1 Unit

Credit course - Does not apply to De Anza Associate degree.

Advisory: Must be selected to work as a De Anza tutor.

One hour lecture.

Pass-No Pass (P-NP) course.

Required of all De Anza group and individual tutors during their first quarter of tutoring. Strategies and communications skills to help peer tutors conduct productive, effective, and fun tutoring sessions. Experience reflecting on instructional and learning theory and practicing theory-based tutoring techniques. Strategies for working with students from diverse backgrounds and with various learning styles. Self-reflection and peer feedback on actual tutoring sessions.

LRNA 100 Supervised Learning Assistance 0 Units

Non-credit course - Does not apply to De Anza Associate degree.

Two hours lecture-laboratory.

(No limit on repeatability for 0 unit classes.)

Pass-No Pass (P-NP) course.

Learning assistance to students in need of special supplemental instruction for specific courses.

Learning Center

LCEN 50 Introduction to Online Research 1 Unit

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Two hours lecture-laboratory.

This course will teach skills needed to find, evaluate, and use information found on the Internet and other electronic databases.

LCEN 51 Business Resources on the World Wide Web 1 Unit

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; experience with Macintosh or Windows operating systems.

Two hours lecture-laboratory.

Locate, examine, and evaluate business-related sites available on the World Wide Web.

LCEN 53 Advanced Internet Search Techniques 1 Unit

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; experience with Macintosh or Windows operating systems.

Two hours lecture-laboratory.

Go beyond general web searching to find the best information available on your topic. Learn to refine and focus your search and use specialized search tools available on the World Wide Web.

Linguistics

LING 1 Introduction to Linguistics 4 Units

(See general education pages for the requirement this course meets.)

Advisory: English Writing 1A or English as a Second Language 5.

(Also listed as English Literature 25. Student may enroll in either department, but not both, for credit.)

Four hours lecture.

Introduction to the nature of language. Origin and development of spoken and written languages, how people learn languages, and how languages change, with emphasis on the history of English. Basics of linguistic description including systems of phonetics and phonology, semantics, morphology and syntax. Study of general linguistic principles as they apply across languages.

Mandarin

MAND 1 Elementary Mandarin (First Quarter) 5 Units

(See general education pages for the requirement this course meets.)

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Introduction to the language and cultures of Mandarin-speaking countries and communities. Basic speaking, listening, reading, and writing of Mandarin will be introduced and practiced within a cultural framework. Mandarin will be the primary language of instruction. Emphasis will be on language as an expression of culture and a medium of communication. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.

MAND 2 Elementary Mandarin (Second Quarter) 5 Units

(See general education pages for the requirement this course meets.)

Prerequisite: Mandarin 1.

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Further development of material presented in Mandarin 1. Continuation of introduction to the language and cultures of Mandarin-speaking countries and communities.

Speaking, listening, reading, and writing of Mandarin will be continued and practiced within a cultural framework. Mandarin will be the primary language of instruction. Emphasis will be on language as an expression of culture and a medium of communication. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.

MAND 3 Elementary Mandarin (Third Quarter) 5 Units

(See general education pages for the requirement this course meets.)

Prerequisite: Mandarin 2.

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Five hours lecture, one hour laboratory.

Further development of material presented in Mandarin 1 and 2. Completion of introduction to the language and cultures of Mandarin-speaking countries and communities. Basic speaking, listening, reading, and writing of Mandarin will be introduced and practiced within a cultural framework. Mandarin will be the primary language of instruction. Emphasis will be on language as an expression of culture and a medium of communication. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.

MAND 4 Intermediate Mandarin (First Quarter) 5 Units

(Formerly Mandarin 94.)

(See general education pages for the requirement this course meets.)

Prerequisite: Mandarin 3 or demonstrated proficiency in the language competency description of level three.

Five hours lecture, one hour laboratory.

Read and discuss texts dealing with geography, history, social and cultural practices of the Chinese-speaking world. Review the linguistic functions and grammatical structures of first-year Chinese. Speaking, listening, reading, and writing of Mandarin will be introduced and practiced within a cultural framework. Mandarin will be the primary language of instruction. Emphasis will be on language as an expression of culture and a medium of communication. Develop reading, listening, speaking and writing skills at the high intermediate level. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.

MAND 5 Intermediate Mandarin (Second Quarter) 5 Units

(Formerly Mandarin 95.)

(See general education pages for the requirement this course meets.)

Prerequisite: Mandarin 4 or demonstrated proficiency in the language competency description of level four.

Five hours lecture, one hour laboratory.

Continuation of Mandarin 4. Read and discuss texts dealing with geography, history, social and cultural practices of the Chinese-speaking world. Review the linguistic functions and grammatical structures of intermediary Chinese. Speaking, listening, reading, and writing of Mandarin will be introduced and practiced within a cultural framework. Mandarin will be the primary language of instruction. Emphasis will be on language as an expression of culture and a medium of communication. Develop reading, listening, speaking and writing skills at the low advanced level. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.

MAND 6 Intermediate Mandarin (Third Quarter) 5 Units

(Formerly Mandarin 96.)

(See general education pages for the requirement this course meets.)

Prerequisite: Mandarin 5 or demonstrated proficiency in the language competency description of level five.

Five hours lecture, one hour laboratory.

Continuation of Mandarin 5. Read, discuss and analyze texts dealing with arts, geography, history, literature, social and cultural practices of the Chinese-speaking world. Review the linguistic functions and grammatical structures of intermediary Chinese. Speaking, listening, reading, and writing of Mandarin will be introduced and practiced within a cultural framework. Mandarin will be the primary language of instruction. Emphasis will be on language as an expression of culture and a medium of communication. Develop reading, listening, speaking and writing skills at the advanced level. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.

Manufacturing and CNC Technologies

MCNC 56 Special Projects in Manufacturing and CNC 1 Unit

MCNC 56X 2 Units

MCNC 56Y 3 Units

(Formerly Manufacturing and Design Technology 56, 56X,Y.)

Prerequisite: Approved special projects contract and appropriate technical background to support the completion of project objectives.

Three hours laboratory for each unit of credit.

(Any combination of Manufacturing and CNC 56, 56X, and 56Y may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)

Projects advancing student's knowledge and experience in a selected area of Manufacturing and CNC Technology. Project type and design will be determined through consultation with the instructor.

MCNC 61A Survey of Writing and Data Communications 2 Units

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263, or equivalent, keyboarding skills 40 words/minute minimum.

Four hours lecture-laboratory.

The application of word processing and spreadsheet programs to communicate technical information used in various fields of technology including manufacturing, product design, nursing, and similar disciplines.

MCNC 61B Project Designer's Portfolio 2 Units

Prerequisite: Manufacturing and CNC 61A with a grade of C or better.

Four hours lecture-laboratory.

Overview of the steps and procedures required to plan, develop and promote a manufactured product or business related project. Completion of a project designer's portfolio for submission to potential employers.

MCNC 62A Technical Calculations 2 Units

(Formerly Manufacturing and Design Technology 62A.)

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Four hours lecture-laboratory.

The application of fundamental mathematics to various fields of technology including machining, automotive, sheet metal, and similar disciplines. Review and development of arithmetic skills, introduction of basic algebraic concepts and metric conversion. The use of a scientific calculator in problem solving will be emphasized.

MCNC 62B Technical Calculations 2 Units

(Formerly Manufacturing and Design Technology 62B.)

Prerequisite: Manufacturing and CNC 62A.

Four hours lecture-laboratory.

The application of fundamental mathematics to various fields of technology including machining, automotive, mechanical drafting, sheet metal, nursing and similar disciplines. Review and development of algebraic skills, plane geometry, geometric constructions, and trigonometric concepts. The use of a scientific calculator in problem solving is essential.

MCNC 62C Advanced Technical Calculations 2 Units

Prerequisite: Manufacturing and CNC 62B with a grade of C or better.

Four hours lecture-laboratory.

Review and development of fundamental algebraic operations on real numbers and real variables with emphasis on linear functions and equations, polynomials, rational expressions and equations, and plane geometry. Elementary trigonometry and their applications as they relate to applied technologies.

MCNC 63A Automotive Mechanisms 3 Units

Prerequisite: Approved Automotive Technology Course Sequence Contract.

Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173 ; Mathematics 101 or 112.

(Also listed as Automotive Technology 53A. Student may enroll in either course, but not both, for credit.)

Six hours lecture-laboratory per week. Seventy two hours lecture-laboratory per quarter.

The application of physical principles to the operation of mechanical, hydraulic, and hydromechanical systems, using an applied physics technique.

MCNC 63B Automotive Electromechanical Systems 2 Units

Prerequisite: Approved Automotive Technology Course Sequence Contract.

Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173 ; Mathematics 101 or 112.

(Also listed as Automotive Technology 53B. Student may enroll in either course, but not both, for credit.)

Four hours lecture-laboratory per week. Forty-eight hours lecture-laboratory per quarter.

(Any combination of Automotive Technology 53B and Manufacturing and CNC 63B may be taken three times for credit.)

Electrical theories, testing and measuring procedures, circuit construction and schematic interpretation. Application of the principles of magnetism. Fundamentals of operation of semiconductors used as electronic devices and controls.

MCNC 64 Manufacturing Materials and Processes 4 Units

(Formerly Manufacturing and Design Technology 64.)

Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173 ; Manufacturing and CNC 62A or Mathematics 101 or 112.

Two hours lecture, four hours lecture-laboratory.

Applied materials and process analysis, materials and process selection techniques. The role of metals, polymers, ceramics and composites in the casting, molding, forging, forming, machining, joining, and heat and surface treatment processes.

MCNC 71 Introduction to Machining and CNC Processes 4 1/2 Units

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Nine hours lecture-laboratory.

Manufacturing lab safety. Precision measuring tools and practices. Basic manual machine operations: pedestal grinders, drill presses, saws, lathes and milling machines. Threads: types, applications and use of taps and dies. Computer Numerical Control (CNC) mills: axis moves, cutters, tooling, basic setup and controller functions. Cutter and machine speed and feed calculations.

MCNC 72 Applied Geometric Inspection Dimensioning and Tolerancing (ANSI Y14.5m); Coordinate Measuring Machines (CMM) 3 Units

(Formerly Manufacturing and Design Technology 72.)

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; experience in blueprint reading.

Six hours lecture-laboratory.

Interpretation of specifications and inspection procedures related to current ASME Y 14.5 Geometric Dimensioning and Tolerancing (GD&T) standards. Applications and capabilities of precision measuring tools, including the computer-aided Coordinate Measuring Machine (CMM), used in manufacturing environments to inspect discrete complex parts. Machine and inspected part setup for measuring form, orientation, and position callouts.

MCNC 74A Survey of Computer Drawings 2 Units

(Formerly Manufacturing and Design Technology 54E.)

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Four hours lecture-laboratory.

(May be taken twice for credit if software is different each time.)

Principles and applications of computer drawings using industry standard software. Emphasis on 3-D and articulated drawings.

MCNC 74B Survey of Computer Aided Design 2 Units

(Formerly Manufacturing and Design Technology 54F.)

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; Mathematics 200 or 210 or equivalent.

Four hours lecture-laboratory.

Principles and applications of computer aided design (CAD) using industry standard software. Emphasis on 2D drawings.

MCNC 74D Survey of Industrial Mechanisms 2 Units

Prerequisite: Manufacturing and CNC 62B and 74B with a grade of C or better, or equivalent.

Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Four hours lecture-laboratory.

The application of basic physical principles to the operation and design of mechanical and hydraulic mechanisms.

MCNC 75A Introduction to Computer-Aided Numerical Control (CNC) Programming and Operation; Mills 4 1/2 Units

Advisory: Manufacturing and CNC 71 or experience in machining processes;

English Writing 200 and Reading 200 (or Language Arts 200), or English as a

Second Language 261, 262 and 263.

Nine hours lecture-laboratory.

Introduction to mill tool path programming using G and M code format. CNC systems and components including machine controller functions and operations. Program entry, editing, and back plotting. Calculation for mill and lathe cutter compensation. Precision inspection techniques and basic mill setups, including cutting tool selection, and work holding.

MCNC 75B Computer-Aided Numerical Control (CNC) Programming and Operation; Lathes, Advanced Mills 4 1/2 Units

Prerequisite: Manufacturing and CNC 75A with a grade of C or better or equivalent.

Nine hours lecture-laboratory.

Introduction to lathe tool path programming using word address format, including coordinate system, cutter compensation and canned cycles. Advanced mill programming; sub programs, work coordinate system and use of macros. Program entry, editing, and back plotting. Machine controller functions and operations. Single point threading and Unified thread form classes and measurement. Cutting tool insert selection.

MCNC 76A CAD/CAM Based Computer Numerical Control Programming Using Mastercam 4 1/2 Units

(Students may receive credit for one Manufacturing and CNC 76 course with an A through E designation.)

Advisory: Basic understanding of mill and lathe operations; English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.

Nine hours lecture-laboratory.

Three-axis mill programming; creating part geometry, defining tools and tool paths, and using post-processors to produce word-address format programs.

MCNC 76B CAD/CAM Based Computer Numerical Control Programming Using Mastercam 4 1/2 Units
 (Students may receive credit for one Manufacturing and CNC 76 course with an A through E designation.)
 Advisory: Basic understanding of mill and lathe operations; English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
 Nine hours lecture-laboratory.
 Three-axis mill programming; creating part geometry, defining tools and tool paths, and using post-processors to produce word-address format programs.

MCNC 76F Advanced CAD/CAM Based Computer Numerical Control Programming Using Mastercam 4 1/2 Units
 (Students may receive credit for one Manufacturing and CNC 76 course with an F through J designation.)
 Prerequisite: Manufacturing and CNC 76A.
 Nine hours lecture-laboratory.
 Advanced programming procedures using wireframe, surface and solid models. Editing, post-processing, verifying and running programs on CNC machines.

MCNC 76G Advanced CAD/CAM Based Computer Numerical Control Programming Using Mastercam 4 1/2 Units
 (Students may receive credit for one Manufacturing and CNC 76 course with an F through J designation.)
 Prerequisite: Manufacturing and CNC 76B.
 Nine hours lecture-laboratory.
 Advanced programming procedures using wireframe, surface and solid models. Editing, post-processing, verifying and running programs on CNC machines.

MCNC 77 Machining Practices Using Conventional Machine Tools, Tool Design, Abrasive Machining 4 1/2 Units
 Prerequisite: Manufacturing and CNC 71 with a grade of C or better or equivalent.
 Nine hours lecture-laboratory.
 Advanced machining practices using conventional machine tools. Introduction to fixture design including location and clamping methods and computation of fits and allowances. Abrasive machining.

MCNC 200 Open Manufacturing and CNC Technology Laboratory 1/2 Unit
MCNC 200X 1 Unit
MCNC 200Y 1 1/2 Units
MCNC 200Z 2 Units
 (Formerly Manufacturing and CNC Technologies 100, 100X-Z.)
 Corequisite: Manufacturing and CNC 200 and 200X-Z students must also enroll in any Manufacturing and CNC Technology course.
 Three hours laboratory for each unit of credit.
 (May be repeated as long as the corequisite is satisfied.)
 Pass-No Pass (P-NP) course.
 Use of Manufacturing and CNC Technology labs for those who need/desire more time to complete machining and/or CNC programs, projects and exercises.

Mathematics

MATH 1A Calculus 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 49B (with a grade of C or better), or appropriate score on Calculus Placement Test within the past calendar year.
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.
 Five hours lecture.
 Fundamentals of differential calculus.

(MATH 1A + 1B = CAN MATH 18) (MATH 1A + 1B + 1C = CAN MATH SEQ B) (MATH 1A + 1B + 1C + 1D = CAN MATH SEQ C)

MATH 1B Calculus 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 1A and Mathematics 49B, both, with a grade of C or better; or appropriate score on Calculus Placement Test within the past calendar year.
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.
 Five hours lecture.
 Fundamentals of integral calculus.

(MATH 1A + 1B = CAN MATH 18) (MATH 1A + 1B + 1C = CAN MATH SEQ B) (MATH 1A + 1B + 1C + 1D = CAN MATH SEQ C)

MATH 1C Calculus 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 1B with a grade of C or better; or equivalent.
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.
 Five hours lecture.

Infinite series, lines and surfaces in three dimensions, vectors in two and three dimensions, parametric equations of curves. Derivatives and integrals of vector functions.

(CAN MATH 20) (MATH 1A + 1B + 1C = CAN MATH SEQ B) (MATH 1A + 1B + 1C + 1D = CAN MATH SEQ C)

MATH 1D Calculus 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 1C with a grade of C or better; or equivalent.
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.
 Five hours lecture.
 Partial derivatives, Multiple Integrals, Vector Calculus.

(CAN MATH 22) (MATH 1A + 1B + 1C + 1D = CAN MATH SEQ. C)

MATH 2A Differential Equations 5 Units
 (Formerly Mathematics 2C.)
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 1D with a grade of C or better.
 Five hours lecture.
 Ordinary differential equations and selected applications.

(CAN MATH 24)

MATH 2B Linear Algebra 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 1D with a grade of C or better.
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.
 Five hours lecture.
 Linear algebra and selected topics of mathematical analysis.

(CAN MATH 26)

MATH 10 Elementary Statistics and Probability 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 105 or 114 with a grade of C or better; or qualifying score on Intermediate Algebra Placement Test within the past calendar year.
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.
 Five hours lecture.
 Introduction to data analysis making use of graphical and numerical techniques to study patterns and departures from patterns. The student studies randomness with an emphasis on understanding variation, collects information in the face of uncertainty, checks distributional assumptions, tests hypotheses, uses probability as a tool for anticipating what the distribution of data may look like under a set of assumptions, and uses appropriate statistical models to draw conclusions from data. The course introduces the student to applications in engineering, business, economics, medicine, education, the sciences, and those pertaining to issues of contemporary interest. The use of technology (computers or graphing calculators) will be required in certain applications. Where appropriate, the contributions to the development of statistics by men and women from diverse cultures will be introduced.

(CAN STAT 2)

MATH 11 Finite Mathematics 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Qualifying score on the Math Placement Test within the past calendar year; or Mathematics 105 or 114 with a grade of C or better.
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.
 Five hours lecture or; Four hours lecture and three hours laboratory or; Four hours lecture and two hours lecture-laboratory.

Application of linear equations, sets, matrices, linear programming, mathematics of finance and probability to real-life problems. Emphasis on the understanding of the modeling process, and how mathematics is used in real-world applications.
 (CAN MATH 12)

MATH 12 Introductory Calculus for Business and Social Science 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 11.
 Five hours lecture.

Introduction to limits, differentiation, and integration of single variable functions. Differentiation of multivariate functions. Applications in business, economics, and social science.
 (CAN MATH 34)

MATH 22 Discrete Mathematics 5 Units
 (See general education pages for the requirement this course meets.)
 Prerequisite: Mathematics 49A with a grade of C or better, or equivalent.
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.
 Five hours lecture.

Elements of discrete mathematics with applications to computer science. Topics include methods of proof, mathematical induction, logic, sets, relations, graphs, combinatorics, and Boolean algebra.
 (CAN CSCI 26)

MATH 23	Engineering Statistics	5 Units	MATH 77	Special Projects in Mathematics	1 Unit
	(See general education pages for the requirement this course meets.)		MATH 77X		2 Units
	Prerequisite: Mathematics 1C with a grade of C or better.		MATH 77Y	(Formerly Mathematics 40, 40X, and 40Y.)	3 Units
	Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.			Three hours laboratory for each unit of credit.	
	Five hours lecture.			(Any combination of Mathematics 77, 77X, and 77Y may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)	
	The collection and analysis of information making use of graphical and numerical techniques; the student studies discrete, continuous, cumulative, and joint probability distribution functions and makes use of statistical inference, experimental design, and equation fitting, when appropriate. The course exposes the student to a variety of engineering applications. Certain applications require the use of technology (computers or graphing calculators). Engineering Statistics is a relatively new area of statistics developed in approximately the last 30 years.			Pass-No Pass (P-NP) course.	
				Individual special reading, writing, or study projects in mathematics as determined in consultation with the instructor.	
MATH 44	Introduction to Contemporary Mathematics	5 Units	MATH 104	Applied Algebra Plus	7 Units
	(See general education pages for the requirement this course meets.)			(Student may not receive credit for Mathematics 104 and 112.)	
	Prerequisite: Qualifying score on the Intermediate Algebra Placement Test within the past calendar year; or Mathematics 105 or 114 with a grade of C or better.			Prerequisite: Qualifying score on the Math Placement Test within the last calendar year; or Mathematics 200 or 210.	
	Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.			Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.	
	Five hours lecture.			Seven hours lecture; or five hours lecture, four hours lecture-laboratory.	
	A survey of selected topics from contemporary mathematics, including problem solving techniques and connections between mathematics and culture. Includes a selection of introductory topics from symmetry; graph theory; chaos and fractals; topology; number theory; geometry; combinatorics and counting; the mathematics of social choice; data analysis, probability and statistics; consumer mathematics and personal financial management.			Fundamental algebraic operations on real numbers and real variables with emphasis on linear functions and equations, polynomials, plane geometry, elementary trigonometry and their applications as they relate to applied technologies.	
MATH 46	Mathematics for Elementary Education	5 Units	MATH 112	College Math Preparation Level 2: Beginning Algebra	5 Units
	(Formerly Mathematics 63.)			(Student may not receive credit for both Mathematics 105 and 112.)	
	(See general education pages for the requirement this course meets.)			Prerequisite: Qualifying score on the Math Placement Test within the last calendar year; or Mathematics 210 with a grade of C or better.	
	Prerequisite: Mathematics 105 or 114 with a grade of C or better.			Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.	
	Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.			Five hours lecture or; Four hours lecture and three hours lab or; Four hours lecture and two hours lecture-laboratory.	
	(Also listed as Education 46. Student may enroll in either department, but not both, for credit.)			Application of linear functions, quadratic functions and linear systems to problems. Emphasis on the development of models or real world applications and interpretation of their characteristics.	
	Five hours lecture.				
	Designed for prospective elementary and middle school teachers. The class is an introduction to the discipline of mathematics as the use of logical, quantitative, and spatial reasoning in the abstraction, modeling, and problem solving of real-world situations. The main topics in the course include the origins of mathematics, mathematical reasoning and problem solving strategies, theory of sets, integers and integral number theory, rational numbers and proportion, real numbers and decimal notation, and measurement. Throughout the course students will experience the learning of mathematics in a way that models how they can create an active learning environment for their future students.		MATH 114	College Math Preparation Level 3: Intermediate Algebra	5 Units
MATH 49A	Pre-Calculus Algebra	5 Units		(Student may not receive credit for both Mathematics 105 and 114.)	
	(See general education pages for the requirement this course meets.)			Prerequisite: Qualifying score on the Math Placement Test within the last calendar year; or Mathematics 112 with a grade of C or better.	
	Prerequisite: Mathematics 51 (with a grade of C or better) or satisfactory score on Calculus Readiness test within the last calendar year.			Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.	
	Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.			Five hours lecture; or four hours lecture and three hours laboratory; or four hours lecture and two hours lecture-laboratory.	
	Five hours lecture.			Application of exponential and logarithmic functions, rational functions, and sequences and series to problems. Emphasis on the development of models of real world applications and interpretation of their characteristics.	
	Polynomial, rational, exponential and logarithmic functions, graphs, solving equations; conic sections.		MATH 210	College Math Preparation Level 1: Pre-Algebra	5 Units
MATH 49B	Pre-Calculus Algebra	5 Units		(Formerly Mathematics 110.)	
	(See general education pages for the requirement this course meets.)			Credit course - Does not apply to De Anza Associate degree.	
	Prerequisite: Mathematics 49A (with a grade of C or better) or satisfactory score on the Calculus Readiness test within the last calendar year.			Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.	
	Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.			Five hours lecture or; four hours lecture and three hours laboratory or; four hours lecture, two hours lecture-laboratory.	
	Five hours lecture.			Use of basic arithmetic in application problems, estimation, the real number system, variables and linear equations, graphs of linear equations and the Cartesian coordinate system, the concept of function.	
	Systems of equations and inequalities, vectors, lines and planes, sequences and series, polar coordinates.		MATH 249A	Academic Excellence in Pre-calculus	1 Unit
MATH 51	Trigonometry	5 Units		Credit course - Does not apply to De Anza Associate degree.	
	(See general education pages for the requirement this course meets.)			Corequisite: Mathematics 249A students must also enroll in Mathematics 49A.	
	Prerequisite: Qualifying score on the Intermediate Algebra Placement Test within the past calendar year; or a grade of C or better in Mathematics 105 or 114.			Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.	
	Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.			Three hours laboratory.	
	Five hours lecture.			Critical thinking and skills reinforcement in a pre-calculus setting: cooperative learning/study techniques, concept development, and use of technology.	
	The theory of trigonometric functions and their applications.		MATH 249B	Academic Excellence in Pre-calculus	1 Unit
	(CAN MATH 8)			Credit course - Does not apply to De Anza Associate degree.	
				Corequisite: Mathematics 49B.	
				Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.	
				Three hours laboratory.	
				Critical thinking and skills reinforcement in a pre-calculus setting: cooperative learning/study techniques, concept development, and use of technology.	
			MATH 251	Academic Excellence in Trigonometry	1 Unit
				Credit course - Does not apply to De Anza Associate degree.	
				Corequisite: Mathematics 51.	
				Advisory: English Writing 100 and Reading 100 or English as a Second Language 172 and 173.	
				Three hours laboratory.	
				Critical thinking and skills reinforcement in a trigonometry setting: cooperative learning/study techniques, concept development, and use of technology.	

De Anza College is
a smoke-free campus

