

UNIVERSITY PROGRAMS

INTERDISCIPLINARY GENERAL EDUCATION (IGE)

James Manley, *Director*
Dick Johnson, *Associate Director*
Nancy Ware, *Associate Director*

The IGE (INTERDISCIPLINARY GENERAL EDUCATION) Program is a team-taught, thematically integrated sequence of courses that meets many general education requirements in a stimulating intellectual environment. These requirements, which apply to all California State University campuses, help to broaden skills and understanding in areas beyond the major (such as social science, literature, composition). Usually these requirements are fulfilled by taking separate courses.

The Interdisciplinary General Education Program addresses the need for an integrated approach to curriculum, teaching, and scholarship and the creation of an extended learning community. As of July 1994, the IGE Program is a part of the new School of Education and Integrative Studies, which shares these goals.

FIRST YEAR (F,W,Sp)

IGE 120 **Consciousness and Community: Origins and Development of Human Societies (4)**

Chronology and civilization; origin of consciousness and myths of origin; symbol and ceremony; people and the environment. Prerequisite: EPT score of 147 or better. (F) Activity fee may be required.

IGE 121 **Rationalism and Revelation: The Ancient World (4)**

Myth and history; tragedy, humanism, justice, and freedom; subject and citizen. Prerequisite: IGE 120. (W)

IGE 122 **Authority and Faith: Feudalism and the Renaissance (4)**

Forms of social and economic organization; cultural and intellectual renewal; varieties of spatial organization; secular and sacred forms of aesthetic expression. Prerequisite: IGE 121. (Sp)

SECOND YEAR (F,W,Sp)

IGE 220 **Culture and Contact: The Expansion of the West (4)**

Exploration and ethnocentrism; the nation state and national artistic cultures; the scientific revolution. Prerequisite: IGE 122. (F) Activity fee may be required.

IGE 221 **Reform and Revolution: The Age of Enlightenment (4)**

Concepts of progress and individual rights in a time of political revolution; changes in social organization; restructuring of philosophical, scientific, and aesthetic thought. Prerequisite: IGE 220. (W)

IGE 222 **Individualism and Collectivism, Competing Ideologies: The Industrial Age (4)**

The machine and society; romanticism and realism; capitalism and socialism; population movements. Prerequisite: IGE 221. (Sp)

THIRD YEAR (F,W)

IGE 223 **Promise and Crisis: The Modern World (4)**

Nationalism and internationalism; world wars and nuclear threat; concept of the global village; ecological dilemmas; modernism and post modernism in the arts. Prerequisite: IGE 222. (F) Activity fee may be required.

IGE 224 **Connections Seminar: Exploration and Personal Expression (4)**

Research and presentation of an interdisciplinary project; synthesis and integration of selected IGE Program themes. Prerequisite: IGE 223. (W)

INTERNATIONAL PROGRAMS

Richard F. Pedersen, *Director*, International Programs

These course designations serve Cal Poly students participating in Cal Poly Exchange Programs or in CSU International Programs (IP) overseas as vehicles for residence credit and are administered by the International Center.

IPC 198 **Foreign Study Topics: (Course Title) (1-6)**

Study undertaken in a foreign university under the auspices of The California State University International Programs or Cal Poly Exchange Programs.

IPC 398 **Foreign Study Topics: (Course Title) (1-6)**

Study undertaken in a foreign university under the auspices of The California State University International Programs or Cal Poly Exchange Programs.

IPC 598 **Foreign Study Topics: (Course Title) (1-6)**

Graduate study undertaken in a foreign university under auspices of The California State University International Programs or Cal Poly Exchange Programs. Maximum credit 9 units.

GENERAL EDUCATION - TRACK A

GEN 101 **Communication and Critical Thinking I (4)**

Study and practice of methods of inquiry and forms of written and oral communication in the disciplines and fields of modern knowledge. Selected examples from the humanities, arts, natural sciences, social sciences, and professions. Introduction to the university as a place of cultural actions and knowledge. Frequent papers and oral presentations. Emphasis on self-reflection and exposition. 4 discussion/problem-solving.

GEN 102 **Communication and Critical Thinking II (4)**

This course should build on what students have explored in GEN 101 and continue the study and practice of forms of written and oral communication in the various disciplines. Students will explore the different methods of research, critical thinking, analysis and persuasion as they extend beyond the university and apply to issues of public importance and current events. 4 discussion/problem-solving. Prerequisite: GEN 101.

GEN 103 **Communication and Critical Thinking (4)**

Capstone for GEN 101 and 102, Communication and Critical Thinking. Frequent papers and oral presentations. Integrates content knowledge and process knowledge. 4 discussion/problem-solving. Prerequisites: GEN 101 and 102.

GEN 104 **The Human Conscience and Spirit (4)**

A cross-cultural, multidisciplinary examination of significant recurrent themes from a variety of historical, literary, philosophical, and religious sources that exemplify alternative human responses to common life experiences and ways of resolving fundamental spiritual and moral issues. 4 lecture/problem solving.

GEN 105 **Political Authority and Change (4)**

The study of political authority and change in the context of world cultures. Emphasis is given to institutions, cultural perspectives, the individual in relation to authority, social movements, and political authority at the global level. 4 lecture/problem solving. Prerequisites: GEN 101, 102, 103.

GEN 106 **Creativity, Technology, and Society (4)**

An examination of the moral, aesthetic, and social dimensions of human invention. Selected cultural and historical examples. Emphasis on historical, philosophical, and literary methods of inquiry and analysis. 4 lecture/problem-solving discussions. Prerequisites: GEN 101, 102, and 103.

GEN 107/107A World Cultures IV: Fine and Performing Arts - Intention, Process and Product (4)

Multidisciplinary exploration, on a global scale, of the fine and performing arts drawn from the disciplines of architecture, art, dance, landscape architecture, music and theatre. Emphasis on interdisciplinary dialog on artistic intention, process and product. Instruction is by lecture, activity, or a combination of both.

GEN 108 Consumers, Producers, and Economic Institutions (4)

An interdisciplinary introduction to the concepts and the empirical and normative theories of economic practices, institutions, and outcomes. An analysis of economic and social problems from economic, historical, and philosophical points of view. 4 lecture/problem solving. Prerequisites: GEN 101, 102, 103.

GEN 109 Readings in Human Behavior and Nature (4)

An multidisciplinary examination of the complex "nature" of the human animal. Guided exploration of the literature pertaining to the biological, social, and environmental factors underlying human behavior. An evolutionary, cross-cultural, and cross-species investigation into the uniqueness of humankind. 4 lectures/problem solving. Prerequisites: GEN 101, 102, 103.

GEN 110 The Individual in a Diverse Society (4)

Introduces social theory relevant to the challenge and promise of diverse societies, identifies one disciplinary approach (varies from section to section) to contemporary issues of diversity, and engages students in experiential group activities designed to heighten awareness of individual diversity in society. 4 lecture/discussion/problem-solving.

NATIONAL STUDENT EXCHANGE

Laraine Turk, *Coordinator*

These course designations serve Cal Poly students participating in the National Student Exchange Consortium at various universities and colleges in the United States as vehicles for Cal Poly residence maintenance.

NSE 198 National Student Exchange Study Topics: (Course Title) (1-15)

Study undertaken at a member campus of the National Student Exchange Consortium.

NSE 398 National Student Exchange Study Topics: (Course Title) (1-15)

Study undertaken at a member campus of the National Student Exchange Consortium.

NSE 598 National Student Exchange Study Topics: (Course Title) (1-15)

Study undertaken at a member campus of the National Student Exchange Consortium.

LIBRARY

Harold B. Schleifer, *Director*

For Library instruction: Call the Library Reference and Instruction Services at extension 3076.

MILITARY SCIENCE

Major Robert Kirchubel, Officer in Charge, Army ROTC

The ROTC program offers these courses at the Cal Poly Campus. All courses are worth two credits, except as noted.

MS 101/101L Introduction to the Military Profession.

A survey course for students interested in the military in general and ROTC in particular. Covers broad topics such as leadership, land navigation, plus customs, traditions, organization and roles of the US Army. Fall only. (2/0)

MS 102/102L Wars of the Twentieth Century I (1900-1939).

An in-depth study of the campaigns of World War One. Studies the war at sea and in the air. Concludes with the rise of Bolshevism, Fascism/Naziism, Japanese militarism and the wars of the inter-war period as well as the decline of the western democracies. Spring only. (2/0)

MS 103/103L Wars of the Twentieth Century II (1939-Present).

Continuation of MS 102.

An in-depth study of all aspects of World War Two plus the Korean, Viet Nam and Mideast Wars. Includes conflicts in Afghanistan, Falklands and Operation Desert Storm. Spring only. (2/0)

MS 179L Army Physical Readiness Training.

This course helps the student develop his/her own personal fitness program with the goal of excelling on the Army Physical Fitness Test. Class emphasis is on cardio-vascular and upper body strength.

The course helps to instill fundamentals of conditioning and expose students to a variety of conditioning drills which can be incorporated into an individual fitness program for life. Focus is on ROTC cadets, but all Cal Poly students are welcome. (1)

MS 201/201L General Military Skills I.

Includes lecture and practical exercise techniques to provide student with knowledge of basic military operational techniques.

Topics include drill and ceremony, military map reading and other basic military skills. Fall only. (2/0)

MS 202/202L General Military Skills II.

A continuation of the study of basic military skills. Emphasis on study of the military as an element of national power, its weapons and organization. Winter only. (2/0)

MS 203/203L General Military Skills III.

A continuation of the study of basic military skills. This course studies offensive and defensive tactics which allow the student to understand the nature of the battlefield environment. The fundamentals of map reading and land navigation will be covered in detail. Spring only. (2/0)

MS 301/301L Small Unit Leadership I.

This course covers the principles of tactics and operations, organization of small units and their employment, operations orders and instructions and leadership techniques. Cadets develop leadership skills through the study of military leadership principles and the practical application of tactical doctrine. Leadership theory and principles of planning are presented in the classroom and put into practice during leadership exercises. Fall only. (2/0)

MS 302/302L Small Unit Leadership II.

A continuation of the study of small unit leadership, ROTC's vehicle for the application of leadership principles. Cadets gain insight and practical experience in leader-manager skills. Winter only. (2/0)

MS 303/303L Small Unit Leadership III.

A continuation of the study of small unit leadership. Leadership skills learned thus far are further refined through the planning and execution of patrolling missions as cadets prepare for ROTC Advanced Camp. Spring only. (2/0)

MS 402/402L Military Ethics.

Develops an understanding of the professional soldier's responsibility to the Army and the nation, the understanding of the need for ethical behavior, and a greater awareness and sensitivity to ethical issues. The Military Professional Ethics Decision Making Model is used to assist the cadet's understanding of ethical problems and improve his/her decision making skills. Winter only. (2/0)

MS 403/403L Military Justice (was MS 401)

The Capstone course to bring together all previous Military Science instruction. Studies the military justice system, including the structure of the military law, courts-martial and alternatives to courts-martial. Examines contemporary leadership problems. It provides cadets with the basic manager-leader skills necessary as a foundation to become a junior officer. Spring only. (2/0)

MS 418 Outdoor Survival.

The application of survival skills in the outdoors including navigation without a map, health and hygiene, first aid, hazards, food and water, firemaking and cooking, construction of shelters, construction of survival kits, and varying climatic survival situations. Corequisite: REC 418.

MS 419 Snow Camping and Alpine Navigation.

Effective outdoor skills, knowledge and techniques for responding to cold weather and alpine conditions, whether situation is planned or accidental. Emphasis upon alpine navigation and preparedness for environmental conditions found in alpine snow setting and associated risk factors. Corequisite: REC 419.

Note: Military Science Leadership Laboratories involve practical work to augment classroom instruction. They provide additional work in military skills such as map reading, rifle marksmanship, tactics, first aid and drill and ceremonies. Weekly morning labs and one weekend field trip per quarter are included. Mandatory for Advanced Course.

ROTC Basic Camp.

Six week summer camp at Fort Knox, KY. Designed for students without prior military experience interested in earning a commission but who were unable to complete their first two years of ROTC at Cal Poly. Topics include basic military skills and leadership principles. Permission of instructor required. 18 units.

CAL POLY UNIVERSITY

The CPU designation means that such courses are offered for the entire university community regardless of major or school. Many CPU courses have been specifically designed to meet the requirements of general education or to assist students in career/academic choices. For further information in CPU coursework please contact the Office of Academic Programs (Bldg 1—Room 221).

GENERAL EDUCATION COURSES

CPU 201/201A Exercise, Nutrition and Fitness for Modern Society (3/1)

Importance of good nutrition, circulorespiratory and muscular endurance, strength and flexibility for adult health. Role of exercise and nutrition in control/prevention of cardiovascular disease, obesity and stress-related illness. Rationale for and participation in various adult fitness activities. Team taught. 3 lectures, 2 one-hour activities. Corequisites: CPU 201/201A.

CPU 210/210A Actualized Living (3/1)

Lifelong physiological and socio-psychological aspects of the leisure phenomenon. Experience in assessing student's leisure knowledge and habits coupled with a comprehensive leisure counseling follow through. Includes a one unit component in death and dying. Meets G.E. Category V requirement. Team taught. 2 lectures, 1 lecture/discussion, 1 two-hour activity. Corequisites: CPU 210/210A.

EGR 402 Ethics and Engineering Decision-Making (4)

Team-taught. Explores the ethics of engineers: values; ethical theory and practice; moral reasoning; morality in law and codes; professional standards and societies. Case studies. Open to engineering majors, others as space permits. 4 lecture/discussions. Prerequisites: Senior standing, IE 401, and passing score on the GWT.

ACADEMIC/CAREER GUIDANCE COURSES

CPU 100 Career and Personal Exploration (4)

Systematic development of information about (1) self including values, interests, and skills, (2) environment including career clusters, fields and occupational information, (3) decision making and (4) career search techniques. Includes vocational testing and use of the computer-based System of Interactive Guidance and Information (SIGI PLUS). Materials fee required.

CPU 101 Introduction to the University (1-3)

This course offers first-time freshmen students an orientation to the university. The class concerns instruction in the structure of the university, scheduling classes, career planning and choice of major, use of the library, co-curricular programs, use of the advisory process, study skills, etc.

CPU 102 Fundamental Principles of Learning Skills (3)

Introduction to and practice in college study techniques and learning skills including: listening, notetaking, memory improvement, and time management. Topics discussed among others: class scheduling, career planning, use of the library and advisory centers, and co-curricular programs. 3 lecture/discussions.

CPU 299/299A/299L Special Topics for Lower Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of four units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination. Corequisites may be required.

CPU 499/499A/499L Special Topics for Upper Division Students (1-4)

Group study of a selected topic, the title to be specified in advance. Total credit limited to 8 units, with a maximum of four units per quarter. Prerequisite: Permission of instructor. Instruction is by lecture, laboratory, or a combination. Corequisites may be required.

ENVIRONMENTAL HEALTH SPECIALIST MINOR

The minor provides Biological Sciences majors, Agricultural Biology majors, and other majors with courses which prepare students for careers in the California Department of Health Services as Environmental Health Specialists. Increasing awareness of pollution and other health related environmental problems has led to a demand for specialists to enforce and administer laws governing water, food, and air contamination, noise, land use planning, occupational health hazards, and animal vectors of disease. Many job opportunities exist in California for individuals trained as Environmental Health Specialists according to the California Department of Health Services.

The California Health and Safety Code outlines the standards for admission to the state internship program to become a registered specialist. The minimum educational qualifications are possession of a bachelor's degree from an approved institution with a minimum of 45 quarter units of basic science. The basic science requirement would be met by most students in Biological Sciences and in Agriculture. Students interested in more information may contact Dr. Richard Kaae or Dr. Lester Young (Horticulture/Plant and Soil Sciences Dept.), or Dr. John Chan (Biological Sciences Dept.).

Core courses		Units
Basic Biology	.BIO 115/115L	5
College Chemistry	.CHM 104	3
College Chemistry		
Lab	.CHM 141L	1
College Chemistry	.CHM 105	3
College Chemistry		
Lab	.CHM 142L	1
Elements of Organic		
Chemistry	.CHM 201	3

Fundamentals of Physics . . . . .	.PHY	102	4
College Algebra . . . . .	.MAT	105	4
Elementary Statistics with Applications . . . . .	.STA	120	4
			<hr/> 28

Required of all students:

Public Administration . . . . .	.PLS	314	4
Introduction to Arthropods . . . . .	.AGB	165	4
or			
Introduction to Entomology . . . . .	.ZOO	426/426L	4
Basic Microbiology . . . . .	.MIC	201/201	5
General Epidemiology . . . . .	.MIC	330	4
			<hr/> 17

Select 3 courses from the following:

Applied Microbiology . . . . .	.MIC	310/310L	5
Water Pollution Biology . . . . .	.BIO	420	3
Radiation Biology . . . . .	.BIO	431/431	5
Air Pollution Problems . . . . .	.CHM	460	3
Public Health Entomology . . . . .	.ZOO	435/435	4
			<hr/> 10-14

Select 3 courses from the following:

Pesticide and Hazardous Material Laws . . . . .	.AGB	301	3
Vertebrate Pest Management . . . . .	.AGB	323/323L	4
Produce Market Quality . . . . .	.AGB	325/325L	4
Urban Pest Management . . . . .	.AGB	342/342L	4
			<hr/> 11-12

PHYSIOLOGY MINOR

The Physiology Minor can be taken by students from any department in the University but it is particularly appropriate for students with the following majors: Animal Science (AS), Behavioral Science (BHS), Biology (BIO), Biotechnology (BTC), Chemistry (CHM), Electrical and Computer Engineering (ECE Biomedical Engineering), Foods and Nutrition (FN), Health and Physical Education (HPE), Microbiology (MIC), and Zoology (ZOO). It is intended to assist students interested in physiology to discover and prepare for careers in: medicine; dentistry; veterinary science; high school teaching; graduate study in general or comparative physiology, kinesiology, exercise physiology or physiological psychology, and; allied health professions such as human and animal nutrition, exercise and health counseling, biomedical engineering, and domestic animal reproduction. It will do this by exposing students to the diversity of disciplines and careers available to people with an understanding of physiology. It will also provide them with a broad basic background and then permit them to tailor a program of advanced courses to suit their general interests and career goals. The program is administered by a steering committee composed of the following individuals: S. Bassin (HPE), D. Clark (ECE), E. Cogger (AVS), A. Crecelius (FN), N. Harkey (BHS), D. Hoyt (ZOO), P. Mobley (CHM), and D. Stiffler (ZOO). Students interested in more information should contact Dr. Daniel Stiffler.

Requirements

(Prerequisites listed in parentheses)

Assumed entry level skills: High school chemistry and algebra

Core (all courses)			Units
Basic Biology (none) . . . . .	.BIO	115/115L	5
College Chemistry (none) . . . . .	.CHM	104	3
College Chemistry Lab (CHM concurrent) . . . . .	.CHM	141L	1
College Chemistry (CHM 104) . . . . .	.CHM	105	3
College Chemistry Lab			
(CHM 141; CHM 105 concurrent) . . . . .	.CHM	142L	1
Elementary Statistics with Applications . . . . .	.STA	120	4
			<hr/> 17
Total Units			17

Restricted Electives*Anatomy* (select one course)

Human Anatomy (BIO 115/115L) . . . . .	.ZOO	234/234L	4
Comparative Vertebrate Anatomy (ZOO 138/138L) . . . . .	.ZOO	451/451L	5
Anatomy & Physiology of Domestic Animals (BIO 115/115L) . . . . .	.AVS	350	5
			<hr/> 4-5
Total Units			4-5

Physiology (select one course)

Human Physiology (BIO 115/115L) . . . . .	.ZOO	235/235L	4
Comparative Animal Physiology (ZOO 137/137L, 138/138L) . . . . .	.ZOO	424/424L	5
			<hr/> 4-5
Total Units			4-5

Chemistry

Elements of Organic Chemistry (or equivalent) (CHM 105) . . . . .	.CHM	201	3
Elements of Organic Chemistry Lab (CHM 105) . . . . .	.CHM	250L	1
			<hr/> 4
Total Units			4
Total Units, Restricted Electives			12-14

Advanced Physiology Courses

One or more courses from each of the following four clusters totalling at least 20 units. Two courses must be from outside the major school.

Physicochemical Principles

Elements of Biochemistry (CHM 201, CHM 250L) . . . . .	.CHM	321	4
Biochemistry (CHM 315, CHM 317) . . . . .	.CHM	327	4
Biochemistry (CHM 327) . . . . .	.CHM	328	4
Biochemistry (CHM 328) . . . . .	.CHM	329	4
Elements of Physical Chemistry (MAT 116, CHM 113, PHY 133) . . . . .	.CHM	304	4
Elements of Physical Chemistry (CHM 304) . . . . .	.CHM	305	3
Thermodynamics (PHY 132) . . . . .	.ME	301	4
Thermodynamics (ME 301, MAT 215) . . . . .	.ME	302	4
Fluid Mechanics (ME 215, PHY 132) . . . . .	.ME	311	3
Fluid Mechanics (ME 301, ME 311) . . . . .	.ME	312	4
Cellular Physiology (CHM 201) . . . . .	.BIO	435/435L	4
Advanced Cell Biology (BIO 435, CHM 327 or consent) . . . . .	.BIO	535	4
Biophysics (PHY 123 or consent) . . . . .	.PHY	410	4
			<hr/> 3-4

Physiology

Physiological Ecology (ZOO 424/424L or consent of instructor) . . . . .	.ZOO	440/440L	4
Endocrinology (CHM 327, ZOO 424/424L and/or consent) . . . . .	.BIO	520/520L	4
Renal Physiology (ZOO 424/424L) . . . . .	.BIO	521	3
Physiological Psychology (BHS 204, 205, PHY 202, 203) . . . . .	.PSY	303	5
Mammalian Endocrinology (AVS 350) . . . . .	.AVS	412	4
Physiology of Lactation (AVS 350 and AVS 412) . . . . .	.AVS	413	3
Reproductive Physiology of Food Animals (AVS 350 or ZOO 424/424L) . . . . .	.AVS	414	4
Avian Physiology (none) . . . . .	.PS	431	3
Biomed. Ins. & Meas. (BIO 115/115L, ECE 323 or ECE 333 or consent) . . . . .	.ECE	435	3
Biomed. Ins. & Meas. Lab (ECE 435 concurrent) . . . . .	.ECE	485	1
			<hr/> 3-5

UNIVERSITY PROGRAMS

Nutrition

Nutrition (CHM 201, CHM 250L, ZOO 235/235L)	FN	235	3
Nutrition Lab (FN 235 concurrent)	FN	361	
Advanced Nutrition (CHM 321, FN 235, ZOO 235/235L)	FN	433	4
Nutritional Assessment-Biochemical (FN 433 concurrent)	FN	445	2
Advanced Nutrition (FN 433)	FN	434	4
Diet Therapy (FN 433, FN 445)	FN	443	4
Diet Therapy (FN 443)	FN	444	3
Animal Nutrition (CHM 321)	AVS	402	4
Ruminant Nutrition (CHM 321)	AVS	403	4
Advanced Nutrition (FN 434)	FN	533	3
Recent Advances in Nutrient Metabolism (consent)	FN	535	2
Nutrition Through the Life Cycle (FN 433)	FN	536	3
Biological Control Systems(u.d. course in control sys.)EGR		588	4
			3-4

Ergonomics

Physiology of Exercise (ZOO 235/235L)	KIN	303/303L	3,1
Lifespan Motor Development (Junior or Senior standing)	KIN	312/312A	3,1
Biomechanical Kinesiology (KIN 302)	KIN	402	3
Physiology of Exercise II (KIN 303/303L)	KIN	403/403L	3,1
Motor Learning & Human Performance (KIN 303/303L, 425/425A)	KIN	430/430L	3,1
Sports Medicine (KIN 303/303L)	KIN	455	4
Exercise Metabolism and Weight Control (KIN 303/303L, FN 205 or FN 235 and FN 236L)	KIN	456	3
Advanced Motor Learning & Human Performance	KIN	580	3
Advanced Motor Development (KIN 312)	KIN	583	3
			3-4

Total Units—Advanced Courses	20
Total Units—Minor	49-51

QUANTITATIVE RESEARCH MINOR

The Quantitative Research Minor may be taken by students having any major in the University other than Mathematics. It is particularly appropriate for students having majors in the following areas: Operations Management, Marketing Management, Agricultural Business Management, Animal Science, Behavioral Science, Economics, Political Science, Physical Education, Biological Sciences, Urban and Regional Planning. The minor is intended to prepare students to perform quantitative analyses within their area of interest by providing the working knowledge required in statistics, principles of experimental design, survey and data analysis techniques. This includes learning to understand and use some of the statistical software packages available on computers. Students are expected to complete a project in their major having a significant quantitative component. The project is jointly directed by the Statistics Coordinator and a faculty advisor selected from the student's own department. Through such experience our graduates become more able and prepared to perform quantitative studies in their chosen field of employment. For more information students may contact any of the following reference sources: Dr. D. S. Gill (Statistics Coordinator), Dr. Melinda Burrill (Animal Science), Dr. John Korey (Political Science), Dr. Nancy Harkey (Behavioral Science), Dr. Ralph Miller (Operations Management), Dr. Vernon Stauble (Marketing Management), Mr. Charles Loggins (Urban and Regional Planning), Dr. David Moriarty (Biological Sciences), Dr. Stephen Bryant (Biological Sciences), Dr. John Shieh (Economics), Dr. Wanda Rainbolt (Physical Education) or Dr. Arthur Parker (Agricultural Business Management).

Requirements

<i>Core</i>			Units
Elementary Statistics with Applications	STA	120	4
Sampling Survey Methods	STA	310	4
Units			8

Intermediate (Choose one sequence)

Managerial Statistics	OM	314	4
Advanced Managerial Statistics	OM	3804	

Agricultural Data Management	ABM	375/375L	3/1
Advanced Managerial Statistics	OM	380	4
Statistics for Behavior Sciences	BHS	307/307A	3/1
Computer Methods in Behavior Science	BHS	340/340A	3/1
Statistics in the Behavioral Sciences	BHS	307/307A	3/1
Policy Analysis and Program Evaluation	PLS	417/417A	3/1

Statistical Computing	STA	210	4
Nonparametric Statistics	STA	320	4

Statistical Computing	STA	210	4
Biometrics	BIO	411	3
Planning Research Methods I	URP	331/331L	4/2
Planning Research Methods II	URP	332/332L	4/2
Economic Statistics	EC	321	4
Economic Statistics	EC	322	4
Econometrics	EC	421	4

Units			7-12
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Applied Methods (Choose one course from each group)

GROUP I

Marketing Research I	MKT	408	4
Real Estate Market Analysis	FRL	483	4
Survey Research	SOC	433/433A	3/1

GROUP II

Research Design and Methodology	OM	460	4
Experimental Psychology: Research, Design and Methodology	PSY	433/433L	4/1
Design of Experiments	STA	435	4

Units			8-9
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Project

Students will do a quantitative research project in their major field of study.			4
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Total Units			27-32
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TOTAL QUALITY MANAGEMENT MINOR

The Total Quality Management (TQM) Minor may be taken by students having any major in the University. It is particularly appropriate for students having majors in the following areas: Operations Management, Industrial and Manufacturing Engineering, Management and Human Resources, International Business and Marketing. The Minor is intended to allow students to gain the knowledge and skills necessary for effective application of quality management techniques in manufacturing, service, and not-for-profit organizations. The Total Quality Management Minor will help for the need for graduates, especially from business and engineering, who are trained in the concepts, techniques, tools and methods of analysis used for the continuous improvement of product, service, and process quality. Computer-based approaches are used wherever they are available and appropriate. For more

information, students may contact any of the following faculty members: Dr. Mostafa El Agizy (Operations Management), Dr. Peggy Snyder (Management and Human Resources), and Professor Phil Rosenkrantz (Industrial and Manufacturing Engineering).

Requirements

Prerequisites (12-26 units)

Completion of one of the following prerequisite options is required. In most instances, the prerequisites listed in an option package are part of the existing curriculum for the student in the indicated academic program area.

OPTION 1: (Business, Engineering Technology, and some Science majors. Also, all majors not included in Options 2 and 3 below)

Elementary Statistics with Applications	.STA	120	(4)
Managerial Statistics	.OM	314	(4)
Production and Operations Management I	.OM	331	(4)

OPTION 2: (Engineering, and some Science majors)

Analytic Geometry and Calculus I	.MAT	114	(4)
Analytic Geometry and Calculus II	.MAT	115	(4)
Analytic Geometry and Calculus III	.MAT	116	(4)
Calculus of Several Variables I	.MAT	214	(3)
Statistical Methods in Engineering and the Physical Sciences	.STA	309	(4)
Engineering Probability and Statistics	.IME	312	(4)

OPTION 3: (Mathematics majors)

Analytic Geometry and Calculus I	.MAT	114	(4)
Analytic Geometry and Calculus II	.MAT	115(4)	
Analytic Geometry and Calculus IH	.MAT	116	(4)
Calculus of Several Variables I	.MAT	214	(3)
Calculus of Several Variables II	.MAT	215	(3)
Applied Probability Theory	.STA	330	(4)
Applied Statistics	.STA	331	(4)
Core Requirements			(16 units)

(Note: OM majors are required to substitute a course outside their major, with minor advisor approval, for OM 401.)

Processes and Measurement	.IME	280	(4)
Total Quality Management	.OM	401	(4)
Quality Management	.OM	435	(4)
or			
Quality Control by Statistical Methods	.IME	415	(4)
Total Quality Management Implementation	.MHR	439	(4)
Directed Elective Courses		(8 units)	
Advanced Managerial Statistics	.OM	380	(4)
Material Requirements Planning	.OM	430	(4)
Production and Inventory Management	.OM	432	(4)
Materials and Inventory Management	.OM	433	(4)
Purchasing Management	.OM	434	(4)
Operations Management in Services	.OM	453	(4)
Just-In-Time Production	.OM	455	(4)
Research Design and Methodology	.OM	460	(4)
First Line Management	.MHR	313	(4)
Training and Development	.MHR	405	(4)
Advanced Organizational Behavior	.MHR	438	(4)
Design of Experiments	.IME	435/435L	(3/1)
Fundamentals of Human Factors			
Engineering/Laboratory	.IE	225/225L	(3/1)
Principles of Productivity Engineering	.IE	392	(3)
Reliability Concepts and Techniques	.IE	419	(3)
Human Engineering in Design/Laboratory	.ME	438/448L	(2/1)
Geometric Dimensioning and Tolerancing/Laboratory	.MFE	323/323L	(2/1)
Intro to Computer Integrated Manufacturing/Laboratory	.MFE	450/450L	(3/1)
Producibility Engineering	.MFE	484	(3)
Advanced Human Factors in Engineering Design	.EGR	539	(4)
Quality Assurance	.ETP	375	(3)
Nondestructive Evaluation I	.ETP	437/437L	(1/1)
Nondestructive Evaluation II	.ETP	438/438L	(1/1)
Analysis of Variance and Design of Experiments	.STA	435	(4)
TOTAL CORE & ELECTIVE UNITS REQUIRED			(24 units)

ATHLETIC DEPARTMENT

Karen L. Miller, Director of Athletics

Mike Ashman

Keith Clements

Dee DeRaleigh

Ron Fremont

Phyllis Hoefler

Ky Kugler

Ann Lebedeff

Thomas O. Marshall

Jim Sackett

Todd Saldana

Glen Shenker

Paul Thomas

Chris Ward

Rosie Wegrich

The Department of Intercollegiate Athletics offers opportunities for men and women in a wide variety of sports, which include (m) baseball, basketball, cross country, soccer, tennis, track and field and (w) volleyball. The University is a member of the National Collegiate Athletic Association (NCAA), Division II and competes in the California Collegiate Athletic Association (CCAA) conference. These opportunities are open to all qualified students. The University has gained recognition from the performances of its many outstanding athletic teams.

Course Descriptions

KIN 181-195 Competitive Athletics (2)

May be taken by those students who compete on an intercollegiate athletic team and may be repeated for additional credit as long as normal academic progress is maintained.

181 Intercollegiate Basketball (Women)

182 Intercollegiate Baseball

183 Intercollegiate Basketball (Men)

184 Intercollegiate Soccer (Women)

185 Intercollegiate Cross Country (Men)

186 Intercollegiate Soccer (Men)

190 Intercollegiate Tennis (Men)

191 Intercollegiate Track and Field (Men)

192 Intercollegiate Volleyball (Women)

193 Intercollegiate Cross Country (Women)

194 Intercollegiate Tennis (Women)

195 Intercollegiate Track and Field (Women)

