Columbia College

2015-2016

CATALOG ADDENDUM

This document is the official addendum to the published 2015-2016 Columbia College Catalog. It contains new courses and programs that were approved after the date of publication, as well as errata.

IGETC 2015-16

INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM FOR TRANSFER TO THE UNIVERSITY OF CALIFORNIA AND THE CALIFORNIA STATE UNIVERSITY

Completion of the Intersegmental General Education Transfer Curriculum (IGETC) will permit a student to transfer from a community college to a campus in either the California State University or the University of California system without the need, after transfer, to satisfy specific campus lower-division general education requirements. **IGETC may also be used to satisfy the requirements of the AA-T or AS-T degree.** It should be noted that completion of the IGETC is not a requirement for transfer to CSU or UC, nor is it the only way to fulfill the lower-division general education requirements of these systems prior to transfer. The IGETC is an alternative General Education Pattern for transfer to the CSU and UC systems. Depending upon the major and/or the campus of choice, some students may be better served by taking courses which fulfill the CSU General Education Breadth Requirements listed on pages 54-55 of this catalog or those listed in the CSU or UC campus of choice catalog. Students pursuing majors that require extensive lower-division major preparation may not find the IGETC option to be advantageous. The IGETC will probably be most useful for students who want to keep their options open before making a final decision about transferring to a particular CSU or UC campus.

The course requirements for all areas must be fully completed with a grade of C or better before the IGETC can be certified. A student must request an IGETC Certification from the Admissions & Records Office. Certification will be sent after the last semester is completed at Columbia College. Courses taken from the IGETC list at another community college will be used in the final certification. Advanced Placement Examination credit may be used in some, but not all areas.

Area 1–English Communication

One course each from Group 1A, Group 1B, and Group 1C. (Group 1C is for CSU students only.)

- **Group 1A: English Composition**

  One course, three semester units.

  ENGL 1A

  (Or course from other college or AP)

- **Group 1B: Critical Thinking/English Composition**

  One course, three semester units.

  ENGL 1B

  ENGL 1C

  HIST 5/PHILO 5

  (Or course from other college)

- **Group 1C: Oral Communication**

  CSU students only. One course, three semester units

  SPCOM 1

  SPCOM 4

  (Or course from other college)

Area 2A – Mathematical Concepts and Quantitative Reasoning

One course, three semester units.

MATH 2, 6, 12, 17A*, 17B*, 18A, 18B, 18C

(Or course from other college or AP)

*Maximum of 5 units transferable to UC from 17A and 17B.

Area 3 – Arts and Humanities

Completion of at least three courses totaling nine units. One course must be in the Arts and one course must be in the Humanities. The third course may come from either Arts or Humanities.

- **Group 3A: Arts**

  ART 11, 12, 13; DRAMA 10

  MUSIC 2, 10, 11, 12

  (Or course from another college or AP)

- **Group 3B: Humanities**

  ENGL 11, 17, 18, 46, 47, 49, 50, 81

  HIST 5, HUMAN 1, 2, 3, 4; PHILO 1, 5, 25, 35

  SIGN 40B, 40C, SPAN 1B, 2A, 2B

  (Or course from other college or AP)

Area 4 – Social and Behavioral Sciences

From at least two disciplines, complete at least three courses totaling at least nine units.

- **Group 4A: Anthropology and Archaeology**
  ANTHR 1*, 2, 10, 15*
- **Group 4B: Economics**
  ECON 10, 11
- **Group 4C: Ethnic Studies**
  ANTHR 15*, SOCIO 5*, SPCOM 5
- **Group 4D: Gender Studies**
  ANTHR 7, HHP 2, HIST 21, SOCIO 7

Area 4 – Social and Behavioral Sciences (cont'd)

- **Group 4E: Geography**
  GEOGR 12
- **Group 4F: History**
  HIST 11, 13, 14, 16, 17, 21
- **Group 4G: Interdisciplinary, Social and Behavioral Sciences**
  CHILD 1, SPCOM 12
- **Group 4H: Political Science, Government and Legal Institutions**
  POLSC 10, 12, 14
- **Group 4I: Psychology**
  PSYCH 1, 5, 10, 35
- **Group 4J: Sociology and Criminology**
  HHP 63, SOCIO 1, 2, 5*, 8, 12, ANTHR 8
  (Or courses from other colleges or AP for all of AREA 4)

Area 5 – Physical and Biological Sciences

Completion of at least two courses totaling seven units or more. One Physical Science and one Biological Science course with at least one of these courses to include a Laboratory (L).

- **Group 5A: Physical Sciences**
  CHEM 20**, 5**, 14**, 16**, 2A, 2B, 4A, 4B, 30(L)
  ESC 1, 5 (L), 10, 22, 23(L), 30, 33(L), 40, 42, 50 (L), 62
  GEOGR 15
  FNR 6
  PHYCS 1**, 2**, 4A (L), 4B (L), 5A (L), 5B (L), 30(L)
  (Or courses from other colleges or AP)
- **Group 5B: Biological Sciences**
  ANTHR 1*, BIOL 2 (L)**, 4 (L), 6 (L), 10 (L), 17 (L)**, 24 (L), 60 (L), 65 (L)
  (Or courses from other college or AP)
- **Group 5C: Laboratory Activity**
  CHEM 5L, 14L, 16L, 20L, 2AL, 2BL, 4AL, 4BL
  (Or another course from 5A or 5B with a lab as indicated by (L).)

Area 6 – Language Other than English

(UC Requirement Only) Students transferring to the University of California are required to demonstrate competence (proficiency) in a language other than English equal to two years of high school study. The process for demonstrating competency is outlined below:

1. Completion of two years of high school level work in the same foreign language with a grade of "C-" or better.
2. Completion of a course (or courses) at another college or university, with a grade of "C" or better in each course. Generally, one semester of college work in a language other than English is considered to be equivalent to two years of high school level work. Students must provide the following documentation: test name, score, date test was completed and name of school.
3. In addition, the UC faculty has agreed that a CCC faculty member is qualified to determine language proficiency equal to two years of high school study. The faculty member provides a letter on letterhead asserting the student has mastered proficiency in the language equivalent to two years of high school study or higher.

Any one of the courses listed below completed with a grade of "C" or better will fulfill the requirement:

SIGN 40B	ASL: Intermediate Communication with the Deaf
SIGN 40C	ASL: Advanced Intermediate Communication with the Deaf
SPAN 1A	Spanish: Beginning
SPAN 1B	Spanish: Beginning
SPAN 2A	Spanish: Intermediate
SPAN 2B	Spanish: Intermediate

4. Completion, with a grade of "C" or better, of two years of formal schooling at the sixth grade level or higher at an institution where the language of institution is not English. Documentation must be presented to substantiate the required courses were completed. Students must provide the following documentation: test name, score, date test was completed and name of school.
5. A score of 500 or higher in the College Board Achievement tests in languages other than English.
6. A score of 3 or higher in the College Board Advanced Placement Examination in Languages other than English.

Area 7 – CSU Graduation Requirement in U.S. History, Constitution and American Ideals

The CSU U.S. History, Constitution, and American Ideals (AI) graduation requirement is not part IGETC. Courses used to satisfy this requirement may also be listed in Area 4. However, CSU campuses have the discretion whether to allow courses used to satisfy the CSU AI graduation requirement to count in both Area 4 and to meet the AI graduation requirement. In the absence of specific knowledge of a CSU campus policy for double-counting, Columbia College will certify IGETC using the courses in Area 4 and the CSU AI graduation requirement.

6 units: one course from Group 7A and one from Group 7B

- **Group 7A:**
  POLSC 10 Constitutional Government

And

- **Group 7B:**
  HIST16 United States: to 1877

Or HIST 17 United States: 1877 to Present

*	Courses designated with an asterisk (*) may be counted in one area only.
**	Indicates that transfer credit may be limited by either UC or CSU or both.
(L)	Designates a Laboratory course or a course that includes a Laboratory.

Notice to Students

Selection of courses from this list may be affected by one or more factors, including choice of major, university transfer requirements, or prerequisite or sequencing requirements. Failure to plan appropriately WILL adversely affect timely graduation and/or transfer. Students are encouraged to consult with a counselor in developing an individual education plan. (Counseling Office, Manzanita 15, 588.5109).

GENERAL EDUCATION BREADTH REQUIREMENTS FOR COLUMBIA COLLEGE ASSOCIATE OF ARTS (AA) AND SCIENCE (AS) DEGREES & TRANSFER TO CSU

FOR AA/AS* DEGREE:	FOR AS (OCCUPATIONAL EDUCATION**) DEGREE:	AREA A. ENGLISH LANGUAGE COMMUNICATION AND CRITICAL THINKING:	FOR CSU TRANSFER*** and AA-T/AS-T* DEGREES:
Three courses required: One each from A.1, A.2, A.3 (must have a grade of **C** or higher in each area of A).	Two courses required: one course from A.2. and one course from A.1. or A.3. (must have a grade of **C** or higher).	A.1. Oral Communication SPCOM 1, 4 A.2. Written Communication ENGL 1A, AP A.3. Critical Thinking [1]ENGL 1B, 1C, HIST 5[1], PHILO 5[1] ,SPCOM 2	Three courses required: one each from A.1, A.2, A.3 (must have a grade of **C** or higher in each area of A).
FOR AA/AS* DEGREE: Three courses required: One each from B.1, B.2, B.3 and B.4. A laboratory course from B.1 or B.2 may be used ot satisfy B.3. Also acceptable in B.2: BIOL 150. Also acceptable in B.4: MATH 104 or any higher mathematics course (must have a grade of **C** or higher in area B4).	**FOR AS (OCCUPATIONAL EDUCATION**) DEGREE**: Two courses required: One course from B.1 or B.2; and one course from B.4. Also acceptable in B.2: BIOL 150. Also acceptable in B.4: MATH 104, MATH 106 or any higher mathematics course (must have a grade of **C** or higher in area B4).	**AREA B. SCIENTIFIC INQUIRY AND QUANTITATIVE REASONING:** B.1. Physical Sciences CHEM 2A, 2B, 4A, 4B, 5, 14, 16, 20, 30(L), AP ESC 1, 5(L), 10, 22, 23(L), 30, 33(L), 40, 42, 50(L), 62 FNR 6, GEOGR 15, PHYCS 1, 2, 4A(L), 4B(L), 5A(L), 5B(L), 30(L), AP B.2. Life Sciences ANTHR 1[4], BIOL 2(L), 4(L), 6(L), 10(L), 17(L), 24(L), 60(L), 65(L), AP B.3. Lab/Activity BIOL 2(L), 4(L), 6(L), 10(L), 17(L), 24(L), 60(L), 65(L), ESC 5(L), 23(L), 33(L), 50(L), PHYCS 4A(L), 4B(L), 5A(L), 5B(L), 3.(L)AP, CHEM 2AL, 2BL, 4AL, 4BL, 5L, 14L, 16L, 20L, 30(L), AP B.4. Mathematics, Quantitative Reasoning MATH 2, 4, 6, 8, 12, 17A, 17B, 18A, 18B, 18C, AP	**FOR CSU TRANSFER:*** Three courses required: one each from B.1, B.2, B.3, and B.4. A laboratory (L) course from B.1 or B.2 may be used to satisfy B.3. No fewer than nine units total from Area B (must have a grade of **C** or higher in area B4).
FOR AA/AS* DEGREE: Two courses required: one from C.1; and one from C.2. *The GE requirements in this column do not apply to the AS (OCCUPATIONAL EDUCATION) Degree. See column w right for AS (OCCUPATIONAL EDUCATION) GE Degree requirements.	**FOR AS (OCCUPATIONAL EDUCATION**) DEGREE:** One course required from C.1 or C.2. **The GE requirements in this column only apply to the AS (OCCUPATIONAL EDUCATION) Degree.	**AREA C. ARTS AND HUMANITIES:** C.1. Arts (Art, Cinema, Dance, Music, Theater): ART 11, 12, 13[3], AP, DRAMA 10 , 20, 42, 43 MUSIC 2, 10, 11, 12, AP C.2. Humanities (Literature, Philosophy, Languages other than English: [1]ENGL 1B, 11, 17, 18, 46, 47, 49, 50, 81, AP HIST 5[1] HUMAN 1, 2, 3, 4 PHILO 1, 5[1], 25, 35 SIGN 40A, 40B, 40C SPAN 1A, 1B, 2A, 2B, AP	**FOR CSU TRANSFER:*** Three courses required: one from C.1, one from C.2, and one from either C.1 or C.2; and no fewer than nine units from Area C.

[1] ENGL 1B, HIST 5, or PHILO 5 may be used to satisfy either Area A.3 or C.2, but not both.
[2] CHILD 1, HHP 2, PSYCH 20 or PSYCH 35 may be used to satisfy either Area D. or E., but not both.
[3] Designed to meet an Ethnic Studies Requirement.
[4] ANTHR 1 may be used to satisfy either Area B.2 or D.1, but not both.
(L) Includes a laboratory

FOR AA/AS * DEGREE:	FOR AS (OCCUPATIONAL EDUCATION**) DEGREE:	AREA D. SOCIAL SCIENCES:	FOR CSU TRANSFER*** and AA-T/AS-T * DEGREES:
Two courses required: one from HIST 16, 17 or POLSC 10; and one course from D.0-D.9	Two courses required: One course from HIST 16, 17 or POLSC 10; and one course from D.0-D.9	Area D.0. Sociology and Criminology HHP 63, SOCIO 1, 2, 5[3], 8, ANTHR 8 Area D.1. Anthropology, Archaeology ANTHR 1[4], 2, 3, 10, 15 Area D.2. Economics ECON 10, 11, AP Area D.3. Ethnic Studies ANTHR 15, SOCIO 5[3], SPCOM 5 Area D.4. Gender Studies ANTHR 7, HHP 2[2], HIST 21, SOCIO 7 Area D.5. Geography GEOGR 12 Area D.6. History HIST 11, 13, 14, 16, 17, 21, AP Area D.7. Interdisciplinary, Social or Behavioral Science CHILD 22, CHILD 36, FNR 1, SPCOM 12 Area D.8. Political Science, Government and Legal Institutions POLSC 10, 12, 14, AP Area D.9. Psychology CHILD 1[2], PSYCH 1, 15, 20[2], 35[2], AP	Three courses from at least two subareas (D.0-D.9) **Strongly Recommended:** Include POLSC 10 and History 16 or 17 to fulfill CSU American Ideals' graduation requirement. The third class can be any course chosen from Area D (subareas D.0-D.9).
FOR AA/AS* DEGREE:	**FOR AS (OCCUPATIONAL EDUCATION**) DEGREE:**	**AREA E. LIFELONG LEARNING AND SELF DEVELOPMENT:**	**FOR CSU TRANSFER:***
One course in E. *The GE requirements in this column do not apply to the AS (OCCUPATIONAL EDUCATION) Degree. See column at right for AS (Occupational Education) GE Degree requirements.	No course required in E.	BIOL 50 CHILD 1[2] GUIDE 1, 18, 30 -HHP 2[2], 5, 6A, 6B, 60 INDIS 48 PSYCH 5, 10, 20[2], 30, 35[2], 40 SOCIO 12, 28 DD 214 (Military Discharge)	One course in E. Three units minimum required. ***A student may opt to follow the Intersegmental General Education Transfer Curriculum (IGETC) for

See pages 45-51 for additional information on Graduation and Transfer Requirements.
See pages 57-58 for specific information on Advanced Placement (AP) credit.

Two physical activity courses under Health & Human Performance are required for graduation from Columbia College.*
DD214 will clear the physical activity requirement.
*** not required for AA-T or AS-T degree.**

U.S. History, Constitution and American Ideals
This is a system-wide California State University graduation requirement. It is strongly recommmended to blend the fulfillment of this requirement with classes chosen fulfill Area D General Education. HIST 16 **or** HIST 17, taken in conjunction with POLSC 10, satisfies Associate Degree and CSU requirements in United States History, Constitution, and American Ideals. Completion of HIST 16 and/or 17 in combination with MJC HIST 101 or MJC HIST 102 will not fulfill the requirement for CSU graduation.

Notice to Students

As part of the Columbia College transcript application, a student must request a CSU General Education Breadth Certification from the Admissions & Records Office. Selection of courses from this list may be affected by one or more factors, including choice of major, university transfer requirements, or prerequisite or sequencing requirements. Failure to plan appropriately WILL adversely affect timely graduation and/or transfer. Students are encouraged to consult with a counselor in developing an individual education plan. (Counseling Office, upper level of the Manzanita Building, 588.5109).

New Program Awards

ELEMENTARY TEACHER EDUCATION

Elementary Teacher Education

■ ASSOCIATE IN ARTS FOR TRANSFER (AA-T)

The Associate of Arts Transfer Degree in Elementary Teacher Education provides students with a core curriculum in the concepts and issues related to teaching diverse learners in today's contemporary schools, K-12. Topics include teaching as a profession and career, historical and philosophical foundations of the American education system, contemporary educational issues. California's content standards and frameworks, and teacher performance standards, In addition to class time, the course requires 45 hours of structured fieldwork on a public school elementary classroom(s) that represent California's diverse student population, and includes cooperation with at least one carefully selected and campus-approved certificated classroom teacher.

The goal of the Associate in Arts in Elementary Teacher Education for Transfer program is to prepare students for transfer to a California State University to pursue a Bachelor's Degree in Liberal Studies, K-8 Teacher Preparation Program. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The major requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students wishing to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

Successful students will demonstrate the following knowledge and skills:

- Develop a personal philosophy of education, including reflection on motivation for pursuing a teaching career.
- Identify cultural perspectives in the language of learning and describe how educators can structure positive learning situations for diverse learners.
- Demonstrate ability to observe and work with teachers and students in the classroom.
- Develop expertise in the introductory content area subject matter required for teaching at the elementary school level.

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

A. Either the California State University General Education-Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC) ; AND

B. Semester units as specified below, with a grade of C or better in all courses; AND

C. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Institutional Requirement of completing two physical activity courses.

Required Courses:

BIOL 17	Fundamentals of Biology	4
CHEM 30	Survey of Chemistry and Physics	4
CHILD 1	Child Growth and Development	3
EDUC 11	Introduction to Elementary Classroom Teaching	3
ENGL 1A	Reading and Composition: Beginning	3
ENGL 1B	Advanced Composition and Introduction to Literature	3
ESC 33	Introduction to the Earth	4
GEOGR 20	World Regional Geography	3
HIST 13	World Civilizations: to 1650	3
HIST 16	United States: to 1877	3
MATH 4	Mathematics for Elementary Teachers	3
POLSC 10	Constitutional Government	3
SPCOM 1	Introduction to Public Speaking	3

Select one course from the following:

ENGL 1C	Critical Reasoning and Writing	3
HIST 5/ PHILO 5	Introduction to the History and Philosophy of Science	3

Select one course from the following:

DRAMA 10	Introduction to the Theatre	3
MUSIC 2	Introduction to Music	3

Major units required 48

GEOLOGY

Geology

■ ASSOCIATE IN SCIENCE FOR TRANSFER (AS-T)

The Geology Associate in Science for Transfer degree includes lower division coursework that is required for transfer and which focuses on mastery of the identification of earth materials and the use of geologic maps, stratigraphic sections, remote sensing imagery, and plate tectonic concepts, using these techniques and theory to model real-world applications.

The major requirements align with the Transfer Model Curriculum (TMC) for Geology. Students should consult with a counselor to determine whether this degree is the best option for their transfer

goals.

The goal of the Associate in Science in Geology for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Geology. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students desiring to transfer to CSU in a similar major in a timely manner.

Students will likely:

- Learn how to plan a program of data collection and analysis that employs modern scientific procedures and the use of modern technology
- Use acquired knowledge of geology to make informed decisions about problems in society and public policy
- Develop social and professional skills needed to be successful in the modern workplace (e.g. communications, working in collaborative teams, working with technology)

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

A. Either the California State University General Education-Breadth Requirements (CSU-GE) (minimum of 39 units) OR the Intersegmental General Education Transfer Curriculum (IGETC) (minimum of 37 units); AND

B. Semester units as specified below, with a grade of C or better in all courses; AND

C. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Institutional Requirement of completing two physical activity courses.

Required courses:

ESC 5	Physical Geology	4
ESC 23	Historical Geology	4
CHEM 2A	General Chemistry 1	3
CHEM 2AL	General Chemistry 1 Laboratory	2
CHEM 2B	General Chemistry II	3
CHEM 2BL	General Chemistry II Laboratory	2
MATH 18A	Calculus I	5
MATH 18B	Calculus II	5
	Major units required	**28**

Additional Recommended Preparation:

One year of Calculus-based physics

PHYCS 5A	Introductory Physics I: Calculus Level	4
PHYCS 5B	Introductory Physics II: Calculus Level	4

One semester of General Biology

BIOL 17	Fundamentals of Biology	4

One semester of Geographic Information Systems (GIS)

CCTIS 59	Geographic Information and Global Positioning Systems	1-3

MATHEMATICS

Mathematics

■ ASSOCIATE IN SCIENCE FOR TRANSFER (AS-T)

The Associate of Science Transfer Degree in Mathematics provides students with a core curriculum of mathematics content, theory, and methodology, building an understanding of the broader scope of mathematics and its relationship to other disciplines. Students will develop proficiency in quantitative reasoning using words, graphs, mathematical symbols and other appropriate means. The program integrates key theoretical approaches with insights that inform mathematical reasoning in addition to fostering critical thinking, persistence in problem solving and abstract reasoning.

The goal of the Associate in Science in Mathematics for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Mathematics. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The major requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students wishing to transfer to CSU in a similar major in a timely manner.

Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

Successful students will:

- Master the mathematical knowledge and techniques necessary to pursue upper division mathematics.
- Master the techniques of differentiation and integration to solve problems in real world applications.
- Utilize the theory and application of linear systems, matrix algebra and general vector spaces.
- Apply mathematical concepts across disciplines.

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

A. Either the California State University General Education-Breadth Requirements (CSU-GE) (minimum of 39 units) OR the Intersegmental General Education Transfer Curriculum (IGETC) (minimum of 37 units); AND

B. Semester units as specified below, with a grade of C or better in all courses; AND

C. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Institutional Requirement of completing two physical activity courses.

Required courses:

MATH 18A	Calculus I	5
MATH 18B	Calculus II	5
MATH 18C	Calculus III	5
MATH 26	Linear Algebra	3

One course required from this section:

PHYCS 5A	Introductory Physics I: Calculus Level	4
CCTPG 22	Programming Concepts and Methodology I	4
CCTPG 24	Programming Concepts and Methodology II	4
MATH 2	Statistics	4

Major units required 22

MUSIC

Music

■ ASSOCIATE IN ARTS FOR TRANSFER (AA-T)

The Associate of Arts Transfer Degree in Music provides students with a core curriculum of music theory, musicianship, private study and performance. Students will develop proficiency in music reading, fundamentals, advanced harmony, sight-singing and performance literature and practices. The program integrates music study, aural skills, writing and performance in order to foster artistic and critical thinking and a broad foundation of musical skill.

The goal of the Associate in Arts in Music for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. in Music. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students desiring to transfer to CSU in a similar major in a timely manner.

Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

Successful students will demonstrate the following knowledge and skills:

- Competence in music reading
- Competence in performance of music fundamentals, scales and chords in all keys
- Solo performance of at least 5 representative music pieces or etudes
- Competence in music theory terms and definitions
- Musicianship skills in sightreading and ear training

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

A. The Intersegmental General Education Transfer Curriculum (IGETC) (minimum of 37 units); AND

B. Semester units as specified below, with a grade of C or better in all courses; AND

C. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Institutional Requirement of completing two physical activity courses.

Required Core Courses

MUSIC 20A	Elementary Music Theory	3
MUSIC 20B	Elementary Music Theory	3
MUSIC 21A	Intermediate Music Theory	3
MUSIC 21B	Intermediate Music Theory	3
MUSIC 4A	Elementary Musicianship	1
MUSIC 4B	Elementary Musicianship	1
MUSIC 5A	Intermediate Musicianship	1
MUSIC 5B	Intermediate Musicianship	1

Applied Music (2 units over 4 semesters)

MUSIC 50	Private Lessons-Guitar	½
MUSIC 51	Private Lessons-Keyboard	½
MUSIC 52	Private Lessons-Woodwinds	½
MUSIC 53	Private Lessons-Brass	½
MUSIC 54	Private Lessons-Strings	½
MUSIC 55	Private Lessons-Percussion	½
MUSIC 56	Private Lessons-Voice	½

Large Ensemble (4 units over 4 semesters)

MUSIC 60	College Choir	1
MUSIC 64	Jazz Choir	1
MUSIC 66	Columbia College Community Chorus	1
MUSIC 72	Jazz Ensemble	1
MUSIC 75	Jazz Studies	1
MUSIC 76	Community Orchestra	1
MUSIC 78	Ensemble: Instrumental Emphasis	1

Major units required 22

Addtional recommended preparation for those who major in an instrument other than piano:

Credit by examination OR
MUSIC 41B Intermediate Piano (1)

STUDIO ARTS

Studio Arts

■ ASSOCIATE IN ARTS FOR TRANSFER (AA-T)

The Studio Arts program provides students with a core curriculum covering introductory art content, theory, history, and practice. The program is designed to provide students with a solid foundation in visual design elements and principles, common materials and techniques, and a historical and cultural context. The program also seeks to promote critical visual thinking and evaluation, nurture creative independence, and encourage productive experimental problem solving.

The goal of the Studio Arts Associate in Arts for Transfer (AA-T) program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Studio Arts, Fine Arts, Art History, or something similar. The program is intended and designed to make the transfer of Columbia College students to the CSU as seamless as possible. It is the most efficient pathway for students desiring to transfer to CSU in a similar major in a timely manner.

Measurable Outcomes:

- Student will demonstrate a foundation of art skills and a high level of craftsmanship by utilizing a variety of tools and technologies.
- Students will demonstrate an understanding of the art materials, methods and techniques, historical and contemporary, and the contexts in which they are employed.

The major requirements align with the Transfer Model Curriculum (TMC) for Studio Arts. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

A. Either the California State University General Education-Breadth Requirements (CSU-GE) (minimum of 39 units) OR the Intersegmental General Education Transfer Curriculum (IGETC) (minimum of 37 units); AND

B. Semester units as specified below, with a grade of C or better in all courses; AND

C. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Institutional Requirement of completing two physical activity courses.

Required Core		**12 units**
ART 1	Basic Freehand Drawing	3
ART 2	Basic Color and Design	3
ART 3	3-D Art and Design	3
ART 12	History of Art: Renaissance, Baroque, and Modern	3

Select One course		**3 units**
ART 11	History of Art: Ancient and Medieval (3)	
ART 13	Art of Africa, Asia, Australia and the Americas (3)	

Select three of the following (minimum of 9 units):		**9 units**
ART 9A	Figure Drawing: Beginning (3)	
ART 9B	Figure Drawing: Intermediate (3)	
ART 21A	Painting: Beginning (3)	
ART 21B	Painting: Intermediate (3)	
ART 23A	Watercolor: Beginning (3)	
ART 23B	Watercolor: Intermediate (3)	
ART 25	Mixed Media Painting (3)	
ART 31	Ceramics: Introductory (3)	
ART 32	Ceramics: Intermediate (3)	
ART 40	Photography: Beginning (4)	
ART 71	Ceramic Sculpture: Introduction (3)	
CCTDM 53	Computer Graphics 1 (3)	

Major units required: 24-25

Program Errata

The following programs have been reprinted with minor corrections.

Forestry

■ CERTIFICATE OF ACHIEVEMENT

Formerly offered as "Forestry Technology"

The Certificate of Achievement in Forestry helps prepare recipients for immediate employment in entry-level positions in the field of forestry. To earn the Certificate of Achievement, a student must complete the requirements including courses in forestry, soil resources, maps and remote sensing, natural history, and ecology. The courses that make up the Forestry Certificate are also applicable to the Forestry ASOE degree, which has additional General Education requirements.

Required courses:		**16 units**
FNR 2	Introduction to Forestry	3
FNR 6	Soil Resources	3
FNR 10	Dendrology	3
FNR 53	Forest Surveying	3
FNR 60	Introduction to Maps and Remote Sensing	2
FNR 62	Applied Forest Inventory and Management	2

One course required from this section:		**2 -3 units**
FNR 22	Ecology and Use of Fire in Forest Ecosystems	2
FNR 24	Fire-Fuels Management	3

One course required from this section:		**1-3 units**
CCTIS 59	Geographic Information and Global Positioning Systems (1-3)	
CCTIS 60	Introduction to ArcGIS (3)	

One course required from this section:		**1-3 units**
BIOL 39	Field Biology (1-2)	
BIOL 40	Field Biology: Ecosystems (1)	
BIOL 158	Birds of Central California (1)	
BIOL 159	Wildflowers (1-1 ½)	
BIOL 160	Mushrooms and Other Fungi (1½)	
BIOL 179	Fishing and Fishery Biology (1) of the Sierra Nevada	
ESC 35	Field Geology (1-2)	
FNR 11	Natural Resources Field Camp (3)	
FNR 50	Natural History and Ecology (2)	
FNR 172	Nature Photography (1½)	
FNR 182	Techniques of Surveying Sierra Nevada Wildlife (2)	
FNR 183	Ecological Restoration (1)	

One course required from this section:		**3-4 units**
BIOL 24	General Ecology (4)	
ESC 5	Physical Geology (4)	
FNR 30	Introduction to Watershed Management (3)	
FNR 81	California Wildlife (3)	

One course required from this section:		**1-3 units**
FNR1	Environmental Conservation (3)	
FNR 3	Natural Resources Law and Policy (3)	
FNR 9	Parks and Forests Law Enforcement (2)	
FNR 185	Introduction to the National Wilderness Preservation System (1)	

Total units for Certificate of Achievement 24-32

Natural Resources

■ CERTIFICATE OF ACHIEVEMENT

Formerly offered as "Natural Resources Technology"

Required courses:		**8 units**
FNR 1	Environmental Conservation	3
FNR 3	Natural Resources Law and Policy	3
FNR 60	Introduction to Maps and Remote Sensing	2

One course required from this section:		**3 units**
FNR 30	Introduction to Watershed Management (3)	
FNR 61	Introduction to Water Resources Management (3)	
FNR 63	Water for Consumption (3)	
FNR 65	Rural Wastewater Strategies (3)	
FNR 66	Decentralized Wastewater Management (3)	
FNR 67	Operation of Wastewater Treatment Plants (3)	

One course required from this section:		**1-3 units**
CCTIS 59	Geographic Information and Global Positioning Systems (1-3)	
CCTIS 60	Introduction to ArcGIS (3)	

Three courses required from this section:		**3-7 units**
BIOL 39	Field Biology (1-2)	
BIOL 40	Field Biology: Ecosystems (1)	
BIOL 158	Birds of Central California (1)	
BIOL 159	Wildflowers (1-1½)	
BIOL 160	Mushrooms and Other Fungi (1)	
BIOL 179	Fishing and Fishery Biology of the Sierra Nevada (1)	
ESC35	Field Geology (1-2)	
FNR 11	Natural Resources Field Camp (3)	
FNR 50	Natural History and Ecology (2)	
FNR 172	Nature Photography (1½)	
FNR 182	Techniques of Surveying Sierra Nevada Wildlife (2)	
FNR 183	Ecological Restoration (1)	
FNR 185	Introduction to the National Wilderness Preservation System (1)	

Two courses required from this section:		**4-8 units**
BIOL 24	General Ecology (4)	
ESC 5	Physical Geology (4)	
FNR 2	Introduction to Forestry (3)	
FNR 10	Dendrology (3)	
FNR 22	Ecology and Use of Fire in Forest Ecosystems (2)	
FNR 24	Fire-Fuels Management (3)	
FNR 53	Forest Surveying (3)	
FNR 62	Applied Forest Inventory and Management (2)	
FNR 81	California Wildlife (3)	

Total units for Certificate of Achievement 19-29

Water Resources Management

■ ASSOCIATE IN SCIENCE (OCCUPATIONAL EDUCATION)

The Associate in Science Occupational Education Degree (ASOE) in Water Resources Management prepares recipients for immediate employment in the fields of Watershed Management, Wastewater Treatment, and/or Drinking Water Treatment.

To earn this associate degree, a student must complete the requirements listed in Column 2 of the General Education Breadth Requirements for Columbia College as well as requirements specific to the degree, including courses in water resources management, natural resources, environmental conservation,geology, Geographic Information Systems, natural history, and ecology.

Required courses:		**8 units**
FNR 1	Environmental Conservation	3
FNR 60	Introduction to Maps and Remote Sensing	2
FNR 61	Introduction to Water Resources Management	3
Three courses required:		**9 units**
FNR 30	Introduction to Watershed Management	3
FNR 63	Water for Consumption	3
FNR 65	Rural Wastewater Strategies	3
FNR 66	Decentralized Wastewater Management	3
FNR 67	Operation of Wastewater Treatment Plants	3
FNR 69	Operation of Wastewater Treatment Plants 2	3
One course required from this section		**1-3 units**
CCTIS 59	Geographic Information and Global Positioning Systems (1-3)	
CCTIS 60/ GEOGR 60	Introduction to ArcGIS (3)	
Two courses required from this section:		**2-8 units**
BIOL 24	General Ecology (4)	
BIOL 65	Microbiology (4)	
BIOL 179	Fishing and Fishery Biology of the Sierra Nevada (1)	
ESC 5	Physical Geology (4)	
ESC 35TR	Geology of the Tuolumne River (1-3)	
ESC 50	Oceanography (4)	
ESC 62	Meteorology (3)	
FNR 3	Natural Resources Law and Policy (3)	
FNR 6	Soil Resources (3)	
FNR 11	Natural Resources Field Camp (3)	
FNR 53	Forest Surveying (3)	
FNR 183	Ecological Restoration (1)	

Total units for Certificate of Achievement 20-28

Water Resources Management

■ CERTIFICATE OF ACHIEVEMENT

The Certificate of Achievement in Water Resources Management helps prepare recipients for immediate employment in entry level positions in the field of Watershed Management, Wastewater Treatment, and/or Drinking Water Treatment.

To earn this Certificate of Achievement, a student must complete the requirements including courses in water resources management, maps, and environmental conservation, as well as related electives. The courses that make up the Water Resources Management Certificate are also applicable to the Water Resources Management ASOE degree, which has additional General Education requirements.

Required courses:		**8 units**
FNR 1	Environmental Conservation	3
FNR 60	Introduction to Maps and Remote Sensing	2
FNR 61	Introduction to Water Resources Management	3
Three courses required:		**9 units**
FNR 30	Introduction to Watershed Management	3
FNR 63	Water for Consumption	3
FNR 65	Rural Wastewater Strategies	3
FNR 66	Decentralized Wastewater Management	3
FNR 67	Operation of Wastewater Treatment Plants	3
FNR 69	Operation of Wastewater Treatment Plants 2	3
One course required from this section		**1-3 units**
CCTIS 59	Geographic Information and Global Positioning Systems (1-3)	
CCTIS 60/ GEOGR 60	Introduction to ArcGIS (3)	
Two courses required from this section:		**2-8 units**
BIOL 24	General Ecology (4)	
BIOL 65	Microbiology (4)	
BIOL 179	Fishing and Fishery Biology of the Sierra Nevada (1)	
ESC 5	Physical Geology (4)	
ESC 35TR	Geology of the Tuolumne River (1-3)	
ESC 50	Oceanography (4)	
ESC 62	Meteorology (3)	
FNR 3	Natural Resources Law and Policy (3)	
FNR 6	Soil Resources (3)	
FNR 11	Natural Resources Field Camp (3)	
FNR 53	Forest Surveying (3)	
FNR 183	Ecological Restoration (1)	

Major units required 20-28

Business Management

■ ASSOCIATE IN SCIENCE

The Associate in Science Degree is awarded in Science and Technical fields. It is specifically designed for students who intend to go straight into a management position or transfer. To earn this degree, a student must complete the requirements listed in Column 1 of the G.E. Breadth Requirements.

Required courses		**15 units**
BUSAD 24	Human Relations in Organizations	3
BUSAD 30	Principles of Marketing	3
BUSAD 40	Principles of Management	3
BUSAD 41	Small Business Management	3
BUSAD 158	Payroll Accounting	3
8 units required from B1 or B2:		**8 units**
BUSAD 2A	Financial Accounting (4)	
and BUSAD 2B	Managerial Accounting (4)	
or		
BUSAD 161A	Small Business Accounting I (4)	
and BUSAD 161B	Small Business Accounting II (4)	
Minimum 6 units required		**6-7 units**
BUSAD 18	Business Law (3)	
BUSAD 163	Business Mathematics (3)	
CCTPG 9	Operating Systems - Windows Unix/Linux (4)	
OFTEC 132	Business Communications (3)	

Units Required for Major 29 - 30

Tax Clerk

■ CERTIFICATE OF ACHIEVEMENT

Required Courses		**Units**
BUSAD 24	Human Relations in Organizations	3
BUSAD 161A	Small Business Accounting (4)	4
or BUSAD 2A	Financial Accounting (4)	
BUSAD 163	Business Mathematics	3
BUSAD 164	Income Tax	2
CCTIS 10	Computer Concepts and Information Systems	4

Total Required Units 16

New Courses

BIOL 100—A Natural History of California, 3 units

This course is an introduction to plants and animals of California with emphasis on the plant communities and wildlife of the Central Valley, the coastal ranges, and the Sierra Nevada. Ecologically oriented, the course probes ways in which plants and animals adapt to their environment. Present and historical human environmental relationships will be investigated. A field trip is required. Not repeatable.

Course Errata

The following courses have updated articulation information, or errors that have been corrected.

CCTDM 41–Compositing for Motion Graphics, 3 units

Recommended for Success: CCTDM 28 or CCTDM 40 CCTDM 53 or CCTDM 50
Hours per term: 36 lecture and 54 laboratory/activity

This course introduces software and techniques designed to provide a comprehensive set of 2D and 3D tools for compositing, animation, and effects for motion-graphics, visual effects, web design, film and video. Not repeatable. **Transfer:** (CSU/UC)

CCTPG 9–Operating Systems, Windows-Unix/Linux, 4 units

Recommended for Success: CCTIS 10 Computer Concepts and Information Systems
Hours per term: 54 lecture and 54 laboratory/activity

Provides an introduction to operating systems concepts, system architecture, structure, and management. Topics include operating system history, system commands, system programs, role of the operating system, its operational characteristics, file management, system commands, shell scripting, TCP/IP basics, FTP, mail, telnet, and text editors. Not repeatable. **Transfer:** (CSU/UC)

EDUC 11–Introduction to Elementary Classroom Teaching, 3 units

Recommended for Success: ENGL 1A
Hours per term: 36 lecture, 54 laboratory/activity

This course introduces students to the concepts and issues related to teaching diverse learners in today's contemporary schools, Transition Kindergarten through grade 12 (TK-12). Course requires a minimum of 45 hours of structured fieldwork in public school elementary classrooms. Not repeatable. **Transfer:** (CSU/UC)

FNR 1–Environmental Conservation, 3 units

Formerly listed as: NATRE 1
Hours per term: 54 lecture

Conservation of the biological and physical environment. History of the conservation movement. A case-study approach to land use practices of environmental conservation with current topics on endangered species, environmental pollution, wilderness management, energy, population, and the uniqueness of California and Alaska natural resources. Not repeatable. Field trips may be required. **Transfer:** (CSU/UC) (CSU-GE: D7)

FNR 6–Soil Resources, 3 units

Formerly listed as: NATRE 6
Recommended for Success: CHEM 5
Hours per term: 36 lecture and 54 laboratory/activity

Introduction to physical, chemical, and biological properties of soils. Soil development, type, and analysis. Implications and applications for natural resources management.**Transfer:** (CSU/UC)(IGETC: 5A, CSU-GE: B1)

FNR 172–Nature Photography, 1½ units

Formerly listed as: NARTC 172
Hours per term: 27 lecture

An introduction to nature and wildlife photography including field craft, maintaining records, conveying scale, performing basic photographic techniques, equipment specific to nature and wildlife photography, and advantages and disadvantages of digital photography. Instruction is in the field. Digital cameras and tripods required. Macro lenses and telephoto lenses recommended. Field trips may be required. Not repeatable. **Grading:** (P/NP only) **Transfer:** (CSU)

FNR 182–Techniques of Surveying Sierra Nevada Wildlife, 2 units

Formerly listed as: NARTC 182
Hours per term: 36 lecture

A technical, applied, field course on the methods of surveying and monitoring Sierra Nevada mammals, raptors, songbirds, reptiles, and amphibians. Topics include field identification of pelage, tracks, plumage, life cycle, geographic ranges, habitat, ecological niche, field signs, behavioral patterns, and State and Federal listed status, as well as use of track plates, hair snare systems, and wildlife cameras. Not repeatable. **Grading:** (P/NP only)

FNR 183–Ecological Restoration, 1 unit

Formerly listed as: NARTC 183
Hours per term: 18 lecture

A field lecture course on ecological restoration. Topics covered include the importance of ecological restoration to society and the environment, identification, and prioritization of natural community types in jeopardy, assessment of resource damage and causative factors, as well as, restoration techniques, implementation, and monitoring. Not repeatable. **Grading:** (P/NP only)

FNR 185–Introduction to the National Wilderness FPreservation System, 1 unit

Formerly listed as: NARTC 185
Hours per term: 18 lecture

A field course that informs and trains land management employees, volunteers, and others in the historical and philosophical antecedents to the Wilderness Act of 1964 and the provisions and administration of the National Wilderness Preservation System. Field trips required. Not repeatable. **Grading:** (P/NP only)

HHP 19–Aerobic Spinning, 1 unit

Hours per term: 54 laboratory/activity

Provides instruction on spinning as a method to improve cardio endurance and efficiency. Not repeatable. **Transfer:** (CSU/UC)

HHP 85–Varsity Tennis, 3 units

Hours per term: 171 laboratory/activity

Preparation and training for intercollegiate varsity tennis competition. Participation in contests with other colleges will be scheduled. May be repeated three times. **Transfer:** (CSU/UC)

HHP 86–Varsity Volleyball (Women), 3 units

Hours per term: 162 laboratory/activity

Preparation and training for intercollegiate varsity volleyball competition. Participation in contests with other colleges will be scheduled. Field trips required. May be repeated three times. **Transfer:** (CSU/UC-*Transfer credit limited. See a counselor.)*

HHP 91A–Pilates I, 1 unit

Erroneously published as: HHP 99A
Hours per term: 54 laboratory/activity

Provides instruction designed to condition the entire body, using positions and movements that simulate functional activities and thereby correct body alignment and balance. Not repeatable. **Transfer:** (CSU/UC)

HHP 94A–Swimming I, 1 unit

Hours per term: 54 laboratory/activity
Recommended for Success: Students should be able to complete one length of the pool without assistance

Provides an introduction to the application of mechanical and anatomical principles of aquatics for beginning swimmers. Not repeatable. **Transfer:** (CSU/UC)

HHP 94B–Swimming II, 1 unit

Recommended for Success: HHP 94A Swimming I
Hours per term: 54 laboratory/activity

Provides an introduction to the application of mechanical and anatomical principles of aquatics for intermediate swimmers, with an emphasis on the four competitive swim strokes and increasing cardiorespiratory endurance. Not repeatable. **Transfer:** (CSU/UC)

MATH 16–Precalculus, 5 units

Prerequisite: Completion of MATH 8 with at least a C or P
Hours per term: 90 lecture

Topics in Algebra, Trigonometry and Analytic Geometry are studied in preparation for Calculus. Includes polynomial, absolute value, radical, rational, exponential, logarithmic, and trigonometric equations, functions and their graphs. Not repeatable. **Transfer:** (CSU/UC)

MATH 26–Linear Algebra, 3 Units

Prerequisite: Completion of MATH 18A with at least a C or P
Hours per term: 54 lecture

This course develops the techniques and theory needed to solve and classify systems of linear equations. Solution techniques include row operations, Gaussian elimination and matrix algebra. Investigation of properties of vectors in two and three dimensions leads to the notion of an abstract vector space. Vector space and matrix theory topics include inner products, norms, orthogonality, eigenvalues, eigenvectors, eigenspaces and linear transformations. The course also includes an introduction to writing proofs and selected applications and numerical methods. Not repeatable. **Transfer:** (CSU/UC)

MATH 602–Prealgebra, 4 units

Prerequisite: Completion of MATH 601 with at least a C or P

Designed to help students prepare for algebra and applied math courses by reviewing fundamental operations of arithmetic and common geometric formulas, and introducing the algebraic concepts of simplifying expressions, polynomial arithmetic, and solving linear equations. Arithmetic reviewed includes calculation with integers, decimals, and fractions. Ratios, percents, and their applications are also studied. Not repeatable.

PHYCS 30/CHEM 30–Survey of Chemistry and Physics, 4 units

Prerequisite: Completion of MATH 101 with at least a C or P
Hours per term: 54 lecture and 54 laboratory/activity

An investigation of basic principles of physics and chemistry including matter, physical and chemical properties, energy, motion, light, atomic structure, bonding, solutions and chemical reactions. The inter-dependence of chemistry and physics will be emphasized. The inquiry-based learning experience is designed to assist students and future science educators in learning how to guide learning by self-discovery. Not repeatable. **Transfer:** (CSU/UC) (IGETC: 5A/5C)(CSU-GE: B1/B3) **C-ID:** (CHEM 30 or PHYCS 30 = C-ID CHEM 140)

PSYCH 24–Abnormal Psychology, 3 units

Recommended for Success: ENGL 151
Hours per term: 54 lecture

This course is designed to introduce students to the scientific study of psychopathology and atypical psychological behavior. The course will examine psychological disorders from a variety of contemporary psychological perspectives, including the biological and neuroscience perspectives, the psychological perspectives and the sociocultural perspectives. Students will also be introduced to current assessment and diagnostic criteria and the DMS-5, as well as intervention and treatment strategies. An examination of the scientific method and current research are also presented. Not repeatable. **Transfer:** (CSU/UC) **CID:** (PSY 120)