MATH 197  Mathematics Topics  (3 - 4)  
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.  
Prerequisite: A minimum grade of ‘C’ in either MATH 56 or MATH 60, or eligibility determined through the math placement process  
Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus  
Topics in Mathematics. See Class Schedule for specific topic offered. Course title will designate subject covered.

MATH 200  Introduction to Linear Algebra  (3)  
3 hours lecture  
Prerequisite: A minimum grade of ‘C’ in MATH 141  
Transfer acceptability: CSU; UC  
C-ID MATH 250  
Matrices, determinants, vectors, linear dependence and independence, basis and change of basis, linear transformations, and eigen values.

MATH 205  Calculus With Analytic Geometry, Third Course  (4)  
4 hours lecture  
Prerequisite: A minimum grade of ‘C’ in MATH 141  
Transfer acceptability: CSU; UC  
C-ID MATH 210  
Vectors in the plane and space, three-dimensional coordinate system and graphing, vector-valued functions and differential geometry, partial differentiation, multiple integration, and vector calculus.

MATH 206  Calculus With Differential Equations  (4)  
4 hours lecture  
Prerequisite: A minimum grade of ‘C’ in MATH 205  
Transfer acceptability: CSU; UC  
C-ID MATH 240  
A first course in ordinary differential equations from analytic, geometric, numeric and applied perspectives (including the use of modern computational technology as appropriate). Topics include exact, separable, and linear equations; initial value and boundary-value problems; systems of first-order equations; reduction of order; undetermined coefficients; variation of parameters; series solutions; and Laplace transforms.

MATH 245  Discrete Mathematics  (3)  
3 hours lecture  
Prerequisite: A minimum grade of ‘C’ in MATH 130 or MATH 140  
Transfer acceptability: CSU; UC  
The study of prepositional and predicate logic, number theory and methods of proof, elements of set theory, relations and functions, the Pigeonhole Principle, sequences, infinite sets, basic counting techniques, permutations, combinations, graphs and trees, and applications directed to the field of computer science.

MATH 200  Fundamentals of Microbiology  (4)  
2 hours lecture - 7 hours laboratory  
Prerequisite: A minimum grade of ‘C’ in BIOL 102; or BIOL 200 and CHEM 104 or CHEM 100; or BIOL 100 and CHEM 104 or CHEM 100; or BIOL 105 and CHEM 104 or CHEM 100; or ZOO 203  
Transfer acceptability: CSU; UC  
Fundamentals of microbiology including medical aspects of microbiology.

Multicultural Studies (MCS)  
See also Africana Studies, American Indian Studies, American Studies, Chicano Studies, Judaic Studies  
Contact the Multicultural Studies Department for further information.  
(760) 744-1150, ext. 2206  
Office: MD-354  
COURSE OFFERINGS  
MCS 100  Introduction to Multicultural Studies  (3)  
3 hours lecture  
Transfer acceptability: CSU; UC  
Social, cultural and political awareness of diverse national and international systems of thought and multicultural groups as revealed through their social institutions and cultural traditions emanating from family, community and nation - state.

MCS 110  Diverse Cultures in America Today  (3)  
3 hours lecture  
Note: Cross listed as AMS 110  
Transfer acceptability: CSU; UC  
An investigation of prevalent cultural trends in four groups of diverse ethnic and cultural backgrounds in America -- African Americans, Latinos, Chinese, and people of Jewish heritage -- since World War II. Emphasis will be placed on the literary, musical, and artistic expressions of their heritage, social conditions, struggle to become part of the main culture, and response to prejudice, racial, and religious discrimination. Selections dealing with social conditions will include such diverse issues as family life, intergenerational conflicts, and religious traditions.

MCS 115  Graphics and Media:A Multicultural Perspective  (3)  
3 hours lecture  
Note: Cross listed as GC 115  
Transfer acceptability: CSU; UC  
An introduction to the impact of media technology on the visual arts from a multicultural perspective. Includes print, Internet, multimedia, and game design. Embraces the diversity and multicultural perspectives that reflect American demographics by presenting individual and collaborative contributions as well as strategies for designing niche marketing and advertising graphics for a multicultural society. Addresses the impact of globalization. Examines gender, ethnicity (African American, American Indian, Asian-Americans and/or Pacific Islanders, and Mexican American in particular), age, sexual orientation, and universal access for people with impairments.

MICR 100  Microbiology and Foods  (3)  
2 hours lecture - 3 hours laboratory  
Note: Cross listed as FCS 110  
Transfer acceptability: CSU  
Introduction to the principles of microbiology with an emphasis on foodborne pathogens. Students will explore biological factors and controls relating to reproduction of microorganisms and the effects on public health. This course does not meet microbiology requirement for pre-health students.
### MCS 125 Women, Culture, and Islam (3)  
3 hours lecture  
**Transfer acceptability:** CSU; UC  
This course examines the historical women of Islamic societies from the advent of Islam in the 1st AH/7th CE to present day. Drawing on a variety of primary and secondary sources in written texts and from the Internet, this course explores the role of women in Islam as a religion, cultural experience, and tradition, along with the wide range of women’s experiences throughout different periods of history and in diverse Muslim societies.

### MCS 157 Theatre and Social Justice (3)  
3 hours lecture  
**Note:** Cross listed as TA 157  
**Transfer acceptability:** CSU  
The study and practice of theatre as a vehicle for understanding global conditions of social injustice and working to create justice in local communities.

### MCS 160 History of the Middle East from 600 to the Present (3)  
3 hours lecture  
**Recommended Preparation:** HIST 107  
**Note:** Cross listed as HIST 160  
**Transfer acceptability:** CSU; UC  
History of the Middle East from the origins of Islam to contemporary times. Topics include the political, social, and economic development of Islam, the early caliphates, the Crusades, the Ottoman and Safavid empires, European imperialism, and modern Middle Eastern states.

### MCS 161 Introduction to Asian American Studies (3)  
3 hours lecture  
**Transfer acceptability:** CSU; UC  
This course is an introduction to Asian American Studies. It focuses on the lives and experiences of Asian Americans in the United States. It surveys the history of immigration and cultural assimilation of the different Asian American groups in the U.S. As such, the course will utilize historical perspectives, literature, and film to examine the Asian American experience and the changing roles and contributions of Asian Americans in American society.

### MCS 197 Multicultural Studies Topics (1-4)  
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.  
**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.  
Topics in Multicultural Studies. See Class Schedule for specific topic offered. Course title will designate subject covered.

### MCS 200 Race, Class, and Ethnic Groups in America (3)  
3 hours lecture  
**Note:** Cross listed as AMS 200/SOC 200  
**Transfer acceptability:** CSU; UC  
C-ID SOCI 150  
This course is designed to introduce the topics of intergroup relations in general to superordinate-subordinate relations in particular, as exemplified in various racial, ethnic, social class, and cultural groups. Emphasis is primarily on contemporary relations in the United States, although a comparative perspective is also offered.

### Music (MUS)  
Contact the Performing Arts Department for further information.  
(760) 744-1150, ext. 2316  
Office: PAC-122  
**Associate in Arts Degrees -**  
AA Degree requirements are listed in Section 6 (green pages).  
- Music  
**Certificates of Proficiency -**  
Certificate of Proficiency requirements are listed in Section 6 (green pages).  
- Digital Animation, Compositing, and Music  
- Basic Music Skills

### PROGRAMS OF STUDY

#### Basic Music Skills  
The primary purpose of this certificate is to provide basic music skills and music fluency. The knowledge gained may be particularly valuable to pre-school or elementary school teachers, music therapists, recreational therapists, multimedia specialists, video game designers, or other creative artists who use music to complement their primary art form.

#### CERTIFICATE OF PROFICIENCY

<table>
<thead>
<tr>
<th>Program Requirements</th>
<th>Units</th>
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<tbody>
<tr>
<td>MUS 100 Music Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUS 103 Fundamentals of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUS 115 Basic Keyboard I</td>
<td>5</td>
</tr>
<tr>
<td>MUS 117 Basic Keyboard II</td>
<td>5</td>
</tr>
<tr>
<td>MUS 130 Fundamental Vocal Skills</td>
<td>5</td>
</tr>
<tr>
<td>MUS 175 Beginning Guitar</td>
<td>5</td>
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<tr>
<td>MUS 180 Computer Music I</td>
<td>3</td>
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</table>

#### Electives (Select a minimum of 4.5 units)  
- MUS 101 Survey of 20th Century Music  
- MUS 102 Introduction to Jazz  
- MUS 131 Vocal Literature and Performance  
- MUS 134 Palomar Women’s Chorus  
- MUS 138/139 Cuban and Brazilian Drumming II  
- MUS 143 Palomar Chorale Chamber Ensemble  
- MUS 147 Concert Choir  
- MUS 148 Palomar Chorale  
- MUS 149 Spectrum Pop/Jazz Singers  
- MUS 150 Musical Theatre - Vocal  
- MUS 151 Concert Band  
- MUS 152 Jazz Ensemble  
- MUS 155 Chamber Ensemble - Brass  
- MUS 157 Guitar Ensembles  
- MUS 158 Chamber Singers  
- MUS 161 Summer Concert Band  
- MUS 162 Summer Stage Band  
- MUS 171 World Music  
- MUS 172 Repertory Jazz Ensemble  
- MUS 176 Intermediate Guitar  
- MUS 179 Beginning Flamenco Guitar  
- MUS 184 Electronic Ensemble  
- MUS 187 Computer Music Composition  
- MUS 198 Palomar Symphony Orchestra  
- MUS 224 Introduction to Jazz Piano  

**TOTAL UNITS**  
15.5

#### Digital Animation, Compositing, and Music  
This program is directed at the digital design and implementation of 3D animation, graphic compositing and music.

#### CERTIFICATE OF PROFICIENCY

<table>
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<th>Program Requirements</th>
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<tbody>
<tr>
<td>ARTI 246 Digital 3D Design and Modeling</td>
<td>3</td>
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<tr>
<td>ARTI 247 Digital 3D Design and Animation</td>
<td>3</td>
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<tr>
<td>GCMW 204 Motion Graphics for Multimedia</td>
<td>3</td>
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<tr>
<td>GCMW 206 Motion Graphics Production and Compositing</td>
<td>3</td>
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<tr>
<td>MUS 180 Computer Music I</td>
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<tr>
<td>MUS 184 Electronic Ensemble</td>
<td>1</td>
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</tbody>
</table>

**TOTAL UNITS**  
13 - 15

Digital Animation, Compositing, and Music Certificate of Proficiency is also listed in Art and in Graphic Communications - Multimedia and Web.