ARTD 150 Digital Concepts and Techniques in Art (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: *A minimum grade of 'C' in ARTD 100*
Transfer acceptability: *CSU; UC*
An overview of vector based and pixel based computer applications, and how they are used in a creative environment. Understanding of the underlying logic of computer software will be taught with an emphasis on the role of the computer in all forms of modern art-making. Students will learn how to use the computer as a tool effectively while developing their own method of creating digital artwork. Cross-platform issues will be addressed, as well as file preparation for various output media.

ARTD 200 Graphic Design II – Lettering and Layout (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: *A minimum grade of 'C' in ARTD 100*
Recommended preparation: *ARTD 150*
Transfer acceptability: *CSU*
The study of the historical roots and nomenclature of lettering forms and the development of grid systems to aid in the development of successful layout designs. Design and assembly utilizing both hand skills and computer software will be taught.

ARTD 210 Typography Design (3)
1½ hours lecture - 4½ hours laboratory
Recommended preparation: *ARTD 150*
Transfer acceptability: *CSU*
Introduction to the historical roots and contemporary technology of typography. Provides a critical analysis of technical processes and elements through assignments that define its symbolic and communicative aspects.

ARTD 220 Motion Design (3)
1½ hours lecture - 4½ hours laboratory
Transfer acceptability: *CSU*
An introduction to the concepts and techniques of animation and multimedia for personal computers using After Effects. Emphasis will be placed on the role of the artist and in the development process and as a key link in determining the success of the final project.

ARTD 250 New Media Studio (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: *Enrollment based on portfolio review with list of criteria*
Transfer acceptability: *CSU*
An advanced class using digital tools that focuses on collaborative creative projects. Joint concept development, communication, critical thinking and creative teamwork will be stressed. Emphasis will be placed on the integration of graphic design, illustration. 2-D and 3-D animation and fine art components into professional quality multimedia projects. Students from the Art Department will have the opportunity to collaborate with students from music and computer science.

Art - Illustration (ARTI)

Contact the Art Department for further information.
(760) 744-1150, ext. 2302
Office: D-14

Associate in Science Degrees -

AS Degree requirements are listed in Section 6 (green pages).
• Illustration

PROGRAMS OF STUDY

Illustration

Provides students with specific skills necessary to prepare a portfolio for application to Illustration programs at 4-year schools. In addition develops creative conceptual and Illustrative skills for use in advertising and story Illustration.

A.S. DEGREE MAJOR

Program Requirements		**Units**
ART 104	Design and Composition	3
ART 120	Life Drawing and Composition I	3
ART 125	Head Drawing	3
ART 166	History of Art II	3
ART 200	Color/Light and Theory	3
ART 220 or ART 225	Oil Painting I Acrylic Painting I	3
ARTD 150	Digital Concepts and Techniques in Art	3
ARTI 100	Introduction to Illustration	3
ARTI 200	Rendering	3
ARTI 210	Illustration I – Traditional Techniques	3
ARTI 220	Illustration II – Digital Techniques	3
ARTI 230	Illustration III – Experimental Techniques	3
ARTI 246	Digital 3D Design and Modeling	3
ARTI 247	Digital 3D Design and Animation	3
	Final Art Portfolio Review	0

Electives (Select 3 units)

ART 121	Life Drawing and Composition II	3
ART 197B	Topics in Art – Painting	3
ART 197F	Topics in Art – Drawing	.5-3
ART 235	Watercolor Painting I	3
ART 296	Special Projects	1, 2, 3
ARTD 100	Graphic Design I	3
ARTD 220	Motion Design	3
ARTD 250	New Media Studio	3
BUS 150	Advertising	3
BMGT 105	Small Business Management	3
PHOT 100	Elementary Film and Darkroom Photography	3
CE 100	Cooperative Education	1, 2, 3, 4
TOTAL UNITS		**45**

Illustration A.S. Degree Major is also listed in Art.

COURSE OFFERINGS

Individual courses are not repeatable. State Guidelines also limit the number of times a student may take courses with related content and similar primary educational activities. Therefore, some combinations of course work in Art – Illustration have limitations on the number of times a student may enroll. Specific information about enrollment limitations for Art – Illustration classes is available at http://www.palomar.edu/

ARTI 100 Introduction to Illustration (3)
1½ hours lecture - 4½ hours laboratory
Transfer acceptability: *CSU*
A course on proportion and structure, quick sketching, gesture, and contour drawing. Included is the study of perspective and drawing of mechanical and natural forms by the use of line and value. Emphasis is placed on the evolutionary development of visual ideas.

ARTI 200 Rendering (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: *A minimum grade of 'C' in ARTI 100*
Transfer acceptability: *CSU*
Application of various media and techniques for illustrating known products and services or the illustration of design ideas for students in design and architecture. Emphasis is on the development of proficiency and the encouragement of comparison of student work with current professional work.

ARTI 210 Illustration I – Traditional Techniques (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: *A minimum grade of 'C' in ARTI 100*
Transfer acceptability: *CSU*
Course work that reflects the types of assignments an illustrator may encounter in the industry, using a variety of traditional media and techniques. Contemporary principles of concept development and problem solving will be explored, using stylization, design, composition and color as methods of communication. Accurate analysis, historical reference, oral and graphic presentation of ideas, sketches and finished art will be stressed.

ARTI 220 Illustration II – Digital Techniques (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: *A minimum grade of 'C' in ARTI 210*
Transfer acceptability: *CSU*
A course for advanced illustration students that focuses on creating non-traditional professional level commercial artwork. Media experimentation, and combination of traditional methods with digital applications is used to create finished pieces that are conceptually and visually interesting and strong. Students are encouraged to develop and strengthen personal and distinctive approaches to Illustration. Portfolio preparation for admission to high quality 4-year art and design programs, or for entry into to the work force will be examined and applied. Students will also gain insight into self-promotion and marketing strategies. Contracts, self-employment issues and billing procedures will be explained.

ARTI 230 Illustration III – Experimental Techniques (3)
1½ hours lecture - 4½ hours laboratory
Prerequisite: *A minimum grade of 'C' in ARTI 220*
Transfer acceptability: *CSU*
Course work will reflect advanced illustration concepts, conceptually and technically. Students will combine experimental traditional and digital techniques to create projects that reflect a professional level of finish and format. Projects will focus on conceptual content and process, and represent a range of possible industry application, such as entertainment design, editorial illustration and illustrations for an interactive environment.

ARTI 246 Digital 3D Design and Modeling (3)
1½ hours lecture - 4½ hours laboratory
Recommended preparation: *ARTD 150*
Transfer acceptability: *CSU*
Fundamentals of computerized 3-D modeling and Design. Hands on experience with modeling, lighting, developing texture maps and rendering.

ARTI 247 Digital 3D Design and Animation (3)
1½ hours lecture - 4½ hours laboratory
Recommended preparation: *ARTD 220*
Transfer acceptability: *CSU*
Concepts and techniques of 3-dimensional animation using Maya software. The course will provide an understanding of the production, animation and postproduction process.

ARTI 248 Digital 3D Design and Sculpture (3)
1½ hours lecture - 4½ hours laboratory
Transfer acceptability: *CSU*
Concepts and techniques of digital sculpting using ZBrush software. The course will provide an understanding of high detail polygon modeling and the use of mapping techniques to transfer detail to low polygon models.

Astronomy (ASTR)

Contact the Earth, Space, and Aviation Sciences Department for further information.
(760) 744-1150, ext. 2512
Office: NS-110G
For transfer information, consult a Palomar College Counselor.

Associate in Science Degrees -

AS Degree requirements are listed in Section 6 (green pages).
• Astronomy

Certificates of Achievement -

Certificate of Achievement requirements are listed in Section 6 (green pages).
• Astronomy

Planetarium
The Planetarium is part of the Earth, Space, and Aviation Sciences Department at Palomar College. Several types of planetarium programs are offered for the community including school programs for area elementary and secondary schools. The planetarium also offers evening shows throughout each month, open to students of Palomar College and the general public. For further information, visit www.palomar.edu/planetarium or contact the planetarium at planetarium@palomar.edu or (760) 744-1150, ext. 2833.

PROGRAM OF STUDY

Astronomy

Provides the student with sufficient background to begin upper division course work. Transfer students should consult the four year college or university catalog for specific requirements or see a Palomar College counselor. Students pursuing a major in Astronomy at San Diego State University must complete a minor in Mathematics.

A.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
ASTR 100	Principles of Astronomy	3
ASTR 105L	Introduction to Astronomy Laboratory	1
ASTR/GEOL 120	Planets, Moons and Comets	3
MATH 140	Calculus/Analytic Geometry, First Course	5
MATH 141	Calculus/Analytic Geometry, Second Course	4
MATH 205	Calculus/Analytic Geometry, Third Course	4
PHYS 230	Principles of Physics	5
PHYS 231	Principles of Physics	5
PHYS 232	Principles of Physics	4
TOTAL UNITS		**34**

Recommended Electives: ASTR 210, 295

COURSE OFFERINGS

ASTR 100 Principles of Astronomy (3)
3 hours lecture
Transfer acceptability: *CSU; UC*
The fundamental nature of the night sky as understood by pre 20th century scientists. Properties of the solar system, stars, black holes, galaxies, and extragalactic objects. Interstellar communication and extraterrestrial life.

ASTR 105L Introduction to Astronomy Laboratory (1)
3 hours laboratory
Prerequisite: *A minimum grade of 'C' in ASTR 100 or 120, or concurrent enrollment in ASTR 100 or 120*
Transfer acceptability: *CSU; UC*
Exploration of the techniques used in astronomy to determine the physical properties of stars and galaxies. The physical nature of light and the optical principles of a telescope are also explored. Measurements of planetary and stellar phenomena are used to investigate the astronomical methods of determining the size, composition and age of the universe.

ASTR 120 Planets, Moons, and Comets (3)
3 hours lecture
Note: *Cross listed as GEOL 120*
Transfer acceptability: *CSU; UC*
The astronomy and geology of the solar system, observations, dynamics relativistic ideas, including theories of formation and evolution. Comparative survey of the atmospheres, surface features and interiors of planets and satellites. Minor objects, such as comets and asteroids, will be included.

ASTR 197 The Universe: Contemporary Topics in the Space Sciences (1-3)
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.*
Selected topics in astronomy and space sciences, emphasizing current research and discoveries. Refer to the Class Schedule for specific topics covered.