

**SAN BERNARDINO VALLEY COLLEGE
SUBMITTED FOR BOARD OF TRUSTEE APPROVAL**

NEW COURSE			
COURSE ID		EFF DATE	RATIONALE
PS 112	Division: Science Department: Physical Science Course ID: PS 112 Course Title: Introduction to the Development of Modern Science Units: 3 Lecture: 3 contact hour(s) per week 48 - 54 contact hours per semester Laboratory: None Departmental Advisory: ENGL 015 Catalog Description: A survey of the rise of modern science from the Scientific Revolution of the 16th and 17th centuries through the biological and earth science revolutions of the 20th century and today. The historical forces that led to major scientific developments and the impact of science and science-based technology on society will be examined. Schedule Description: A survey of the rise of modern science from the Scientific Revolution through today. The historical forces that led to major scientific and technological advancement will be examined.	FA09	<i>This course will provide students with a cultural and societal perspective about the role of science in the rise of modern society. As our culture becomes more technologically advanced, it is important that a scientifically literate population is educated to make informed decisions. This course intends to broaden the world view of students in such a respect.</i>

MODIFIED COURSES			
COURSE ID		EFF DATE	RATIONALE
PSYCH 052	Catalog Description: In this course, students will study the principles of psychology as applied to everyday living, communication with others and effective behavior. Strategies for self-improvement will be discussed. Schedule Description: In this course, students will study the principles of psychology as applied to everyday living, communication with others and effective behavior. Note: Approved as Stand-Alone Course and for removal from associate degree general education requirements	FA09	<i>To reflect changes in curriculum.</i>

MODIFIED COURSES

COURSE ID		EFF DATE	RATIONALE
REFRIG 050A	<p>Course ID: REFRIG 050 C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of the principles of refrigeration. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of the principles of refrigeration.</p>	FA09	<p><i>This course is designed for professional development and to help certify or re-certify journeymen-level refrigeration technicians to keep their knowledge current. Repetition is necessary due to rapid changes in technology. Catalog and Schedule Description: The need to have NATE as part of the RSES course descriptions is to raise the technical recognition to national levels. The Advisory Committee recommended that students become NATE and RSES certified so they can be employed anywhere in the United States.</i></p>
REFRIG 051A	<p>Course ID: REFRIG 051C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of compressors, condensers, and accessories. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of compressors, condensers, and accessories.</p>	FA09	<p align="center"><i>Same as noted above.</i></p>
REFRIG 052A	<p>Course ID: REFRIG 052C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of air conditioning. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of air conditioning.</p>	FA09	<p align="center"><i>Same as noted above.</i></p>
REFRIG 055A	<p>Course ID: REFRIG 055C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of heating systems. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of heating systems.</p>	FA09	<p align="center"><i>Same as noted above.</i></p>

MODIFIED COURSES

COURSE ID		EFF DATE	RATIONALE
REFRIG 056A	<p>Course ID: REFRIG 056C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of heat sources and distribution. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of heat sources and distribution.</p>	FA09	<i>Same as noted above.</i>
REFRIG 057A	<p>Course ID: REFRIG 057C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of heating controls, filtering, and cleaning equipment. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered by the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of heating controls, filtering, and cleaning equipment.</p>	FA09	<i>Same as noted above.</i>
REFRIG 060A	<p>Course ID: REFRIG 060C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of fundamentals of electricity. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of fundamentals of electricity.</p>	FA09	<i>Same as noted above.</i>
REFRIG 061A	<p>Course ID: REFRIG 061C</p> <p>Catalog Description: This is one of the three, semester long, national training courses offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of alternating current and applications. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of the three, semester long, national training courses offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of alternating current and applications.</p>	FA09	<i>Same as noted above.</i>

MODIFIED COURSES

COURSE ID		EFF DATE	RATIONALE
REFRIG 062A	<p>Course ID: REFRIG 062C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of solid state and electrical control circuits. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of solid state and electrical control circuits.</p>	FA09	Same as noted above.
REFRIG 065A	<p>Course ID: REFRIG 065C</p> <p>Catalog Description: This is one-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of refrigeration heat-pump theory. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of refrigeration heat-pump theory.</p>	FA09	Same as noted above.
REFRIG 066A	<p>Course ID: REFRIG 066C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of refrigeration pneumatic controls. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of refrigeration pneumatic controls.</p>	FA09	Same as noted above.
REFRIG 067A	<p>Course ID: REFRIG 067C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of refrigeration electric controls. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of refrigeration electric controls.</p>	FA09	Same as noted above.

MODIFIED COURSES

COURSE ID		EFF DATE	RATIONALE
REFRIG 068A	<p>Course ID: REFRIG 068C</p> <p>Catalog Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of refrigeration electronic controls. This course is designed to help certify journeymen-level refrigeration technicians and keep their knowledge current.</p> <p>Schedule Description: This is one of three courses of a three-semester national training course offered in conjunction with the Refrigeration Service Engineers Society (RSES) and the North American Technician Excellence (NATE) and is a comprehensive study of refrigeration electronic controls.</p>	FA09	<i>Same as noted above.</i>

DISTRIBUTED EDUCATION

COURSE ID		EFF DATE	RATIONALE
CHEM 101	Hybrid (Includes both on-campus and online components. This should be used only when there are specific requirements for on-campus instruction, for example, Speech and Science lab classes.	FA09	<i>Lecture content of this course if available on-line, will increase access. Lecture content will be available for DE. Laboratory will be available only on-campus.</i>

Liberal Arts A.A. Degree Major

The Associate Degree in Liberal Arts is designed for students who wish a broad knowledge of liberal arts and sciences plus additional coursework in an "Area of Emphasis". An area of emphasis would be an ideal choice for students planning on transferring to the California State University (CSU) or University of California (UC) as the student can satisfy required general education requirements, plus focus on transferable course work that relates to majors at CSU or UC. Students are advised to consult with a counselor for specific information regarding choice of major and transfer university. Students may obtain an Associate of Arts Degree in Liberal Arts by completing a minimum of 60 semester units as outlined below:

It is recommended that students complete either the IGETC or the CSUGE for the general education pattern related to your educational goal. Students are also strongly advised to consult with a counselor relative to required courses for the selected option.

For either the IGETC or CSUGE option, 39-48 units of general education are required.

Complete 18 units in one "**Area of Emphasis**" from those outlined below. For depth of study, a minimum of two courses in one discipline is required. (Note: Where appropriate, courses in the "Area of Emphasis" may also be counted for Associate Degree Option #1 or #2.)

For ALL OPTIONS, complete necessary SBVC graduation and proficiency requirements (Refer to page **XX** in the SBVC catalog).

All classes listed below transfer to CSU. Courses in **BOLD** are transferable to **UC**. Refer to www.assist.org for transfer details.

Courses that include a symbol x in the number such as MUS 141x4 indicate the course may be taken four times for credit. Students may apply each course with a symbol x only one time toward graduation requirements.

I. AREAS OF EMPHASES

A. Biological and Physical Sciences

These courses emphasize the natural sciences which examine the physical universe, its life forms and natural phenomena. Students will be able to demonstrate an understanding of the methodologies of science as investigative tools. Students will also examine the influence that the acquisition of scientific knowledge has on the development of world civilization.

Anthropology (ANTHRO) **106, 106H**

Astronomy (ASTRON) **120, 123, 125**

Biology (BIOL) **100, 104, 109, 109H, 123, 201, 202, 204, 250, 251, 260, 261, 270**

Business Calculations (BUSCAL) **208**

Chemistry (CHEM) **101, 104, 110, 150, 150H, 151, 151H, 212, 212H, 213, 213H**

Economics (ECON) **208**

Geography (GEOG) **110, 111, 114, 285**

(continued on next page)

Geology (GEOL)

100, 101, 111, 112, 122, 200, 201, 250, 251

Mathematics (MATH)

102, 103, 108, 115, 151, 250, 251, 252, 265, 266, 285

Oceanography (OCEAN)

100, 101, 111

Physical Science (PS)

101

Physics (PHYSIC)

101, 150A, 150B, 200, 201

B. Social and Behavioral Sciences

These courses emphasize the perspective, concepts, theories and methodologies of the disciplines typically found in the vast variety of disciplines that comprise study in the social and behavioral sciences. Topics and discussion to stimulate critical thinking about ways people have acted in response to their societies will allow students to evaluate how societies and social subgroups operate.

Anthropology (ANTHRO)

100, 102, 106, 106H, 107, 109, 110

Child Development (CD)

105, 105H, 126

Economics (ECON)

100, 200, 200H, 201, 285

Geography (GEOG)

102, 106, 120

History (HIST)

100, 101, 107, 110, 137, 138, 139, 140, 150, 170, 171

Political Science (POLIT)

100, 110, 110H, 204

Psychology (PSYCH)

100, 100H, 102, 103, 110, 111, 112, 118

Religious Studies (RELIG)

110, 135

Sociology (SOC)

100, 100H, 110, 130, 141, 145, 150, 285

Speech (SPEECH)

135, 174, 176

(continued on next page)

C. Humanities and Fine Arts

These courses emphasize the study of cultural, literary, humanistic activities and artistic expression of human beings. Students will evaluate and interpret the ways in which people throughout the ages in different cultures have responded to themselves and the world around them in artistic and cultural creation. Students will also learn to value aesthetic understanding and incorporate these concepts when constructing value judgments.

American Sign Language (ASL)

109, 110, 111, 112

Anthropology (ANTHRO)

109, 107, 110

Architecture (ARCH)

145, 146

Art (ART)

100, 102, 103, 105, 107, 108, 110, 111, 120, 124x4, 126x4, 132x4, 145, 148, 158x4, 161, 164x4, 175x4, 180, 212x4, 240x4, 270x4, 285

Dance (DANCE)

200, 203

English (ENGL)

151, 153, 155, 161, 163, 165, 175, 232, 260, 261, 270, 271, 275, 280, 281

French (FRENCH)

101, 102

History (HIST)

100, 101, 107, 137, 138, 139, 140, 150, 170, 171

Music (MUS)

100, 101, 101L, 102, 102L, 104, 105, 106, 107, 117x4, 121, 122, 130, 131, 133, 134, 136, 141x4, 150x4, 152x4, 154x4, 156x4, 158x4, 201, 201L, 202, 202L, 285

Philosophy (PHIL)

101, 101H, 105, 112, 180

Religious Studies (RELIG)

100, 100H, 101, 110, 135, 150, 175, 176, 180

Spanish (SPAN)

101, 102, 103, 103H, 104, 157, 158

Theatre Arts (THART)

100, 114x4, 120, 135, 160x4, 165

Total Units

60

Effective Date: FA08

Rationale: Our campus Articulation Officer has been in contact with Stephanie Low at the Chancellor's Office and Stephanie has made the suggestions reflected in this modification. Stephanie Low contacted the Vice President of Instruction on AUGUST 13 requesting an additional change to the following verbiage: It is recommended that students complete either the IGETC or the CSUGE for the general education pattern related to your educational goal. Students are also strongly advised to consult with a counselor relative to required courses for the selected option.