• Certified completion of the California State University General Education- Breadth pattern (CSU GE Breadth) or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.

Learning Outcomes
1. Imagine, develop, assess, and refine a variety of solutions to given creative problems.
2. Create and present art forms that communicate individual or cultural ideas.
3. Critically assess and articulate ideas presented visually in arts and media.
4. Apply knowledge of materials and techniques to create original art forms.
5. Recognize the role of cultural and social diversity in the visual arts.
6. Demonstrate skills and practices that support professional artistic growth.

CSU or IGETC for CSU General Education Requirements 37-39 Units

Core Courses (12 units) | Units
---|---
AH 20B | Survey of Art from the Renaissance to the Present ........................................ 3
ART 2A | Drawing and Composition I ................................................................. 3
ART 4 | Beginning Design: Design and Color ......................................................... 3
ART 5 | Beginning Design: 3-Dimensional Form ...................................................... 3

List A - Select one course from the following: | Units
---|---
AH 20A | Survey of Art from Prehistoric Through Medieval Periods ......................... 3
AH 11 | Ancient Art ......................................................................................... 3
or
AH 11H | Honors Ancient Art .............................................................................. 3
AH 12 | Middle Ages: Art/Mediterranean ................................................................ 3
World & Europe (A.D. 300-1400) ......................................................... 3
or
AH 13 | Renaissance to 19th Century ...................................................................... 3
AH 14 | Modern Art .................................................................................................. 3

List B - Select 9 units from the following: | Units
---|---
ART 2B | Drawing and Composition II ................................................................. 3
ART 3A | Life Drawing I ....................................................................................... 3
ART 3B | Life Drawing II ..................................................................................... 3
ART 7A | Ceramics–Hand Building ......................................................................... 3
ART 7B | Ceramics–Wheel Forming ....................................................................... 3
ART 8A | Small Scale Metal/Jewelry ................................................................. 3
ART 11A | Beginning Casting: Small Scale Metal/Jewelry ........................................ 3
ART 21 | Textile Surface Design ............................................................................ 3
ART 27 | Graphic Design ....................................................................................... 3
ART 28 | Lettering/Typography ............................................................................. 3
ART 31A | Painting I ............................................................................................... 3
ART 31B | Painting II ............................................................................................... 3
ART 32A | Printmaking: Etching and Intaglio ......................................................... 3
ART 33A | Screen Printing/Serigraphy .................................................................... 3
ART 34A | Sculpture: Direct Processes I ............................................................... 3
ART 34B | Sculpture: Direct Processes II .............................................................. 3
ART 35 | Sculpture: Casting .................................................................................. 3
ART 37A | Watercolor I ............................................................................................ 3
ART 37B | Watercolor II ............................................................................................ 3
AP 6 | Introduction to Digital Photography ......................................................... 1 - 3
AP 9A | Beginning Photography ............................................................................ 3

A.A.-T in Studio Arts for Transfer

The Art Studio Program offers beginning and intermediate courses that provide students with the knowledge and experience needed for a broad understanding of the visual arts. Core curriculum includes drawing and composition, two-dimensional and three-dimensional design, and art history. After completing the core courses, students may advance to intermediate courses and complete their degree by concentrating their course work within the art studio options. Students may also investigate special interests in ART 40 A-Z classes, approved Art Photography classes and/or approved Digital Media classes.

Art gallery viewing is provided in the Cabrillo Art Gallery, which presents a range of exhibitions of original work by a variety of artists during each academic year. These exhibitions are an integral part of the instructional program. Students participate in additional gallery observations through ART 50L, Gallery Viewing Lab. Museum viewing experience is facilitated through ART 51L, Museum Viewing Lab. Both courses are hybrid requisites in the Art Studio program.

The student with a transferable Associate in Arts Degree in Art Studio is prepared for upper division work in similar majors at many four-year institutions including UCs and CSUs, the San Francisco Art Institute, and California College of the Arts, as well as other colleges of art and schools of design.

Cabrillo offers options for degrees in Studio Art. The first option listed below is the Associate in Arts in Studio Arts for Transfer (A.A.-T in Studio Arts), which is intended for students who plan to transfer and complete a bachelor’s degree in Studio Arts or a similar major at a CSU campus. Students completing the Associate in Arts in Studio Arts for Transfer (A.A.-T in Studio Arts) are guaranteed admission to the CSU system, but not to a particular campus or major. The Associate in Arts in Studio Arts for Transfer (A.A.-T in Studio Arts) may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system. See Associate Degree for Transfer information in the Cabrillo College Catalog. The following is required for all A.A.-T or A.S.-T degrees:

- Completion of 60 CSU-transferable semester units.
- Minimum grade-point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some majors may require a higher GPA.
- Completion of a minimum of *18 semester units in the major with a letter grade of “C” or better, or a “P” if the course is taken on a “pass/no pass” basis. *Note: this degree requires greater than 18 units in the major for completion.
Art Studio A.A. Degree

Learning Outcomes

1. Imagine, develop, assess, and refine a variety of solutions to given creative problems.
2. Create and present art forms that communicate individual or cultural ideas.
3. Critically assess and articulate ideas presented visually in arts and media.
4. Apply knowledge of materials and techniques to create original art forms.
5. Recognize the role of cultural and social diversity in the visual arts.
6. Demonstrate skills and practices that support professional artistic growth.

Career Opportunities in Art

Career opportunities in the major include the following: exhibiting artist, art educator, graphic designer, illustrator, animator, game designer, 3-D digital designer, creative director, product designer, as well as positions within galleries, museums, and other arts organizations. Creative problem-solving skill, aesthetic expertise, critical thinking, and innovation are valued in many areas of commerce, industry, and in the non-profit sector.

Model Program for Art Studio

An Associate Degree requires 60 units appropriate to your educational goal, to include general education and at least 18 units in a major. Courses should be selected to meet the lower-division major preparation requirements at your intended transfer university. These specific requirements can be found at www.assist.org for 4-year public institutions in California. Please see a counselor for advisement to ensure you are taking the best possible courses given your goal.

The department presents the following suggested Model Program for this major. The courses listed below may or may not be appropriate depending on your specific goal. Please see a counselor for advisement for transfer to any 4-year institution.

Art History courses are also general education courses.

### Electives: Units
(Any course Numbered 1-99) ................................................................. 0-5

**Total Units**: 60

### A.A. General Education 30 Units

**Core Courses (12 units)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 2A</td>
<td>Drawing and Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ART 2B</td>
<td>Drawing and Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ART 4</td>
<td>Beginning Design: Design and Color</td>
<td>3</td>
</tr>
<tr>
<td>ART 5</td>
<td>Beginning Design: 3 Dimensional Form</td>
<td>3</td>
</tr>
</tbody>
</table>

**Art History Core Courses (6 units)**

Since Art Studio major preparation can vary at four-year campuses, see a counselor before deciding on Art History options 1 or 2, or a different pattern, to the 6 unit requirement.

- **Art History Option 1**: 3 units
  - AH 20A Survey of Art from Prehistoric Through Medieval Periods
  - AH 20B Survey of Art from the Renaissance to the Present

- **Art History Option 2**: 3 units
  - AH 11 Ancient Art
  - AH 12 Middle Ages: Art/Mediterranean
  - AH 13 Renaissance to 19th Century
  - AH 13H Honors Renaissance to 19th Century
  - AH 14 Modern Art

### Studio Art Options (9 units)

Select 9 units from the following options:

- **Ceramics Option**
  - ART 7A Ceramics–Hand Building
  - ART 7B Ceramics–Wheel Forming
  - ART 17A Intermediate Hand Building - Ceramics
  - ART 72A Ceramics Process I
  - ART 72B Ceramics Process II
  - ART 75 Surface Decorations in Ceramics
  - ART 92 Public Art - Ceramics Tile and Mosaic

- **Fiber Arts Option**
  - ART 21 Textile Surface Design
  - ART 24A Fiber Arts: Textile, Fiber, Paper
  - ART 29 Textile Surface Design and Structures

- **Drawing Option**
  - ART 3A Life Drawing I
  - ART 3B Life Drawing II
  - ART 49 Alternative Drawing Processes
  - ART 82 Perspective Drawing

- **Art Photography Option**
  - AP 9A Beginning Photography
  - AP 9B Intermediate Photography
  - AP 15 History of Photography
  - AP 42 Alternative Photographic Processes
  - AP 46A Digital Photography I
  - AP 47 Lighting for Photography I

- **Graphic Art Option**
  - ART 3A Life Drawing I
  - ART 27 Graphic Design
  - ART 28 Lettering/Typography

- **Small Scale Metal/Jewelry Option**
  - ART 8A Small Scale Metal/Jewelry
<table>
<thead>
<tr>
<th>Units</th>
<th>Course/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>ART 11A Beginning Casting: Small Scale Metal/Jewelry</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 13A Beginning Small Scale Enameling</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 38A Metalsmithing</td>
</tr>
<tr>
<td>3</td>
<td>ART 31A Painting I</td>
</tr>
<tr>
<td>3</td>
<td>ART 31B Painting II</td>
</tr>
<tr>
<td>3</td>
<td>ART 37A Watercolor I</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 41A Figure Painting</td>
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<tr>
<td>1-3</td>
<td>ART 48 Two-Dimensional Mixed Media</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 91 Public Art - Painting and Mural</td>
</tr>
<tr>
<td>3</td>
<td>AR Woodworking Option</td>
</tr>
<tr>
<td>3</td>
<td>ART 95B Printmaking: Etching and Intaglio</td>
</tr>
<tr>
<td>3</td>
<td>ART 32B Intermediate Intaglio Printing</td>
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<tr>
<td>3</td>
<td>ART 33A Screen Printing/Serigraphy I</td>
</tr>
<tr>
<td>3</td>
<td>ART 33B Screen Printing/Serigraphy II</td>
</tr>
<tr>
<td>3</td>
<td>ART 39A Woodblock and Relief Printmaking</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 46 Book Arts</td>
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<tr>
<td>1-3</td>
<td>ART 74 Monoprint and Monotype Printmaking</td>
</tr>
<tr>
<td>3</td>
<td>ART 34A Sculpture: Direct Processes I</td>
</tr>
<tr>
<td>3</td>
<td>ART 34B Sculpture: Direct Processes II</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 35 Sculpture: Casting</td>
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<tr>
<td>1-3</td>
<td>ART 36 Sculpture: Moldmaking</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 44A Figure Sculpture</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 84 Found Object Sculpture</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 95A Survey of Digital Fabrication for Studio Arts</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 95B Beginning Digital Fabrication for Studio Arts</td>
</tr>
<tr>
<td>3</td>
<td>AR Woodworking Option</td>
</tr>
<tr>
<td>3</td>
<td>ART 52 Beginning Woodworking/Furniture Design</td>
</tr>
<tr>
<td>3</td>
<td>ART 52B Intermediate Woodworking/Furniture Design</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 55A Examining the Chair</td>
</tr>
<tr>
<td>1-3</td>
<td>ART 65A Illumination: Lighting Fabrication</td>
</tr>
<tr>
<td>3</td>
<td>(Any Course Numbered 1-99)</td>
</tr>
<tr>
<td>60</td>
<td>Total Units</td>
</tr>
</tbody>
</table>

### Creative Careers—Discovering Self-Directed Pathways Skills Certificate

Students develop the ability to research and investigate various possibilities in the process of creating and developing arts-based entrepreneurial enterprises.

#### Learning Outcomes

1. Research and analyze ways to create impact and develop a livelihood in all visual, applied, and performing arts disciplines by identifying your WHY and focusing on unique, self-directed, non-traditional, and entrepreneurial pathways.

#### Required Courses

<table>
<thead>
<tr>
<th>Units</th>
<th>Course/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>AH 79 Creative Careers - Discovering Self Directed Pathways</td>
</tr>
<tr>
<td>3</td>
<td>or AP 79 Creative Careers - Discovering Self Directed Pathways</td>
</tr>
<tr>
<td>3</td>
<td>or ART 79 Creative Careers - Discovering Self Directed Pathways</td>
</tr>
<tr>
<td>3</td>
<td>or DM 79 Creative Careers - Discovering Self Directed Pathways</td>
</tr>
<tr>
<td>3</td>
<td>or MUS 79 Creative Careers - Discovering Self Directed Pathways</td>
</tr>
<tr>
<td>3</td>
<td>or TA 79 Creative Careers - Discovering Self Directed Pathways</td>
</tr>
<tr>
<td>3</td>
<td>and BUS 88 Starting and Operating a New Small Business</td>
</tr>
<tr>
<td>3</td>
<td>*Special VAPA only cohort offering, typically offered every spring term</td>
</tr>
</tbody>
</table>

#### Total Units

7-10

### Digital Fabrication and Making Skills Certificate

This cross-disciplinary skills certificate will introduce students to the innovative and adaptive skills needed in the new world of work. These courses have been selected to give students a well-rounded skill set required to bring an idea to fruition through design thinking, 2D & 3D problem solving, digital and hands-on fabrication, and knowledge of basic making software and hardware.

#### Learning Outcomes

Produce a portfolio of objects that showcase competency with design thinking, entrepreneurship, digital fabrication technologies, and traditional hands-on making techniques.

#### Required Courses

<table>
<thead>
<tr>
<th>Units</th>
<th>Course/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>ART 5 Beginning Design: 3-Dimensional Form</td>
</tr>
<tr>
<td>3</td>
<td>ART 95A Survey of Digital Fabrication for Studio Arts</td>
</tr>
<tr>
<td>3</td>
<td>EN 3 How Things Work</td>
</tr>
</tbody>
</table>

#### Add one of the following courses

<table>
<thead>
<tr>
<th>Units</th>
<th>Course/Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>CIS 15 Cloud Programming with Python</td>
</tr>
<tr>
<td>4</td>
<td>CIS 71 Information &amp; Communication</td>
</tr>
<tr>
<td>4</td>
<td>DM 4 Digital Graphics</td>
</tr>
</tbody>
</table>

#### Total Units

11-13
## Art Studio Courses

### ART 1A  
**Introduction to Art-making Practices**  
3 units; 3 hours Lecture  
Repeatability: May be taken a total of 1 time.  
Introduces traditional and contemporary art forms and practices in a variety of cultural and social contexts. Explores the relationship between methods, materials, and content from the perspective of art making. May be offered in a Distance-Learning Format.  
_Transfer Credit:_ Transfers to CSU; UC.

### ART 2A  
**Drawing and Composition I**  
3 units; 2 hours Lecture, 4 hours Laboratory  
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.  
Repeatability: May be taken a total of 1 time.  
Teaches fundamentals of composition, and the development of drawing skills with various drawing media. Develops appreciation and perception by means of studio work, library references, slides, field trips and lectures. Materials fee may apply.  
_Transfer Credit:_ Transfers to CSU; UC. C-ID: ARTS 110

### ART 2B  
**Drawing and Composition II**  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 2A.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.  
Repeatability: May be taken a total of 1 time.  
Refines and expands technical drawing skills from ART 2A with an emphasis on personal expression, thematic development, and an introduction to the use of color. Materials fee may apply.  
_Transfer Credit:_ Transfers to CSU; UC. C-ID: ARTS 205

### ART 3A  
**Life Drawing I**  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 2A.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.  
Repeatability: May be taken a total of 1 time.  
Teaches the fundamentals of drawing the human figure. Emphasizes observational studies from the live model and personal interpretation of the human form. Materials fee may apply. This course is not appropriate for minors.  
_Transfer Credit:_ Transfers to CSU; UC. C-ID: ARTS 200

### ART 3B  
**Life Drawing II**  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 3A.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.  
Repeatability: May be taken a total of 1 time. Continues development of fundamental skills of the representation of the human figure. Drawing from life. Emphasizes composition and content. This course is not appropriate for minors. Materials fee may apply.  
_Transfer Credit:_ Transfers to CSU; UC.

### ART 4  
**Beginning Design: Design and Color**  
3 units; 2 hours Lecture, 4 hours Laboratory  
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.  
Repeatability: May be taken a total of 1 time.  
Introduces the concepts, applications, and historical references related to two-dimensional art and composition, including the study of the principles of composition and elements of art: line, shape, texture, value, color and spatial illusion. Develops a visual vocabulary for creative expression through lecture presentations, studio projects, problem solving, and written assignments. Materials fee may apply.  
_Transfer Credit:_ Transfers to CSU; UC. C-ID: ARTS 100

### ART 5  
**Beginning Design: 3-Dimensional Form**  
3 units; 2 hours Lecture, 4 hours Laboratory  
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.  
Repeatability: May be taken a total of 1 time.  
Teaches design elements and principles used in 3-dimensional artwork and sculpture. Includes projects in various media: plaster, paper, wood, and metal. Materials fee may apply.  
_Transfer Credit:_ Transfers to CSU; UC. C-ID: ARTS 101

### ART 7A  
**Ceramics--Hand Building**  
3 units; 2 hours Lecture, 4 hours Laboratory  
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.  
Repeatability: May be taken a total of 1 time.  
Provides beginning level instruction in clay processes covering hand-building methods only, glazing, and firing procedures. Explores creative design and technical problem-solving. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.  
_Transfer Credit:_ Transfers to CSU; UC.

### ART 7B  
**Ceramics--Wheel Forming**  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 7A.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.  
Recommended Preparation: ART 5.  
Repeatability: May be taken a total of 1 time. Provides beginning level instruction in clay processes covering wheel throwing methods only, glazing, decorating, and firing procedures. Explores creative design and technical problem-solving. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fees may apply.  
_Transfer Credit:_ Transfers to CSU; UC.
ART 7C  Advanced Wheel-Forming, Ceramic Surfaces and Kiln-Firing
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Prerequisite: ART 7B or equivalent skills (portfolio review).
Repeatability: May be taken a total of 1 time.
Continues the study of clay processes covering wheel throwing methods, ceramic surfaces, and kiln-firing procedure and practice. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fees may apply.
Transfer Credit: Transfers to CSU.

ART 8A  Small Scale Metal/Jewelry
3 units; 2 hours Lecture, 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Recommended Preparation: ART 4 or ART 5.
Repeatability: May be taken a total of 1 time.
Teaches basic metal arts and jewelry making processes used in fabricating nonferrous metals. No casting. Attention paid to design, use of tools, supply sources, as well as development of technical skills. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 10A  Beginning Color on Metal
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Repeatability: May be taken a total of 1 time.
Investigates concepts of color with metal and technical applications of color to metal. Color technologies may include patina, vitreous enamels, resins, felt pens, color pencil, and or combination of colored metal i.e., anodized aluminum, niobium, colored tin and re-purposed metal.
Materials fees may apply.
Transfer Credit: Transfers to CSU.

ART 11A  Beginning Casting: Small Scale Metal/Jewelry
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 8A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Recommended Preparation: ART 5.
Repeatability: May be taken a total of 1 time.
Focuses on a variety of non ferrous metal casting processes and related technologies. Attention paid to safety practices, jewelry design applications, use of related tools, supply sources, as well as development of technical skills and personal aesthetics. Materials fees may apply.
Transfer Credit: Transfers to CSU.

ART 11B  Intermediate Casting: Small Scale Metal/Jewelry
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 11A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Presents increased complexity in non ferrous small scale metals casting technologies. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 13A  Beginning Small Scale Enameling
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Repeatability: May be taken a total of 1 time.
Introduces art enameling processes on small scale metals and explores granular and liquid enamels and related technologies. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 13B  Intermediate Small Scale Enameling
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Prerequisite: ART 13A.
Hybrid Requisite: ART 51L.
Repeatability: May be taken a total of 1 time.
Teaches intermediate level small scale enamelating processes on 3D and 2D metal formats with granular and liquid enamel applications. Materials fees may apply.
Transfer Credit: Transfers to CSU.

ART 17A  Intermediate Handbuilding - Ceramics
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Recommended Preparation: ART 7A.
Repeatability: May be taken a total of 1 time.
Builds on concepts, processes and practices learned in ART 7A, with an emphasis on using a combination of handbuilding techniques toward innovative design and fabrication for ceramic art work. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 21  Textile Surface Design
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Repeatability: May be taken a total of 1 time.
Teaches the creation of wall pieces and fabric designs through transforming, dyeing and manipulating fibers and fabrics. Includes textile dyeing, printing, painting, stitching, assembling and embellishing. Teaches analysis of contemporary and historical art textiles. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 24A  Fiber Arts: Textile, Fiber, Paper
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Repeatability: May be taken a total of 1 time.
Presents general topics in the fiber arts area such as paper making, fabric dyeing, bookbinding, and related fiber arts. Emphasizes individual design. Explores contemporary and historical fiber arts, their design and processes. Materials fees may apply.
Transfer Credit: Transfers to CSU.
ART 25A  Beginning Woodworking/Furniture Design
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Recommended Preparation: ART 2A and ART 5.
Repeatability: May be taken a total of 1 time.
Introduces the practice and art of furniture making, including exploring the characteristics of wood as a material and use of woodworking tools. Emphasizes appropriate joinery techniques and designing of furniture concepts. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 25B  Intermediate Woodworking/Furniture Design
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Prerequisite: ART 25A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Continues the study of concepts and techniques of furniture making covered in ART 25A. Emphasizes explorations in mixed media and alternative materials in furniture making. Students will engage in more advanced design concepts (ergonomics) and woodworking techniques. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 25CA  Advanced Woodworking/Furniture Design
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Prerequisite: ART 25B.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Develops a complex investigation of design concepts and technical skills for woodworking and furniture making. Building on practices covered in ART 25B, this course explores mixed media and alternative materials, bent lamination construction, material formulation for custom finishes. Provides further training and practice in equipment and tool maintenance covered in ART 25A and ART 25B. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 26A  Fabrication I: Small Metal/Jewelry
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 8A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Repeatability: May be taken a total of 1 time.
Presents small scale metals/jewelry fabrication techniques, mechanisms construction, surface design, and non traditional engineered settings. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 26B  Fabrication II: Small Scale Metal/Jewelry
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 26A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Presents non ferrous metal decorative and structural fabrication through heat fusion technologies, ancient and contemporary. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 27  Graphic Design
3 units; 2 hours Lecture, 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Recommended Preparation: DM 1 and ART 4.
Repeatability: May be taken a total of 1 time.
Teaches the basic skills and concepts of graphic design. Includes the process of the development of the idea to the production techniques using computer software. Discusses the history of traditional methods. Emphasizes both art form and communication. Materials fees may apply.
Transfer Credit: Transfers to CSU.

ART 28  Lettering/Typography
3 units; 2 hours Lecture, 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Repeatability: May be taken a total of 1 time.
Introduces lettering techniques and typographic designs and use. Covers both traditional methods and contemporary applications. Includes a study of calligraphy from its beginnings in Ancient Rome to modern commercial use, and typography from moveable metal type to digital computer information. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 29  Textile Surface Design and Structures
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Recommended Preparation: ART 21.
Repeatability: May be taken a total of 1 time.
Transfer Credit: Transfers to CSU; UC.
ART 31A  Painting I  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 4.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.  
Recommended Preparation: ART 2A.  
Repeatability: May be taken a total of 1 time.  
Studies the practice and theory of painting with emphasis on individuality in painting techniques. Explores experimental methods and process for visual expression. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply. Transfer Credit: Transfers to CSU; UC. C-ID: ARTS 210

ART 31B  Painting II  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 31A or equivalent skills.  
Hybrid Requisite: Completion or concurrent enrollment in ART 51L. Repeatability: May be taken a total of 1 time.  
Continues the study of theory and practice of painting from ART 31A with emphasis on individual projects. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply. Transfer Credit: Transfers to CSU; UC.

ART 31C  Painting III  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 31B or equivalent skills.  
Repeatability: May be taken a total of 1 time.  
Continues the study of theory and practice of painting from ART 31B with emphasis on defining and developing individual direction and portfolio. Materials fee may apply. Transfer Credit: Transfers to CSU; UC.

ART 32A  Printmaking: Etching and Intaglio  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 2A.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L. Repeatability: May be taken a total of 1 time.  
Teaches intaglio printmaking techniques in etching, drypoint, and monoprint. Materials fee may apply. Transfer Credit: Transfers to CSU; UC.

ART 32B  Intermediate Intaglio Prints  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 32A.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L. Repeatability: May be taken a total of 1 time.  
Expands the use of intaglio printmaking techniques taught in ART 32 for the creation of original fine art prints. Materials fee may apply. Transfer Credit: Transfers to CSU; UC.

ART 33A  Screen Printing/Serigraphy I  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 4.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L. Repeatability: May be taken a total of 1 time.  
Introduces the art and techniques of screen printing-serigraphy including stenciling, printing, care of prints, papers and proper studio use. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply. Transfer Credit: Transfers to CSU; UC.

ART 33B  Screen Printing/Serigraphy II  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 33A.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L. Repeatability: May be taken a total of 1 time.  
Continues screen printing-serigraphy techniques including advanced stenciling, registration methods, print care and curating, papers and proper studio use. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply. Transfer Credit: Transfers to CSU; UC.

ART 34A  Sculpture: Direct Processes I  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 5 or equivalent skills.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L. Repeatability: May be taken a total of 1 time.  
Introduces beginning level materials and processes in sculpture. Materials fee may apply. Transfer Credit: Transfers to CSU; UC.

ART 34B  Sculpture: Direct Processes II  
3 units; 2 hours Lecture, 4 hours Laboratory  
Prerequisite: ART 34A.  
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L. Repeatability: May be taken a total of 1 time.  
Continues the study of materials and processes from ART 34A with an increased use of a wide variety of materials, which can be sculpted through direct processes. Emphasizes the application of concepts and presentation. Materials fee may apply. Transfer Credit: Transfers to CSU; UC.
ART 34C   Sculpture: Direct Process III
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 34B or equivalent skills.
Repeatability: May be taken a total of 1 time.
Continues the study of sculptural processes from ART 34B with an increased awareness of materials, which can be transformed through direct approach. Emphasizes the application of concept and presentation. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 35   Sculpture: Casting
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Teaches bronze casting for sculptural purposes, utilizing lost wax method and rigid investments. Includes patination and presentation. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 36   Sculpture: Moldmaking
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Introduces moldmaking with an emphasis on constructing armatures, bas-relief, waste, piece and flexible mold types using suitable materials in both positive and negative mode. Presentation of finished sculpture is included as part of the course. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 37A   Watercolor I
3 units; 2 hours Lecture, 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Repeatability: May be taken a total of 1 time.
Provides observational study from the model, both nude and clothed, including use of source materials to develop figure-based paintings. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 37B   Watercolor II
3 units; 2 hours Lecture, 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Continues content from ART 37A with emphasis on experimental and individual problems. Further explores watercolor, opaque water base media, polyvinyl and acrylic resins. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 38A   Metalsmithinng I
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 8A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Recommended Preparation: ART 4 and ART 5.
Repeatability: May be taken a total of 1 time.
Introduces direct non ferrous metalsmithing and metal forming processes of raising, sinking, chasing and forging. Processes and design concepts are applied to small scale sculpture and/or jewelry projects. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU; This course transfers to UC if taken before F02.

ART 38B   Metalsmithing II
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 38A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Continues development of non ferrous small scale metal and jewelry art forming technologies. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 39A   Woodblock and Relief Printmaking
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 4.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Introduces wood and linoleum cutting techniques in relief printmaking. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 40AZ   Studies in Studio Art
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Repeatability: May be taken a total of 1 time.
Investigates special areas of interest in Visual Arts. The special area (i.e. drawing, painting, sculpture, etc.) will be announced and described in the Schedule of Classes. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC, with conditions: Students must retain a copy of the course outline, the course syllabus and work completed for this course. Credit for this course is contingent upon a review of the course outline and other materials by the UC transfer campus.

ART 41A   Figure Painting
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Recommended Preparation: ART 3A or ART 31A.
Repeatability: May be taken a total of 1 time.
Provides observational study from the model, both nude and clothed, including use of source materials to develop figure-based paintings. Historical and contemporary currents in figurative art will be presented. Opaque painting media will be used. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.
ART 44A  Figure Sculpture
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Prerequisite: ART 5.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L. Repeatability: May be taken a total of 1 time.
Studies and explores the basic principles, materials and techniques of sculpting the human figure from live models. Emphasizes structure, proportion, balance, and self-expression in three-dimensional form. Develops awareness of historical and contemporary concerns in figure sculpture. Materials explored are clay, wire, and mixed media. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 51L  Museum Viewing Lab
0.5 unit; 1 hour Laboratory
Repeatability: May be taken a total of 1 time.
Encourages students to develop skills in museum art viewing and critical analysis supplemented by docent-led tours and/or reading of exhibition material. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 46  Book Arts
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L. Recommended Preparation: ART 4.
Repeatability: May be taken a total of 1 time.
Teaches a variety of construction techniques to create handbound books, boxes, and portfolios. Includes paste papers and marbled papers and use of transfers, collage, prints and mixed media. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 48  Two-Dimensional Mixed Media
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L. Recommended Preparation: ART 4.
Repeatability: May be taken a total of 1 time.
Explores two-dimensional, mixed media approaches to art and introduces students to a variety of materials, and design challenges. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 49  Alternative Drawing Process
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Repeatability: May be taken a total of 1 time.
Focuses on development of a personal visual language that will expand upon traditional drawing techniques, materials and concepts. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 50L  Gallery Viewing Lab
0.5 unit; 1 hour Laboratory
Repeatability: May be taken a total of 1 time.
Encourages students to develop skills in gallery art viewing and critical analysis, supplemented by video viewing, guest lectures, and Internet searches. Materials fee may apply.
Transfer Credit: Transfers to CSU.
ART 72B  Ceramics Process II
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 72A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Continues the exploration of methods and materials in ceramics as they pertain to individualized concepts, design, and presentation including specialized projects and group collaborations. Critical analysis of historical and contemporary ceramics as it relates to course work also required. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 74  Monoprint and Monotype Printmaking
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Prerequisite: ART 32A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Introduces monoprints and monotypes based on the intaglio process. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 75  Surface Decoration in Ceramics
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Prerequisite: ART 7A.
Hybrid Requisite: Completion or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Covers a range of materials and techniques in ceramic surface decoration such as underglaze painting and printing on clay. Students will develop ceramic forms for the specific purpose of exploring surface treatments prevalent in modern ceramics. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 79  Creative Careers-Discovering Self-Directed Pathways
3 units; 3 hours Lecture, 1 hour Laboratory
Repeatability: May be taken a total of 1 time.
Investigates creative career opportunities in all visual, applied, and performing arts disciplines, with a focus on unique, self-directed, non-traditional, and entrepreneurial pathways and the academic and life choices necessary to realize such opportunities. May be offered in a Distance-Learning Format. Materials fee may apply. AH 79, ART 79, AP 79, DANCE 79, DM 79, MUS 79, and TA 79 are cross listed courses. Students may enroll in only one course for credit.
Transfer Credit: Transfers to CSU.

ART 82  Perspective Drawing
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Recommended Preparation: ART 2A.
Repeatability: May be taken a total of 1 time.
Introduces drawing techniques in linear and atmospheric perspective, and includes instruction of observational drawing techniques that develop the illusion of space within the picture plane. Concentrates on the study and practice of systematic perspective drawing, and potential for pictorial manipulation and personal expression. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 84  Found Object Sculpture
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Recommended Preparation: ART 5.
Repeatability: May be taken a total of 1 time.
Investigates ideas through the mixing of found objects with other media to create three dimensional artworks. Explores innovative approaches to working with found materials to convey personal content. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 90  Methods of Art Presentation
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Repeatability: May be taken a total of 1 time.
Introduces methods of presenting artwork for students with a developed body of work including portfolio preparation and display, writing resumes, artist statements and autobiographies, photographing artwork, and performing individual research. May be offered in a Distance-Learning Format. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 91  Public Art - Painting & Mural
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Recommended Preparation: ART 2A and/or ART 4.
Hybrid Requisite: Completion of or concurrent enrollment in ART 50L.
Repeatability: May be taken a total of 1 time.
Focuses on skill development using a variety of painting materials and techniques for individual portfolios and collaborative large-scale public art works, including murals. Course includes: a review of color and design principles, artist/client interaction, planning, site review and installation, and an overview of contemporary issues in painting and site-specific art. Materials fee may apply.
Transfer Credit: Transfers to CSU; UC.

ART 92  Public Art - Ceramic Tile and Mosaic
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L.
Repeatability: May be taken a total of 1 time.
Explores ceramic tile and mosaic mural fabrication and construction for individual works and collaborative public projects. The medium is explored through all stages of the process including: artist/client interaction, planning, experimentation, technical application, proper and safe studio practices and firing, use of equipment, mounting, installation, and historic and contemporary context. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 95A  Survey of Digital Fabrication for Studio Arts
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L
Recommended Preparation: ART 5.
Repeatability: May be taken a total of 1 time.
Surveys creative applications of computer-aided fabrication technologies for studio arts including 3D printing hardware and software, and other related fabrication technologies. Materials fee may apply.
Transfer Credit: Transfers to CSU.
ART 95B  Beginning Digital Fabrication for Studio Arts
1 – 3 units; 0.67 – 2 hours Lecture, 1.33 – 4 hours Laboratory
Prerequisite: ART 95A.
Repeatability: May be taken a total of 1 time.
Investigates methods for fabricating objects utilizing open-source models to create objects with computer-aided fabrication technologies. Introduces basic 3D modeling software as a tool for creative art making. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Transfers to CSU.

ART 196A  Beginning 3D Modeling for Digital Fabrication in Art
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 95B.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L
Repeatability: May be taken a total of 1 time.
Teaches techniques and processes to create 3D computer models for art fabrication. Includes exercises assignments and projects designed to build skill levels with 3D computer modeling tools and software. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Materials fee may apply.
Transfer Credit: Non-transferable.

ART 196B  Intermediate 3D Modeling for Digital Fabrication in Art
3 units; 2 hours Lecture, 4 hours Laboratory
Prerequisite: ART 196A.
Hybrid Requisite: Completion of or concurrent enrollment in ART 51L
Repeatability: May be taken a total of 1 time.
Continues 3D modeling and fabrication studies from ART 196A with a focus on specialized tools for intricate model making, combining 3D modeling practice with traditional art making, and individual project development. Some of the class hours for this course may be scheduled as To Be Arranged (TBA). See the Schedule of Classes for the details about this course offering. Material fee may apply.
Transfer Credit: Non-transferable.

ASTRONOMY
Natural and Applied Sciences Division
Dave Reynolds, Division Dean
Division Office, Room 701
Rick Nolthenius, Program Contact, (831) 479-6506
Aptos Counseling: (831) 479-6274 for appointment
Watsonville Counseling: (831) 786-4734
Call (831) 479-6328 for more information
http://www.cabrillo.edu/programs

Astronomy A.S. Degree
Modern astronomy is an interdisciplinary field applying knowledge of physics, mathematics, planetary sciences, atmospheric sciences, and computational numerical methods to the study of planetary systems, stars, galaxies, and the universe as a whole. A B.S. Degree qualifies one to work as a scientific computer programmer, direct a planetarium, enter a teacher credential program, work at support position an observatory, and work in positions requiring a general technical knowledge. An M.S. Degree broadens the opportunities to include community college instructor, major observatory telescope operator, some space science positions, and many more positions in technical fields. A Ph.D. Degree qualifies one for a university professorship, and to do sponsored research, either theoretical or observational, at a major observatory or university. This advanced degree also opens up opportunities to work as an astronaut, space engineer, space scientist. Astronomers are also in high demand in investment finance modeling, because of their skills in analyzing heterogeneous systems characterized by incomplete data.

University level astronomy curricula generally stress very strong initial preparation in mathematics and physics, and increasingly in computational numerical methods, atmospheric/climate science, planetary sciences, and chemistry. The most rapidly expanding area of astronomy today is planetary and atmospheric sciences, driven by the discoveries of planets around other stars and the urgent need to better understand planetary atmospheres, including our own. Many recommend that those planning on an advanced degree obtain their B.S. in physics or mathematics, but successful astronomers also emerge from atmospheric sciences majors and physics-related sciences. While most astronomy courses are taken at the upper division or graduate level, lower division astronomy will prepare students for choosing which area of astronomy interests them, and helps prepare them for a wide variety of science careers with the unique skills that astronomers must bring to the study of systems which include differing physics and data often not amenable to standard controlled experiments. The terms “astronomy” and “astrophysics” are interchangeable. Transfer students must also complete the admission and general education requirements of the intended transfer institution.

High School Preparation: Four years of college preparatory mathematics and one year of physics. Cabrillo offers courses which can substitute for this preparation; however, the major will then require more than two years to complete.

Students may double count one ASTRO course and one MATH course from the Core courses to fulfill Cabrillo general education, CSU GE Breadth, or IGETC. Note that Astro 25 however only transfers as a CSU science elective. If your goal is to do astronomy as a career, astronomers tend to be focused in either planetary science - which is rapidly expanding thanks to new space missions and technology – or into stellar, cosmology, and galactic astronomy. It’s unusual to find astronomers doing extensive work in both. There is some important overlap,