

organization and works under the direct supervision of someone with a degree, credential, or demonstrated expertise in psychology or sociology. Students identify how their work in the community contributes to the overall society in an effort to create a more globally minded citizenry. New placements learn about the agency's services, and to begin to apply psychological and sociological principles, theories, and concepts, while ongoing placements refine and strengthen their application of those principles, theories, and concepts. In weekly topical seminars, based on trending/current events and student placements, students both process their placement experiences and apply theory to practice. (CSU)

BIOLOGY

Biology career options include dozens of intriguing specialties. One can concentrate on microbiology and investigate viruses, bacteria, or molds. One can focus on cytology and study cells or histology and delve into the structure of animal and vegetable tissue. Ichthyology, parasitology, embryology, genetics, ecology, and biochemistry are a few of the other choices in the field. Emerging areas of emphasis include the concern for the environment and allied health professions.

Career Options

Agricultural Biologist, Biochemist, Biologist, Botanist, Chiropractor, Dentist, Entomologist, Environmental Specialist, Fish and Game Technical Aide, Fish and Game Warden, Food Technologist, Forester, Genetic Counselor, Horticulturist, Industrial Hygienist, Inhalation Therapist, Laboratory Technician, Marine Biologist, Medical Technologist, Microbiologist, Nuclear Medical Technician, Nutritionist, Occupational Therapist, Orthotist-Prosthetist, Osteopath, Park Naturalist/Ranger, Pharmacist, Pharmacologist, Physical Therapist, Physician/Surgeon, Podiatrist, Registered Nurse, Research Assistant, Sanitarian, Scientific Illustrator, Speech Pathologist/ Audiologist, Teacher, Technical Writer, Veterinarian, Wildlife Specialist, X-Ray Technician, Zoo Curator, Zoologist

Faculty

Fernando Agudelo-Silva, Becky Brown, Tina Christensen, Paul da Silva, Jamie Deneris, David Egert, Joseph Mueller
Department Phone: 415-485-9510

A.S. IN BIOLOGY

(Certificate of Achievement in Natural History also awarded. Skills Certificate available in Environmental Science.)

Students who complete the requirements listed below, plus additional general education and graduation requirements, will be awarded the associate degree. While students may take classes at both campuses, courses required for the major are offered at the Kentfield Campus.

All students should consult a counselor.

REQUIREMENTS			UNITS
BIOL	112A	Majors' Biology: Animals, Protozoa, Evolution and Classification	5
BIOL	112B	Majors' Biology: Plants, Algae, Fungi, and Ecology	5
BIOL	112C	Majors' Biology: Molecules, Cells, Prokaryotes and Genetics	5
And			
CHEM	115	Survey of Organic and Biochemistry	4
Or			
CHEM	131	General Chemistry I	5
And			
CHEM	132	General Chemistry II	5

MATH	104	Plane Trigonometry	3
PHYS	108A	General Physics I	4
PHYS	108B	General Physics II	4

TOTAL MAJOR UNITS 30-36

Upon successful completion of this degree, students will be able to:

- Demonstrate basic understanding of the major areas of modern biology, at levels of organization ranging from molecules to the biosphere.
- Explain how important observations, hypotheses, experiments and revisions of theory have led to our modern understanding in these areas.
- Analyze critically current biological information in articles, news reports and other forms in the print and electronic media.
- Use procedures and equipment essential to modern biological research in the laboratory and the field.

Natural History Certificate of Achievement

The Natural History Certificate of Achievement is a field experience program based on scientific principles and concepts for students who want to develop a comprehensive understanding of the natural world. It is especially designed for elementary school teachers, natural history museum and environmental docents, and environmental educators. For students interested in receiving an Associate in Science degree in Biology, see requirements under that major.

REQUIREMENTS			UNITS
BIOL	101	Field Biology	3
BIOL	110	Introduction to Biology	3
BIOL	161	Field Botany	3
BIOL	162	General Ecology	3
BIOL	235	General Marine Biology	4
GEOG	112	Meteorology and Climatology	3
GEOL	120	Physical Geology	3
GEOL	120L	Physical Geology Laboratory	1
Select one field course from the following:			
BIOL	237	Marine Ecology Field Studies	2
BIOL	244A	Alaska Field Studies	3
BIOL	244B	Greater Yellowstone Ecosystem Field Studies	1.5
Select one field course from the following:			
GEOL	125	Field Geology I	2.5
GEOL	126	Field Geology II	2
GEOL	128	Geologic Studies of Point Reyes and the San Andreas Fault	2
In addition, complete six units from the following courses:			
BIOL/ENVS	143	Stewardship of Marin Parks and Open Spaces	4
BIOL	164	Introduction to Mammalogy	3
BIOL	165	World of Insects	2
BIOL	165L	Introduction to Insect Biodiversity Laboratory	2
BIOL	167	Introduction to Herpetology	3
BIOL	169A	Introduction to Ornithology A	3
BIOL	169B	Introduction to Ornithology B	3
BIOL	171	Biology of Marine Mammals	3

TOTAL CERTIFICATE UNITS MINIMUM OF 32.5

Upon successful completion of this certificate, students will be able to:

- Describe the major components of local ecosystems and explain their interrelationships.
- Use available resources and accepted procedures to identify species of living things, types of rocks and minerals and important

TOTAL DEGREE UNITS**60**

Upon successful completion of this degree, students will be able to:

- Analyze the social effects and role of the electronic media.
- Identify the structure, governance and trends in the electronic media industry.
- Practice ethical standards when creating media content.
- Effectively communicate using the electronic media through scriptwriting and production.
- Understand and apply fundamental electronic media production methods.

A.A. IN COMMUNICATION, MASS COMMUNICATIONS OPTION

Students who complete the requirements listed below, plus additional general education and graduation requirements, will be awarded the associate degree. **All students should consult a counselor.**

REQUIREMENTS	UNITS
COMM 110 Introduction to Mass Communication and Media Literacy	3
FILM 150 Introduction to Film and Video Production	4
COMM 160 Images of Race, Gender, and Class in the Media	3
JOUN 115 Reporting and Writing for Mainstream Media	3
MMST 110 Introduction to Multimedia	3
One course from the following:	
FILM/HUM 109A History of Film: Beginning to 1950	4
FILM/HUM 109B Analysis and History of Contemporary Media	3
And three additional units from the following:	
JOUN 122 Newspaper and Media Production I	3
JOUN 123 Newspaper and Media Production II	3
SPCH 140 Oral Interpretation of Literature I	3
SPCH 155 On-Camera Performance/Reporting for Electronic Media	3

TOTAL MAJOR UNITS**22-23**

Upon successful completion of this degree, students will be able to:

- Write a brief news story under deadline conditions for any text-based mass medium.
- Analyze the primary influences of dominant mass media on major cultural practices and social formations.
- Interpret media messages to create meanings based on personal experience.
- Recognize the influences of mass media on the construction of socio-cultural identity and behavior, in particular as they relate to the representations of race, class, and gender.
- Recognize the unique set of semiotic rules and conventions used by image-based media to construct messages.

COMMUNICATION COURSES (COMM)

COMM 100: Introduction to Communication & Speech

3.0 Units. 3 lecture hrs/wk. No prerequisite.

An interactive course focusing on presentational speaking, emphasizing building self-confidence through progressive performance experiences. Students provide written and oral feedback of peer performances in a collaborative group-based format. (CSU/UC) AA/AS Area E, CSU Area A-1, IGETC Area 1C

COMM 101: Interpersonal Communication

3.0 Units. 3 lecture hrs/wk. No prerequisite.

This course introduces the theories, processes, and principles of interpersonal communication, and builds self-confidence through oral communication performance experiences. Through research and in-class oral presentations, students examine how human characteristics (e.g., gender, age, power, culture) and the communicative environment affect relationship development, emphasizing the study of the theory and practices of speech interaction in person-to-person settings. Concepts examined include perception, attraction, self-disclosure, listening, conflict management, and the patterns and stages in the development of interpersonal communication. Students are expected to demonstrate and apply skills through individual and group presentations and written reflections. (CSU/UC) AA/AS Area E, CSU Area A-1; IGETC Area 1C

COMM 102: Intercultural Communication

3.0 Units. 3 lecture hrs/wk. No prerequisite.

This introductory course surveys the basic theories and research in the area of intercultural communication, focusing on understanding and improving human interaction in both domestic and international contexts. Students examine how their own cultural beliefs and values influence their perception in order to achieve more positive outcomes when communicating with individuals from diverse backgrounds and identities. The course draws from multiple perspectives, through lecture, discussion, reading, independent research, films, presentations, and written and oral assignments. (CSU/UC) AA/AS Area E, CSU Area D; IGETC Area 4

COMM 103: Public Speaking

3.0 Units. 3 lecture hrs/wk. No prerequisite.

This introductory course in rhetoric and public address focuses on the creation and presentation of speeches that inform, persuade, inspire, and/or entertain. Emphasis is on analyzing the audience, adapting ideas and evidence in support of a thesis, developing language suitable to the occasion, applying ethical decision-making, and practicing delivery to effectively convey the message. The course develops critical listening skills through performance and evaluation. (CSU/UC) AA/AS Area E, CSU Area A-1; IGETC Area 1C

COMM 104: Argumentation and Persuasion

3.0 Units. 3 lecture hrs/wk. No prerequisite.

This argumentation and debate theory course develops critical thinking skills through written and oral arguments. Students create arguments on current issues and enduring questions; advocacy positions include stock issues, philosophical perspectives, and impacts on changing the status quo. (CSU/UC) AA/AS Area E, CSU Area A-1; IGETC Area 1C

COMM 105: Small Group Communication

3.0 Units. 3 lecture hrs/wk. No prerequisite.

This class offers practical experience in the techniques of leading and participating in small group discussion. Effective techniques such as speaking on panels, symposiums, problem solving groups, conflict resolution within small groups, and leadership skills and parliamentary procedures are covered. Designed for students intending to major in Speech/Communication, business, international business, education, and all fields of study and certification that require group

KIN 215: Advanced First Aid/First Responder

3.0 Units. 2.5 lecture and 1.5 hrs/wk. No prerequisite. May also be taken as FIRE 215; credit awarded for only one course.

This introductory course is designed for lay persons interested in, or for professionals who require, First Responder training per State of California (Title 22) or U.S. DOT standards. The class teaches the basic pre-hospital care skills needed to render care at the scene of an emergency until more highly trained emergency medical response personnel arrive. Includes basic anatomy and body systems; lifting and moving patients; airway management; patient assessment; medical, behavioral, and trauma emergencies; terrorism awareness; and an overview of the Emergency Medical Services (EMS) system. This course is a prerequisite for the Emergency Medical Technician Program. (CSU/UC)

LIBRARY

Learning the techniques of library research will enable students to make use of this resource with confidence and efficiency. Library Skills courses enable students to manage information in an era of information explosion, whether their interests are academic, professional, or personal.

Faculty

John Erdmann, Sarah Frye, David Patterson
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LIBRARY COURSE (LIBR)

LIBR 110: Introduction to Library Resources: A Self-Directed Approach

1.0 Unit. 1.125 TBA hrs/wk. No prerequisite. Self-paced. No regularly scheduled class meetings. Completion of the course represents approximately eighteen to thirty-six hours of academic work.

A self-paced course that facilitates the use of the library and teaches the basic skills needed for library research. The resources studied and the skills learned are applicable to any library - academic, public or special. Topics include the card catalog; important reference works such as encyclopedias, dictionaries, and almanacs; periodicals; periodical indexes; and book reviews. (CSU/UC)

MACHINE AND METALS TECHNOLOGY

Study in the field of machine and metals technology is designed as preparation for entrance into metalworking occupations. Graduates may enter the fields dealing with industrial production, prototype construction, special die work, or research and development. The courses in welding are designed to provide opportunity for the development of skills, knowledge, and experience for employment in the occupation and as auxiliary experience for persons in other majors.

Career Options

Certified Welder, Lathe Operator, Machinist, Machinist Apprentice, Mechanical Technician, Numerical Control Operator, Production Welder, Tool and Die Maker, Tool Company Representative, Welder Fabricator, Welding Technician

Faculty

Arthur Lutz
Department Phone: 415-883-2211, Ext. 8108

A.S. IN MACHINE AND METALS TECHNOLOGY, OCCUPATIONAL

(Certificate of Achievement also awarded.)

An Associate of Science degree in Machine and Metals Technology, Occupational is awarded for satisfactory completion of the major requirements, as well as the general education requirements. A Certificate of Achievement is awarded for satisfactory completion of the major requirements as listed below. This program is offered at the Indian Valley Campus. **All students should consult a counselor.**

REQUIREMENTS			UNITS
First Semester			
MACH	130	Welding I	2
MACH	140	Intermediate Machine Tool Processes	4
MACH	145	Computer Numerical Control Machining/Mill	3
MACH	165	Blueprint Reading for the Machine Trades	2
Second Semester			
CIS	101	Introduction to Personal Computers and Operating Systems	1.5
ELEC	100	Fundamentals of Electronics	2
MACH	97	Machine Trades Math	2
MACH	155	Computer Numerical Control Machining/Lathe	3
MACH	240	Advanced Machine Tool Processes	4
Third Semester			
ENGG	256	Practical Materials Science	3
MACH	131	Welding II	2
MACH	250	Applications of Machine Tool Technology	2
WE	298B	Occupational Work Experience B	2

TOTAL MAJOR UNITS**32.5**

Upon successful completion of this degree or certificate, students will be able to:

- Demonstrate the technical knowledge and technical skills that will serve to prepare them for entry into careers of the manufacturing and related industries.
- Determine the materials that are suitable for specific applications in the machine and metals technology fields and demonstrate their applications.

MACHINE AND METALS TECHNOLOGY COURSES (MACH)

MACH 106A: Metal Fabrication Fundamentals

2.0 Units. 1 lecture and 3 lab hrs/wk. No prerequisite.

This course introduces advanced metal fabrication techniques and their usefulness in other applications. The course includes basic metal straightening fundamentals, and introduces tools, techniques, and theory of metal fabrication. (CSU)

MACH 107A: MIG Welding for Auto Collision Repair Fundamentals

2.0 Units. 1 lecture and 3 lab hrs/wk. No prerequisite.

This course introduces basic auto body repair techniques using the MIG (metal inert gas) Welder. The course includes a short introduction to welding, and introduces MIG techniques and theories of metalworking. (CSU)