UNIVERSITY OF HAWAII

GENERAL CATALOGUE

1959-1960

Hawaii Univ.
Bulletin
II
UNIVERSITY OF HAWAII

GENERAL CATALOGUE 1959 • 1960

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The human figure is reproduced from a rubbing of an ancient Hawaiian petroglyph in a sea cave near Hanauma Bay on the island of Oahu. The sun-like shape is a silhouette of a unique Hawaiian tapa pattern believed to represent the sea urchin.
UNIVERSITY OF HAWAII
1959–1960 Calendar

First Semester

September 14–15, Monday and Tuesday……Orientation of freshmen
September 15, Tuesday……………………Registration of seniors
September 16, Wednesday…………………Registration of juniors
September 17, Thursday…………………..Registration of sophomores
September 18, Friday…………………Registration of freshmen
September 19, Saturday…………………8:00 A.M. to 1:00 P.M. Registration of graduates and unclassified students and auditors
September 21, Monday…………………..2:30 to 5:00 P.M. Registration of graduates and unclassified students and auditors
September 21, Monday…………………..Instruction begins
September 28, Monday…………………..Last day of registration for credit
October 12, Monday…………………..Last day of withdrawal from courses without "grade" penalty
October 30, Friday…………………..First deficiency reports due
November 11, Wednesday………………Veteran's Day (holiday)
November 25, Wednesday………………Last day for removal of "Incompletes"
November 26–28, Thursday through Saturday.…Thanksgiving recess
December 4, Friday…………………..Second deficiency reports due
December 7, Monday…………………..Last day of withdrawal from courses
December 19, Saturday…………………..Last day of instruction before Christmas recess

January 4, Monday…………………..Instruction resumes
January 16, Saturday…………………..Last day of instruction, first semester
January 18, Monday…………………..Final examinations begin
January 28, Thursday…………………..First semester ends

Second Semester

February 3, Wednesday…………………..Registration of seniors and juniors
February 4, Thursday…………………..Registration of sophomores
February 5, Friday…………………..Registration of freshmen
February 6, Saturday…………………..8:00 A.M. to 1:00 P.M. Registration of graduate and unclassified students and auditors
February 8, Monday…………………..2:30 to 5:00 P.M. Registration of graduate and unclassified students and auditors
February 8, Monday…………………..Instruction begins
February 15, Monday…………………..Last day of registration for credit
February 22, Monday…………………..Presidents' Day (holiday)
February 29, Monday…………………..Last day of withdrawal from courses without "grade" penalty
March 18, Friday…………………..First deficiency reports due
March 26, Saturday…………………..Prince Kuhio Day (holiday)
April 8, Friday…………………..Last day for removal of "Incompletes"
April 11–16, Monday through Saturday…………Easter recess
April 29, Friday…………………..Second deficiency reports due
May 2, Monday…………………..Last day for withdrawal from courses
May 24, Tuesday…………………..ROTC graduation exercises
May 28, Saturday…………………..Last day of instruction
May 30, Monday…………………..Memorial Day (holiday)
May 31, Tuesday…………………..Final examinations begin
June 10, Friday…………………..Second semester ends
June 12, Sunday…………………..Commencement
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board of Regents</td>
<td>6</td>
</tr>
<tr>
<td><strong>Faculty and Staff</strong></td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>7</td>
</tr>
<tr>
<td>Instruction</td>
<td>8</td>
</tr>
<tr>
<td>Hawaii Agricultural Experiment Station</td>
<td>30</td>
</tr>
<tr>
<td>Agricultural Extension Service</td>
<td>33</td>
</tr>
<tr>
<td>Office of Student Personnel</td>
<td>37</td>
</tr>
<tr>
<td>Legislative Reference Bureau</td>
<td>37</td>
</tr>
<tr>
<td>Land Study Bureau</td>
<td>38</td>
</tr>
<tr>
<td>Affiliate Graduate Faculty</td>
<td>38</td>
</tr>
<tr>
<td><strong>General Information</strong></td>
<td>41</td>
</tr>
<tr>
<td><strong>Academic Information</strong></td>
<td>46</td>
</tr>
<tr>
<td><strong>Student Activities</strong></td>
<td>64</td>
</tr>
<tr>
<td>College of Agriculture</td>
<td>66</td>
</tr>
<tr>
<td>College of Arts and Sciences</td>
<td>75</td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>83</td>
</tr>
<tr>
<td>College of Education</td>
<td>86</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>94</td>
</tr>
<tr>
<td>College of General Studies</td>
<td>98</td>
</tr>
<tr>
<td>College of Nursing</td>
<td>100</td>
</tr>
<tr>
<td><strong>Graduate School</strong></td>
<td>104</td>
</tr>
<tr>
<td><strong>Announcement of Courses</strong></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>105</td>
</tr>
<tr>
<td>Air Science</td>
<td>109</td>
</tr>
<tr>
<td>Anthropology</td>
<td>110</td>
</tr>
<tr>
<td>Art</td>
<td>112</td>
</tr>
<tr>
<td>Asian and Pacific Languages</td>
<td>115</td>
</tr>
<tr>
<td>Bacteriology</td>
<td>117</td>
</tr>
<tr>
<td>Botany</td>
<td>118</td>
</tr>
<tr>
<td>Business</td>
<td>121</td>
</tr>
<tr>
<td>Chemistry</td>
<td>125</td>
</tr>
<tr>
<td>Dental Hygiene</td>
<td>127</td>
</tr>
<tr>
<td>Drama and Theatre</td>
<td>129</td>
</tr>
<tr>
<td>Economics</td>
<td>130</td>
</tr>
<tr>
<td>Education</td>
<td>132</td>
</tr>
<tr>
<td>Engineering</td>
<td>138</td>
</tr>
<tr>
<td>English</td>
<td>141</td>
</tr>
<tr>
<td>European Languages</td>
<td>144</td>
</tr>
<tr>
<td>Geography</td>
<td>147</td>
</tr>
<tr>
<td>Geology and Geophysics</td>
<td>149</td>
</tr>
<tr>
<td>Government</td>
<td>151</td>
</tr>
<tr>
<td><strong>Health and Physical Education</strong></td>
<td>154</td>
</tr>
<tr>
<td>History</td>
<td>156</td>
</tr>
<tr>
<td>Home Economics</td>
<td>160</td>
</tr>
<tr>
<td>Interdepartmental Courses</td>
<td>163</td>
</tr>
<tr>
<td>Library Science</td>
<td>163</td>
</tr>
<tr>
<td>Mathematics</td>
<td>164</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>165</td>
</tr>
<tr>
<td>Military Science</td>
<td>165</td>
</tr>
<tr>
<td>Music</td>
<td>166</td>
</tr>
<tr>
<td>Nursing</td>
<td>169</td>
</tr>
<tr>
<td>Oceanography</td>
<td>170</td>
</tr>
<tr>
<td>Philosophy</td>
<td>170</td>
</tr>
<tr>
<td>Physics</td>
<td>172</td>
</tr>
<tr>
<td>Psychology</td>
<td>173</td>
</tr>
<tr>
<td>Religion</td>
<td>176</td>
</tr>
<tr>
<td>Social Work</td>
<td>177</td>
</tr>
<tr>
<td>Sociology</td>
<td>178</td>
</tr>
<tr>
<td>Speech</td>
<td>181</td>
</tr>
<tr>
<td>Zoology and Entomology</td>
<td>183</td>
</tr>
<tr>
<td><strong>Summary of Enrollment for 1958–59</strong></td>
<td>187</td>
</tr>
<tr>
<td><strong>Index</strong></td>
<td>189</td>
</tr>
</tbody>
</table>
BOARD OF REGENTS

TERM EXPIRES

J. Garner Anthony ........................................ 1961
Attorney, Robertson, Castle & Anthony
Honolulu

Reynolds G. Burkland .................................... 1959
Assistant Treasurer, Alexander & Baldwin, Ltd.
Honolulu

Hung Wai Ching ........................................ 1959
Realtor
Honolulu

Leslie A. Hicks .......................................... 1961
President, Hawaiian Electric Company, Ltd.
Honolulu

Katsuyuki Izumi ......................................... 1961
Physician and Surgeon
Wailuku, Maui

Fred K. Lam ............................................. 1959
Physician and Surgeon
Honolulu

Richard Penhallow .................................... 1959
Assistant Manager, Parker Ranch
Kamuela, Hawaii

Philip E. Spalding .................................... 1961
Chairman of the Board, Hawaiian Electric Company, Ltd.
Honolulu

OFFICERS OF THE BOARD

Philip E. Spalding .................................... Chairman
Fred K. Lam ........................................... Vice-Chairman
Akiko T. Owen ......................................... Secretary

FORMER PRESIDENTS

John W. Gilmore, 1908–1913
B.S.A. 1898, M.S.A. 1906, Cornell

Arthur L. Dean, 1914–1927
B.A. 1900, Harvard; Ph.D. 1902, Yale; LL.D. 1947, Hawaii

David L. Crawford, 1927–1941
B.A. 1911, LL.D. 1933, Pomona; M.A. 1912, Stanford; LL.D. 1957, Hawaii

Gregg M. Sinclair, 1942–1955
B.A. 1912, LL.D. 1949, Minnesota; M.A. 1919, LL.D. 1954, Columbia; LL.D.
1951, Ohio State; LL.D. 1955, California; HH.D. 1956, Hawaii

Paul S. Bachman, July 1, 1955–January 9, 1957
B.S. 1922, Ohio State; M.A. 1925, Ph.D. 1927, University of Washington
FACULTY AND STAFF
1958-1959

Administration

LAURENCE H. SNYDER, SC.D., President
WILLARD WILSON, Ph.D., Vice-President and Provost
WILFRED J. HOLMES, M.S., Vice-President and Dean of Administration
BRUCE E. WHITE, Ph.D., Dean of the Faculties
ROBERT W. HIATT, Ph.D., Dean of the Graduate School and Director of Research

ALLAN F. SAUNDERS, Ph.D., Dean of the College of Arts and Sciences*
MURRAY TURNBULL, M.A., Acting Dean of Arts and Sciences (second semester 1958–59)
WILLIAM M. WACHTER, M.S., Dean of the College of Engineering†
OSWALD A. BUSHNELL, Ph.D., Acting Dean of Applied Science (first semester 1958–59)
HUBERT V. EVERLY, Ph.D., Dean of the College of Education
MORTON M. ROSENBERG, Ph.D., Dean of the College of Agriculture‡
HAROLD S. ROBERTS, Ph.D., Dean of the College of Business Administration§
EDMUND F. SPELLACY, Ph.D., Dean of the College of General Studies
VIRGINIA A. JONES, M.ED., Dean of the College of Nursing
HAROLD M. BITNER, Ph.D., Dean of Student Personnel
SHUNZO SAKAMAKI, Ph.D., Dean of the Summer Session*
THOMAS H. IGE, Ph.D., Acting Dean, 1959 Summer Session
CARL G. STROVEN, Ph.D., Librarian
AMOS P. LEIB, M.A., Acting Veterans' Adviser

JOSEPH M. SKORPEN, B.A., Treasurer
EDWARD T. WHITE, M.A., Director, Office of Admissions and Records
THOMAS NICKERSON, B.A., Director, Office of Publications and Information
ROBERT M. KAMINS, Ph.D., Director, Legislative Reference Bureau
KATHARINE N. HANDLEY, M.S.W., Director, School of Social Work
ROGER L. MOSELEY, M.B.A., Director, Hilo Campus
Y. BARON GOTO, B.S., Director, Agricultural Extension Service

Emeriti

Andrews, Carl B., Professor Emeritus of Engineering
B.S. 1908, M.S. 1909, C.E. 1917, Rose Polytechnic Institute; M.S. 1928, Massachusetts Institute of Technology

‡Also designated as Director of the Hawaii Agricultural Experiment Station.
§Also designated as Director of the Industrial Relations Center.
Bennett, J. Gardner, **Professor Emeritus of Engineering**
B.S. 1912, Cornell College; B.S. in C.E. 1918, C.E. 1925, Wisconsin

Bilger, Leonora N. (Mrs. Earl M.), **Professor Emeritus of Chemistry**
B.A. 1913, M.A. 1914, Ph.D. 1916, Cincinnati

Brown, Hubert E., **Professor Emeritus of Health and Physical Education**
B.P.E. 1920, M.P.E. 1927, Springfield College; Ph.D. 1940, New York

Edmonson, Charles H., **Professor Emeritus of Zoology**
Ph.D. 1903, M.S. 1904, Ph.D. 1906, Iowa

Eller, Willard H., **Professor Emeritus of Physics**
B.S. 1914, Ph.D. 1928, California; M.S. 1925, University of Washington

Henke, Louis A., **Professor Emeritus of Agriculture**
B.S. 1912, M.S. 1923, Wisconsin

Keller, Arthur R., **Dean Emeritus, College of Applied Science**
C.E. 1903, Cornell; LL.B. 1906, National University; M.S. 1916, Massachusetts Institute of Technology; M.S. in C.E. 1916, Harvard; Sc.D. (Hon.) 1942, Hawaii

Krauss, Frederick G., **Professor Emeritus of Agriculture**
Sc.D. (Hon.) 1921, Hawaii

Kuykendall, Ralph S., **Professor Emeritus of History**
B.A. 1910, College of the Pacific; M.A. 1921, California; L.H.D. 1956, Hawaii

Leebrick, Karl C., **Professor Emeritus of Government**
B.S. 1911, M.S. 1913, Ph.D. 1916, California

Luquiens, Huc-Mazelet, **Professor Emeritus of Art**
B.A. 1902, B.F.A. 1908, Yale

Miller, Carev D., **Professor Emeritus of Nutrition**
B.A. 1917, California; M.S. 1922, Columbia

Palmer, Harold S., **Professor Emeritus of Geology**
B.A. 1912, Ph.D. 1923, Yale

Pecker, Irving O., **Professor Emeritus of Romance Languages**
B.A. 1912, Boston

Porteus, Stanley D., **Professor Emeritus of Psychology**
Sc.D. (Hon.) 1938, Hawaii

Ripperton, John C., **Professor Emeritus of Agriculture**
B.S. 1913, Municipal University of Wichita; M.S. 1916, Kansas State

St. John, Harold, **Professor Emeritus of Botany**
B.A. 1914, M.A. 1915, Ph.D. 1917, Harvard

Sinclair, Gregg M., **President Emeritus**

Wadsworth, Harold A., **Dean Emeritus, College of Agriculture**
B.S. 1916, California

### Instruction

Abbott, Agatin T., **Associate Professor of Geology**
B.A. 1959, Minnesota; Ph.D. 1952, University of Washington

Abrums, Tom E., **Instructor in English**
B.A. 1992, M.A. 1993, Colorado

Adam. Leona R., **Assistant Professor of Nursing**
B.S. 1944, Indiana
Adler, Jacob, Associate Professor of Business  
B.S. 1933, Chicago; M.S. 1956, Ph.D. 1959, Columbia

Agee, Lucille, Instructor in Nursing  
B.S. 1955, University of Washington

Appalsa, Elaine E. (Mrs. Maximo), Instructor in Education  
B.Ed. 1952, Hawaii

Akamine, Ralph N., Lecturer in Dental Hygiene  
D.D.S. 1946, Washington University; M.S. 1951, Illinois

Akiyoshi, Rudolph S., Lecturer in Engineering  
B.B.A. 1953, Hawaii

Alden, Robert P., Lecturer in Business

Alicata, Earleen E. (Mrs. Joseph E.), Instructor in Education  
B.S. 1942, Manchester College; M.S. 1953, Indiana

Allen, Master Sergeant Oliver V., Instructor in Military Science

Alm, Julie N. (Mrs. Richard S.), Instructor in Education  
B.S. 1943, M.A. 1947, Minnesota

Alm, Richard S., Associate Professor of Education  
B.S. 1942, M.A. 1948, Ph.D. 1954, Minnesota

Amato, Anthony J., Assistant Professor of Education  

Amioka, Shiro, Assistant Professor of Education  

Anderson, Doris N. (Mrs. Robert W.), Lecturer in Engineering  
B.S. 1958, Hawaii (first semester 1958-59)

Andersson, Theodore, Carnegie Visiting Professor of European Languages  
B.A. 1925, M.A. 1926, Ph.D. 1931, Yale (second semester 1958-59)

Ansberry, Merle, Professor of Speech  
B.A. 1929, M.A. 1931, California; Ph.D. 1937, Wisconsin

Aoki, Mitsuo, Assistant Professor of Religion  
B.A. 1940, Drury College; B.D. 1943, Chicago Theological Seminary

Arkoff, Abe, Associate Professor of Psychology  
B.A. 1946, M.A. 1948, Ph.D. 1951, Iowa

Arnason, H. Harvard, Carnegie Visiting Professor of Art  

Asato, James K., Instructor in Health and Physical Education  
B.S. 1952, Hawaii; M.S. 1956, Illinois

Aspinwall, Dorothy B. (Mrs. Albion N.), Associate Professor of European Languages  
B.A. 1933, M.A. 1939, Alberta; Ph.D. 1948, University of Washington

Austin, Thomas S., Associate Professor of Botany  
B.S. 1938, Grove City College; M.A. 1940, Buffalo; M.S. 1942, Yale

Avery, Don E., Associate Professor of Engineering  
B.S. 1937, M.E. 1950, University of Washington

Avery, Donald M., Lecturer in Business  
B.A. 1943, Stanford (second semester 1958-59)

Banner, Albert H., Professor of Zoology  
B.S. 1935, Ph.D. 1943, University of Washington; M.S. 1940, Hawaii
Barnes, Master Sergeant Dwight T., Instructor in Military Science
B.A., M.A. 1954, Colorado; Ph.D. 1958, Yale

Bartos, Otomar J., Assistant Professor of Sociology
B.A. 1919, Washington State

Bartow, Mary L. (Mrs.), Instructor in Home Economics
B.A. 1956, Washington State

Beamer, Martha F. (Mrs. Milton D., Jr.), Instructor in Health and Physical Education
B.Ed. 1952, Hawaii

Bell, Donald W., Assistant Professor of Economics
B.S. 1943, Montana State

Bellando, William P., Lecturer in Dental Hygiene (second semester 1958–59)

Bennett, Hannah L., Assistant Professor of Education and Principal, Preschool
B.S. 1939, Northwest Missouri State College; M.A. 1947, Ohio State

Bentley, Lucie F., Assistant Professor of Speech and of Drama and Theatre
B.A. 1928, Stanford; M.A. 1933, Cornell

Bernatowicz, Albert J., Assistant Professor of Botany
B.A. 1948, Clark; M.A. 1952, Ph.D. 1954, Michigan

Berrien, F. Kenneth, Professor of Psychology
B.A. 1931, Colgate; M.A. 1932, Ph.D. 1937, Ohio State (on exchange first semester 1958–59 from Rutgers)

Bess, Henry A., Senior Professor of Entomology
B.S. 1927, Alabama Polytechnic Institute; M.S. 1931, Florida; Ph.D. 1934, Ohio State

Beyers, Otto J., Professor of Education

Bice, Charles M., Professor of Agriculture
B.S. 1927, Wisconsin

Bilger, Earl M., Professor of Chemistry
B.S. 1920, M.A. 1921, Wesleyan; Ph.D. 1925, Yale

Bilous, Carolyn B. (Mrs. Nicholas), Assistant Professor of Education
B.S. 1938, Temple; M.A. 1949, Columbia

Bilsborrow, Eleanor J., Assistant Professor of Speech
B.A. 1937, Colorado State College of Education; M.A. 1942, Stanford; Ph.D. 1957, Denver

Bitner, Harold M., Professor of Psychology
B.S. 1941, State Teachers College, Shippensburg, Pennsylvania; M.A. 1945, Duke; Ph.D. 1951, Ohio State

Black, A. Duane, Instructor in Speech (Hilo)
B.S. 1954, Northwestern; M.A. 1958, Hawaii

Boatman, Elsie M. (Mrs.), Associate Professor of Home Economics and Director of Food Service
B.S. 1924, M.S. 1931, Iowa State

Bonk, William J., Instructor in Anthropology and Sociology (Hilo)
B.A. 1951, M.A. 1954, Hawaii

Borie, Master Sergeant William, Jr., Instructor in Military Science
B.A. 1934, Indiana; M.A. 1948, Ph.D. 1951, Harvard
Bowers, Neal M., Professor of Geography
B.S. 1938, Western Michigan College of Education; M.A. 1939, Ph.D. 1951, Michigan

Bowers, Rohma L. (Mrs. Neal M.), Lecturer in Geography
B.S. 1932, Detroit Teachers College; M.A. 1939, Wayne

Breneman, Lucille (Mrs. A. D.), Assistant Professor of Speech
B.A. 1935, Baylor; M.A. 1949, Hawaii

Brenneisen, Elizabeth K. (Mrs. Leo S.), Instructor in English

Britten, Edward J., Associate Professor of Agriculture
B.S. 1940, M.S. 1941, Saskatchewan; Ph.D. 1944, Wisconsin

Brown, Dorothy S. (Mrs.), Assistant Professor of English
B.A. 1934, Hawaii; M.A. 1935, Stanford; Ph.D. 1956, University of Washington

Brown, Robert E., Instructor in Music
B.A. 1952, M.Ed. 1958, Western Washington College of Education

Bruhn, William J., Jr., Assistant in Health and Physical Education
B. Ed. 1957, Hawaii

Bruyere, Lieutenant Colonel Walter R., Associate Professor of Military Science
B.S. 1939, Rutgers

Burack, Captain Emanuel, Assistant Professor of Military Science
B.S. 1950, College of the City of New York

Burkett, George I., Instructor in European Languages
B.A. 1941, M.A. 1950, Oklahoma; Diploma 1948, Paris

Bushnell, Oswald A., Professor of Bacteriology
B.S. 1934, Hawaii; M.S. 1935, Ph.D. 1937, Wisconsin

Cabral, Master Sergeant Manuel P., Instructor in Military Science

Cagle, Technical Sergeant Thomas E., Instructor in Air Science

Campbell, Robert L., Instructor in Education
B.S. 1946, Illinois Institute of Technology; M.Ed. 1951, Louisiana State (on leave 1958-59)

Canfield, Claire, Assistant Professor of Nursing
B.S. 1947, Wayne; M.A. 1950, Columbia

Carr, Albert B., Jr., Assistant Professor of Education
B.S. 1950, Iona College; M.A. 1951, Ed.D. 1958, Columbia

Carr, Elizabeth B. (Mrs.), Associate Professor of Speech
B.A. 1924, M.A. 1940, Oklahoma; Ph.D. 1953, Louisiana State (on leave first semester 1958-59)

Carroll, Philip S., Instructor in Speech (Hilo)
B.A. 1954, M.A. 1956, Denver

Carter, Walter, Professor of Entomology
B.S. 1925, Montana; M.S. 1924, Ph.D. 1928, Minnesota

Castille, Master Sergeant Alfred, Instructor in Military Science

Castro, Evelyn H. (Mrs. William C.), Instructor in English
B.A. 1938, San Jose State College; M.A. 1948, Hawaii

Chandler, Lester V., Carnegie Visiting Professor of Economics
B.A. 1930, M.A. 1931, Missouri; Ph.D. 1934, Yale (second semester 1958-59)
Chang, Chia-Ling, Assistant Professor of Education
B.A. 1948, M.Ed. 1950, Smith College

Chang, Raymon M., Instructor in Physics
B.A. 1951, Hawaii; M.S. 1953, New York

Chang, Winona L. (Mrs. Charles K. C.), Instructor in Education
B.Ed. 1949, Hawaii; M.Ed. 1957, Boston

Charlot, Jean, Senior Professor of Art
D.F.A. 1946, Grinnell College; L.L.D. 1956, St. Mary's College

Cheng, Ch’eng-K’un Professor of Sociology
B.A. 1932, Yenching; M.A. 1937, Ph.D. 1945, University of Washington

Ching, Quan Y., Lecturer in Engineering
B.S. 1932, Hawaii (first semester 1958-59)

Chirol, Laure, Assistant in Education
L.L.B. 1944, University of Strasbourg; M.A. 1956, California at Los Angeles

Chiu, Arthur N. L., Assistant Professor of Engineering
B.A., B.S. 1952, Oregon State; M.S. 1953, Massachusetts Institute of Technology

Cho, Samuel S., Lecturer in Business

Chou, James C. S., Lecturer in Engineering
B.S. 1941, National Institute of Technology (China); M.S. 1949, Georgia Institute of Technology

Chow Hoy, Rose L., Instructor in Education
B.Ed. 1935, Hawaii

Chu, George W., Professor of Bacteriology and Zoology
B.A. 1928, Lingnan; M.S. 1929, Yenching; Sc.D. 1934, Johns Hopkins

Chui, Edward F., Assistant Professor of Health and Physical Education
B.S. 1947, M.A. 1948, Iowa

Chun, Dai Ho, Professor of Education

Clark, Richard H., Assistant Professor of Mathematics
B.S. 1940, Yale; M.A. 1949, Michigan

Clopton, Robert W., Professor of Education
B.A. 1928, Maryville College; M.Ed. 1941, Hawaii; Ph.D. 1946, Northwestern

Cobb, Estel H., Assistant Professor of Agriculture
B.S. 1948, Oklahoma State; M.S. 1952, Ph.D. 1958, Iowa State

Cochran, Evelyn H., Associate Professor of Social Work
B.A. 1927, Mississippi; M.A. 1932, Tulane

Comba, Paul G., Associate Professor of Mathematics
B.A. 1947, Bluffton College; Ph.D. 1951, California Institute of Technology (on leave 1958-59)

Congdon, Charles F., Assistant Professor of Business
B.S. 1934, State Teachers College, West Chester, Pennsylvania; M.Ed. 1940, Hawaii; M.B.A. 1953, Columbia (on leave 1958-59)

Contois, David E., Assistant Professor of Bacteriology
B.A. 1950, California at Los Angeles; M.S. 1952, Hawaii; Ph.D. 1958, California

Cooil, Bruce J., Professor of Agriculture
B.S. 1936, Washington State; M.S. 1939, Hawaii; Ph.D. 1942, California

Corba, Nicholas B., Assistant Professor of Engineering
B.S. 1940, State Teachers College, California, Pennsylvania; M.Ed. 1952, Pittsburgh
FACULTY

Cowing, Cedric B., Assistant Professor of History
B.A. 1948, M.A. 1950, Stanford; Ph.D. 1956, Wisconsin

Cox, J. Halley, Associate Professor of Art
B.A. 1933, San Jose State College; M.A. 1937, California

Cranch, D. Eleanor, Instructor in Nursing
B.S. 1952, Pittsburgh; M.S. 1954, Yale

Crawford, Carolyn, Assistant Professor of Education
B.A. 1933, B.A. in L.S. 1934, Michigan; M.S. 1936, Western Reserve

Crooker, Elizabeth P. (Mrs. F. Deal), Instructor in Education
B.A. 1931, Smith; M.A. 1933, Columbia

Cross, Edmond, Associate Professor of Education
B.S. 1932, Kentucky; M.A. 1937, Ed.D. 1954, Columbia

Crossley, John B., Associate Professor of Education
B.A. 1929, Pomona; M.A. 1940, Claremont; D.Litt. 1945, Howard; Ed.D. 1950, California

Crowell, David H., Associate Professor of Psychology
B.A. 1941, Drew; Ph.D. 1948, Iowa

Crutchfield, Barbara E., Instructor in Economics and Business
B.A. 1954, Bennett College; J.D. 1957, Iowa

Crymes, Ruth H., Instructor in English
B.A. 1945, M.A. 1948, Oregon

Culkin, Mary A., Instructor in Economics and Business
B.S. 1951, Arkansas; M.B.Ed. 1956, Colorado

Daniel, L. Scott, Professor of Engineering
B.S. 1946, Montana State

Davis, Captain Donald D., Assistant Professor of Military Science
B.S. 1951, Oregon

Davis, Frances E., Assistant Professor of Mathematics
B.S. 1936, Michigan State; M.A. 1941, Michigan

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Kitagawa, Yukio, *Assistant County Agent, West Oahu*  
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*Degrees listed under "Instruction."
STAFF, EXTENSION SERVICE

Kogachi, Shirley Y., Assistant County Agent, South Oahu
b.s. 1954, Hawaii (on leave 1958-59)

*Koshi, James H., Area Specialist in Dairy Science

Kumabe, Bunki, County Agent, Kauai
b.s. 1942, Hawaii; m.s. 1953, Missouri

Landry, Vivian A. (Mrs. G. Hall), Assistant Supervisor of 4-H Club
Work
b.a. 1948, San Jose State College

Lyman, Clarence, Specialist in Soil Management
b.s. 1938, m.s. 1941, Hawaii

MacMillan, Donald N., Assistant County Agent, Kauai
b.s. 1956, Clemson

Maruyama, Charles I., County Agent, East Hawaii
b.s. 1935, Hawaii

Masumoto, Sachiko, County Agent, West Hawaii
b.s. 1949, Hawaii; m.s. 1957, Pennsylvania State

Matsuba, Esther K., Assistant in Extension, Kahului
b.s. 1958, Northeast Missouri State Teachers College

Matsumoto, Dan K., Assistant County Agent, West Hawaii
b.s. 1951, Hawaii

Matsumoto, Eleanor A., Assistant Specialist in Home Economics
b.s. 1941, Hawaii; m.a. 1953, Columbia

Matsuura, Minoru, County Agent, North Hawaii
b.s. 1938, Hawaii

Mihata, Keichi, County Agent, East Oahu
b.a. 1935, Hawaii

Morrill, Olive L. (Mrs. J. Glenn), Assistant County Agent, East Oahu
b.s. 1954, Utah State; m.s. 1958, Cornell

Motobu, Tatsumi, Assistant County Agent, East Hawaii
b.s. 1951, Hawaii

Nakagawa, Yukio, Assistant Specialist in Horticulture
b.s. 1940, Hawaii

Nakamura, Adeline T. (Mrs. Richard S.), Assistant County Agent,
East Hawaii
b.s. 1954, Hawaii; m.s. 1955, Pennsylvania State

Nakasato, Masaru George, Assistant County Agent, South Oahu
b.s. 1951, Hawaii

Okagawa, Tomoyuki, Assistant County Agent, South Oahu
b.s. 1954, Hawaii

Orr, Kathryn J., Assistant Specialist in Foods and Nutrition
b.s. 1945, California; m.s. 1949, Michigan State

Ota, Robert M., County Agent, Honokaa
b.s. 1950, Colorado State (on leave 1958-59)

Riley, Merrill K., County Agent, East Oahu
b.s. 1927, Colorado College; m.s. 1929, South Dakota State College

*Degrees listed under “Instruction.”
Sato, Sadato, Assistant Crop Reporter, Kauai
  B.S. 1954, Missouri

Schwartz, Lillian R. (Mrs.), County Agent, West Oahu
  B.S. 1931, Hastings College

Serikaku, Ethel K. (Mrs. Seisuke), County Agent, East Oahu
  B.S. 1954, Hawaii

Shibuya, Irene T. (Mrs. Fujio), Assistant County Agent, West Oahu
  B.S. 1952, Hawaii

Shigeta, Daniel T., County Agent, Kula, Maui
  B.S. 1950, Hawaii

Shigeta, Y. James, Assistant Specialist in Club Work
  B.S. 1951, Maryland; M.S. 1958, Wisconsin

Shin, Barbara, Assistant County Agent, Kauai
  B.S. 1958, Hawaii

Shirakawa, Takumi, County Agent, Naalehu
  B.S. 1948, Hawaii

Smith, Adrienne A., Assistant in Extension, South Oahu
  B.S. 1958, California

Stormont, John L., Specialist in Club Work
  B.S. 1928, Illinois; M.Ed. 1954, Cornell

Sumida, Y. Dick, Crop Reporter
  B.S. 1936, Hawaii

Takahashi, T. Francis, Assistant County Agent, Kauai

Takei, Shiro, Assistant Specialist in Agricultural Economics
  B.S. 1938, Hawaii

Takishita, Francis M., Assistant Crop Reporter, Maui

Teho, Fortunato G., Assistant Supervisor in Visual Aids
  B.S. 1927, Hawaii

Ueda, Motoi, Assistant County Agent, East Hawaii
  B.A. 1934, California at Los Angeles (on leave first semester 1958-59)

Vollrath, Harvey M., Specialist in Animal Husbandry
  B.S. 1929, Colorado State; M.S. 1948, Minnesota

Wallrabenstein, Paul P., Supervisor of Crop and Livestock Reporting
  B.S. 1931, Ph.D. 1941, Ohio State

Winston, Vivian A., County Agent, South Oahu
  B.S. 1932, Texas State College for Women

Yamaguchi, Rokuro, Assistant Specialist in Agricultural Economics
  B.S. 1942, Hawaii; M.S. 1954, Missouri

Yamamoto, Mitsuko, Assistant County Agent, Honokaa
  B.S. 1954, Hawaii

Yamamoto, Sueki, Assistant Crop Reporter
  B.S. 1951, Hawaii

Yamamoto, Tamao, Assistant in Extension, West Oahu
  B.S. 1957, Oregon State

Yee, Warren Y. J., Assistant Specialist in Horticulture
  B.S. 1942, Hawaii (on leave 1958-59)
Yonamine, Charles N., Assistant County Agent, West Oahu
B.S. 1951, California State Polytechnic College
Yoshikane, Mabel T., Assistant County Agent, Kula, Maui
B.S. 1956, Hawaii

Office of Student Personnel

*Bitner, Harold M., Dean of Student Personnel
Clark, Genevieve F., Assistant in Counseling, Hemenway Hall

*Dole, Arthur A., Director, Bureau of Testing and Guidance

Durkee, Peter E., Counselor
B.A. 1953, M.A. 1957, Colgate
Grant, I. Patricia. Assistant in Counseling, Hemenway Hall
B.S. 1949, Rhode Island
Hogle, Frances deV. (Mrs.), Head Resident, Frear Hall
Iams, Ruth W. (Mrs. James P.), Counselor, Bureau of Testing and Guidance
Ph.B. 1933, Chicago; M.A. 1952, Hawaii
Ishimoto, Winifred H., Counselor, ASUH Executive Secretary
Keeley, Harold J., Head Resident, Johnson Hall
B.S. 1924, United States Military Academy
McPherson, Mary Lou (Mrs.), Director, Bureau of Student Residences
B.S. 1933, Kansas State; M.A. 1955, Missouri

*Miyake, James S., Counselor and Foreign Students Adviser

Reick, Elmer C., Counselor
B.Ed. 1934, Wisconsin State Teachers College; M.A. 1942, Wisconsin
Slonaker, Susan D. (Mrs. Jack C.), Director, Bureau of Student Activities
B.S. 1946, Rhode Island
Wery, Katherine H. (Mrs. Clay H.), Counselor, Student Housing and Part-Time Employment
B.A. 1944, Westhampton College
White, Edward T., Director, Office of Admissions and Records
B.A. 1936, M.A. 1939, Columbia
Will, Caroline F. (Mrs. Richard Y.), Counselor, Bureau of Testing and Guidance
B.A. 1953, Minnesota; M.A. 1959, Hawaii

Legislative Reference Bureau

Awana, Henry T., Assistant Researcher
B.A. 1948, Hawaii; LL.B. 1951, Denver
Holden, Margaret E., Assistant Researcher
B.S. 1943, M.A. 1945, Wayne; B.L.S. 1948, Chicago

*Degrees listed under "Instruction."
Land Study Bureau

Baker, Harold L., Economist
B.S. 1939, Utah State Agricultural College; M.S. 1942, Ph.D. 1949, California

Lucas, Broder F., Associate Economist
B.S. 1923, Cornell; M.S.A. 1930, Tennessee (first semester 1958–59)

Noffsinger, Terrell L., Climatologist
B.S. 1941, M.S. 1946, Kentucky; Ph.D. 1957, Purdue

Nunns, Frederick K., Director
B.S. 1932, North Dakota Agricultural College; M.S. 1934, State College of Washington; M.S. 1943, Wisconsin

Perin, Donald R., Junior Geographer
B.A. 1949, Hawaii

Sahara, Tamotsu, Specialist in Land Classification
B.S. 1948, Hawaii

Wong, Gilbert K. H., Assistant Specialist in Data Analysis
B.S. 1952, Temple

Affiliate Graduate Faculty†

Anderson, E. J., Ph.D. Head, Pathology Department
Pineapple Research Institute

Ayres, A. S., Ph.D., Senior Agronomist, Experiment Station
Hawaiian Sugar Planters' Association

Balock, Jack W., B.S., Entomologist
Fruit Fly Laboratory, U.S. Department of Agriculture

Baver, Leonard D., Ph.D., Director, Experiment Station
Hawaiian Sugar Planters' Association

Bloom, Bernard L., Ph.D., Psychologist
Territorial Hospital

Brock, Vernon E., M.A. Director
Bureau of Commercial Fisheries Biological Laboratory

Burr, George O., Ph.D., Head, Department of Physiology and Biochemistry, Experiment Station
Hawaiian Sugar Planters' Association

Cox, Doak C., M.A., Principal Geophysicist, Experiment Station
Hawaiian Sugar Planters' Association

*Degrees listed under “Instruction.”
†Members of cooperating institutions available for service on graduate committees, They do not offer courses at the University.
Cushing, Robert L., M.S., Director
Pineapple Research Institute

Darroch, J. G., M.S., Principal Statistician, Experiment Station
Hawaiian Sugar Planters’ Association

Dull, Gerald G., Ph.D., Associate Chemist
Pineapple Research Institute

Ekern, Paul C., Ph.D., Associate Soil Physicist
Pineapple Research Institute

Farden, Carl A., B.S., Statistician
Pineapple Research Institute

Gortner, Willis A., Ph.D., Head, Chemistry Department
Pineapple Research Institute

Gowing, Donald P., Ph.D., Plant Physiologist
Pineapple Research Institute

Gressitt, J. Linsley, Ph.D., Entomologist
Bernice P. Bishop Museum

Halperin, Sidney L., Ph.D., Clinical Psychologist
Tripler General Hospital

Hanson, Noel S., Ph.D., Senior Agronomist, Experiment Station
Hawaiian Sugar Planters’ Association

Hilton, H. Wayne, Ph.D., Principal Organic Chemist, Experiment Station
Hawaiian Sugar Planters’ Association

Humbert, R. P., Ph.D., Principal Agronomist, Experiment Station
Hawaiian Sugar Planters’ Association

Ito, K., M.S., Associate Entomologist
Pineapple Research Institute

Kerns, Kenneth R., M.S., Plant Breeder
Pineapple Research Institute

King, Joseph, M.S., Fishery Research Biologist
Bureau of Commercial Fisheries Biological Laboratory

Klemmer, H. W., Ph.D., Associate Pathologist
Pineapple Research Institute

Kondo, Yoshio, Ph.D., Malacologist
Bernice P. Bishop Museum

Krauss, Beatrice, M.S., Associate Plant Physiologist
Pineapple Research Institute

Leeper, Robert W., Ph.D., Organic Chemist
Pineapple Research Institute

Mangelsdorf, A. J., Ph.D., Principal Geneticist, Experiment Station
Hawaiian Sugar Planters’ Association

Martin, J. P., M.S., Principal Pathologist, Experiment Station
Hawaiian Sugar Planters’ Association

Mitchell, Wallace C., Ph.D., Entomologist
Fruit Fly Laboratory, U.S. Department of Agriculture

Payne, John H., Ph.D., Principal Technologist, Experiment Station
Hawaiian Sugar Planters’ Association
Sakimura, K., Associate Entomologist
Pineapple Research Institute

Sanford, Wallace G., Ph.D., Head, Agronomy Department and Plant Physiologist
Pineapple Research Institute

Schmidt, Carl T., Ph.D., Entomologist
Pineapple Research Institute

Smith, Donald H., Ph.D., Soil Chemist
Pineapple Research Institute

Spiegelberg, Carl H., Ph.D., Pathologist
Pineapple Research Institute

Steiner, Loren F., M.S., Entomologist in Charge
Fruit Fly Laboratory, U.S. Department of Agriculture

Strasburg, Donald W., Ph.D., Fishery Research Biologist
Bureau of Commercial Fisheries Biological Laboratory

Warner, John N., Ph.D., Senior Geneticist, Experiment Station Hawaiian Sugar Planters' Association

Winneberger, John H., Associate Plant Physiologist
Pineapple Research Institute

Wismer, Chester A., Ph.D., Senior Pathologist, Experiment Station Hawaiian Sugar Planters' Association

Wortman, Sterling, Ph.D., Plant Breeder and Head, Plant Breeding Department
Pineapple Research Institute

Young, H. Y., M.S., Associate Chemist
Pineapple Research Institute
GENERAL INFORMATION

The University of Hawaii is located in Honolulu, on the island of Oahu. It is three miles from the business center and two miles from Waikiki. Manoa Valley, where the University is situated, is one of the most picturesque sections of the city. The Manoa campus and ten other tracts on the islands of Oahu, Maui, and Hawaii bring the landholdings to 710 acres.

The University was established by the territorial legislature in 1907. Although it did not receive a grant of land such as that provided for state colleges under the Morrill Act of 1862, it is a federal land-grant institution and shares in benefits from the Second Morrill Act of 1890, the Nelson Amendment of 1907, and subsequent legislation. The University receives a major portion of its support from the Territory and bears the same relation to the Territory as state universities to their states.

History. The institution was known as the College of Agriculture and Mechanic Arts from 1907 to 1911, and the College of Hawaii from 1911 to 1920. It was located on the grounds now occupied by Linekona School in Honolulu until 1912 when it was moved to the present site. When the College of Arts and Sciences was added in 1920, the name was changed to the University of Hawaii. In 1931 the legislature united the Territorial Normal School with the University School of Education to form Teachers College (now the College of Education) of the University.

The College of Agriculture was established in 1946, the College of Business Administration in 1949, and the College of General Studies in 1956. Prior to 1951 all graduate work was under the Graduate Division, but in that year the name was changed to Graduate School.

Control and Accreditation. Government resides in a Board of Regents appointed by the governor for terms of four years. Copies of statutes and bylaws of the Board of Regents are available upon request.

The University is accredited by the Western College Association. Its students may transfer to other American and to foreign universities on the same basis as students of other American universities.

Instruction. Classes are open to all academically qualified men and women, regardless of racial ancestry or nationality.

Academic Year. The academic year is divided into two 18-week semesters and a summer session.
University Colors, Symbol, Seal, Coat of Arms. University colors are green and white. The popular symbol traditionally used by students on campus is the rainbow. The seal is a torch and book entitled Ma Lama Lama (the light of knowledge) in a circle of the Pacific, with the motto of Hawaii, UA MAU KE EA O KA AINA I KA PONO (The Life of the Land is Preserved in Righteousness). The coat of arms is an adaptation of the Hawaiian coat of arms and includes the motto of Hawaii.

Communications. Prospective students should address letters of general inquiry to the Office of Admissions and Records, University of Hawaii, Honolulu 14, Hawaii.

Administrative Organization

The University has seven colleges: College of Agriculture (including the Hawaii Agricultural Experiment Station and the Agricultural Extension Service), College of Arts and Sciences, College of Business Administration, College of Education, College of Engineering, College of General Studies, and the College of Nursing.

Graduate work is organized under the Graduate School. The Office of Student Personnel administers the work of admissions and registration, and, through its Bureau of Testing and Guidance, offers educational, vocational, and personal counseling, and gives aptitude, interest, and other psychological tests. Other administrative units are the Gregg M. Sinclair Library, the Legislative Reference Bureau, and the Summer Session.

Academic departments are units of the University as a whole, rather than of colleges, and are responsible to the Dean of Faculties on matters of finance and personnel. Coordination of the departments with the colleges in instructional matters is obtained through the Administrative Council, of which the President is chairman.

The University Senate acts as an advisory body to the President on matters of instruction and related problems.

Related Services

In addition to the instructional program, several other forms of public service are offered.

Speech and Hearing Clinic. The Clinic staff offers speech and hearing rehabilitation services such as diagnosis, testing, and therapy for children and adults. A registration fee is charged nonuniversity cases.

Reading Clinic. Diagnosis and therapy for reading disabilities is carried on by the members of classes in Education 294, 296-C, and 332, under the supervision of Clinic staff members. Small fees are charged.

Legislative Reference Bureau. In 1943 the legislature created the Bureau to aid in legislative and governmental problems. It is situated on
the campus, but during sessions of the legislature an office is maintained in Iolani Palace. The legislature, governor, departments, institutions, and agencies of the Territory are provided with information and reports concerning legislative problems.

**Volcano Research Laboratory.** Located on the island of Hawaii, the Laboratory is conducted in cooperation with the U. S. Geological Survey, and offers research possibilities to graduate students and investigators in subjects pertaining to volcanology.

**Aquarium.** The Aquarium at Waikiki is operated as a place of education and entertainment.

**Harold L. Lyon Arboretum.** The Aboretum, consisting of 124 acres in upper Manoa Valley, was donated in 1954 by the Hawaiian Sugar Planters' Association. Six thousand kinds of trees and plants are established there.

**Romanzo Adams Social Research Laboratory.** The Laboratory is staffed by members of the Sociology Department, and is concerned primarily with studies relative to the peoples of Hawaii.

**Human Relations Area Files.** This organization, supported by sixteen major universities, places basic information on various societies of the world in files at each member institution. Each file, in the Gregg M. Sinclair Library, contains facts about a people or region that are judged to be of value to students of human behavior, social life, and culture.

**Industrial Relations Center.** The Center was established to promote understanding of labor-management problems in the community. It provides a library and reference service, promotes lectures, conferences, and discussion groups, and conducts research.

**Radio Office.** Station KUOH-FM, broadcasting five days a week, is operated by the Office, which also coordinates and supervises other University radio and TV broadcasts.

**Psychological Research Center.** The Center conducts basic and applied research on problems involving the scientific approach to human behavior. It serves as an agency to which business, education, government, industry, labor, and others may bring psychological research problems, and as a training facility for advanced students.

**Cooperating Institutions**

Through cooperative agreements with institutions listed below, the University has increased its research facilities and expanded its services to the Territory.
Pineapple Research Institute of Hawaii. The Institute, supported by the pineapple industry, is affiliated with the University. Offices and laboratories are in Institute buildings on the campus. Studies are carried on at Wahiawa, where the Institute maintains a 100-acre experimental farm.

Hawaiian Sugar Planters’ Association. In 1947 the Association provided $100,000 for a building on the campus to house the Agricultural Engineering Institute, with shop facilities for instructional and research purposes.

Fruit Fly Laboratory. A research laboratory is maintained on the campus by the United States Bureau of Entomology for the study of fruit fly pests.

United States Fish and Wildlife Service. Permanent headquarters of the Service for the Bureau of Commercial Fisheries Biological Laboratory are located on the campus. Certain members cooperate with the Department of Zoology and Entomology in offering advanced courses and in directing research in fishery biology. Several fellowships are available to citizen students. Requests for information or fellowship application forms should be addressed to the Director, Bureau of Commercial Fisheries Biological Laboratory, University of Hawaii.

Bernice P. Bishop Museum. The University and the Bishop Museum reciprocate in the use of research facilities. Students may use the facilities, subject to Museum regulations.

Pacific and Asian Affairs Council. The Council, adjacent to the campus, sponsors lectures, seminars, and meetings on international affairs, particularly on Asia and the Pacific. Its library offers research facilities on world affairs.

Honolulu Academy of Arts. The Academy was built and endowed by Mrs. Charles M. Cooke. Its collections are available to students and instructors.

Bishop Museum, the Council, and the Academy of Arts offer special membership rates to students.

Campus and Buildings

The principal buildings on the campus are Bachman Hall, the Bookstore, Bilger Hall, Crawford Hall, Dean Hall, the Engineering Quadrangle, Farrington Hall, Gartley Hall, Gilmore Hall, George Hall, Hawaii Hall, Hemenway Hall, Henke Hall, Miller Hall, Klum Gymnasium, the Gregg M. Sinclair Library, and Wist Hall and its laboratory centers.
(the Elementary School, the High School, Castle Memorial Hall, and Auditorium).

Farrington Hall, an auditorium with a backstage extension, is well equipped for work in drama. The engineering laboratories and classrooms are in the four buildings of the Engineering Quadrangle. The Arthur L. Andrews Theatre is the outdoor setting for commencement and other programs.

The Library contains 281,164 bound volumes and 721,650 unbound parts and pamphlets. Also, it serves as a depository for government publications. Extensive collections of Chinese and Japanese works and valuable books and periodicals about Hawaii and the Pacific islands make the University an excellent place to study international relations, especially those concerning the Pacific area. The Library files include local and mainland newspapers, and literary, technical, and scientific periodicals. These materials are available to all persons complying with Library regulations.

Hemenway Hall is the general social center for students and faculty with quarters for student organizations. A cafeteria is maintained in the Hall.

Residence accommodations on or near the campus include the Charles H. Atherton House, Hale Laulima, Mary Dillingham Frear Hall, and John A. Johnson Hall.

A swimming pool and locker buildings are located near Hemenway Hall. Cooke Field, which is used for football, baseball, and track practice, also affords opportunities for physical education and intramural sports.

The Honolulu Stadium, with a seating capacity of 22,000, is equipped for football, baseball, and other outdoor sports, and is regarded as an integral part of the University's plant resources for physical education and athletics. It is owned and managed by the Honolulu Stadium Corporation.

The Hawaii Marine Laboratory, with branches at Waikiki and Coconut Island, is devoted to research in the marine sciences, and to teaching.

Other buildings include the ROTC buildings, Hawaii Annex, the Nutrition Laboratory, and temporary office and classroom buildings on the campus.

A part of the campus is occupied by an experimental farm, devoted to solving problems of Hawaii's dairymen, poultrymen, and livestock raisers; instructional facilities for students of agriculture are provided.

The herbaria of the University and of the Bernice P. Bishop Museum, which are combined under the custodianship of the Museum, contain the most complete collection of Hawaiian plants in existence; some species now extinct are included. The most valuable parts are the cotypes of Dr. W. Hillebrand's species and the types of many new species collected by later botanists.
ACADEMIC INFORMATION

Students (other than auditors and those taking corresponding courses) are classified as undergraduate and graduate.

Undergraduate students are designated as regular or unclassified. Regular students follow organized programs of study and comply with regulations which lead to the bachelor's degree. They ordinarily carry full-time programs (12 semester hours or more), and for registration and classification purposes are divided as follows: freshmen, 1–24 credit hours completed; sophomores, 25–54; juniors, 55–88; seniors, 89 and above. Freshmen and sophomores are lower division students; juniors and seniors, upper division students.

Unclassified students are those who, although registered for credit, are not candidates for a degree. No student may use the unclassified status to evade technical or scholastic graduation requirements of a college. They usually carry only part-time programs (fewer than 12 semester hours).

Graduate students (graduates of this University or of other institutions of approved standing) are designated as degree candidates, five-year diploma candidates, and unclassified.

Degree candidates are those who are pursuing programs of study leading to advanced degrees.

Five-year diploma candidates are graduate students following a curriculum leading to the diploma.

Unclassified graduate students are those who, although registered for credit, are not degree candidates. Some are working toward the professional certificate of the Department of Public Instruction, and others later become candidates for advanced degrees.

Auditors are those who are permitted to attend certain courses as listeners, but who take no part in class work and receive no credit.

Admission

Candidates for admission must present satisfactory evidence of ability to do university work. Prospective regular or unclassified students who have not earned credits in an institution of higher learning apply to the Director, Office of Admissions and Records. A high school senior who

*Students taking fewer than 12 semester hours in any semester are considered "part-time" students. This classification, however, has significance only in determining fees. Both regular and unclassified students may be either part time or full time.
plans to enter within a year should file his application during the final semester of his high school course. In any case, applications should be filed at least one month before the opening of the semester in which enrollment is desired. Requests for application forms and questions about admission should be addressed to the Director, Office of Admissions and Records.

Admission of Regular Students Entering for the First Time. Admission to first-year standing depends upon performance in college aptitude tests, quality of high school work, and various ratings by the preparatory school. A high rating in one factor alone will not insure admission; nor will poor performance on one measure alone exclude an applicant if other evidence indicates he might be successful. Ordinarily a student should average B or better in his high school work, although an applicant with a C average who scores above average on the college aptitude test may be admitted. The quality of work done during the last two years in secondary school receives special consideration.

College aptitude tests are given by the University for high schools of the Territory each spring. These tests are also given at the University several times during the summer, and between semesters. Applicants should communicate with the Director, Office of Admissions and Records, as to dates.

Every applicant for admission as a regular student who has not previously earned credits in an institution of higher learning must take college aptitude examinations and submit evidence that he has satisfactorily completed at least 15 units of work in a four-year high school or at least 12 units of work in a three-year senior high school.

The word unit as employed here signifies the satisfactory completion of a course of study pursued for a full school year, with five recitations a week of not less than 45 minutes each, or the equivalent laboratory or shop exercises. For an acceptable distribution of the units required of entering students, see the table below.

When authorized by the Office of Admissions and Records, candidates from continental United States and certain foreign countries may take the scholastic aptitude test given by the College Entrance Examination Board (431 West 117th Street, New York City) and submit a certificate covering the results of this examination along with a complete record of work done in preparatory school. Such candidates should meet all admission requirements and await notice of acceptance before coming to Hawaii.

Admission by Examination. Veterans and other mature individuals may take entrance examinations covering preparatory school subjects. Successful performance on these and the college aptitude tests will admit these candidates. Such individuals, however, must meet all special requirements for admission to such curricula as engineering, premedical, etc.
### Minimum Unit Requirements for Admission

<table>
<thead>
<tr>
<th>From a 4-Year High School</th>
<th>Subject</th>
<th>From a 3-Year High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>ENGLISH</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>ALGEBRA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Not required if the student had ninth-grade general mathematics in intermediate, i.e., junior high school.)</td>
</tr>
<tr>
<td>6</td>
<td>ENGLISH—(In addition to the 3-unit minimum requirement in English.)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>SCIENCES—Physical, biological, and social.</td>
<td>(If applicant offers ninth-grade mathematics, this requirement is 5 units.)</td>
</tr>
<tr>
<td></td>
<td>MATHEMATICS—(In addition to the 1-unit minimum requirement in mathematics.)</td>
<td></td>
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<tr>
<td></td>
<td>FOREIGN LANGUAGES—(Entrance credit in foreign language is not granted unless the total number of foreign language units offered includes at least 2 units in some one language.)</td>
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<tr>
<td></td>
<td>Any other subjects (except physical education and ROTC) credited by the high school toward its diploma (no less than ( \frac{1}{2} ) nor more than 2 units in any one subject) provided that these subjects have been pursued in accordance with regular classroom procedure involving a reasonable amount of preparation in addition to the time spent in class.</td>
<td>4</td>
</tr>
</tbody>
</table>

|         | Total | 12 |

**Special Requirements for Certain Programs.** Candidates for admission to certain programs must meet special requirements. Each applicant should study the conditions set by the college he intends to enter and for the program he intends to pursue in that college. Special attention is directed to the following requirements.

Students who expect to study mathematics or to take subjects for which college mathematics is a prerequisite, should have had plane geometry and two years of algebra.

Prospective engineering and prearchitecture students must have had plane geometry and two years of algebra. It is strongly recommended that they also have trigonometry, solid geometry, mechanical drawing, and physics. Engineering students who have not had Mathematics 150 (trigonometry) may take it in the summer session preceding the first year or take Mathematics 150 and 151 the first semester, Mathematics 152 the second semester, and Mathematics 153 in the following summer session.

Prospective students of medicine should have had plane geometry, trigonometry, two years of algebra, two years of a foreign language, two years of history, and three years of English.
Prospective students of agriculture should have had two years of algebra. Students with only one year must complete the second year by the end of the freshman year.

Entering freshmen are expected to be on the campus during the Freshman Orientation Period, the dates of which are stated in the "University Calendar." This program is designed to give special help to incoming freshmen and to acquaint them with the University. Examinations, conferences with advisers, introductory lectures, and social events occupy the period.

Admission to Advanced Standing. Students who transfer from other accredited universities or colleges may be granted advanced standing. These students must have the institutions attended send to the Director, Office of Admissions and Records, an official statement of the studies offered for admission at such institutions, of the studies pursued in college and the grade received in each, and of honorable dismissal. These transcripts become a permanent part of the University files. Credit toward graduation is given only in subjects in which grades of C or better are recorded. Candidates transferring with advanced standing are required to do a minimum of 30 semester hours at the University of Hawaii to qualify for a bachelor's degree.

Students transferring from other than accredited institutions must meet University of Hawaii standards of admission. Upon the completion of a minimum of 30 semester hours with an average grade of C or better, credit will be given for courses at the previous institution. Such credit, however, will not exceed 60 semester hours, and will be granted only for courses usually considered of lower division level.

Admission of Unclassified Students. Mature persons may register as unclassified students when their backgrounds, in the opinion of the Director of the Office of Admissions and Records, qualify them for credit work. No such student, however, will be admitted to a college or allowed to become a degree candidate until he has satisfied all admission requirements.

Admission as an unclassified student in no case serves as a means of avoiding compliance with requirements laid down for regular students.

Admission of Auditors. Persons wishing to audit classes must have the written consent of the Director, Office of Admissions and Records, of the chairman of the department concerned, and of the instructor of the course. In general, auditors are not allowed in laboratory science, mathematics, language, English composition, speech, studio art courses, or in classes limited in size where credit students might thereby be excluded. By definition auditors are "listeners" and are not allowed to participate in class discussions or examinations.

Admission of Graduate Students. Graduates of accredited colleges and universities who wish to do graduate study should apply to the Dean
of the Graduate School. Each application should be accompanied by an official transcript of undergraduate record and of any graduate work completed at another institution. Admission to graduate study is provisional until such records are on file. These transcripts become a permanent part of the University files.

Registration, Withdrawal, and Other Changes

Registration dates are given in the “University Calendar.” Students entering in the autumn receive a circular telling them how to proceed in registering. Courses are described under “Courses of Instruction,” and a schedule stating the time and place of meeting of each course is issued by the Office of Admissions and Records in September for the first semester, and in January for the second semester. The summer session schedule is given in the summer session catalogue.

Registration of Undergraduate Students. Before they register, undergraduates must decide which of the seven colleges of the University they wish to enter, and select one of the programs offered by the college chosen. Each undergraduate is assigned at registration time to a faculty member who acts as his adviser in selecting courses. Credit is given only for courses regularly entered upon the registration card.

Registration of Graduate Students. Graduate students follow the same procedure in registration as do undergraduates.

Registration of Auditors and Unclassified Students. Auditors and unclassified students register after the period assigned to the registration of regular students, and in accordance with instructions issued at the beginning of each semester.

Maximum Registration. Regular students may not register as auditors or for courses in the College of General Studies in excess of the maximum registration allowed by the college in which they are enrolled.

Arrangement of Credits in Advance. The number of credits obtainable in most courses is stated in this catalogue and in the time schedule available shortly before registration. However, certain courses in which students carry on individual work are marked “credit by arrangement.” Such statements do not signify that the credits are to be determined at the end of the semester. The student registers for a definite number of credits and may earn no more than that number.

Late Registration. Registration for credit after the announced registration days is permitted only in exceptional cases and for valid reasons. The following rules govern such late registration: (1) during the first seven days following the last official day of registration, written approval must be obtained from the dean concerned; (2) subsequent to the seventh day, students may register only as auditors and must have the written approval of the dean and the instructor concerned. Corresponding re-
restrictions apply to summer session registration and are stated in the summer session bulletin.

These same rules apply to students who wish to register for courses in addition to those signed for during the official registration period.

Auditors need not comply with these regulations, except that they cannot change to credit status after the above late registration periods.

Withdrawal from Courses or from the University. Withdrawal is the voluntary severance from a course or from the University. To withdraw from a course an undergraduate must have the written consent of the dean of his college. Withdrawals from the University must be applied for on a form available at the Office of Admissions and Records; signatures as indicated on the form must be obtained, and the completed application returned to the office of the dean concerned.

During the first three weeks of a semester a formal withdrawal is marked W on the student's record. After the first three weeks a formal withdrawal is marked W if the work was passable; otherwise it is marked F (for failure). No withdrawals from individual courses are permitted during the last four weeks of instruction in a semester, but a dean may approve complete withdrawal for legitimate reasons. A student who ceases to attend a course without complying with the official procedure for withdrawing receives an F in the course. The effective date of withdrawal is the date recorded by the Business Office.

Other Changes of Students' Programs of Study. A student may transfer from one college to another at the end of either semester. Application for transfer must be made on a form supplied by the Office of Admissions and Records or one of the deans concerned. The application must be approved by the deans of the two colleges and should be returned to the Office of Admissions and Records at least two weeks before the end of the first semester, and by August 15 during the summer.

Credits, Grades, Grade Points, Grade-Point Ratios

Work accomplished by students is recognized in terms of credits, grades, grade points, grade-point ratios, and honors.

A credit (also called a semester hour and a credit hour) is given to a student for work satisfactorily accomplished during three hours a week spent in the preparation and recitation of assignments in a course, or in the field or laboratory. The normal division of time in nonlaboratory courses is one hour in the classroom and two hours in preparatory work.

Grades given in undergraduate courses are A, B, C, D, F, and I. The lowest passing grade is D. An I is given to a student who has failed to complete a small but important part of a semester's work before the semester grades are determined, if the instructor believes that failure was caused by conditions beyond the student's control and not by carelessness or procrastination. To receive credit for a course for which an I has been
reported, the student must make up the incomplete work before the Thanksgiving or Easter recess of the semester following that for which the grade was given. If the work is not thus completed, the I will stand and the student will receive neither credits nor grade points in that course. If the work is completed, the instructor will report a semester grade, taking the completed work into consideration. Credit in a course for which an F is given may be obtained only by repeating the course and passing it.

Grades given in graduate courses are H (honors), S (satisfactory), and U (unsatisfactory). The honors grade is awarded for exceptionally good work. Graduate students in undergraduate courses are graded on the undergraduate scale, A to F.

Grade points are given for all courses in which grades are reported, including military science, and health and physical education. They are computed as follows: for each credit received in a course, 4 grade points are granted if the grade is A, 3 if the grade is B, 2 if the grade is C, and 1 if the grade is D.

Students entering as undergraduates with advanced standing are not given grade points upon work done elsewhere; but on work done in the University of Hawaii such students must gain grade points in the same proportion to credit hours required for graduation as that demanded of other students.

Grade-point ratios are determined by dividing the total number of grade points by the total number of credits for which a student has been registered. Courses for which grades of W or I were recorded are not included in the computation of ratios nor are courses for which a grade of F was recorded, if credit is subsequently obtained for these courses.

Transfers to Other Institutions. Accredited American institutions of higher learning, including the University of Hawaii, give students who transfer credit toward graduation only in those courses in which they have received a grade of C or better. (See "Tuition and Fees" for further information about transfers.)

Requirements for Continued Registration

Scholastic accomplishment is determined by the grade-point ratio (see above) at the end of any stated period, i.e., at the end of one semester, two semesters, etc.

Further registration is denied to the following classes of undergraduate students:

1. Those who have failed to pass in any semester (or who were not passing when they withdrew) in 50 per cent of their registered credits.

2. Those who have failed to earn, after two semesters' attendance, a minimum of one and one-half times as many grade points as the total of their registered credits.

3. Those who are deficient in composition after two semesters' attendance and who have less than a 2.0 grade-point ratio in other subjects.
4. Those who have failed to earn, after four semesters' attendance, a minimum of one and eight-tenths times as many grade points as the total of their registered credits.

5. Those whose progress in speech is unsatisfactory after three semesters of speech instruction, unless they register for, and attend regularly, a speech correction course. (Failure to remove a speech deficiency constitutes failure to meet graduation requirements.)

Students who become ineligible for further registration at the close of either semester may register for any part of the succeeding summer session. Credits and grade points thus earned will then be included in determining the current grade-point average. Attendance at and credits earned in a summer session are considered but do not determine readmission.

Students who have been dropped may apply for readmission, in writing, to the chairman of the Committee on Scholastic Standing at least one month prior to the opening of the semester for which admission is requested. Usually readmission will not be granted until at least one semester has elapsed since the student was dropped. Only in unusual circumstances will a student be readmitted after having been dropped for the second time.

Whenever, in the opinion of the dean of a college, a student's work makes such action necessary, the dean may warn the student or place him on the grade-point rule. The grade-point rule is the requirement that a student earn twice as many grade points as credits for which he is registered, in other words, a C average. Failure to comply with the grade-point rule may result in refusal by the Committee on Scholastic Standing to permit further registration.

Ordinarily failure in the first semester of a year course bars the student from registering for the second semester of that course.

Warnings of low scholarship are given by instructors and deans, usually at the end of the first and second six-week periods of each semester, but the student should not assume that his work is of passing grade merely because he has not been warned. The University assumes no responsibility if a warning that has been mailed to a student fails to reach him.

If a student has been in attendance up to the time of the final examination but is absent from the examination, the instructor may give an "Incomplete" for the course. If within one week no satisfactory reason is given by the student for his absence from the final examination, the instructor must turn in a removal of the Incomplete, counting the final examination as F in computing the grade for the course.

Regular attendance at class and laboratory sessions is expected. Unavoidable absence should be explained to the instructors concerned.
Student Discipline

Students are expected to observe accepted University and community standards of conduct. Disciplinary authority is exercised by the Committee on Discipline, composed of the deans of the several colleges, faculty members and students appointed by the President of the University, and the Dean of Student Personnel.

Financial Obligations to the University. Students who have not adjusted their financial obligations of whatever sort (traffic violations, library fines, locker fees, laboratory breakage charges, transcript fees, loans past due, etc.) to the satisfaction of the University Treasurer, may be denied graduation and further registration, and in the latter case their transcripts will be notated "Denied further registration. See discipline file."

Undergraduate Degree Requirements

Credit and Grade-Point Requirements. The minimum credit requirement for the baccalaureate (bachelor's) degree in all colleges is 130. In addition, the student must have earned at least twice as many grade points as the total of registered credits.

Kinds of Baccalaureate Degrees. Upon satisfactory completion of a regular program in the colleges of Agriculture, Engineering, and Nursing, a candidate is granted the degree of bachelor of science (B.S.); the diploma designates the particular program that has been pursued.

The degrees of bachelor of arts (B.A.), bachelor of fine arts (B.F.A. in Art), and bachelor of science (B.S.) are granted upon the satisfactory completion of prescribed programs in the College of Arts and Sciences.

Satisfactory completion of a regular Teacher training program in the College of Education leads to the award of the degree of bachelor of education (B. Ed.); the degree of bachelor of science (B.S.) is granted for the recreation leadership program. Holders of bachelor degrees who complete the five-year program are awarded diplomas.

The degree of bachelor of business administration (B.B.A.) is granted upon the satisfactory completion of a regular program in the College of Business Administration.

Residence Requirements. Baccalaureate degrees are granted only to those students who earn a minimum of 30 semester hours in residence (that is, in class or laboratory work at the University of Hawaii).

Degree candidates must be registered and in attendance during the semester or summer session in which the degree is to be granted. A college dean may modify this requirement, in certain exceptional cases, by granting a leave of absence.

Time Within Which Work Must Be Completed. All graduation requirements for baccalaureate degrees must be completed within 10 years
of the first registration. The college deans are empowered to extend this period in certain exceptional cases.

Credit by Examination. An enrolled undergraduate who has been in attendance for one semester and presents evidence to the dean that he has had the equivalent of a course through experience or training but has not received college credit for the course may apply for credit by examination. Application must be made within the first six-week period of a semester. Failure in the examination will be entered on the permanent record, and can be removed only by credit earned in a resident course. In no case will the grade received in such examination carry grade points. Graduate students may also obtain credit in this manner for certain undergraduate courses. A fee is charged for each examination. (See p. 56.)

Course Examinations. Final examinations are required in all undergraduate courses except directed reading, research, or seminar courses. No examinations (other than short quizzes) are allowed during the two weeks just prior to the final examination period.

Tuition and Fees

Students (including auditors) registered for 12 or more credit hours in any semester pay $85.00 for tuition and $10.00 for registration per semester. Students (including auditors) registered for fewer than 12 credit hours in regular day courses in any semester pay $8.00 per credit hour. Summer session students pay $10.00 per credit hour and an activities fee of $1.25. Students registered in the College of General Studies pay fees as indicated in the bulletins of that college.

Persons who register or pay the fees after the announced days of registration pay a late registration fee of $5.00.

All students registered for daytime courses pay a “Student Health Fee” of 75 cents each semester.

All fees must be paid in full at the time of registration, and no registration card will be finally accepted until it is endorsed showing payment.

Veterans, or orphans of veterans, registering for the first time under any of the various federal veterans' bills, should present a proper Certificate for Education and Training, or Certificate of Eligibility and Entitlement.

Laboratory fees, uniform and awards fees in military science, and special course fees are stated in the description of courses. If the instructor feels it is justified, students may be charged for excessive breakage of equipment.

Students who take the college aptitude test pay a $2.00 fee at the time of examination.

Tuition and laboratory fees may be refunded to students who wit-
draw from courses, the percentage refunded to be in accordance with
the following schedule: Withdrawal during

<table>
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<tr>
<th>Withdrawal Time</th>
<th>Refund Percentage</th>
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<tr>
<td>First two weeks of</td>
<td>40%</td>
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<td>instruction</td>
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</tr>
<tr>
<td>Third week of instruction</td>
<td>60%</td>
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<tr>
<td>Fourth week of instruction</td>
<td>80%</td>
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<tr>
<td>Fifth week of instruction</td>
<td>20%</td>
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<tr>
<td>Remainder of semester</td>
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In no case is the registration fee, or any part of it, refunded.

A fee of $2.00 is charged for each change in registration after the
initial registration, unless such changes are due to reasons beyond the
control of the student. This fee does not apply to complete withdrawals
from the University.

A fee of $5.00 must be paid to the Business Office before any degree
is awarded to a student. The five-year diploma fee is $2.50.

A graduate student receiving an advanced degree must pay, before
the degree is awarded, a fee of $4.00 to cover the cost of binding two
copies of his thesis.

Caps, gowns, and hoods for graduation ceremonies may be rented for
$2.00.

A student who requests the Office of Admissions and Records to send
a transcript of his work to another institution is not required to pay for
the first copy but is charged $1.00 for each subsequent copy. Transcripts
of students whose records indicate indebtedness to the University carry
the following statement: "Denied further registration. See discipline
file."

A fee of $8.00 per credit is charged for "Credit by Examination," payable
at the time of application for the examination.

A fee of $10.00 is charged for any special examination in regularly
constituted courses at other than the specified time.

Steel book lockers for student use are situated in Wist Hall. The use
of a locker for the first and second semester may be obtained at Room 9,
Hawaii Hall, for $1.00. All keys must be returned before Commencement.

At the request of the Associated Students of the University of Hawaii
(ASUH) and with the consent of the Board of Regents, the Business Of-
cine collects certain ASUH fees at registration time. These fees, approxi-
mately $10.00 each semester, include membership in the ASUH for under-
graduates taking 12 or more credit hours (if more than 6 are in the day
program), class dues, the use of Hemenway Hall, and participation in
the social, cultural, and recreational programs provided by the Hemen-
way Hall Board of Governors. For other students the fee is optional.
These fees are not collected for the summer session. Complete details
are given in the ASUH Handbook.

**Military Training**

Instruction is offered in military and air science and tactics in ac-
cordance with the requirements stipulated by Congress in legislation re-
lating to land-grant colleges. The first two years must be taken by every
male student who is an American citizen, who meets the required physical
standards, whose twenty-fourth birthday has not passed at the time of
enrollment, who (1) is a freshman or sophomore, or (2) is an unclassi-
fied student carrying more than 11 credit hours of work and having fewer
than 55 college credits. An alien or a student not physically qualified
may register for the basic courses at his own expense with the consent of
the department chairman. Students who have satisfactorily completed
three years of training in the junior division may be excused from the
first year; veterans with six months to a year of military service meet the
requirements of the first year; veterans with more than one year of serv­
ice may receive credit for the basic courses. All such students should clari-
fy their status with the Military or Air Science Department prior to their
first registration in the University.

Training in the advanced courses is optional for selected juniors and
seniors but the number can not exceed the quotas authorized by the fed­
eral government. Students must be enrolled for 12 or more semester hours
in order to take advanced military training. Completion of the advanced
courses leads to a Reserve commission in the Army or Air Force.

Advanced students and certain selected freshmen and sophomores are
given Selective Service deferments within authorized quota limitations.
Deferments are initially given in the second semester of the freshman
year and remain in effect as long as the student is regularly enrolled (12
or more semester hours), is in good standing, and continues in military
training.

Health, Physical Education, and Sports

The University expects every student to safeguard his health and of­
ers certain aids toward that end. Before entering, every new undergradu­
ate student must have a medical examination by a licensed physician.
The student makes his own arrangements and pays the physician. The
University provides a form for reporting the examination. If subsequent
examinations are needed, the University makes them in its dispensary
without cost to the student. Yearly chest X-ray examinations are required.
These are provided free-of-charge. Failure to comply with this require­
ment precludes registration for the following semester.

At the dispensary a registered nurse is on duty throughout the day and
a physician during certain hours. First-aid service is available for minor
ills and injuries; no charge is made and no responsibility is assumed by
the University. Any student who needs medical attention beyond that
which the University can reasonably give should make his own arrange­
ments with a physician.

The University also offers instruction in health and conducts a pro­
gram of recreation and sports. Freshman and sophomore men and women
under 25 years of age who are registered for 12 or more semester hours of
academic work must take Health and Physical Education 101, 102, and 130. Veterans with one year of military service meet all health and physical education requirements.

Students engaged in varsity sports may be exempted from the health and physical education requirement during the semester of such participation upon petition to the academic dean and substantiation of such participation by the Director of Athletics.

Intramural sports are planned to supplement the regular courses.

Varsity sports are conducted independently of the Department. They are governed by a Board of Athletic Control composed of 11 members: 3 faculty members appointed by the President; 3 alumni members appointed by the Governing Board of the Alumni Association; 3 students—the president of the ASUH, and one senior and one junior appointed by the president of the ASUH, with approval of the Student Council; the Treasurer of the University, ex officio; and the Director of Athletics, ex officio. The Board forms policies for intercollegiate athletics, drafts budgets, and makes contracts and other arrangements for contests between the University and other colleges and athletic groups.

*Although the University takes reasonable precautions, it assumes no responsibility for injuries received in sports or games.*

**Scholarships and Fellowships**

Scholarship aid is provided through appropriations by the legislature and contributions from business firms and private organizations. A few scholarships are supported by endowment funds. Awards are based, in general, on (1) character, (2) scholastic ability and achievement, and (3) financial need.

The period covered is usually one year, the chief exception being in the case of the Territorial Scholarships which cover four years. The granting of a scholarship implies that the recipient is expected to carry a regular load of college work with success. A scholarship may be withdrawn at the close of any semester in which a satisfactory academic record is not maintained.

The chief kind of aid for entering freshmen consists of the Territorial Scholarships described below. For freshman students there are few other scholarships available. However, several community organizations provide scholarships for deserving local students. Full information for entering freshmen is sent to the principals of all local high schools during the spring.

For undergraduate students of sophomore rank or above, numerous scholarships are available. Information may be obtained from the chairman of the Scholarship Committee.

Prospective graduate students who need financial assistance should communicate with the Dean of the Graduate School for information concerning aid which can be offered.
Grants and Other Aids. The Standard Oil Company of California provides two $400 grants to outstanding students.

The Sears Roebuck Foundation grants four $500 scholarships in general agriculture.

The John Fee Embree Scholarship of $800 is awarded to an outstanding upper division or graduate student in the social sciences, preferably anthropology or sociology.

Mildred and Leland Ira Doan offer three annual $500 scholarships to island students specializing in chemistry.

The Matson Navigation Company offers four $500 scholarships each year to juniors and seniors in the College of Business Administration.

The City Mill Company offers an annual $250 scholarship to an outstanding student in the College of Business Administration.

Information on the above grants may be obtained from the Scholarship Committee.

The Kekaha Sugar Company offers a four-year scholarship of $250 a year to a young man whose family is connected with the company. Information may be obtained from the chairman of the Scholarship Committee or from the company.

The Alumni Association provides tuition scholarships and loan grants for qualified junior, senior, and graduate students. Application should be made to the Association's Education Aid Committee through the Alumni Office.

Territorial Scholarships. Twenty-four scholarships, divided between the six senatorial districts, are awarded annually to entering freshmen. They may be held four years, provided the beneficiary maintains a satisfactory record.

Other Scholarships Administered by the Scholarship Committee. Alonzo Gartley (in agriculture); Ann Koga Mortimer Memorial; ASUH Scholarship-Leadership grants; Chinese Community; Fushiminomiya Memorial Scholarship Endowment Fund; Gamma Phi Beta; Harry H. Collins; Kam's Society; Kappa Alpha Theta; Kenji Yamaguma Memorial; Korean Foundation; Korean University Club; Leora Parmlee Dean (sponsored by the Women's Campus Club); MidPac Lumber Company; Oahu Plumbing and Sheet Metal Company; Opti-Mrs. Club of Honolulu; Pua Memorial; Rama Watumull Memorial; Riley H. Allen; Rubie Ethel Kono; Ruth C. Scudder Memorial (sponsored by the Women's League of Central Union Church); Seu Tin Chong Award; Stephen Spaulding; College of Education Club; Theodore R. Rhea Hawaii Cancer Society Memorial; Tri-Alpha Art Club; United Chinese Society; W. A. Ridings; Wakaba Kai Sorority; Yasutaro Soga.

Scholarships Administered by Individuals and Private Organizations, with Assistance from the University Scholarship Committee. Associated Chinese University Women; Chinese Women's Club; City Mill Company;
Hawaii Chinese Civic Association; Hawaiian Pineapple Company; Honolulu Japanese Chamber of Commerce; Hung Wo and Elizabeth L. Ching; Kauai High School Alumni Association; Leilehua High School Alumni Association; Music Club, University of Hawaii; Ralston Purina; Recreation Association of Honolulu; Soroptimist Club; Te Chih Sheh; Waikiki Rotary Club; Wallace Rider Farrington (for graduates of Wallace Rider Farrington High School, sponsored by the Honolulu Star-Bulletin); West Honolulu Rotary; West Kauai Naturalized Citizens Club; Yang Chung Hui.

Scholarships Administered Entirely by Private Organizations. The Scholarship Committee has no direct information about the independent awards listed. American Trust Company; Buddhist Fellowship Society; Chinese University Club; "Chu" Baldwin Memorial (sponsored by Puu­nene Community Association); Civic Associates of Nuuanu YMCA; Easy Appliance Company; Elks (the Benevolent and Protective Order of Elks, Lodge No. 616, of Honolulu); Hawaii Federation, Young Buddhists Association; Hawaiian Civic Club of Molokai; Honolulu Chapter, National Foundation for Infantile Paralysis; Honolulu Community Chest; Honolulu Symphony; Hui Hanalike; Jack Johnson Memorial Scholarship; Kaneohe Lions Club; Kilmer Moe; Lahainaluna Alumni; Leeward Oahu Lions Club; Maui AJA Veterans Club; Molokai Lions Club; Pacific Fellowship (sponsored by the American Association of University Women); Retail Board, Honolulu Chamber of Commerce; Timarau Club of Honolulu; Wahiawa Chamber of Commerce; Waialua Lions Club; YWCA.

General inquir[...](Chairman of the Scholarship Committee, University of Hawaii, Honolulu 14, Hawaii.

Prizes and Awards

Dean Prize for Undergraduate Research. This prize fund, established in 1927 in honor of Dr. Arthur Lyman Dean, past President, is used to stimulate interest in undergraduate research. Any senior may compete for this prize of not less than $25.00 nor more than $50.00 each year by presenting to the Dean Prize Committee a thesis in which he reports fully upon his research in any field of intellectual endeavor. The committee selects the thesis which is the best example of originality, independence, logic, and form of presentation. This paper is placed in the Hawaiian Room of the Library.

Banks Memorial Prize. The Charles Eugene Banks Memorial Prize, the income from a $500 endowment, is awarded each year to the student whose manuscript is judged the best in a creative writing contest.
O. C. Magistad Award of the Hawaiian Section of the American Chemical Society. A one-year student membership in the Society, and subscriptions to several of the Society's journals, are awarded each year to the outstanding senior majoring in chemistry. The name of the winner is engraved on a bronze plaque in the Chemistry Building.

Phi Beta Kappa Recognition Award. An award by the Hawaii Alpha Chapter of Phi Beta Kappa made in recognition of high scholastic standing among sophomores in the College of Arts and Sciences.

Phi Kappa Phi Prize. The Hawaii chapter of Phi Kappa Phi honor society awards a $20.00 cash prize to the senior who graduates with the highest scholastic record in his class.

Carl F. Knobloch Prize in Government. The prize is awarded to an outstanding student in government.

Best Soldier Awards. The Honolulu Star-Bulletin sponsors an annual award in which two gold medals are presented to cadets of the first-year basic course of the ROTC, one to the outstanding Army cadet and one to the outstanding Air Force cadet. Judgment is based on scholastic standing in military or air science as well as leadership.

Real Dean Awards of Honor. The ASUH annually awards medals to students who, in the opinion of fellow students, have given time and effort willingly, untiringly, and without thought of reward to the promotion of ASUH activities.

Berndt Prizes for Extemporaneous Public Speaking. Medals are annually awarded by the ASUH to the students judged best in an extemporaneous speaking contest.

University Oratory Prizes. The ASUH annually awards medals to the students judged best in an oratorical competition.

Theatre Group Prizes. The Group sponsors an annual contest for undergraduates in which prizes of $50.00, $35.00, and $15.00 are awarded for original one-act plays.

Warrior of the Pacific Trophy. Since 1928 the United States Department of the Army has supervised an annual rifle marksmanship competition among ROTC infantry units in American universities and colleges for the possession of a bronze statuette of a native Hawaiian soldier. Residents of Hawaii offer the trophy for the competition.

American Society of Civil Engineers (Hawaii Section) Award. A cash prize of $50.00 and a year's membership in the Society are awarded each year to the outstanding senior in civil engineering.
Hawaiian Pineapple Company Summer Travel Award. An annual award, for two juniors in home economics, based on scholarship, extracurricular activities, and ability. It provides a trip to the American Home Economics Convention, where the students assist with the Hawaiian Pineapple Company's exhibit and visit various educational institutions and commercial establishments employing home economists.

Danforth Summer Fellowship Awards. Awards are given by the Danforth Foundation and Ralston Purina Company of St. Louis, Missouri, to an outstanding junior in agriculture and an outstanding junior in home economics. Transportation is provided from San Francisco to St. Louis. Representatives of state universities spend two weeks in classes at the Ralston plant and two weeks in leadership training at the American Youth Foundation, Shelby, Michigan.

Major John A. Johnson Memorial Award. An award is made to the Army ROTC student with the best scholastic record at the end of the sophomore year who is approved for advanced training.

Captain H. Gaylord Dillingham Memorial Award. This award is given to the Air Force ROTC student with the best scholastic record at the end of the sophomore year who is approved for advanced training.

Hawaiian Botanical Society Award. An annual award, customarily $50.00, is made to a senior student on the basis of a thesis on an announced topic in theoretical or applied botany.

Das Prize in Asian History and Politics. An annual cash prize of $50.00, offered by the Taraknath Das Foundation, is awarded to a senior selected by a faculty committee appointed by the President.

Sigma Pi Sigma Recognition Award. An award is made by the University chapter of Sigma Pi Sigma in recognition of high scholastic standing among sophomores in physics.

Carey D. Miller Award. This monetary award established by the graduates in home economics is given to a senior who has shown outstanding leadership qualities in home economics.

Honors

Honors may be granted at graduation to undergraduates who have a grade-point average of 3.4 or above for their undergraduate work. At least 60 semester hours of such work must have been at the University of Hawaii during a period not exceeding six years prior to graduation.

Shortly after the close of each semester the Deans' List gives the names of all full-time undergraduate students who achieved a grade-point average of 3.5 or above for the preceding semester.
In addition there are campus chapters of six national honorary societies—Phi Beta Kappa (founded at William and Mary in 1776, encourages study in the liberal arts and sciences and recognizes high scholastic attainment in these areas; to be eligible for election a student must have pursued a broad course of study, definitely liberal in character including work in foreign languages and mathematics, leading to the bachelor of arts degree; election to Phi Beta Kappa is regarded as one of the highest undergraduate honors; Alpha Chapter was installed in 1952); Phi Kappa Phi (general scholarship); Sigma Xi (sciences); Pi Gamma Mu (social sciences); Phi Delta Kappa (education); Sigma Pi Sigma (physics); and Omicron Delta Kappa (scholarship and leadership in activities); Chi Epsilon (national civil engineering honor fraternity).

**Loan Funds**

Through the generosity of various organizations and individuals, certain funds have been provided from which students may borrow—either in small amounts to meet emergencies or in larger sums to defer part of tuition costs. A student wishing to make use of these funds should consult the Dean of Student Personnel. Loan funds include the following:

- Alumni Fund—Molokai Chapter
- Carey D. Miller Fund
- Chinese Students' Alliance Fund
- Commerce Club Fund
- Edgar Wood Memorial Fund
- Future Farmers of America, Uniwai’Chapter Fund
- George H. Lamy Fund
- Gruscidada Fund
- Hawaiian University Association Fund
- Helen Strong Carter Dental Fund
- Honolulu Civic Association Fund
- Inez Wheeler Westgate Fund
- Japanese Students’ Alliance Fund
- Louise S. Jessen Memorial Fund
- Mary L. Kelsey Fund
- Minnesota Club Fund
- Mori-Ross Health Fund
- N.G.B. Fund
- Ruth Alexander, M.D., Student Fund
- Representatives Club Fund
- Senior Class Fund
- Student Fund of the College of Education

**Summer Session**

The University conducts a regular six-week summer session, and offers limited programs during two five-week terms and a three-week post session. In 1960 the regular session will run from June 20 through July 29. The total enrollment for the 1958 sessions was 6,002.

Further information may be obtained from the office of the Dean of the Summer Session.
STUDENT ACTIVITIES

STUDENT ACTIVITIES are recognized as part of the University educational program. The Bureau of Student Activities is responsible for studying, encouraging, and developing student participation in leadership and followership, sound programming and well-balanced living.

The Associated Students, a self-governing organization, promotes and directs its undergraduate extracurricular activities and cooperates with the University administration in student affairs. All undergraduate students registered for 12 or more credits pay ASUH membership fees. An elected council directs its activities. The ASUH Handbook describes the organization and functions in detail.

Activities in which the ASUH engages are athletics, debating, dramatics, a semiweekly newspaper (Ka Leo o Hawai‘i), and a yearbook (Ka Palapala).

Ka Leo and Ka Palapala are integral parts of the curriculum in journalism and serve as workshops for English 115 and 116. Nonexecutive staff members may also obtain credit for English 111. English 112 is required for junior editorial executives. Credit for, or concurrent registration in, English 115 and 116 is required for all appointive editorial positions. Junior executives must have had, or be registered in, English 115 or 116, depending upon the nature of their positions.

Students registered for 12 or more credits receive free admission to, and are eligible to participate in, the productions of the University Theatre Group.

All regular students are eligible to try out for membership in the music organizations. Tryouts for the A Cappella Choir, Chorus, University Band, Orchestra, and vocal and instrumental ensembles are conducted at the beginning of each school year, and at other times by special appointment.

Hemenway Hall is the center of campus activities, facilities, and services. Faculty, students, and alumni are represented on the Board of Governors, which administers the building and sponsors the programs. The Board is affiliated with the National Association of College Unions.

There are some 80 student scholastic, honorary, professional, religious, social, departmental, and residence organizations.

Living Accommodations and Expenses

Limited housing and eating facilities are maintained on the campus. The University cafeteria serves three meals a day, six days a week, at an average cost of $2.50 per day. It also offers a semester contract for breakfast and dinner, six days per week (exclusive of holidays and vacations).
for approximately $140 per semester. For further information, write: University Cafeteria, University of Hawaii, Honolulu 14, Hawaii. The Snack Bar is open during the school day for light refreshments.

Campus Housing. Requests for assignment to dormitories should be addressed to the Office of Student Residences, Bachman Hall 126, University of Hawaii, Honolulu 14, Hawaii.

Mary Dillingham Frear Hall has double accommodations for 144 women. Rent is $110.00 per semester, and $70.00 for the summer session.

Hale Laulima, a cooperative dormitory, houses 27 women in double rooms. Residents do the cooking and housekeeping. It is reserved for island girls and assignments are based largely on financial need. Rent is $85.00 per semester. On school days only breakfast and dinner are served. Living expenses approximate $60.00 per month.

John A. Johnson Hall, a residence for men, accommodates 80 in double rooms. The rooms are well furnished and each has a view of the mountains or the sea. Rent is $110.00 per semester and $70.00 for the summer session.

There are no housing facilities on the campus for married students.

Off-Campus Housing. To supplement campus housing, the University maintains a file of off-campus dormitories, rooming houses, single rooms in private homes, and a few apartments. The Office of Student Housing and Part-Time Employment gives all possible assistance in locating suitable accommodations after the student arrives.

Atherton House, the YMCA dormitory adjoining the campus, houses 68 men. Inquiries should be addressed to the Director, Charles Atherton House, 1810 University Avenue, Honolulu 14, Hawaii.

Expenses. Minimum expenses are estimated at from $1,250 to $1,500 a year for board, room, tuition, registration, course fees, class and student body fees, and books. Off-campus living costs may be higher. These estimates do not include the cost of clothing, laundry, transportation, and other personal items. Students from outside the Territory should add the cost of transportation to and from Hawaii and additional items for adjustments in a new community. Some earn part of their expenses by part-time employment, but everyone should be prepared to finance a major portion of the costs.

For further information on either off-campus housing or part-time employment, address the Counselor for Student Housing and Part-Time Employment, Bachman Hall 124, University of Hawaii, Honolulu 14, Hawaii.
COLLEGE OF AGRICULTURE

The College of Agriculture prepares students for professional work in the fields of agriculture and home economics. There are four curricula in agriculture: general agriculture, agricultural economics, tropical crop production, and technical agriculture. The specializations available in technical agriculture include animal science, entomology, poultry science, soil science, and tropical horticulture. A choice of electives permits the building of a program for special needs.

Four curricula are offered in home economics: general home economics, institutional management, home economics education, and foods and nutrition.

All curricula lead to the bachelor of science degree.

The College also includes the Hawaii Agricultural Experiment Station and the Cooperative Extension Service in Agriculture and Home Economics.

Admission and Degree Requirements

The requirements for admission are, in general, the same as those for the University (pp. 46–50). Students who lack some of this required preparation are unable to follow the regular programs and usually need more than four years to complete the degree requirements.

To be eligible for the degree a student must:

1. Complete the course requirements of a curriculum;
2. have an aggregate of at least 130 semester hours of credit;
3. have a 2.0 grade-point ratio for all registered credits. (See "Undergraduate Degree Requirements.")

Curricula in Agriculture

The program in agriculture is designed to give a knowledge of the fundamental principles underlying agriculture as a science and to prepare for effective service in agricultural research, the teaching of agriculture, or in practical farming.

Students interested in agricultural engineering, with approval of the Dean, may substitute certain courses in engineering, mathematics, and physics for some of the required courses in agriculture.
Summer practice work in the area of major interest may be required if, in the opinion of the adviser, such experience is necessary for reasonable competence.

**GENERAL AGRICULTURE**

**FIRST YEAR**

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<td>Health &amp; Phys. Ed. 102</td>
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<tr>
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<td>MS or AS 102</td>
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<td>Poultry Science 172</td>
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**SECOND YEAR**

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**THIRD YEAR**

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<td>Soil Science 281</td>
<td>4</td>
<td>Zoology 372</td>
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<td>Zoology 161</td>
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**FOURTH YEAR**

The only required course in the fourth year is English 210. This should be taken in the second semester. Elective courses necessary to complete the 130 semester hours required for graduation must include 9 credits in animal science, 9 credits in plant science, 6 credits in agricultural engineering, and 6 credits in agricultural economics.
### TROPICAL CROP PRODUCTION

#### FIRST YEAR

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<td>Health &amp; Phys. Ed. 102</td>
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<td>History 171</td>
<td>3</td>
</tr>
<tr>
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<td>MS or AS 102</td>
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#### SECOND YEAR

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#### THIRD YEAR

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<td>Agricultural Engineering 455</td>
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<td>Soil Science 281</td>
<td>4</td>
<td>English 210</td>
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<td>Zoology 161</td>
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#### SUMMER PRACTICE IN INDUSTRY—10 weeks

#### FOURTH YEAR

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### AGRICULTURAL ECONOMICS

#### FIRST YEAR

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### COLLEGE OF AGRICULTURE

#### SECOND YEAR

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<td>English 155</td>
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#### THIRD YEAR

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<td>English 210</td>
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<td>Elective in ag. economics</td>
<td>3</td>
<td>Elective in ag. economics</td>
<td>3</td>
</tr>
<tr>
<td>Elective in social science</td>
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<td>Elective</td>
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#### FOURTH YEAR

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Electives are chosen with the approval of the adviser. They must include 9 credits in social science, other than economics; 9 credits in economics and business in addition to those specified and 9 credits in agricultural economics in addition to those specified.

### TECHNICAL AGRICULTURE

#### FIRST YEAR

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#### SECOND YEAR

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THIRD YEAR

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FOURTH YEAR

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The following list indicates the fields of technical agriculture in which students in this curriculum may specialize. In each case the required courses are listed as well as additional courses from which electives may be chosen with approval of the adviser.

ANIMAL SCIENCE. Requirements: Animal Science 141, 242, 243, 244, 245; Bacteriology 151; Zoology 311—21 credits, and 16 credits from the following: Agriculture 502; Animal Science 246, 443, 444, 641; Bacteriology 260, 262; Chemistry 131, 132, 271; Poultry Science 172, 473, 474, 475; Zoology 161, 410, 416, 425, 431, 445.

ENTOMOLOGY. Requirements: Bacteriology 151; Botany 440; Zoology 161, 361, 363, 372, 390—21 credits, and 15 credits from the following: Agriculture 399; Agricultural Engineering 433, 434, 435; Botany 105, 460, 470, 553; Chemistry 131, 132; Geography 420; Geology 150, 151; Horticulture 162; Philosophy 350; Soil Science 482, 483; Vegetable Crops 191; Zoology 401, 410, 416, 425, 131, 445, 561.

POULTRY SCIENCE. Requirements: Animal Science 246; Bacteriology 151; Poultry Science, 172, 473, 474, 475; Zoology 161, 311—27 credits, and 15 credits selected from the following: Agriculture 502; Agricultural Engineering 433, 434; Animal Science 141, 245, 443; Chemistry 131, 132; Economics 140, 480; Genetics 452; Zoology 372, 410.

SOIL SCIENCE. Requirements: Agriculture 399; Agricultural Engineering 435; Chemistry 131, 132; Soil Science 482, 483—18 credits, and 18 credits from the following: Agriculture 502; Agricultural Engineering 433, 434; Bacteriology 151, 251; Botany 161, 470, 570—571, 572, 573; Chemistry 271, 444, 551—552; Geography 101, 430; Geology 150, 151; Horticulture 162; Mathematics 103, 104; Philosophy 350; Soil Science 484.

TROPICAL HORTICULTURE. Requirements: Bacteriology 151; Botany 410, 440, 470; Genetics 453; Horticulture 162—20 credits, and 16 credits from the following: Agricultural Engineering 433, 434, 435; Botany 161, 412, 418, 460, 553, 570—571; Chemistry 131, 132; Genetics 452; Horticult-
Curricula in Home Economics

The home economics program combines a broad range of academic and professional courses and is designed to promote satisfying personal, home, and community life. It prepares students for homemaking and for professional careers. Four curricula are offered: home economics education, institutional management, general home economics, and foods and nutrition.

**FIRST YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Art 103</td>
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<tr>
<td>Home Economics 100</td>
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<td>Home Economics 110</td>
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| Total | 15 |

<table>
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<td>English 102</td>
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<tr>
<td>Health &amp; Phys. Ed. 102</td>
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<td>Home Economics 110 or 120</td>
<td>3</td>
</tr>
<tr>
<td>Speech 100</td>
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| Total | 16 |

**SECOND YEAR**

<table>
<thead>
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<th>First Semester</th>
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<tbody>
<tr>
<td>Health &amp; Phys. Ed. 130</td>
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<tr>
<td>Home Economics 122</td>
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<tr>
<td>Psychology 104</td>
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<tr>
<td>Sociology 151</td>
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</tr>
<tr>
<td>Zoology 111 or 115</td>
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| Total | 17 |

<table>
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<tbody>
<tr>
<td>Economics 140</td>
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<td>English 155</td>
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<tr>
<td>Home Economics 103</td>
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<tr>
<td>Home Economics 123</td>
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<tr>
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<td>1</td>
</tr>
<tr>
<td>Elective</td>
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</tr>
</tbody>
</table>

| Total | 17 |

In addition to the courses listed above, students in home economics must complete the requirements for special curricula. Additional work is ordinarily devoted to courses relating to these special fields.

Four such special curricula are offered. The major requirements and the additional recommended electives for each are listed below.

During the second and third years, students in general and home economics education must take Bacteriology 130, Home Economics 112, 113, 114, and Zoology 111 or 115. Students in institutional management and dietetics must take Bacteriology 151, Chemistry 271, and Zoology 115.

Students intending to specialize in clothing and textiles, dress design, or interior decoration follow the general home economics curriculum, selecting electives according to their interests. Students interested in preparing for the Agricultural Extension Service follow the home economics curriculum.

---

*Required only in foods and nutrition curriculum.*
education curriculum. Those interested in research should follow the foods and nutrition curriculum.

**GENERAL HOME ECONOMICS**

**THIRD YEAR**

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Second Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Economics 214</td>
<td>2</td>
<td>English 210</td>
<td>3</td>
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<tr>
<td>Home Economics 240</td>
<td>2</td>
<td>History 171</td>
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<td>Home Economics 241</td>
<td>2</td>
<td>Home Economics 215 or 217</td>
<td>2 or 3</td>
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<tr>
<td>Home Economics 250</td>
<td>3</td>
<td>Home Economics 253</td>
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<tr>
<td>Home Economics 252</td>
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<td>Sociology 151</td>
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<td>Home Economics 260</td>
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<tr>
<td>Elective</td>
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<td><strong>Total</strong></td>
<td><strong>16</strong></td>
<td><strong>Total</strong></td>
<td><strong>16 or 17</strong></td>
</tr>
</tbody>
</table>

**FOURTH YEAR**

| Home Economics 258 or elective | 4 | Home Economics 258 or elective | 4 |
| Home Economics 262 | 3 | Home Economics 441 | 3 |
| Elective | 9 | Elective | 9 |
| **Total** | **16** | **Total** | **16** |

**HOME ECONOMICS EDUCATION**

**THIRD YEAR**

| Education 230 | 5 | English 210 | 3 |
| Home Economics 214 | 2 | Home Economics 215 or 217 | 2 or 3 |
| Home Economics 240 | 2 | Home Economics 253 | 2 |
| Home Economics 241 | 2 | Home Economics 270 | 3 |
| Home Economics 250 | 3 | Elective | 7 |
| **Total** | **18** | **Total** | **17 or 18** |

**FOURTH YEAR**

| Education 391, 392, or Home Economics 258 | 8 or 4 | Home Economics 262 | 3 |
| History 171 | 3 | Home Economics 258 or Education 391, 392 | 4 or 8 |
| Elective | 6 | Speech 365 | 3 |
| Elective | 3 | Elective | 5 |
| **Total** | **17 or 18** | **Total** | **18 or 17** |

**INSTITUTIONAL MANAGEMENT**

**THIRD YEAR**

| History 171 | 3 | English 210 | 3 |
| Home Economics 234 | 3 | Home Economics 235 | 3 |
| Home Economics 240 | 2 | Home Economics 443 | 3 |
| Home Economics 241 | 2 | Home Economics 445 | 3 |
| Home Economics 250 | 3 | Elective | 6 |
| Elective | 5 |               |         |
| **Total** | **18** | **Total** | **18** |
FOURTH YEAR

FIRST SEMESTER

<table>
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<th>Course</th>
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<td>Home Economics 236</td>
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</tr>
<tr>
<td>or elective</td>
<td></td>
</tr>
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<td></td>
</tr>
<tr>
<td>Home Economics 338 or 340</td>
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<tr>
<td>Elective</td>
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SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
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<td>Home Economics 338 or 340</td>
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</tr>
<tr>
<td>Elective</td>
<td>6*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

FOODS AND NUTRITION MAJORS follow the second-year program including Chemistry 131, 141; Mathematics 103; Zoology 101. During the third and fourth years, the following are required: Bacteriology 151; Chemistry 132, 271; History 171; Home Economics 240, 241, 250, 258, 399, 443.

SUGGESTED ELECTIVES

GENERAL AND VOCATIONAL HOME ECONOMICS: Art 101, 111-112, 136, 141, 142, 235; English 115, 571-572, 585; Home Economics 217, 234, 251, 399, 441; Music 160; Psychology 150, 152; Sociology 232, 450.

INSTITUTIONAL MANAGEMENT: In addition to the above electives, Home Economics 112, 113, 114, 251, 252, 253, 262.

FOODS AND NUTRITION: Chemistry 472; English 210, 571-572, 585; German 101-102, 151-152; Home Economics 112, 113, 114, 251, 262, 441; Physics 160-161; Sociology 151, 232; Zoology 115, 431.

Hawaii Agricultural Experiment Station

The facilities of the Station, including the research staff, the field laboratory, and the Agricultural Engineering Institute, are available in part for undergraduate and graduate instruction. Thus, students have unusual opportunities to study the latest methods and results of agricultural research. The close collaboration maintained with the experimental stations of the Hawaiian Sugar Planters’ Association and the Pineapple Research Institute of Hawaii is of value in the research of all three institutions and in University instruction, because in Hawaii diversified agricultural interests, in most instances, must be integrated with those of the dominant crops.

The function of the Station is “to promote scientific investigation and experiments respecting the principles and applications of agricultural science” (Hatch Act of 1887). Facilities for carrying on this work are

*Home economics students are eligible for membership in the American Dietetic Association after a year’s internship in an approved mainland hospital. For hospital internship, the Association requires 3 additional credits in one of the following: anthropology, economics, education, personnel relations, psychology, sociology.
provided by the headquarters offices and laboratories located on the University campus, and research farms at Poamoho and Waimanalo, Oahu; a branch station at Makawao, Maui; and a branch station at Kainaliu, Hawaii. Emphasis is placed upon animal husbandry, poultry production, agronomy, and horticulture. Investigations cover the physiology of plants and animals; diseases, insects, and parasites; agronomy, soils and soil chemistry; human and animal nutrition; breeding and genetics; as well as other research in culture, production, and marketing.

**Cooperative Extension Service in Agriculture and Home Economics**

This program, conducted jointly by the College and the United States Department of Agriculture, is devoted to the advancement of agriculture in Hawaii and to the improvement of rural home life.

**Agricultural Extension Service.** The Service maintains personal contacts with the rural population through its field staff of county farm agents, home demonstration agents, and their assistants, with the help of the specialists at the territorial headquarters at the University. The staff, 77 in number, operates out of offices located as follows:

- Oahu—Honolulu, Kaneohe, Wahiawa
- Maui—Kahului—Kula
- Kauai—Lihue
- Molokai—Kaunakakai
- Hawaii—Hilo, Naalehu, Kealakekua, Honokaa, Kohala
- Maui—Kahului—Kula

Improved farm and home practices are taught by means of practical demonstrations before University Extension clubs of men and women, commodity groups, and 4-H clubs of boys and girls. This group instruction is supplemented by farm and home visits and personal conferences. Each year a 4-H Ahaolelo is held on the University campus.

An important phase of Extension work is to demonstrate in a practical manner the results of scientific experiments conducted by the Hawaii Agricultural Experiment Station, by state experiment stations, and by the USDA.

Bulletins and circulars containing varied, timely information pertaining to farming and rural home life are issued from time to time.

The Service, cooperating with the USDA Agricultural Marketing Service, collects and publishes crop estimates and market statistics of value to farmers and businessmen, and assists in keeping proper records for tax accounting. Emphasis is placed upon the grading and marketing of farm products.
The College of Arts and Sciences is dedicated to the task of giving a general education of breadth as well as depth. It moves in the liberal arts tradition and attempts to give a comprehensive acquaintance with the thought and achievement basic to civilization. Its courses are directed toward the development of ideals, interests, and attitudes characteristic of cultured people, and the ability to think clearly and act upon conviction.

Preprofessional training is provided by stipulated combinations of courses. All of the programs lead either to the bachelor of arts, the bachelor of fine arts (in art), or the bachelor of science degree (in geology and meteorology).

Its geographical position midway between continental America and the Far East makes Hawaii more than ordinarily conscious of the increasing importance of the Orient. Therefore, more than usual attention is given to the history, languages, literature, art, institutions, and philosophy of Asian countries and peoples.

Admission and Degree Requirements

Admission requirements, except for the premedical and predental programs, are the same as those for the University (pp. 46–50).

Each freshman is admitted to one of the following groups, depending upon his interests: social sciences; languages, literature, and art; biological and physical sciences.

To be entitled to the bachelor of arts, the bachelor of fine arts, or the bachelor of science degree a student must:

1. meet certain basic requirements of the first two years;
2. complete a major field of study as outlined by the major department;
3. have at least 50 semester hours of credit in other than introductory courses;
4. have an aggregate of at least 130 semester hours of credit;
5. have a 2.0 (a C average) grade-point ratio for all registered credits, and in the major field. (See "Undergraduate Degree Requirements.")
Curricula

The curricula are built around the major fields of concentration. The degrees of bachelor of fine arts and bachelor of science differ from that of the bachelor of arts in requiring greater concentration in the major and in exemption from foreign language and certain other requirements. All students must meet the basic requirements of the first two years, and complete a major, with related courses, during the last two years. A major consists of 24 to 36 semester hours in one field of concentration. Related courses (generally upper division) are courses in other departments which are associated with and contribute to the major. They are not counted in the total number of hours required for the major. Twelve semester hours is the maximum which any department may require in related courses. The major must be indicated by the beginning of the third year, and for architecture, art, chemistry, meteorology, music, and the premedical program it should be indicated at the beginning of the first year.

Basic Requirements

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>SECOND YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101-102 or 105</td>
<td>English 150-151</td>
</tr>
<tr>
<td>Foreign language (B.A. only)</td>
<td>Foreign language (B.A. only)</td>
</tr>
<tr>
<td>MS or AS 101-102</td>
<td>History 171 (B.A. and B.F.A. only)</td>
</tr>
<tr>
<td>Science</td>
<td>MS or AS 151-152</td>
</tr>
<tr>
<td>Speech</td>
<td>Speech (as required)</td>
</tr>
</tbody>
</table>

The B.F.A. curriculum requires some changes of sequence to allow for more art courses in the first two years.

In addition, six of the following must be completed: Anthropology 150; Art 101; Drama 140; Economics 140 or 150; Mathematics 102, 103, or 111; Music 160; Philosophy 100 or 150; Psychology 102 or 104; Religion 150 or 151; Sociology 151.

A number of these basic requirements may be anticipated in the secondary school program. Entering freshmen with four years of a single language at the secondary school level are excused from the foreign language requirement, and those in the social sciences, and in languages, literature, and art, with three years of science in a senior high school may be excused from the science requirement. Qualified students, upon reporting to the Admissions Office, may also take an examination in American history to satisfy the requirement of History 171.

For students in the social sciences and in languages, literature, and art who must take a year of science, the requirement may be satisfied by 6 to 8 credits from the following courses: Bacteriology 151; Botany 101; Chemistry 103-104; Entomology 161; Geography 101; Geology 150, 151,
152, 153; Physics 160–161; Psychology 102; Zoology 101 or 111; or Introduction to Science 120–121, which if elected should be taken the entire year.

**Majors**

The following list indicates the departments in which students may major and the requirements for the major, viz., the total number of semester hours and the specific courses required by the department. A 2.0 (C average) grade-point ratio in the major is required for graduation.

**Anthropology.** *Major requirement:* 24 semester hours. *Required courses:* Anthropology 150, 200, and a reasonable balance between regional courses (400 to 440) and systematic courses (500 to 553).

**Art.** *Major requirement:* 36 semester hours. *Required courses:* Art 111–112; 131–132, at least 12 hours in approved art history courses, and others as needed to complete one of the divisions—drawing and painting, applied design, ceramics, advertising art, history of art, weaving. For the B.F.A. degree the major requirement is 64 semester hours, with emphasis in one of the divisions.

**Bacteriology.** *Major requirement:* 24 semester hours. *Required courses:* Bacteriology 151, 251 or 252, 260, 262, 415, 464.

**Botany.** *Major requirement:* 24 semester hours. *Required courses:* Botany 101, 410, 425, 460, 470, 553; Genetics 451, or approved substitutes.

**Chemistry.** *Major requirement:* 36 semester hours. *Required courses:* Chemistry 103–104, 131, 132, 143–144, 231, 551–552. A reading knowledge of scientific German is required. Students desiring certification by the American Chemical Society must take 5 additional hours (including 1 hour of laboratory) from the following: 399, 421–422, 423–424, 441, 442, 444, 446, 571–572.


**Drama and Theater.** *Major requirement:* 24 semester hours. *Required courses:* Drama 150–151; 12 hours from 410, 420–421, 430, 440, and 445; 6 hours from 550, 560, and 570. In addition, 6 hours in dramatic literature, 3 hours in phonetics, interpretation, radio, or playwriting, are required.

**Economics.** *Major requirement:* 33 semester hours. *Required courses:* Economics 150–151, 240, 400, 404. Six hours from the following courses may be counted toward the major: Business 300, 442, 450, 460, 480, 490, 491, 501.

**English.** *Major requirement:* 24 semester hours of upper division courses. *Required courses:* 9 hours in "periods" of literature, 6 hours in single authors, 3 hours in American literature, 6 hours in the English language, writing, and criticism. The language requirement should be met by an ancient or modern European language.


GEOGRAPHY. Major requirement: 27 semester hours. Required courses: Geography 101, 410, three continental courses, and one systematic course.

GEOLGY (B.S. degree). Major requirement: 35 semester hours. Required courses: Geology 150, 151, 152, 153, 265, 410. Related courses: Civil Engineering 111, 112; Chemistry 103-104, 131 (or Physics 280); Economics 140; English 210; Mathematics 102, 192; Physics 160-161.

GERMAN. Major requirement: 20 semester hours, exclusive of German 101-102. Required courses: German 151-152, 411-412, 413-414, 491.

GOVERNMENT. Major requirement: 27 semester hours. Required courses: Government 110, 400, and one course from each of the following groups: comparative government, international relations, politics, public administration.

HISTORY. Major requirement: 24 semester hours of upper division courses. Required courses: History 396, 397, or 398, and 9 hours from each of two of the three fields—United States, Pacific and Far East, European. Courses marked with an asterisk may be applied to either of two of these groups. Greek 401 and Latin 402 are recommended but may not be taken as part of the 2-unit requirement.


MATHEMATICS. Major requirement: 27 semester hours. Required courses: Mathematics 103, 104, 131, 132, 133, and at least 9 hours in upper division courses.

METEOROLOGY (B.S. degree). Major requirement: 35 semester hours. Required courses: Meteorology 202, 204, 206, 220, 221, 225, 230, 231. Related courses: Chemistry 103-104, 105-106; English 210; Geography 101; Geology 150; Mathematics 133; Physics 151, 180-181, 310, 530.

MUSIC. Major requirement: 36 semester hours. Required courses: Music 181-182, 183-184, 301, 361-362, 383, 384, and 6 hours in applied music, including Applied Music 237. Piano technique sufficient to play ordinary accompaniments is recommended.

PHILOSOPHY. Major requirement: 24 semester hours. Required courses: Philosophy 150, 151, 250, 300, 350.

PHYSICS. Major requirement: 31 semester hours. Required courses: Physics 160-161 or 180-181, 253-254, 280, 310, 350, 480, 550, and two of the following: 420, 440, 460, 461, 530. As related courses, Mathematics 131, 132, and 133 are required.

PSYCHOLOGY. Major requirement: 24 semester hours. Required courses: Psychology 102, 230. Further work in mathematics and science is recommended.
RELIGION. **Major requirement**: 24 semester hours. **Required courses**: Religion 151, 200, 201, 382-383.

SOCIOLOGY. **Major requirement**: 24 semester hours. **Required courses**: Sociology 151, and one each from the following: demography and human ecology; the community and related courses; social organization and disorganization; the group and the persons; collective behavior and social change; methods and theory.

SPANISH. **Major requirement**: 20 semester hours, exclusive of Spanish 101-102. **Required courses**: Spanish 151-152, 258, 456, 457.

SPEECH. **Major requirement**: 27 semester hours. **Required courses**: Speech 100 or 150, 130, 210, 214, 220, 450, 480, plus 3 hours in drama. For students emphasizing speech correction, in addition to the specialized courses in speech correction and audiology, Psychology 150, 440, 480 and Zoology 111 or 115 are also required.

ZOOLOGY. **Major requirement**: 30 semester hours. **Required courses**: Zoology 101, 311-312, 390, 445.

**Preprofessional and Graduate Preparation**

The following programs are recommended as desirable preparation in the various fields. They are suggested rather than required, as variations are often necessary in order to meet student needs or the stipulations of a particular professional or graduate school. Student programs should follow the recommendations of the appropriate national professional organizations, provide a good background in the humanities and social sciences, and meet the requirements of the College of Arts and Sciences.

There are no dental, law, medical, ministerial, or osteopathic schools in Hawaii.

**Fine Arts Program**

This program is designed to provide basic preparation for a career in any one of several fields of art. Requirements include approximately twice as many semester hours in art as for the bachelor of arts degree with a consequent lessening of the credits to be taken outside the department. A major may be obtained in drawing and painting, applied design, ceramics, advertising art, history of art, and weaving.

**Pacific Islands Studies Program**

The University offers graduate work leading to the master of arts degree in Pacific islands studies. This program provides both a regional specialization for those who intend to continue work for the doctorate in a particular discipline, and an area background for those contemplating employment in business, government, or mission work in the Pacific islands—Polynesia (including Hawaii), Micronesia, and Melanesia.
The required undergraduate preparation is 18 semester hours of courses dealing with the Pacific islands, to be chosen from the following: Anthropology 400, 401, 402, 403, 552, 553; Economics 452, 480, 482; English 585; Geography 561, 571, 574, 575, 578; Government 261, 422, 442; History 438, 439, 571, 572, 575, 577; Psychology 460, 462; Sociology 232, 450, 452, 524. A basic course in either anthropology or geography of the Pacific islands is required.

**Predental Program**

**AMERICAN DENTAL ASSOCIATION RECOMMENDATIONS**

The Council of Dental Education has established the following minimum list of requirements for admission to approved dental schools:

<table>
<thead>
<tr>
<th>University of Hawaii Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry General, and a half year of organic</td>
</tr>
<tr>
<td>Physics</td>
</tr>
<tr>
<td>Biology or zoology</td>
</tr>
<tr>
<td>English</td>
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</tbody>
</table>

Generally, at least 90 credit hours are required.

**Prelegal Program**

Most reputable law schools require a bachelor's degree for entrance. They do not specify major fields to be covered, but in general prefer a well-rounded background with a major in economics, English, government, history, philosophy, psychology, or sociology. A mastery of elementary logic and mathematics, together with a good grasp of scientific principles, is considered desirable and work in elementary accounting is strongly advised; but increasingly it is being stated that the best prelegal training consists of a thorough grounding in the social sciences and humanities together with extensive practice in the arts of oral and written communication.

Chemistry 103–104 is suggested for the science requirement, and either French or German for the language. The work of the last two years, aside from the major, is largely elective, but the following courses are especially recommended: Business 150–151; Economics 240, 450; Government 500; History 435, 475; Psychology 270, 480; Speech 150.

**Premedical Program**

**AMERICAN MEDICAL ASSOCIATION RECOMMENDATIONS**

Preparatory school requirements include a minimum of 15 units of which at least 3 must be in English, 2 in a foreign language, 2 in algebra, 1 in geometry, and 1 in history.

University requirements are a minimum of 60* credit hours as follows:

*A majority of medical schools now require 90 credit hours and give preference to applicants with a bachelor's degree.*
Fifteen semester hours of electives from the following fields: bacteriology, botany, chemistry, economics, English, history, mathematics, psychology, sociology, and zoology.

**Preministerial Program**

Accredited schools for ministers and directors of religious education require a bachelor's degree for entrance. They prefer students with a well-rounded background. A major in religion itself is advised only when the background is particularly weak in Christian training. Majors in English, history, philosophy, psychology, or sociology are almost equally helpful.

A preministerial student should meet the basic requirements recommended by the American Association of Theological Schools and consult the catalogues of the graduate schools he is considering.

**Public Administration Program**

Students expecting to enter the field of public administration major in government and follow the program in public administration. They must complete the work required of a major in government (see p. 78) and all courses offered in public administration.

In order to insure an adequate background of preparation, the following courses are strongly recommended: Government 420, 421, 423, 483, 484; Economics 450, 470, 472, 492; English 210; and a course in statistical methods.

Enrollment in the public administration program is open to persons engaged in public service who are desirous of training in public administration, and who are able to satisfy University admission requirements.

**Preosteopathic Program**

The Osteopathic Bureau of Professional Education and Colleges recommends, and several osteopathic schools require, that preosteopathic students complete at least three years of college work. Such students are urged to emphasize general education rather than science specialization.

The minimum requirements for admission to an approved college of
osteopathy are 60 semester hours (two years) from a college or university accredited by a regional or national accrediting agency. The specific subject and credit requirements, and the University of Hawaii equivalents, are identical with those of the predental program.

**Presocial Work Program**

Students who plan to enter the School of Social Work may major in any of the social sciences. They must have a minimum of 30 semester hours in social science, with 6 semester hours each from economics, government, psychology, and sociology. In addition to the introductory course, advanced courses may be chosen from the following: Economics 290, 450, 490, 492; Government 282, 481, 500, 502; Psychology 150, 420, 426, 462, 480; Sociology 450, 472, 500, 504, 524, 560, 570. In addition, Social Work 300 must be taken in the junior or senior year.

A biological science should be elected to satisfy the lower division science requirement. A course in statistics is recommended.

Intention of preparing for social work should be indicated to the College Dean by the beginning of the third year.

**Prearchitectural Program**

Students intending to take a degree in architecture must transfer to another institution at the beginning of the junior year. The second year of this program may be modified to fit the requirements of any school to which the student intends to transfer.

### FIRST YEAR

<table>
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<tr>
<th>First Semester</th>
<th>Credits</th>
<th>Second Semester</th>
<th>Credits</th>
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<td>Architecture 172</td>
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<td>Art 111</td>
<td>2</td>
<td>Art 112</td>
<td>2</td>
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<td>Art 131</td>
<td>2</td>
<td>Art 132</td>
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</tr>
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<td>English 101</td>
<td>3</td>
<td>English 102</td>
<td>3</td>
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<td><strong>Total</strong></td>
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### SECOND YEAR

| Architecture 116 | 2       | Architecture 139 | 3       |
| Architecture 138 | 3       | Civil Engineering 102 | 2       |
| English 155      | 3       | Humanities elective | 3       |
| Health & Phys. Ed. 130 | 1 | Mathematics 132 | 3       |
| Mathematics 151  | 3       | MS or AS 152      | 1       |
| MS or AS 151     | 1       | Physics 102       | 4       |
| Physics 102      | 4       | Speech (as required) | 1       |
| **Total**        | **18**  | **Total**        | **16**  |
COLLEGE OF
BUSINESS ADMINISTRATION

The College of Business Administration aims to provide an understanding of the structure, functions, and objectives of American business enterprise and to train for active participation in the business and industrial activities in Hawaii. The four-year program leads to the degree of bachelor of business administration.

For the first two years, all students follow a common program of required basic courses. During the junior and senior years, provision is made for specialization in one of the following curricula: general business, banking and finance, personnel and industrial relations, accounting, merchandising, and office management.

Admission and Degree Requirements

Admission requirements are the same as those for the University (pp. 46–50).

In order to qualify for the bachelor of business administration degree from the College, a student must:

1. meet certain basic requirements of the first two years;
2. complete one of the six curricula of the College;
3. have an aggregate of at least 130 semester hours of credit;
4. have a 2.0 grade-point ratio for all registered credits. (See "Undergraduate Degree Requirements").

Curricula

FIRST YEAR

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<thead>
<tr>
<th>FIRST SEMESTER</th>
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<th>SECOND SEMESTER</th>
<th>CREDITS</th>
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<td>3</td>
<td>Geography 151 or Business 110</td>
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<td>Health &amp; Phys. Ed. 101</td>
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<td>Government 110 or Philosophy 110</td>
<td>3</td>
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<td>Health &amp; Phys. Ed. 102</td>
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<td>History 152</td>
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<td>Philosophy 110 or Government 110</td>
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83
### SECOND YEAR

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<td>Psychology 104</td>
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### GENERAL BUSINESS

### THIRD YEAR

- Bus. 300 Business Statistics
- Bus. 405 Income Tax Problems
- Bus. 480 Principles of Marketing
- Econ. 240 Money and Banking
- Econ. 290 Labor Problems
- Bus. 488 Retail Merchandising
- Bus. 490 Corporation Finance
- Econ. 470 Government and Business

### FOURTH YEAR

- Bus. 301 Bus. Reports and Correspondence
- Bus. 485 Principles of Salesmanship
- Econ. 450 Public Finance
- Bus. 442 Bus. Organ. and Mgmt.
- Bus. 460 Personnel Management
- Geog. 507 Econ. Resources of the U.S.

### BANKING AND FINANCE

### THIRD YEAR

- Bus. 300 Business Statistics
- Bus. 301 Bus. Reports and Correspondence
- Bus. 400 Intermediate Accounting
- Econ. 240 Money and Banking
- Bus. 404 Analysis of Fin. Statements
- Bus. 490 Corporation Finance
- Econ. 450 Public Finance
- Econ. 470 Government and Business

### FOURTH YEAR

- Bus. 405 Income Tax Problems
- Bus. 492 Credit Management
- Econ. 472 Public Utilities
- Bus. 502 Negotiable Instruments
- Econ. 460 International Trade and Fin.

### PERSONNEL AND INDUSTRIAL RELATIONS

### THIRD YEAR

- Bus. 300 Business Statistics
- Econ. 290 Labor Problems
- Econ. 492 Labor Legislation
- Bus. 460 Personnel Management
- Bus. 461 Indus. Safety and Health
- Bus. 462 Time and Motion Study
- Econ. 490 American Trade Unionism

*May be taken either semester.*
FOURTH YEAR

Bus. 450 Collective Bargaining  
Econ. 240 Money and Banking  
Econ. 470 Government and Business  
Econ. 496 Research in Indus. Rel.  

Bus. 465 Employment Interviewing  
Econ. 494 Arbitration of Grievances

ACCOUNTING

THIRD YEAR

Bus. 300 Business Statistics  
Bus. 400 Intermediate Accounting  
Bus. 405 Income Tax Problems  
Econ. 240 Money and Banking  

Bus. 401 Advanced Accounting  
Bus. 406 Merchandise Acctg. and Control  
Bus. 490 Corporation Finance  
Econ. 450 Public Finance

FOURTH YEAR

Bus. 403 Cost Accounting  
Bus. 407 Auditing  
Bus. 442 Bus. Organ. and Mgmt.  

Bus. 402 Budgetary Acctg. and Control  
Bus. 404 Analysis of Fin. Statements  
Bus. 408 Accounting Systems

MERCHANDISING

THIRD YEAR*

Bus. 400 Intermediate Accounting  
Bus. 480 Prin. of Marketing  
Econ. 240 Money and Banking  
Econ. 470 Government and Bus.  

Bus. 300 Business Statistics  
Bus. 481 Prin. of Advertising  
Bus. 483 Retail Merchandising

FOURTH YEAR†

Bus. 485 Prin. of Salesmanship  
Bus. 490 Corporation Finance  
Bus. 492 Credit Management  

Bus. 442 Bus. Organ. and Mgmt.

OFFICE MANAGEMENT

THIRD YEAR

Bus. 270 Tech. of Typewriting  
Bus. 301 Bus. Reports and Corres.  
Bus. 400 Intermediate Accounting  
Bus. 440 Office Organ. and Mgmt.  
Econ. 290 Labor Problems  

Bus. 271 Tech. of Typewriting  
Bus. 300 Business Statistics  
Bus. 460 Personnel Management

FOURTH YEAR

Bus. 272 Tech. of Shorthand  
Bus. 464 Elem. of Supervision  
Econ. 240 Money and Banking  

Bus. 230 Punch Card Accounting  
Bus. 274 Adv. Secretarial Training  
Bus. 276 Secretarial Practice  
Bus. 278 Bus. and Sec. Machines

*One of the following to be elected: Psychology 270, 474; Sociology 171, 232.
†Any two of the following to be elected the second semester: Business 406, 410, 482, 484.
COLLEGE OF EDUCATION

The function of the College of Education is to prepare teachers for the public schools of Hawaii and to afford those already in service an opportunity to improve themselves professionally. Standard preparation for teaching positions in the public schools of the Territory requires four years of undergraduate work and a graduate year. The four-year programs lead to the bachelor of education and the bachelor of science degrees, and the year of graduate work to the five-year diploma. Both the degree and the diploma indicate the level—preschool-primary, elementary, or secondary—for which the curriculum is designed.

Admission and Degree Requirements

In addition to University admission requirements (pp. 46–50), applicants for admission to undergraduate curricula in the College must meet certain standards of college aptitude, scholarship, health, personality, and oral English. Applicants for admission to the fifth year or any other advanced program must take the National Teacher Examinations or present scores previously earned in this examination. These examinations are included in Education 309, required of all seniors in the College. Admission to the fifth-year program leading to the five-year diploma requires a grade of C or better in practice teaching, and professional preparation equivalent to that represented by the bachelor of education degree or the bachelor of science degree in vocational education.

To be eligible for the bachelor of education degree, a student must:
(1) have an aggregate of at least 130 semester hours of credit;
(2) have a 2.0 grade-point ratio for all registered credits (see “Undergraduate Degree Requirements”);
(3) have met all University degree requirements;
(4) have met the course requirements for one of the College curricula.

Five-Year Diploma Requirements

To be eligible for the five-year diploma a student must:
(1) have the bachelor of education degree or its equivalent, including:

86
(a) directed teaching in amount and under conditions comparable to those in the laboratory schools; and
(b) course background in general and professional education, comparable to the specific requirements of one of the curricula offered by the College;
(2) have satisfactorily met the intern teaching and course requirements of the fifth-year curriculum.

Professional Certificate Requirements

The standard certificate for public school teaching in Hawaii is the professional certificate granted by the territorial Department of Public Instruction. The general requirement for this certificate is five years of college work, including practice teaching and other professional course experiences. In addition, the candidate must have met the specific course and curriculum requirements for the grade of certificate sought (e.g., preschool-primary, elementary, secondary).

Requirements for the professional certificate can be met as follows:
(1) by fulfillment of requirements for the five-year diploma; or
(2) by earning 30 semester hours of credit after receiving the bachelor of education degree or its equivalent. Six of these credits must be in education courses designed primarily for graduate students.

Curricula

The curricula in preschool-primary, elementary, and secondary education, with minor exceptions, are identical for the first two years, where the curriculum is designed to provide for a broad general background.

During the third year, students are introduced to the professional information and background necessary for public school service. Differentiation appropriate to the selected curriculum (preschool-primary, elementary, or secondary) begins at this point. Students preparing for secondary school teaching utilize the electives included in the curriculum outline in meeting requirements for teaching field concentrations. These requirements range from 24 to 36 credits, and are designed to meet Department of Public Instruction requirements for certification.

The fourth-year program consists largely of professional education. One semester is devoted to practice teaching, while the other provides necessary professional courses. One half of the students engage in practice teaching the first semester and take courses the second semester, while the other half reverses the order. The criteria for initial placement in student teaching are as follows: (1) cumulative grade-point average of at least 2.0; (2) evidence of competency in spoken and written English; (3) evidence of personality adjustment suitable for contact with children.
The program of the fifth year becomes practically identical for all curricula, with intern teaching appointments being made at the appropriate level, and, in the case of prospective secondary school teachers, in the appropriate teaching fields. An alternation of supervised teaching and course work, similar to that in the senior year, is followed.

The curriculum in dental hygiene is listed separately.

**PRESCHOOL-PRIMARY, ELEMENTARY, AND SECONDARY CURRICULA**

**FIRST YEAR**

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<tr>
<th>FIRST SEMESTER</th>
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<td>History 152</td>
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<td>MS or AS 102</td>
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**SECOND YEAR**

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<td>English 150†</td>
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<td>English 151†</td>
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**PRESCHOOL-PRIMARY CURRICULUM**

**THIRD YEAR**

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<td><strong>Total</strong></td>
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*Economics 140 or Mathematics 111 may be substituted.
†Not required in the secondary curriculum.
§English 152-153 may be substituted.
<table>
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**ELEMENTARY CURRICULUM**

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**FOURTH YEAR**

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**SECONDARY CURRICULUM**

**THIRD YEAR**

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**FOURTH YEAR**

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*As required to meet teaching field concentrations.
†For other teaching fields, appropriate methods courses will be substituted.
### PRESCHOOL-PRIMARY, ELEMENTARY, SECONDARY, AND DENTAL HYGIENE CURRICULA

#### FIFTH YEAR

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#### DENTAL HYGIENE CURRICULUM

##### FIRST YEAR

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<tr>
<td>History 151</td>
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<tr>
<td>Speech 100</td>
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</tr>
<tr>
<td>Sociology 151</td>
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##### SECOND YEAR

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<td>Health &amp; Phys. Ed. 190</td>
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##### THIRD YEAR

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<td>History 171</td>
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<td>CREDITS</td>
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<tr>
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**ELECTIVES**

Suggested: Art 103–104; Education 304, 309, 320, 333; Health and Physical Education 231, 232, 236, 239; Psychology 152, 472; Social Work 300; Speech 365.

**RECREATION CURRICULUM**

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<tr>
<th>FIRST YEAR</th>
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<tbody>
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<td>Botany 105 or 160</td>
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<td>Economics 140</td>
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<td>Sociology 151</td>
<td>3</td>
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<td>MS or AS 102</td>
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<td>MS or AS 152</td>
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<td>Music 140</td>
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<td>Psychology 152</td>
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<tr>
<td>Health &amp; Phys. Ed. 215 (for men)</td>
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<td>Health &amp; Phys. Ed. 217 (for men)</td>
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<tr>
<td>or 225 (for women)</td>
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<td>or 227 (for women)</td>
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<tr>
<td>Health &amp; Phys. Ed. 245</td>
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<td>Health &amp; Phys. Ed. 246</td>
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<td>Sociology 232</td>
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<td>Education 341</td>
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<td>Health &amp; Phys. Ed. 241</td>
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<td>Psychology 472</td>
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<td>Health &amp; Phys. Ed. 263</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>Total</strong></td>
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</table>
ELECTIVES

Eight credits of electives must be selected from Group I. Additional electives from Group II must be selected to complete curriculum requirements of 130 semester hours. Substitutions for suggested electives may be approved by the adviser.


GROUP II: Air Science 201–202, 251–252; Anthropology 401; Art 101; Chinese 101–102; Drama 140; Geography 101; Geology 150; Hawaiian 101–102; History 151–152, 521–522, 577; Japanese 101–102; Military Science 201–202, 251–252; Music 160; Philosophy 100; Psychology 270, 420; Religion 150; Science 120–121; Speech 150.

Laboratory Schools

Practical experience in teaching is given in the College laboratory schools and selected public schools. To insure a rich experience for the children enrolled and to set a high standard of achievement for the student teachers, conditions are made as ideal as possible, with small classes, selected children, and a strong supervising staff assisted by specialists in art, drama, health, library science, physical education, music, and speech.

Observation-participation experience in the third year and intern teaching in the fifth year are provided in selected public schools under the joint supervision of the College and the Department of Public Instruction.

Vocational Home Economics Education

Prospective vocational home economics teachers obtain their undergraduate preparation in the College of Agriculture. Basic professional education courses and practice teaching are required. Selective standards, including those in English, used in the College of Education apply to prospective vocational teachers. Students in these divisions register in the secondary curriculum for the fifth (graduate) year. For the work of this year, see "Five-Year Diploma Requirements."

Certification in School Counseling

The Department of Public Instruction grants certification in school guidance counseling on three levels: minor in counseling; provisional certificate in counseling; professional certificate in counseling. Requirements for a minor in counseling include the Professional Teachers Certi-
ficate and certain courses especially pertinent to the area. Higher certifi-
cation is dependent on specified experience and advanced courses. The
undergraduate student interested in this area of teaching should confer
with the counselor trainer before the beginning of the junior year.

Library Science

Regulations of the Department of Public Instruction provide that a
teacher may have "Qualified School Librarian" placed on the face of the
Professional Certificate providing he meets the requirements of 26 se-
mester hours in library science and related courses. Individuals interested
in the program should confer with one of the instructors in library sci-
ence.

Leadership Training Program

Sponsored by the College of Education and the Department of Pub-
lic Instruction, this program is designed to give training and experience
to those now in educational work in preparation for added responsibili-
ties. Each year a selection examination is given. Eligibility for the ex-
amination requires that a candidate (1) have a professional certificate,
or qualify for it by June 30 following the date of the examination; (2)
have five or more years of teaching experience; (3) be less than 50 years
of age. Approved candidates enroll for a year in Education 780 (Seminar
in Educational Administration), and Education 790 (Seminar in Edu-
cational Leadership). Those interested in administrative, guidance, su-
pervisory, and curricular areas are invited to apply.
COLLEGE OF ENGINEERING

The College of Engineering prepares students for civil, electrical, and general engineering. This preparation includes training in fundamental scientific principles, development of leadership and professional ethics, and the general education of the individual. The programs lead to the degree of bachelor of science.

Admission and Degree Requirements

The number of students admitted is limited. Selection is made from applicants best qualified on the basis of admissions tests and high school records. The programs of the College require special preparation in addition to the requirements for admission to the University (pp. 46–50). Students who lack the required special preparation, or who are unable to carry heavy schedules, or who elect advanced military or air science, usually need more than four years to meet degree requirements.

In order to be eligible for the bachelor of science degree from the College a student must:

(1) complete the course requirements of a curriculum;
(2) have an aggregate of at least 130 semester hours of credit;
(3) have a 2.0 grade-point ratio for all registered credits. (See "Undergraduate Degree Requirements.")

Curricula

Four-year programs lead to the degree of bachelor of science in civil, electrical, or general engineering. They are designed to give broad training in the fundamental principles of engineering as well as specialization in one field.

The first-year courses are common to all curricula.
# COLLEGE OF ENGINEERING

## FIRST YEAR

### FIRST SEMESTER

<table>
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<th>Course</th>
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<tbody>
<tr>
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<tr>
<td>CE 101 Drawing</td>
<td>2</td>
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<tr>
<td>Eng 101 English Composition</td>
<td>3</td>
</tr>
<tr>
<td>HPP 101 Ind. &amp; Team Sports</td>
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<tr>
<td>Math 105 College Algebra</td>
<td>3</td>
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<td>Math 104 Analytical Geometry</td>
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<tr>
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**Total: 18 Credits**

### SECOND SEMESTER

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<tbody>
<tr>
<td>Chem 104 General Chemistry</td>
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<tr>
<td>CE 102 Descriptive Geometry</td>
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<tr>
<td>Eng 102 English Composition</td>
<td>3</td>
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<tr>
<td>HPE 102 Ind. &amp; Team Sports</td>
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</tr>
<tr>
<td>Hist 171 American History</td>
<td>3</td>
</tr>
<tr>
<td>Math 131 Differential Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Military or Air Science 102</td>
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<tr>
<td>Sp 100 Fundamentals of Speech</td>
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**Total: 18 Credits**

## CIVIL ENGINEERING CURRICULUM

### SECOND YEAR

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<tr>
<td>CE 111 Surveying</td>
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<tr>
<td>Eng 155 Literature</td>
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<td>HPE 130 Personal Hygiene</td>
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<td>Math 132 Integral Calculus</td>
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<tr>
<td>Military or Air Science 151</td>
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</tr>
<tr>
<td>Phys 180 Engineering Physics</td>
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</tr>
<tr>
<td>Speech (as required)</td>
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**Total: 18 Credits**

### SUMMER SESSION

**CE 213 Route Surveying 3 credits**

### THIRD YEAR

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<tbody>
<tr>
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<tr>
<td>CE 273 Mechanics of Materials</td>
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</tr>
<tr>
<td>CE 241 Mechanics of Mat. Lab.</td>
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<tr>
<td>EE 201 Electrical Engineering</td>
<td>4</td>
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<tr>
<td>Eng 210 Report Writing</td>
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<td>Elective (Group I)</td>
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**Total: 18 Credits**

### FOURTH YEAR

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<td>CE 331 Sanitary Engineering</td>
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<td>CE 351 Soil Mechanics</td>
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<tr>
<td>CE 381 Indeterm. Structures</td>
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<tr>
<td>CE 383 Reinf. Concrete Design</td>
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**Total: 17 Credits**
### ELECTRICAL ENGINEERING CURRICULUM

#### SECOND YEAR

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<td>CE 170 Mechanics (Statics)</td>
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<td>Eng 155 Literature</td>
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<td></td>
<td>EE 102 Elements, Elect. Engin.</td>
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</tr>
<tr>
<td>Math 132 Integral Calculus</td>
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<td>Health &amp; Physical Education</td>
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<tr>
<td>Military or Air Science 151</td>
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<td>Math 133 Calculus Applications</td>
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<td>Phys 180 Engineering Physics</td>
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<td>Phys 181 Engineering Physics</td>
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<td>Speech (as required)</td>
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#### THIRD YEAR

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<td>EE 211 Circuit Analysis</td>
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<td>Phys 550 Electricity &amp; Magnetism</td>
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#### FOURTH YEAR

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<td>CE 220 Fluid Mechanics</td>
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<td>EE 249 Trans. Lines</td>
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<td>CE 302 Contracts &amp; Specif.</td>
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<td>EE 261 Applied Electronics</td>
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<td>EE 248 Electrical Design</td>
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<td>EE 266 Electrical Engin. Lab.</td>
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<td>EE 260 Auto. Con. Systems</td>
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<td>ME 231 Thermodynamics</td>
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<td>EE 262 Transients</td>
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### GENERAL ENGINEERING CURRICULUM

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<td>Eng 155 Literature</td>
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<td>Econ 140 Introduction</td>
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<td>HPE 190 Personal Hygiene</td>
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<td>Math 132 Integral Calculus</td>
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<td></td>
<td>Military or Air Science 152</td>
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</tr>
<tr>
<td>Military or Air Science 151</td>
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<td></td>
<td>Phys 181 Engineering Physics</td>
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<td>Phys 180 Engineering Physics</td>
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### THIRD YEAR

<table>
<thead>
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<tr>
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<tr>
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<td>CE 241 Mechanics of Mat. Lab.</td>
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<tr>
<td>ME 231 Thermodynamics</td>
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<tr>
<td>Phys 253 Electrical Measurements</td>
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<td>CE 280 Structural Theory</td>
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<tr>
<td>EE 201 Electrical Engineering</td>
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<tr>
<td>ME 260 Kinematics</td>
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<td>Phys 254 Electrical Measurements</td>
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### FOURTH YEAR

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<td>ME 331 Steam Power</td>
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<td>ME 333 Heat Power Lab.</td>
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<td>Phys 280 Survey, Modern Physics</td>
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<td>CE 302 Contracts &amp; Specif.</td>
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<tr>
<td>EE 301 General Circuit Anal.</td>
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</tr>
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<td>ME 334 Heat Power Lab.</td>
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<td>Phys 440 Electronics</td>
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<td>Electives (Group III)</td>
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### RECOMMENDED ELECTIVES

**GROUP I:** Air Science or Military Science 201–202; Anthropology 150; Geography 101, 151; Government 110; History 151–152; Music 160; Philosophy 100, 150; Psychology 104; Sociology 151; Speech 150.

**GROUP II:** Air Science or Military Science 251–252; Bacteriology 130, 151 (2 or 4 credits); Business 461; Economics 482; Civil Engineering 311, 321, 322, 325, 340, 382, 399; Geology 150; Mathematics 471.

**GROUP III:** Air Science or Military Science 251–252; Business 150–151, 461, 464; Civil Engineering 300, 302, 399; Mathematics 401–402, 471; Mechanical Engineering 341, 342; Physics 460, 480.
THE COLLEGE OF GENERAL STUDIES is committed to the premise that age alone is no bar to learning. By providing facilities for instruction in the evenings and in areas away from the University campus, the College enables many people other than regular day students to broaden their cultural backgrounds, gain an insight into the demands of responsible citizenship, and prepare themselves for competent participation in the business and professional affairs of the community. Besides extending the availability of University education to people who cannot attend school on the campus in the daytime, the College administers the academic affairs of those day students who are not yet candidates for a degree in another college of the University. Three regular programs are offered:

Evening Credit Courses. Concurrent with University sessions, a group of basic undergraduate requirements and such advanced courses as are needed by substantial groups of evening students, particularly in business, are offered on the campus, usually after 5 P.M. Similar programs are offered at Schofield Barracks, Pearl Harbor, Hickam Field, Kaneohe Marine Base, Tripler Army Hospital, and other off-campus locations. Some of these courses are accelerated to fit the needs of military personnel. Admission to all credit courses is governed by general University requirements (see pp. 46-50), and credit received is the full equivalent of daytime credit in the same courses, including graduate credit when applicable.

Evening Noncredit Courses. Short evening courses covering selected college-level material in art, business, English, engineering, foreign languages, mathematics, general culture, and other subjects are offered on the campus.

Sessions begin in January, April, July, and October. Any person with the equivalent of a high school education who can profit from these courses may enroll. Students who attend regularly receive certificates upon completing these courses.

Correspondence Courses. Undergraduate credit courses are offered by correspondence for people who can satisfy University admission requirements but are unable to attend regular classes. Credits earned in correspondence may be counted toward a bachelor’s degree, but not more than 25 per cent of the total required for the degree may be earned in
such courses. Correspondence courses do not give residence or graduate credit.

Other special courses and conferences offering training in specific professional or vocational areas, preparing candidates for professional licensing examinations, or supplying University personnel to assist with special local problems are sponsored by the College as needs for such activities arise in the community.

Announcements of courses and other forms of service are issued approximately a month before each program begins.

**Hilo Campus**

The University's Hilo Campus, located in Hilo on the island of Hawaii, is two hundred miles southeast of Honolulu and the Manoa Campus. An administrative division of the College of General Studies, this campus offers a regular day program covering the first two years of required courses in the colleges of Arts and Sciences, Business Administration, and Education. It is also possible to complete a year's work in certain other selected fields. The resident faculty consists of 14 full-time and 3 part-time members. A full program of extracurricular activities is provided and dormitory quarters are available nearby. The 30-acre campus itself includes two classroom buildings, a library, a cafetorium, a gymnasium, and other facilities.

A limited summer program, primarily for teachers, and selected evening courses are also offered.

For catalogs or other information, address the Director, University of Hawaii, Hilo Campus, Hilo, Hawaii, or the Dean of the College of General Studies, University of Hawaii, Honolulu 14, Hawaii.
COLLEGE OF NURSING

The College of Nursing prepares students for nursing and medical technology. This preparation includes training in fundamental principles and practices, development of leadership and professional ethics, and the general education of the individual. The programs lead to the degree of bachelor of science.

Admission and Degree Requirements

The number of students admitted is limited. Selection is made from applicants best qualified on the basic of admissions tests and high school records.

In order to be eligible for the degree a student must:

1. Complete the course requirements of a curriculum;
2. Have an aggregate of at least 130 semester hours of credit;
3. Have a 2.0 grade-point ratio for all registered credits. (See "Undergraduate Degree Requirements.")

Bachelor of Science Curriculum

This program combines academic and professional courses with practice and requires four academic years and one summer session. It is intended to develop nurses capable of giving competent preventive and bedside nursing care in any branch of service; to provide a sound foundation in both general and professional education in preparation for supervision, teaching and administration; and to contribute to the development of a self-directing, socially conscious person able to make effective adjustments in personal and professional situations.

FIRST YEAR

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>CREDITS</th>
<th>SECOND SEMESTER</th>
<th>CREDITS</th>
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<tr>
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<td>Bacteriology 145</td>
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<td>English 101</td>
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<td>Chemistry 102</td>
<td>4</td>
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<tr>
<td>Health &amp; Phys. Ed. 101</td>
<td>1</td>
<td>English 102</td>
<td>3</td>
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<tr>
<td>Home Economics 126</td>
<td>2</td>
<td>Health &amp; Phys. Ed. 102</td>
<td>1</td>
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<tr>
<td>Nursing 100</td>
<td>2</td>
<td>Nursing 101</td>
<td>2</td>
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<td>Zoology 115</td>
<td>3</td>
</tr>
<tr>
<td>Speech 100</td>
<td>1</td>
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<tr>
<td>Total</td>
<td>16</td>
<td>Total</td>
<td>16</td>
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CURRICULUM FOR REGISTERED PROFESSIONAL NURSES LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN NURSING

This program is designed to increase the ability of registered professional nurses in any field of nursing, to provide a sound foundation for preparation for supervision, teaching, and administration, and to prepare registered professional nurses for positions in public health nursing. It combines general education with professional courses so that registered professional nurses may obtain the degree of bachelor of science within a reasonable period of time.

In addition to the University entrance requirements, admission to this curriculum requires: (1) graduation from a school of nursing approved by the University; (2) registration as a nurse; (3) personal and professional fitness for advanced nursing as shown by credentials, interviews, and tests; and (4) good health as evidenced by a physical examination satisfactory to the University.

*Must be nonprofessional upper division courses.

SECOND YEAR

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>CREDITS</th>
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<tr>
<td>English 155</td>
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<td>History 171</td>
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<td>Nursing 110</td>
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<td>Home Economics 127</td>
<td>3</td>
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<tr>
<td>Nursing 115</td>
<td>3</td>
<td>Nursing 111</td>
<td>8</td>
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<tr>
<td>Psychology 102 or 104</td>
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<td>Total</td>
<td>17 or 18</td>
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SUMMER SESSION
Nursing 120–6 semester hours

THIRD YEAR

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<td>or</td>
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<td>Nursing 230</td>
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<td>Psychology 462 or</td>
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<td>Psychology 150</td>
<td>2</td>
<td>Sociology 524</td>
<td></td>
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<tr>
<td>Sociology 472</td>
<td>3</td>
<td>Elective*</td>
<td>4</td>
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<td>Elective*</td>
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FOURTH YEAR

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<tr>
<td>Nursing 340 and 383</td>
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<td>or</td>
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<td></td>
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<tr>
<td>Nursing 345 and 383</td>
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<td>10 or 14</td>
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FIRST TWO YEARS

A maximum of 60 semester hours of credit in advanced standing may be allowed for professional work in an approved hospital school. Credit will be granted only under the following conditions:
1. satisfactory instruction in clinical courses required in the four-year nursing curriculum of the University as determined by scores on qualifying examinations prepared and scored by the National League for Nursing;
2. completion of one year of successful work at the University (minimum of 2.0 grade-point ratio).

THIRD YEAR

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<th>Course</th>
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<td><strong>Total</strong></td>
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FOURTH YEAR

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<td>Nursing 391</td>
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<td>Sociology 524</td>
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<td>Social Work 300</td>
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<td>Electives*</td>
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SUMMER SESSION

Nursing 390—6 semester hours

Medical Technology Curriculum

The medical technology curriculum provides for three years of course work on the campus and a fourth year of practical experience in hospital.

*Must be nonprofessional upper division courses.
laboratories. Beginning with the summer session preceding the fourth year and continuing throughout the year, students register for Medical Technology 266, 267, and 268. Completion of this curriculum makes the student eligible for the bachelor of science degree and certification as a medical technologist.

**FIRST YEAR**

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<th>FIRST SEMESTER</th>
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<td>Speech 100</td>
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<tr>
<td>Zoology 101</td>
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<td>Zoology 151</td>
<td>4</td>
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**SECOND YEAR**

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**THIRD YEAR**

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<td>Zoology 410</td>
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<td><strong>Total</strong></td>
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**SUMMER SESSION**

Medical Technology 266-4 semester hours

**FOURTH YEAR**

<table>
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<th></th>
<th>CREDITS</th>
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<td>Medical Technology 267</td>
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<td><strong>12</strong></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
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</table>
GRADUATE SCHOOL

The Graduate School provides opportunities for further study, research, and professional training to students who have earned a bachelor's degree from an accredited institution of higher learning. The graduate program is not, however, merely an extension of work at the undergraduate level. More rigorous academic standards are applied and a greater degree of independence in the pursuit of knowledge is required. Special emphasis is placed on the cultivation of scholarly attitudes and methods of research.

The University offers graduate work leading to:

1. the doctor of philosophy degree in botany, chemistry, entomology, genetics, psychology, soil science, and zoology;
2. the master's degree in animal science, anthropology, art, bacteriology, botany, business administration, chemistry, drama and theatre, economics, education, English, entomology, Far East studies, genetics, geography, government, history, mathematics, nutrition, Pacific islands studies, philosophy, physics, psychology, social work,* sociology, soil science, speech, tropical crop science, and zoology;
3. the professional certificate for teachers in the employ of the territorial Department of Public Instruction (see p. 87).

Students may likewise earn graduate credit at the University for transfer to other institutions.

Complete information concerning admission, procedures, and requirements is given in the graduate bulletin, available, upon request, from the office of the Graduate School.

*For School of Social Work see Graduate Bulletin or School of Social Work Bulletin.
ANNOUNCEMENT OF COURSES FOR 1959-60

Courses are listed alphabetically by subject. Orientation courses carry the number 100. Lower division courses, intended for freshmen and sophomores, are numbered 100 to 199. Upper division courses are numbered 200 to 599, but only those from 400 to 599 give graduate credit. Graduate courses are numbered 600 to 799. In a few cases, qualified seniors may enroll in a graduate course with the consent of the instructor.

Heading each course description are the number and title of the course, the number of credits, and the semester in which the course is given. Credits and semesters are indicated as follows: (3) I means a 3-credit first-semester course; (3) II, a 3-credit second-semester course; (3) I, II, a 3-credit course repeated the second semester; (3-) Yr., a 3-credit year course; (Ar.), that the credits are variable and must be arranged with the instructor. The following abbreviations also are used on the title line: Hr, hour; L, lecture(s); Lb, laboratory or laboratories; L-Lb, lecture-laboratory combined. Abbreviations used in the descriptions are: Alt. yrs., alternate years; Lab, laboratory; Pre, prerequisite.

In general, courses are listed by departments, but in a few cases (library science, medical technology, etc.) the material does not logically belong in an academic department and so is listed separately. The various languages are grouped under the departments of Asian and Pacific Languages, and European Languages. The faculty list heading each department indicates the instructors giving courses in that department rather than the actual members of the department. The rank and title of each instructor are given under “Faculty and Staff.”

A schedule stating the time and place of meeting of all classes is issued prior to the beginning of each semester and the summer session.

This catalog edition introduces a new numbering system. Where course numbers have been changed the old number appears in brackets immediately after the new number.

Agriculture

Senior Professor G. D. Sherman; Professors B. Goto, Hamilton, Kamemoto, Kinch, Philipp, Scott, Wayman, Young; Associate Professors Britten, Gilbert, McGuire, Otagaki; Assistant Professors Cobb, Dedolph, S. Goto, Kanehiro, Koshi, Mollett, Nakasone, Palafax, Ross, Smith, van’t Woudt; Instructors Gooch, I. Iwanaga, Tanaka

100 ORIENTATION COURSE (1) I S. Goto

Lectures to acquaint the student with agriculture in Hawaii and help select a major.
399 [299] AGRICULTURAL THESIS (Ar.) I, II  
Advanced individual work in field, laboratory, and library. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in agriculture.

401 [230] INTRODUCTION TO AGRICULTURAL EXTENSION (3) II  
Objectives and organization. Methods, selection, and training of voluntary leaders; basic principles in program development and appraisal. (Alt. yrs.; not offered 1959-60.)

501 [251] TROPICAL CROP PRODUCTION (3) I  
Current agricultural practices in the production of sugar cane, pineapples, vegetables, fruits, and forage in the tropics. Fee $2.00.

502 [256] PRINCIPLES OF AGRONOMY (3) II (2 L, 1 Lb)  
Pasture and field crops; ecology, cultural methods, and management in Hawaii. Pre: Botany 101; Chemistry 104; Zoology 101. Lab fee $1.00.

503 [312] APPLIED AGRICULTURAL STATISTICS (3) II (2 L, 1 Lb)  
Field plot technique; analysis of laboratory and field data for evaluating factors in agricultural experiments. Pre: Zoology 431 or Genetics 451.

699 [300] DIRECTED RESEARCH (Ar.) I, II  
(1) Genetics—Britten; (2) soil science—Sherman; (3) tropical horticulture—Kamehameha; (4) poultry science—Ross; (5) animal science—Wayman. Pre: candidacy for the M.S. degree; consent of instructor.

799 DIRECTED RESEARCH  
(1) Genetics—Britten; (2) soil science—Sherman. Pre: candidacy for the Ph.D. degree; consent of instructor.

AGRICULTURAL ECONOMICS (AE)

421 [292] AGRICULTURAL PRICES AND POLICY (3) I (2 L, 1 Lb)  
Factors affecting prices of agricultural products; evaluation of governmental policy. Pre: a course in economics. (Alt. yrs.; not offered 1959-60.)

422 [241] MARKETING AGRICULTURAL PRODUCTS (3) I (2 L, 1 Lb)  
Problems, agencies, functions, costs, prices, and regulations affecting marketing; proposed improvements. Pre: an introductory course in economics or consent of instructor.

423 [293] AGRICULTURAL COOPERATIVES (3) II  
History; appraisal of methods and operations; problems of management, membership relations, and accounts. Pre: consent of instructor. (Alt. yrs.; offered 1959-60.)

427 [239] FARM MANAGEMENT (3) I (2 L, 1 Lb)  
Principles of organization and management of individual farms; choice of enterprises; business aspects; records, taxes, credit.

428 [240] ADVANCED FARM MANAGEMENT (3) II  
Techniques involved in the economic interpretation of production data. Pre: AE 427. (Alt. yrs.; not offered 1959-60.)

AGRICULTURAL ENGINEERING

433 [281] AGRICULTURAL MACHINERY (3) I (2 L, 1 Lb)  
Principles of operation, construction, adjustment, power requirements, use, selection, and maintenance of farm and plantation machinery and general service equipment.

434 [282] AGRICULTURAL POWER (3) II (2 L, 1 Lb)  
Principles of operation, adjustment, selection and maintenance of internal combustion engines, farm tractors, trucks, and other power sources.
AGRICULTURE

435 [291] IRRIGATION PRINCIPLES AND PRACTICE (3) II (2 L, 1 Lb) von't WOUDT
Irrigation in its relation to crop production; development, distribution, and measurement of water; soil moisture and its effect on plant growth.

ANIMAL SCIENCE (AS)

141 [151] ANIMAL HUSBANDRY (3) II (2 L, 1 Lb) IWANAGA
Study of the important breeds of horses, cattle, sheep, and swine, and of their care and management. Lab fee $1.00.

242 [261] BEEF PRODUCTION (2) II KOSHI
Breeding, feeding, and management of beef cattle with particular reference to conditions in Hawaii. (Alt. yrs.; not offered 1959-60.)

243 [253] DAIRY HUSBANDRY (3) II (2 L, 1 Lb) KOSHI
Breeding, feeding, and management of dairy animals in Hawaii. Lab fee $1.00. (Alt. yrs.; offered 1959-60.)

244 [260] SWINE PRODUCTION (2) I COBB
Management of swine with reference to conditions in Hawaii. Breeds available, breeding practices, and suitability of local feeds. (Alt. yrs.; not offered 1959-60.)

245 [257] FEEDS AND FEEDING (3) I (2 L, 1 Lb) OTAGAKI
Principles of feeding and their application to feeding farm and plantation animals.

246 [297] ANIMAL DISEASES AND THEIR CONTROL (3) I (2 L, 1 Lb) GOOCH
Disease problems of domestic animals; prevention, control, and eradication. Pre: AS 141; Poultry Science 172. Lab fee $3.00.

443 [279] PHYSIOLOGY OF DOMESTIC ANIMALS (3) I (2 L, 1 Lb) WAYMAN
Organ systems, their structure and functions. Emphasis upon most important livestock. Pre: AS 141; Poultry Science 172. (Alt. yrs.; offered 1959-60.)

444 [258] ANIMAL NUTRITION (4) II (2 L, 1 Lb) OTAGAKI
Nutrition of farm animals; protein, carbohydrate, fat, mineral, and vitamin metabolism; antibiotics and hormones in feed utilization. (Alt. yrs.; not offered 1959-60.)

641 [298] SEMINAR IN ANIMAL SCIENCE (1) II WAYMAN
Recent advances in animal nutrition, genetics and physiology. Pre: AS 245; sufficient training in chemistry; consent of instructor.

GENETICS

451 [254] PRINCIPLES OF GENETICS (3) I (2 L, 1 Lb) SMITH
Principles of genetics; variations; cytological basis of heredity; biometric methods. Pre: a year of biological science. Lab fee $2.00.

452 [262] ADVANCED GENETICS (3) II BRITTEN
Theories of genetics; methods and results of modification of germinal materials, gene action, and a survey of recent advances. Pre: Genetics 451.

453 [278] PRINCIPLES OF PLANT BREEDING (3) II (2 L, 1 Lb) POOLE
Selection, hybridization, and cytogenetics as applied to plant improvement. Pre: Genetics 451. (Alt. yrs.; offered 1959-60.)

654 [302] GENETICS SEMINAR (1) I, II BRITTEN
Presentation of reports on research or reviews of current literature on genetics and cytogenetics. May be repeated. Pre: Genetics 451 or consent of instructor.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
<th>Prerequisites</th>
<th>Credits</th>
<th>Fee</th>
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<tbody>
<tr>
<td>161</td>
<td>PLANT PROPAGATION (3) I (2 L, 1 Lb)</td>
<td>STAFF</td>
<td>Principles and methods of propagating plants by seeds, cuttings, layers, division, grafting, and budding. Pre: Botany 101. Lab fee $3.00.</td>
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<tr>
<td>162</td>
<td>TROPICAL POMOLOGY (3) II (2 L, 1 Lb)</td>
<td>NAKASONE</td>
<td>Principles of horticulture. Origin, description, and cultural requirements of horticultural crops. Pre: Botany 101; Chemistry 104; Zoology 101. Lab fee $1.00.</td>
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<tr>
<td>463</td>
<td>PRINCIPLES OF FLORICULTURE (3) I (2 L, 1 Lb)</td>
<td>KAMEMOTO</td>
<td>Methods of propagation and management of the important flower and foliage plants of Hawaii. Pre: Botany 101. Lab fee $3.00.</td>
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<tr>
<td>464</td>
<td>COMMERCIAL FLOWER PRODUCTION (3) II (2 L, 1 Lb)</td>
<td>KAMEMOTO</td>
<td>Nursery practices, methods of culture, timing the crop, marketing. Pre: Horticulture 163. Lab fee $2.50. (Alt. yrs.; not offered 1959-60.)</td>
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<tr>
<td>565</td>
<td>CONTROL OF PLANT DISEASES (2) II (2 L, 1 Lb)</td>
<td>S. GOTO</td>
<td>Control of plant diseases with emphasis on problems relating to Hawaiian crop plants. Pre: Botany 101, 130; Bacteriology 151; or consent of instructor. (Alt. yrs.; not offered 1959-60.)</td>
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<tr>
<td>566</td>
<td>ADVANCED TROPICAL POMOLOGY (3) I (2 L, 1 Lb)</td>
<td>HAMILTON</td>
<td>Culture and management of fruit and nut crops commercially important in Hawaii. Pre: Horticulture 161, 162. (Alt. yrs.; offered 1959-60.)</td>
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<tr>
<td>667</td>
<td>HORTICULTURE SEMINAR (1) I, II</td>
<td>STAFF</td>
<td>Presentation of reports upon research or reviews of current literature in the general field of horticulture. May be repeated. Pre: consent of instructor.</td>
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<tr>
<td>172</td>
<td>POULTRY HUSBANDRY (3) I (2 L, 1 Lb)</td>
<td>TANAKA</td>
<td>Introduction to poultry husbandry. Lab fee $2.00.</td>
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<tr>
<td>473</td>
<td>POULTRY BREEDING (3) II (2 L, 1 Lb)</td>
<td>TANAKA</td>
<td>Breeding principles in the improvement of poultry. Breeding programs under Hawaiian conditions. Pre: PS 172; Genetics 451. (Alt. yrs.; not offered 1959-60.)</td>
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<td>474</td>
<td>POULTRY NUTRITION (3) I (2 L, 1 Lb)</td>
<td>ROSS</td>
<td>Principles of poultry nutrition; formulation of poultry rations with local feeds. Pre: PS 172. (Alt. yrs.; not offered 1959-60.)</td>
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<tr>
<td>475</td>
<td>INCUBATION AND HATCHERY MANAGEMENT (3) II (2 L, 1 Lb)</td>
<td>PALAFOX</td>
<td>Principles and practices in incubation and brooding; chick embryology. Pre: PS 172. (Alt. yrs.; offered 1959-60.)</td>
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**SOIL SCIENCE (SS)**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
<th>Prerequisites</th>
<th>Credits</th>
<th>Fee</th>
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</thead>
<tbody>
<tr>
<td>281</td>
<td>SOILS (4) I (3 L, 1 Lb)</td>
<td>SHERMAN</td>
<td>Origin, development, properties, and management of tropical soils; classification of Hawaiian soils. Pre: Chemistry 104. Lab fee $3.00.</td>
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<tr>
<td>482</td>
<td>SOIL ANALYSIS (3) II</td>
<td>SHERMAN</td>
<td>Soil composition and fertility. Special attention to field trials, soil tests, and foliar diagnosis in determining fertilizer requirements. Pre: SS 281.</td>
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<td>483</td>
<td>SOIL DIAGNOSIS LABORATORY (2) II</td>
<td>KANEHIRO</td>
<td>Tests to determine effects of deficiencies and toxicities of plant nutrients; fertilizer requirements. Pre: SS 281, 482. Lab fee $2.00. (Alt. yrs.; offered 1959-60.)</td>
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</tbody>
</table>
484 [269] SOIL PHYSICS (3) II  (2 L, 1 Lb)
Physical properties of soils; structure and moisture relationships. Pre: Physics 161 or 181; SS 281. (Alt. yrs.; not offered 1959-60.)

685 [301] ADVANCED SOIL TECHNOLOGY (3) I
Soil-weathering and soil-forming processes on the basis of modern pedologic principles. Pre: graduate standing; consent of instructor.

686 [303] SOIL CLASSIFICATION (3) II
Comprehensive study of the genesis of soils and the various systems of classification, with special reference to tropical soils. Lectures and field work.

687 [308] SOIL SCIENCE SEMINAR (1) II
Review of recent findings in soil science research in the fields of soil chemistry, physics, classification, fertility, bacteriology, and technology. Pre: graduate standing.

VEGETABLE CROPS (VC)

191 [164] VEGETABLE CROP PRODUCTION (3) I  (2 L, 1 Lb)  GILBERT
Culture of the more important vegetable crops of Hawaii. Pre: Botany 101; Chemistry 104; credit or concurrent registration in Zoology 161. Lab fee $3.00.

492 ADVANCED VEGETABLE PRODUCTION (4) I
Production methods from choosing seed to marketing. Emphasizes top ten Hawaiian vegetables. Pre: Botany 283; Soil Science 281, VC 191. (Alt. yrs.; offered 1959-60.)

493 VEGETABLE CROPS BREEDING (4) II
Development of new varieties of vegetables; practical vegetable improvement in Hawaii. Pre: VC 191; Genetics 654. (Alt. yrs.; offered 1959-60.)

492-493 [209] ADVANCED VEGETABLE CROPS (4-4) Yr.  McGUIRE
First semester, environmental factors; second semester, improvement of major crops. Pre: Botany 470; Soil Science 281; VC 191. (Alt. yrs.; offered 1959-60.)

494 [210] SYSTEMATIC VEGETABLE CROPS (4) II  (2 L, 1 Lb)  McGUIRE
Varieties, climatic adaptation, market quality, disease, insect resistance. Pre: Botany 101; VC 191. Lab fee $5.00. (Alt. yrs.; not offered 1959-60.)

Air Science

Professor Greene; Associate Professor Rogan; Assistant Professors Hawkins, McClain, Morgan, Perkins, Troxel; Instructors Eidson, Esch, Hendren, Poling, Wren

Leadership Laboratory required one day per week for four years. Uniform and awards fee, 75 cents each semester (not refundable). Government 260 and Geography 460 are required of all advanced students.

101-102 FIRST-YEAR AIR SCIENCE (1-1) Yr.  Perkins, Troxel
General survey of air power designed to give an understanding of the elements of air power and basic aeronautical science.

151-152 SECOND-YEAR AIR SCIENCE (1-1) Yr.  McClain, Morgan

201-202 THIRD-YEAR AIR SCIENCE (3-3) Yr.  Hawkins, Rogan
Commander and staff; problem solving; communicating and instructing; military justice; leadership and management. Pre: Air Science 152.
230 [257] SUMMER CAMP (2) STAFF

251–252 FOURTH-YEAR AIR SCIENCE (2-1) Yr. ROGAN

Anthropology

Professors Elbert, Emory, Luomala, Mason; Assistant Professor Jay

Anthropology 150 or the equivalent, or consent of the instructor, is prerequisite to all other courses in the department.

150 [274] INTRODUCTION TO ANTHROPOLOGY (3) I, II STAFF
Man’s biological evolution; archeological history from the Stone to the Iron Age, patterned lifeways of tribal and folk societies throughout the world.

200 [274] NATURE OF CULTURE (3) I LUOMALA
Process of sharing and transmitting learned behavior patterns by which man in groups has met the problems of survival, social interaction, and world view.

399 [299] DIRECTED READING (Ar.) I, II STAFF
Limited to senior majors with 2.7 grade-point ratio in anthropology.

400 [252] PEOPLES OF THE SOUTH SEAS (3) II EMORY
Survey of racial origins, languages, and cultural institutions of aboriginal Australia, Melanesia, Micronesia, and Polynesia. (Not offered 1959-60.)

401 [250] CUSTOMS OF OLD HAWAII (3) I EMORY
Family, economic life, art, religion, mythology, language, and history as known from archeology and oral traditions. (Not offered 1959-60.)

402 [251] POLYNESIANS (3) I LUOMALA
Early settlement, local adaptation, and racial and cultural history of Tahitians, Maoris, Hawaiians, Tongans, Samoans, and other Polynesians.

403 [253] MICRONESIANS (3) I MASON
Native custom in the Marshall, Caroline, Mariana, and Gilbert islands. Cultural innovation during Spanish, German, Japanese, American, and British administrations. (Not offered 1959-60.)

410 [255] ETHNOLOGY OF SOVIET ASIA (3) I JAY
Nomadism as a way of life in the central Asian steppe and tundra. Historical relations of nomadic and agricultural peoples of Russia and eastern Asia.

415 [254] SOUTH ASIAN PEOPLES (3) II JAY
Growth and character of high civilizations in India, Burma, Siam, and Indo-China and their relations with folk and tribal societies in the area. (Not offered 1959-60.)

416 [259] SOCIAL ANTHROPOLOGY OF INDONESIA (3) I JAY
Peoples of the Philippines and the Malayan archipelago. Growth and change in the folk and urban cultures of the area.

420 [256] INDIANS OF THE AMERICAS (3) I LUOMALA
Asiatic origin and New World settlement. Cultural diversity in pre-Columbian Mexico and North America. United States Indians as a minority group. (Not offered 1959-60.)
ANTHROPOLOGY

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>430 [257]</td>
<td>AFRICA SOUTH OF THE SAHARA (3) II</td>
<td>JAY</td>
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<tr>
<td></td>
<td>Ethnic unity and diversity among the societies of Negro Africa. Problems arising from historical contacts with Europeans and Moslems.</td>
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<td>440 [258]</td>
<td>FOLK CULTURES OF EUROPE (3) II</td>
<td>LUOMALA</td>
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<td>Selected studies to show regional differences in the customs of home and community. Importance of provincialism to national and international affairs. (Not offered 1959-60.)</td>
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<td>450 [273]</td>
<td>FOSSIL MEN AND LIVING RACES (3) II</td>
<td>JAY</td>
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<td></td>
<td>Man’s physical nature. Human evolution and racial variation. Comparative study of individual constitutions and its practical application. (Not offered 1959-60.)</td>
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<tr>
<td>460 [279]</td>
<td>ORIGINS OF OLD WORLD CIVILIZATIONS (3) II</td>
<td>JAY</td>
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<tr>
<td></td>
<td>Rise of civilization in Europe, Asia, and Africa, from the Stone Age to the historic period, as known from archeology.</td>
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<td>465 [280]</td>
<td>AMERICAN INDIAN PREHISTORY (3) II</td>
<td>MASON</td>
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<td></td>
<td>Regional cultures and interrelationships as revealed by archeological studies. Emphasis on higher civilizations of Mexico, Central and South America. (Not offered 1959-60.)</td>
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<tr>
<td>500 [282]</td>
<td>CULTURAL DYNAMICS (3) II</td>
<td>MASON</td>
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<tr>
<td></td>
<td>Changing cultural institutions as influenced by ecological setting, interpersonal group relations, and contacts between alien peoples. Pre: Anthropology 200.</td>
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<tr>
<td>510 [265]</td>
<td>SOCIAL ORGANIZATION (3) I</td>
<td>JAY</td>
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<tr>
<td></td>
<td>Comparison of organized group activity in societies of varying complexity. Kinship and association as bases for mutual action and social control.</td>
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<td>515 [281]</td>
<td>ANTHROPOLOGY AND EDUCATION (3) I</td>
<td>MASON</td>
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<tr>
<td></td>
<td>Education as a means of transmitting culture. Socialization in nonliterate societies; universal aspects of the process. Cross-cultural education.</td>
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<tr>
<td>520 [272]</td>
<td>HABITAT, ECONOMY, AND CULTURE (3) I</td>
<td>MASON</td>
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<tr>
<td></td>
<td>Comparison of selected nonindustrial societies to illustrate the interactive influences of physical environment, economic skills, and cultural tradition. (Not offered 1959-60.)</td>
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<tr>
<td>530 [267]</td>
<td>MAGIC AND RELIGION (3) II</td>
<td>LUOMALA</td>
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<tr>
<td></td>
<td>Origins and development of magical practices and religious systems among tribal and folk societies. Ritual and symbolism as aids to social integration. (Not offered 1959–60.)</td>
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<tr>
<td>540 [269]</td>
<td>FOLKLORE (3) I</td>
<td>LUOMALA</td>
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<td>Unwritten literature in preliterate and literate societies. Myth and legend in socialization and as sanctions for custom. (Not offered 1959-60.)</td>
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<tr>
<td>541 [268]</td>
<td>PRIMITIVE ART (3) I</td>
<td>MASON</td>
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<tr>
<td>550 [275]</td>
<td>INTRODUCTION TO LINGUISTICS (3) I</td>
<td>ELBERT</td>
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<td>Linguistics as a science; comparative study of languages. Historical analyses, especially of English. Training in phonetics with native speakers. (Not offered 1959-60.)</td>
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<tr>
<td>551 [276]</td>
<td>LINGUISTIC ANALYSIS (3) II</td>
<td>ELBERT</td>
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<td>Language as an aspect of culture. Use of linguistics by social scientists. Descriptive linguistics, with emphasis on phonemics. Pre: Anthropology 550. (Not offered 1959-60.)</td>
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<tr>
<td>552 [277]</td>
<td>STRUCTURAL LINGUISTICS (3) I</td>
<td>ELBERT</td>
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553 [278] MALAYO-POLYNESIAN LANGUAGES (3) II
ELBERT
Comparative study of Malayo-Polynesian languages. Technique in transcribing one language. Phonological and morphological analysis. Pre: Anthropology 552.

600 [314] ANTHROPOLOGICAL CLASSICS (3) I
LUOMALA
Selected works of outstanding personalities in anthropology and their significance for the development of social science theory. (Not offered 1959-60.)

610 [311] APPLIED ANTHROPOLOGY (3) II
MASON
Case study approach to problems relating to cultural change in public health, social work, education, government, agriculture, and industry. (Not offered 1959-60.)

620 [312] FIELD ARCHEOLOGY IN OCEANIA (3) I
EMORY
Survey and excavation of prehistoric sites. Recording and analysis of data. Supervised excavation on Oahu and laboratory work at Bishop Museum.

630 [312] ETHNOGRAPHIC METHOD (3) II
MASON
Field work planning and first contacts with informants. Interviewing and observation; recording information. Preparation of data for publication.

699 [300] DIRECTED READING OR RESEARCH (Ar.) I, II
STAFF
Pre: graduate standing; consent of instructor.

Art

Senior Professor CHARLO; Professors Cox, Ecke, HORAN, Norris, Robinson, Turnhill; Associate Professor KINGRE; Assistants Professors Carpenter, R. IWANAGA, KIMURA; Instructors McVay, Siasack; Lecturer C. Young

Art 101 is prerequisite to all courses in the history of art.
Certain courses may be repeated for credit with the consent of the instructor.
The University reserves the right to retain any student work which may be needed for exhibition or for the Art Department files.

ARCHITECTURE

116 [153] ARCHITECTURAL GRAPHICS (2) I
IWANAGA
Simple projections as applied to plans, sections, and elevations; shades and shadows; perspective drawing; rendering techniques. Studio fee $1.00.

138-139 [103] ARCHITECTURAL DESIGN (3-3) Yr.
IWANAGA
Design of simple buildings in relation to environment; discussion, field trips, sketch problems. Pre: Arch. 172; Art 132. Studio fee $1.00.

171-172 [101] HISTORY OF ARCHITECTURE (3-3) Yr.
YOUNG
General survey of all periods; reference reading, illustrated lectures, and discussions.

ART

101 [140] INTRODUCTION TO THE VISUAL ARTS (3) I, II
TURNBULL
Nature of visual art and its expression in various forms. Lectures, demonstrations, and museum visits. Course fee $1.00.

103-104 [142-143] ART FUNDAMENTALS (2-2) Yr.
STAFF
Background material and studio practice to stimulate understanding of the arts. Lectures, museum visits, and studio work. Studio fee $1.00 each semester.
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<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Instructor(s)</th>
<th>Description</th>
<th>Studio Fee</th>
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<tr>
<td>111-112</td>
<td>DRAWING (2-2) Yr.</td>
<td></td>
<td>KIMURA, NORRIS, STASACK, STAFF</td>
<td>Basic principles of drawing in a variety of media. This course or its equivalent is prerequisite to all advanced courses. Studio fee $1.00 each semester.</td>
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<tr>
<td>131-132</td>
<td>VISUAL DESIGN (2-2)</td>
<td></td>
<td>COX, KIMURA, KINGREY, NORRIS, STAFF</td>
<td>Elements and principles of visual organization. This course or its equivalent is prerequisite to all advanced courses. Studio fee $1.00 each semester.</td>
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<tr>
<td>136</td>
<td>WEAVING #A (2) I, II</td>
<td></td>
<td>McVAY</td>
<td>Creative processes of weaving. Warping and threading of simple hand looms and multiple harness looms. Studio fee $7.50.</td>
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<tr>
<td>137</td>
<td>WEAVING #B (2) II</td>
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<td>ROBINSON</td>
<td>Experimentation with techniques and study of pattern drafting. Designing for specific problems. Pre: Art 136. Studio fee $7.50.</td>
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<td>141</td>
<td>CERAMICS (2) I, II</td>
<td></td>
<td>HORAN, McVAY</td>
<td>Methods and principles of creating pottery by hand. Studio fee $10.00.</td>
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<tr>
<td>142</td>
<td>CERAMICS (2) I, II</td>
<td></td>
<td>HORAN, McVAY</td>
<td>Emphasis on wheel throwing and experimentation with form and decorative techniques. Pre: Art 141. Studio fee $10.00.</td>
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<tr>
<td>151</td>
<td>SCULPTURE A (2) I, II</td>
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<td>ROBINSON</td>
<td>Introductory study of sculptural form. Basic techniques and problems in clay. Lectures and studio work. Studio fee $10.00.</td>
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<tr>
<td>152</td>
<td>SCULPTURE B (2) II</td>
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<td>ROBINSON</td>
<td>Continuation of 151. Emphasis on individual solutions to problems of sculptural form. Lectures and studio work. Pre: Art 151. Studio fee $10.00.</td>
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<tr>
<td>235</td>
<td>TEXTILE DESIGN (2) I, II</td>
<td></td>
<td>ROBINSON</td>
<td>Execution of individual problems in design on fabrics, utilizing such media as the block print, stencil; and silk screen. Pre: Art 132. Studio fee $7.50.</td>
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<td>263-264</td>
<td>LETTER FORMS (2-2)</td>
<td></td>
<td>KINGREY</td>
<td>The letter as a visual element in design organization. Pre: Art 111-112, 131-132, or consent of instructor. Studio fee $1.00.</td>
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<tr>
<td>271-272</td>
<td>HISTORY OF WESTERN ART (3-3)</td>
<td></td>
<td>CHARLOT</td>
<td>Development of architecture, sculpture, and painting. Visits to Academy of Arts. Course fee $2.00 each semester.</td>
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<tr>
<td>321-322</td>
<td>PAINTING (2-2) Yr.</td>
<td></td>
<td>STASACK</td>
<td>Problems in the creation of visual forms. Pre: Art 112, 132, or consent of instructor. Studio fee $6.00 second semester.</td>
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<tr>
<td>335</td>
<td>TEXTILE DESIGN (2) I, II</td>
<td></td>
<td>ROBINSON</td>
<td>Originating ideas for fabrics. Printing and execution of individual or collaborative projects. Pre: Art 235. Studio fee $10.00.</td>
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<td>390</td>
<td>SENIOR SEMINAR (2) II</td>
<td></td>
<td>STAFF</td>
<td>Reports with group discussion to integrate studio practice, art history, and theory. Pre: consent of department chairman. (Alt. yrs.; offered 1959-60.)</td>
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<tr>
<td>399</td>
<td>DIRECTED WORK (Ar.) I, II</td>
<td></td>
<td>STAFF</td>
<td>Criticism and guidance in work of the advanced student's own choosing in the following fields: (1) drawing, (2) painting, (3) design, (4) ceramics, (5) sculpture, (6) visual design, (7) Western art, (8) Far Eastern. Studio fee $10.00 for (2), (3), (4), and (5). Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in art.</td>
<td></td>
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</tbody>
</table>
411 [269] FIGURE DRAWING A (2) I, II  
KIMURA, TURNBULL  
Basic principles of drawing the human figure, including study of anatomy and articulation as a foundation of knowledge and skill. Pre: Art 112. Studio fee $4.00.

412 [270] FIGURE DRAWING B (2) II  
KIMURA  

415 [266] PRINTMAKING (2) II  
STASACK  

416 [272] ILLUSTRATION (2) I  
KINGREY  
Problems of illustration with emphasis on individual experimentation. Various media for reproduction. Pre: Art 112, 132; consent of instructor. Studio fee $2.00.

421-422 [280-281] ADVANCED PAINTING (2-2) Yr.  
NORRIS, TURNBULL  
Continuation of 321-322. Studio fee $6.00 second semester.

423 [264] WATERCOLOR PAINTING A (2) I  
COX  

424 [265] WATERCOLOR PAINTING B (2) I  
COX  

425 [267] MATERIALS AND TECHNIQUES OF PAINTING (2) II  
NORRIS  
Painting methods emphasizing physical properties and characteristics of materials. Pre: consent of department chairman. Studio fee $10.00. (Alt. yrs.; not offered 1959-60.)

431 [273] THREE DIMENSIONAL DESIGN (2) II  
COX  
Development of concepts of visual organization in three dimensions. Pre: Art 112, 132. Studio fee $5.00.

436 [276] ADVANCED WEAVING (2) I, II  
ROBINSON  
Emphasis on individually designed problems. Pre: Art 136 or consent of instructor. Studio fee $10.00.

442 [261] ADVANCED CERAMICS (2) I, II  
HORAN  
Functional and production limitations. Continuation of exploratory work in field of student's choice. Pre: Art 142 or consent of instructor. Studio fee $10.00.

443 [260] CERAMIC GLAZE CALCULATIONS (2) I, II  
HORAN  
Molecular formulae for glaze experimentation; tests of raw materials. Care and operation of equipment. Pre: Art 141 or consent of instructor. Studio fee $10.00.

463-464 [256-257] ADVANCED VISUAL DESIGN (2-2) Yr.  
KINGREY  
Investigation into the processes of visualization, its expression and control. Pre: Art 112, 132.

473-474 [252] HISTORY OF MODERN ART (3-3) Yr.  
CARPENTER  
Development of Western art since 1800. Pre: Art 272 or consent of instructor. Course fee $2.00.

481 [220] FAR EASTERN AND INDIAN ART (3) I  
ECKE  
Development of architecture, sculpture, and painting in India, China, and Japan. Lectures with slides. Visits to Academy of Arts. Course fee $2.00.

482 [231] APPLIED ARTS OF CHINA (3) I  
ECKE  
Ceramics, glyptic arts, metalwork, lacquer, textiles, architecture, furniture, interior design, landscaping. Visits to Academy of Arts. Course fee $2.00.
483 [225] EARLY CHINESE ART (3) II
Developments in pottery, jade, bronze, and other arts to the end of Han. Lectures with slides. Visits to Academy of Arts. Course fee $2.00.

565 [174] VISUAL COMMUNICATION (2) II
Experimental projects of visual design which communicate. Creation of new images and symbols. Pre: Art 464; consent of instructor. Studio fee $1.00.

581 [233] MUSEUM STUDIES IN FAR EASTERN ART (3) II
Detailed critical consideration of the Far Eastern collections of the Academy of Arts. Pre: consent of instructor. Course fee $2.00.

582 [229] CHINESE PAINTING (3) II
Development of Chinese painting. Lectures with slides. Visits to Academy of Arts. Pre: Art 481 or consent of instructor. Course fee $2.00.

585 [235] ARTS OF JAPAN (3) I
Development of art and architecture in Japan. Visits to Academy of Arts. Pre: Art 481 or consent of instructor. Course fee $2.00.

621 [380] PAINTING (2) I, II NORRIS, TURNBULL
Individual problems in advanced painting. Pre: consent of department chairman and instructor.

636 [376] DESIGN AND RESEARCH IN WEAVING (2) I, II ROBINSON
Utilization of native Hawaiian materials for weaving, or design for specific contemporary uses. Pre: consent of department chairman and instructor. Studio fee $10.00.

642 [360] CERAMIC DESIGN AND RESEARCH (2) I, II HORAN
Individual problems in advanced ceramics. Pre: consent of department chairman and instructor. Studio fee $10.00.

661 [350] VISUAL DESIGN (2) I, II KINGREY
Individual problems in advanced visual design. Pre: consent of department chairman and instructor.

690 [390] GENERAL SEMINAR (2) I, II ROBINSON, TURNBULL
Historical and critical thought in the visual arts related to work of the student. Taken concurrently with Art 661, 642, 636, or 621. Pre: consent of chairman and instructor.

698 [395] SEMINAR IN ORIENTAL ART (1) I, II ECKE
Survey of available literature and presentation of papers in fields of the student's choice. Pre: consent of department chairman and instructor.

699 [300] DIRECTED WORK (Ar.) I, II STAFF
(1) Drawing and graphics. (2) painting, (3) design, (4) ceramics, (6) visual design, (8) Far Eastern. Studio fee by arrangement.

Asian and Pacific Languages

Professors ELBERT, UYEHARA; Assistant Professors FUJIKA, IKEDA, MCELRATH, WINTERS; Lecturer T. LEE

CHINESE

101-102 [100] ELEMENTARY CHINESE (3-3) Yr. WINTERS
Study of Chinese vocabularies with emphasis on conversation; grammar and sentence construction; reading of simple stories; laboratory drill. Lab fee $1.00.
151–152 [101] INTERMEDIATE CHINESE (3–3) Yr.  
Selected reading of Pai Hua essays; composition of stories.

399 [299] DIRECTED READING (Ar.) I, II  
Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in Chinese.

401–402 [250–251] CHINESE LITERATURE (2–2) Yr.  
Selections from classical and modern Chinese literature, in English translation. Pre: English 151 or consent of instructor.

403 CHINESE POETRY (2) I  
Selections from classical and modern Chinese literature, in English translation. Pre: English 151 or consent of instructor.

404 CHINESE FICTION AND DRAMA (2) II  
Representative examples, in English translation. Special attention to the T'ang short stories and novels of the Ming and Ch'ang periods.

491–492 [293–294] METHODS IN CHINESE STUDIES (3–3) Yr.  
Main fields of research, special methods evolved, and principal sources of bibliographical information. Pre: junior standing.

699 [300] DIRECTED READING OR RESEARCH (Ar.) I, II  
Pre: graduate standing.

HAWAIIAN

101–102 [100] ELEMENTARY HAWAIIAN (3–3) Yr.  
Elements of the language; emphasis on conversation with some attention to Hawaiian songs; laboratory drill. Lab fee $1.00.

151–152 [101] INTERMEDIATE HAWAIIAN (3–3) Yr.  
Reading of Hawaiian texts.

Translation of legends, chants, songs, historical documents. Pre: Hawaiian 152 or consent of instructor.

413–414 [210] HAWAIIAN TRADITIONAL POETRY (3–3) Yr.  
Translation of traditional poetry, including the Pele and Hiiaka cycle, and the Kumu Lipo creation chants. Pre: Hawaiian 152 or consent of instructor. (Not offered 1959–60.)

JAPANESE

101–102 ELEMENTARY JAPANESE—CONVERSATIONAL (3–3) Yr.  
Conversation and grammar with laboratory drill; study of hiragana. Lab fee $1.00. May be taken concurrently with 103–104.

103–104 ELEMENTARY JAPANESE—READING (3–3) Yr.  
Intensive training in reading; katakana, hiragana, and mastery of about 500 kanji. May be taken concurrently with 101–102.

151–152 [101] INTERMEDIATE JAPANESE (3–3) Yr.  
Translation and conversation; study of more Chinese characters.
399 [299] DIRECTED READING (Ar.) I, II  
Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in Japanese.

401–402 [260] JAPANESE LITERATURE (2–2) Yr.  
Historical analysis of Japanese thought through literature. Classics and contemporary works in English translation. Pre: English 151 or consent of instructor.


413–414 LITERARY JAPANESE (3–3) Yr.  
Reading of classical and modern literary selections as a basis for linguistic and stylistic analysis. Pre: Japanese 152 or the equivalent.

415 JAPANESE FOLK LITERATURE (3) I  

511 CONTEMPORARY JAPANESE LITERATURE (3) I  
Literary movements and representative works since 1868. Pre: Japanese 412 or the equivalent.

512 JAPANESE POETRY (3) II  
Historical survey of poetical types including tanka, haiku, senryu, shintaishi, and folksongs. Pre: Japanese 412 or the equivalent.

592 JAPANESE BIBLIOGRAPHY (3) II  
Basic reference and bibliographic materials, their use and method in Japanese studies. Pre: Japanese 412 or the equivalent.

699 [300] DIRECTED READING OR RESEARCH (Ar.) I, II  
Pre: graduate standing.

KOREAN

101–102 [100] ELEMENTARY KOREAN (3–3) Yr.  
Conversation, elements of grammar, reading; laboratory drill. Lab fee $1.00. (Not offered 1959–60.)

151–152 [101] INTERMEDIATE KOREAN (3–3) Yr.  
Conversation, reading, and writing. Some Chinese characters.

Bacteriology

Professors BUSHNELL, CHU; Assistant Professor CONTOIS

130 MICROBES AND MAN (2) I, II  
Microorganisms as they affect people and their possessions. Credit cannot be obtained in both this course and 151.

145 MICROBIOLOGY FOR NURSES (3) II  
General and pathogenic microbiology. Open to students who do not intend to take other courses in the department. Lab fee $6.00.

151 GENERAL BACTERIOLOGY (4) I, II  
Fundamentals of bacteriology. Pre: Botany 101 or Zoology 101; Chemistry 104. Recommended: Chemistry 141 or 144. Lab fee $6.00. Lectures only (2 credits) require instructor's approval.
251 AGRICULTURAL MICROBIOLOGY (3) I  (2 L, 1 3-Hr Lab)  BUSHNELL
Soil, sewage, water, milk and dairy microbiology. Pre: Bacteriology 151; Chemistry 141 or 144. Lab fee $3.00. (Alternates with 252; offered 1959-60.)

252 INDUSTRIAL MICROBIOLOGY (3) I  (2 L, 1 3-Hr Lab)  BUSHNELL
Foods, fermentations, and biologicals. Pre: Bacteriology 151; Chemistry 141 or 144. Lab fee $3.00. (Alternates with 251; not offered 1959-60.)

260 MEDICAL BACTERIOLOGY (3) I  CHU
Microorganisms as agents of disease in man. Pre: Bacteriology 151; Chemistry 141 or 143-144.

262 LABORATORY IN MEDICAL BACTERIOLOGY (2) I  (3 Lab)  CHU
Laboratory diagnosis of bacterial diseases. Pre: credit or concurrent registration in Bacteriology 260. Lab fee $6.00.

399 [299] MICROBIOLOGICAL PROBLEMS (Ar.) I, II  STAFF
Directed reading and laboratory. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point in bacteriology. Lab fee $6.00.

415 [285] DESCRIPTIVE BACTERIOLOGY (3) II  CONTOIS
Isolation and identification of selected groups of bacteria. Pre: Bacteriology 251 (or 252), 260, 262. Lab fee $6.00.

464 [264] IMMUNOLOGY (3) II  (2 L, 2 Lab)  BUSHNELL
Concepts of immunity and techniques of diagnostic serology. Pre: Bacteriology 151 and 260, or consent of instructor. Lab fee $6.00.

620 [350] ADVANCED GENERAL MICROBIOLOGY (3) I  (2 L, 2 Lab)  STAFF
Study of the autotrophs, higher bacteria, and ultramicroscopic forms. Pre: Bacteriology 151, or consent of instructor. Lab fee $6.00.

630 [320] MICROBIAL PHYSIOLOGY (3) II  (2 L, 2 Lab)  CONTOIS
Mechanisms of microbial metabolism and techniques of study. Pre: Bacteriology 151; Chemistry 271 or 572; or consent of instructor. Lab fee $6.00.

690 [312] SEMINAR (1) I, II  BUSHNELL
Significant topics in microbiology. Required of graduate students. May be repeated.

699 [300] DIRECTED RESEARCH (Ar.) I, II  STAFF
Selected problems in microbiology. Pre: graduate standing; consent of instructor. Lab fee $6.00.

Botany

Professors Cooil, Doty; Associate Professors Austin, Bernatowicz, Shoji; Assistant Professors S. Goto, J. B. Smith; Instructor Lane

101 [100] GENERAL BOTANY (4) I, II  (2 L, 2 Lab)  STAFF
Basic principles of plant biology. This course and Zoology 101 comprise an introduction to biology. Lab fee $5.00.

103 EVOLUTION (2) I  SMITH
Concepts of evolution and sequence of development from algae to flowering plants.

105 ECONOMIC PLANTS OF HAWAII (2) I  LANE
Cultivated and wild plants used in ancient and modern times by the Hawaiians and other Polynesians for food, drink, medicine, etc.

110 PLANTS AND MAN (2) I  LANE
Uses of plants and their influence upon man.
160  FLOWER AND TREE IDENTIFICATION (2) II   LANE
A nontechnical course in identification of cultivated plants and weeds of Hawaii.

161  PLANT GEOGRAPHY (2) I   LANE
Plant distribution throughout the world; types of vegetation; special attention to
origin, development, and economic importance.

161  PLANTS AND THE SEA (3) I   (2 L, 1 Lb) BERNATOWICZ
Marine algae, their ecology, and taxonomy of local forms. Lab fee $3.00.

399  BOTANICAL PROBLEMS (Ar.) I, II   STAFF
May be repeated. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade­
point ratio in botany.

410  PLANT ANATOMY (3) I   (2 L, 1 Lb)
Structure of vascular plants; origin and differentiation of tissues; relation of struc­
ture to function. Pre: Botany 101. Lab fee $5.00.

411  STRUCTURE OF ECONOMIC PLANTS (3) II   (1 L, 2 Lb)
Anatomy of important plants of Hawaiian agriculture. Pre: Botany 410 or consent
of instructor. Lab fee $5.00. (Alt. yrs.; not offered 1959-60.)

412  PLANT MICROTECHNIQUE (3) II   (1 L, 2 Lb)
Preparation of plant materials for histological and cytological study. Pre: Botany
410 or consent of instructor. Lab fee $8.00.

418  CYTOLOGY (3) I   (2 L, 1 Lb) SMITH
Structure and function of cell components. Pre: Botany 101 or Zoology 101. Lab
fee $4.00.

425  CRYPTOGRAMIC BOTANY (3) II   (2 L, 1 Lb) BERNATOWICZ
Morphology, classification, and biology of algae, fungi, bryophytes, and pterid­
ophytes. Pre: Botany 101. Lab fee $4.00.

430  MYCOLOGY (3) II   (2 L, 1 Lb) DOTY
Structure; food relations; classification of fungi. Identification of common fungi.
Pre: Botany 101 or consent of instructor. Lab fee $4.00.

436  MEDICAL MYCOLOGY (2) II   (2 L, 2 Lb) DOTY
Diagnostic morphology and cultural characteristics of fungi pathogenic to man.
Pre: Bacteriology 262 or Botany 430. Lab fee $3.00.

440  PRINCIPLES OF PLANT PATHOLOGY (3) I   (2 L, 1 Lb) GOTO
Disease in plants; emphasis upon infection and development in relation to environ­
ment; epidemiology; methods of appraisal; control. Pre: Botany 101.

460  SYSTEMATIC BOTANY OF FLOWERING PLANTS (3) I   (1 L, 2 Lb) LANE
Classification of Hawaiian flowering plants. Synopsis of monocotyledons. Prepara­

461  TAXONOMY AND EXPLORATION (3) II   (1 L, 2 Lb) LANE
Taxonomy of Hawaiian vascular plants. Botanical exploration of Hawaii. Literature
of Pacific flora. Pre: Botany 460. Lab fee $3.00.

470  ELEMENTARY PLANT PHYSIOLOGY (4) II   (2 L, 2 Lb) SHOJI
Introduction to plant physiology. Pre: Botany 101; Chemistry 104. Botany 410
and Chemistry 144 recommended. Lab fee $6.00.

553  PLANT ECOLOGY (4) I   (2 L, 2 Lb) DOTY
Plants in relation to environment and geography; plant sociology. Pre: Botany
201. Lab fee $3.00. (Alt. yrs.; not offered 1959-60.)
562 [254] ADVANCED TAXONOMY (1) I
LANE
Synopsis of lower dicotyledons from Piperaceae to Rosaceae; plant distribution; identification of collections. Pre: Botany 460.

570-571 [273] ADVANCED PHYSIOLOGY (3-3) Yr.
COOIL
Biochemical and physical aspects of plant physiology. Pre: Botany 470; Chemistry 144; Physics 161. (Alt. yrs.; not offered 1959-60.)

572 [274] TECHNIQUES IN PHYSIOLOGY (2) I (2 Lb)
COOIL
Nutrient absorption and composition; osmotic relations. Pre: Botany 470; Chemistry 144; Physics 161; consent of instructor. Lab fee $5.00. (Alt. yrs.; not offered 1959-60.)

573 [276] TECHNIQUES IN PHYSIOLOGY-BIOCHEMISTRY (2) II (2 Lb)
COOIL
Determining substances of physiological significance in plant materials. Pre: Botany 572; consent of instructor. Lab fee $5.00. (Alt. yrs.; not offered 1959-60.)

586 [291] BIOLOGICAL PRODUCTIVITY OF THE SEA (3) I
AUSTIN, DOTY
Qualities and functions of the sea; relationships to marine organisms. Pre: senior standing in botany or zoology or consent of instructor. (Alt. yrs.; offered 1959-60.)

610 [310] BOTANICAL SEMINAR (1) I, II
STAFF
Study and discussion of significant topics and problems in botany.

612 [312] ADVANCED BOTANICAL PROBLEMS (Ar.) I, II
STAFF
Investigation of any botanical problem; reading and laboratory work. May be repeated. Pre: consent of instructor. Lab fee $2.00.

615 [377] MORPHOLOGY SEMINAR (2) II
STAFF
Recent developments in morphology, anatomy, and cytology. Pre: consent of instructor. (Alt. yrs.; offered 1959-60.)

618 [380] CYTOGENETICS (3) II (2 L, 1 Lb)
SMITH
Correlation of genetic and cytological phenomena. Pre: Botany 418 and genetics, or consent of instructor. Lab fee $4.00.

630 [330] MOLDS, YEASTS, AND ACTINOMYCETES (3) II (1 L, 2 Lb)
DOTY
Systematics of selected forms. Pre: graduate standing or 12 hours in botany or bacteriology. Lab fee $5.00. (Alt. yrs.; offered 1959-60.)

640 [379] PHYTOPATHOLOGICAL LITERATURE (1) I
GOTO
Literature on recent advances in plant diseases and their control. Pre: advanced or graduate standing; consent of instructor.

665 [378] NOMENCLATURE SEMINAR (2) II
LANE
Laws of botanical nomenclature; application; determination of correct scientific plant names. Pre: Botany 361. (Alt. yrs.; offered 1959-60.)

675 [351] PHYSIOLOGY SEMINAR (2) II
COOIL
Significant topics and problems in physiology. May be repeated. Pre: consent of instructor.

680 [331] EXPERIMENTAL MARINE BOTANY (3) II (1 L, 2 Lb)
DOTY
Current research areas; laboratory methods; physiological aspects of phycology. Pre: graduate standing or 12 hours in botany. Lab fee $5.00. (Alt. yrs.; not offered 1959-60.)

681-682 [332] PHYCOLOGY (3-3) Yr.
DOTY
Four-semester cycle; morphological and systematic aspects of (a) Chlorophyta, (b) Phaeophyta and Myxophyta, (c) Rhodophyta, and (d) small groups. Pre: consent of instructor.
699 [300] DIRECTED RESEARCH (Ar.) I, II  
Pre: candidacy for the M.S. degree; consent of instructor. Lab fee $2.00.

799 DIRECTED RESEARCH (Ar.) I, II  
Pre: candidacy for the Ph.D. degree; consent of instructor. Lab fee $2.00.

Business

Senior Professor ROBERTS; Professor LEONG; Associate Professors ADLER, FERGUSON, IGE, PENDLETON; Assistant Professors BELL, CONGDON, KIRKPATRICK, PIERSON, SLATE, STELLMACHER; Instructors CULKIN, B. LEE, S. LEE; Lecturer LUKE

110 [100] BUSINESS CALCULATIONS (3) I, II  
Application of basic arithmetic to business problems, including compound interest and annuities. Business administration and business education majors only.

150–151 ELEMENTARY ACCOUNTING (3–3) Yr.  
B. LEE, S. LEE  
Fundamental principles of accounting for proprietorships, partnerships, and corporations. Pre: sophomore standing or consent of instructor.

160–161 BUSINESS LAW (3–3) Yr.  
LAU  

230 [243] PUNCH CARD ACCOUNTING (2) II  
FERGUSON  
Business operations: inventory control, billing, accounts receivable, payroll, etc. Practical work using IBM punch card accounting machines. Fee $2.00.

270–271 [170] TECHNIQUE OF TYPEWRITING (2–2) Yr.  
CULKIN  
Intensive advanced typewriting training with emphasis upon speed and accuracy. Pre: business sophomore or business education major; consent of instructor. Fee $2.00.

272 [177] TECHNIQUE OF SHORTHAND (2) I  
CULKIN  
Development of a composite transcription skill for vocational competence. Pre: business sophomore or business education major; consent of instructor. Fee $2.00.

274 [272] ADVANCED SECRETARIAL TRAINING (2) II  
CULKIN  
Business ethics and office procedures; practice in performing secretarial tasks. Pre: business senior or consent of instructor.

276 [277] SECRETARIAL PRACTICE (3) II  
CULKIN  
Supervised, paid business office experience of 100 to 150 hours with coordinated class instruction. Pre: consent of instructor.

278 [241] BUSINESS AND SECRETARIAL MACHINES (2) II  
CULKIN  
Characteristics, function, and operation of machines performing clerical, arithmetic, accounting, and statistical work. Fee $2.00.

300 [282] BUSINESS STATISTICS (3) I, II  
STAFF  
Principles of statistical analysis, including averages, dispersion, sampling, index numbers, time series, correlation, and inference. Pre: Economics 151.

301 [220] BUSINESS REPORTS AND CORRESPONDENCE (3) I  
CULKIN  
Principles and practice in business report writing, stressing analytical thinking applied to current business and economic problems.

399 [299] DIRECTED READING (Ar.) I, II  
STAFF
400 [250] INTERMEDIATE ACCOUNTING (3) I
ADLER, B. LEE
Financial statements: form, content, and related problems such as depreciation, depletion, valuation of assets, and the structure of corporations. Pre: Business 151.

401 [251] ADVANCED ACCOUNTING (3) II
ADLER, B. LEE, S. LEE
More specialized phases of accounting; special reports, consolidated statements, installment sales, consignments, fiduciaries, branches. Pre: Business 400.

402 [249] BUDGETARY ACCOUNTING AND CONTROL (3) II
STELLMACHER
Budgeting for control of business. Problems in purchase, sales, expense, and cash budgets. Pre: credit or concurrent registration in Business 401 and 403.

403 [254] COST ACCOUNTING (3) I
S. LEE
Accounting principles applied in recording, classifying, distributing, and analyzing product and service costs; emphasis on unit costs and cost control. Pre: Business 401.

404 [255] ANALYSIS OF FINANCIAL STATEMENTS (3) II
ADLER
Analysis of the balance sheet and profit and loss statement from the standpoint of owners, managers, credit grantors, and the public. Pre: Business 151.

405 [256] INCOME TAX PROBLEMS (3) I
ADLER, B. LEE

406 [257] MERCHANDISE ACCOUNTING AND CONTROL (3) II
STAFF
Principles and methods of accounting in wholesale and retail establishments; emphasis on inventory control and allocation of costs on a functional basis. Pre: Business 151.

407 [258] AUDITING (3) I
CHO
Principles of conduct of a business audit. Practical aspects of auditing emphasized by means of problems. Pre: Business 401 or consent of instructor.

408 [284] ACCOUNTING SYSTEMS (3) II
STAFF
Design, installation, and operation of appropriate systems of accounts, records, and reports for different types of business. Pre: Business 401.

409 [296] GOVERNMENTAL ACCOUNTING (3) I
STAFF
Accounting in governmental units: account classification, budgetary procedure, fund accounting, revenues, operating costs. Pre: Business 151. (Alt. yrs.; not offered 1959–60.)

410 [240] PRINCIPLES OF INSURANCE (3) I
PIERSON
What should be known about buying personal insurance; protection of home and business against property losses; cost of third-party liability.

411 [212] PROPERTY INSURANCE (3) I
PIERSON
Policies which protect against loss by fire and allied perils, crime, transportation risks; specialized policies which combine these coverages.

412 [217] MISCELLANEOUS CASUALTY INSURANCE (3) II
PIERSON
Emphasis on third-party liability coverages: general liability, automobile insurance (including material damage), and workmen's compensation; miscellaneous casualty lines.

413 [219] LIFE INSURANCE (3) II
PIERSON
Policy forms (whole life, term, endowment, etc.); calculating premiums, reserves, and nonforfeiture values; regulation of policy provisions and underwriting; related coverages.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>420 [232]</td>
<td>REAL ESTATE FUNDAMENTALS (3) I</td>
<td>BELL</td>
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<tr>
<td></td>
<td>Principles of real estate for the customer and home owner, and as a business. Real estate law, brokerage, management, appraising, finance.</td>
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<td>421 [233]</td>
<td>PROPERTY VALUATION (3) II</td>
<td>BELL</td>
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<td>Economic concepts, market forces, and institutional forces influencing land utilization in urban development.</td>
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<td>422 [235]</td>
<td>URBAN LAND UTILIZATION (3) II</td>
<td>BELL</td>
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<td>Effect of population, manufacturing, labor, transportation, and commerce on land utilization.</td>
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<td>440 [259]</td>
<td>OFFICE ORGANIZATION AND MANAGEMENT (3) I</td>
<td>CULKIN</td>
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<td>Duties and functions involved in successful management of an office, with emphasis upon planning, organizing, actuating, controlling.</td>
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<td>441 [260]</td>
<td>PRINCIPLES OF SMALL BUSINESS (3) I</td>
<td>STELLMACHER</td>
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<td>442 [287]</td>
<td>BUSINESS ORGANIZATION AND MANAGEMENT (3) I, II</td>
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<td>Case approach to organization, marketing, finance, and other management problems. Pre: senior standing and Business 490 or consent of instructor.</td>
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<tr>
<td>450 [261]</td>
<td>COLLECTIVE BARGAINING (3) I</td>
<td>ROBERTS</td>
</tr>
<tr>
<td></td>
<td>Principles and concepts of collective bargaining; analysis of sample contracts including union status, seniority, contract enforcement, and other provisions. Pre: Economics 290.</td>
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<tr>
<td>460 [263]</td>
<td>PERSONNEL MANAGEMENT (3) II</td>
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<tr>
<td></td>
<td>Organization of the personnel function. Recruitment, selection, placement, training, pay and incentives, discipline, discharge, rating, communications; effect on the work force.</td>
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<tr>
<td>461 [230]</td>
<td>INDUSTRIAL SAFETY AND HEALTH (3) I, II</td>
<td>ALDEN</td>
</tr>
<tr>
<td></td>
<td>Principles of accident prevention; reporting, analyzing, and prescribing remedies for accident experience; staff organization and safety programs.</td>
<td></td>
</tr>
<tr>
<td>462 [245]</td>
<td>TIME AND MOTION STUDY (3) II</td>
<td>AVERY</td>
</tr>
<tr>
<td></td>
<td>Application of scientific management to industrial operations, including job breakdown, time studies, work simplification, and standards of performance.</td>
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<tr>
<td>463 [248]</td>
<td>WAGE AND SALARY ADMINISTRATION (3) II</td>
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<tr>
<td></td>
<td>Compensation systems. Wage, salary, and incentive plans. Wage surveys, job analysis and evaluation.</td>
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</tr>
<tr>
<td>464 [210]</td>
<td>ELEMENTS OF SUPERVISION (3) I</td>
<td>FERGUSON</td>
</tr>
<tr>
<td></td>
<td>Supervisor's relationships to management and workers. Placement, training, control of costs, safety, rewarding, punishing, grievance adjustment, union relations.</td>
<td></td>
</tr>
<tr>
<td>465 [268]</td>
<td>EMPLOYMENT INTERVIEWING (3) II</td>
<td>FERGUSON</td>
</tr>
<tr>
<td></td>
<td>Interviewing, promotion, transfer, discharge. Practice in conducting board, stress, group oral, and other types of interviews. Pre: senior standing or consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>480 [270]</td>
<td>PRINCIPLES OF MARKETING (3) I</td>
<td>STELLMACHER</td>
</tr>
<tr>
<td></td>
<td>Study of consumption; general survey of the marketing structure, emphasizing marketing functions and channels, market analysis, and policies. Pre: Economics 150-151.</td>
<td></td>
</tr>
<tr>
<td>481 [273]</td>
<td>PRINCIPLES OF ADVERTISING (3) II</td>
<td>CONGDON</td>
</tr>
<tr>
<td></td>
<td>Advertising as a factor in distribution; copy; layout; production; media.</td>
<td></td>
</tr>
</tbody>
</table>
482 [225] ADVERTISING COPY WRITING (3) II
Principles underlying the preparation of effective copy. Practice in creative copy writing. (Alt. yrs.; not offered 1959-60.)

483 [276] RETAIL MERCHANDISING (3) II
Congdon
Retailing history, store organization and management, sales promotion, customer's buying habits. Pre: Economics 150-151 or consent of instructor.

484 [279] METHODS OF MARKET RESEARCH (3) I
Congdon
Specification of problem; data collection; tabulation, interpretation, and presentation of findings. Application in a field study. Pre: Business 300, 480, or consent of instructor.

485 [280] PRINCIPLES OF SALESMANSHIP (3) I
StellmacHER
Principles of personal selling, types of selling jobs, qualifications of salesmen. Emphasis upon practical problems and techniques of selling.

490 [265] CORPORATION FINANCE (3) I, II
OrR
Analysis of instruments and methods of financing a corporation. Pre: Business 151, Economics 240, or consent of instructor.

491 [266] INVESTMENTS AND INVESTMENT BANKING (3) II
Luke
Economic theory and tests of investment; investment credit analysis; mathematics and tools of investment; investment institutions, functions. Pre: Business 151; Economics 240.

492 [278] CREDIT MANAGEMENT (3) I
Nature of business credit; instruments and sources of credit; collection methods and control. Pre: Business 151 or consent of instructor.

500 [283] APPLIED BUSINESS STATISTICS AND FORECASTING (3) II
Ige
Case studies in sampling, correlation, time series. Pre: Business 300 or consent of instructor. Fee $2.00. (Alt. yrs.: offered 1959-60.)

501 [267] BUSINESS CYCLES AND BUSINESS FORECASTING (3) II
Luke
Analysis of the fluctuations of economic activity with emphasis on business cycle theories and forecasting. Pre: Economics 240.

502 [286] NEGOTIABLE INSTRUMENTS (3) II
History, nature, and kinds of negotiable instruments and the provisions of the uniform Negotiable Instrument Law. Pre: Business 161 or consent of instructor.

601 [324] MANAGEMENT ACCOUNTING (3) II
Adler
Case studies in the use of accounting reports for planning, policy making, and control of business. Pre: Business 401, 403, 404. (Alt. yrs.; offered 1959-60.)

641 [307] SEMINAR IN PROBLEMS OF BUSINESS (3) II
Leong
Pre: consent of department chairman. (Alt. yrs.; not offered 1959-60.)

642 [320] ADVANCED MANAGEMENT (3) II

681 [321] MANAGERIAL PROBLEMS OF MARKETING (3) I
StellmacHER
Analysis of executive decisions and policies related to securing the optimum competitive position in the marketing structure.

691 [322] PROBLEMS IN BUSINESS FINANCE (3) I
Luke
Advanced study of selected contemporary problems in business finance. Pre: Business 400, 490. (Alt. yrs.; offered 1959-60.)
CHEMISTRY

699 [300] DIRECTED READING OR RESEARCH (2-2)  STAFF
Pre: consent of department chairman.

711 [323] APPLIED PROBLEMS OF BUSINESS AND GOVERNMENT (3) 1  IGE
Problems of business management that arise from specific legislation such as the
anti-trust, labor, and revenue laws. (Alt. yrs.; not offered 1959-60.)

Chemistry

Professors E. BILGER, NAUGHTON; Associate Professors FRODYMA, IHRIG, SCHEUER, WAUGH,
ZEITLIN; Assistant Professors LARSON, YASUNOBU

101-102 [104] SURVEY OF CHEMISTRY (4-4) Yr. (3 L, 1 Lb)  BILGER
Survey of general and organic. Lab fee $10.00 each semester. Pre: high school
algebra and plane geometry.

103-104 [103] GENERAL CHEMISTRY (4-4) Yr. (3 L, 1 Lb)  ZEITLIN, STAFF
Fundamental laws, principles, and methods. Lab fee $10.00 each semester. Pre:
high school algebra and plane geometry.

105-106 [105] GENERAL CHEMISTRY AND QUALITATIVE ANALYSIS (5-5) Yr. (3 L, 2 Lb)  WAUGH
Fundamental principles, theories, and simple analytical techniques. Lab fee $12.00
each semester. Pre: four of any combination of high school mathematics and physical
science.

131 [150] QUALITATIVE ANALYSIS (4) I (2 L, 2 Lb)  FRODYMA
Systematic semimicro analysis of inorganic ions; theory of procedures. Lab fee $11.00.
Pre: Chemistry 104.

132 [230] ELEMENTARY QUANTITATIVE ANALYSIS (4) II (2 L, 2 Lb)  NAUGHTON
Beginning gravimetric and volumetric analysis. Lab fee $11.00. Pre: Chemistry 106
or 131; Mathematics 103.

141 [159] ELEMENTS OF ORGANIC CHEMISTRY (4) I (3 L, 1 Lb)  ZEITLIN
Intensive course. Chemistry of carbon compounds. Lab fee $12.00. Pre: Chemistry
104 or 106.

143-144 [149] ORGANIC CHEMISTRY (4-4) Yr. (3 L, 1 4-Hr Lb)  SCHEUER
Carbon compounds: classification, structure, reactions. Laboratory techniques. Lab
fee $12.00 each semester. Pre: Chemistry 104 or 106.

231 INTERMEDIATE QUANTITATIVE ANALYSIS (4) I (2 L, 2 Lb)  NAUGHTON
Analysis of inorganic mixtures; introductory instrumental analysis. Lab fee $11.00.
Pre: Chemistry 132.

271 [232] ELEMENTS OF BIOCHEMISTRY (4) I (3 L, 1 Lb)  BILGER
Chemistry of biological systems; pertinent laboratory techniques. Lab fee $9.00.
Pre: Chemistry 102, 141, or 144.

399 [299] DIRECTED READING OR RESEARCH (Ar.) I, II  STAFF
Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in chem­
istry. Fee $5.00 per credit.

421-422 [238] ADVANCED INORGANIC CHEMISTRY (3-3) Yr.  WAUGH
Structure and properties of inorganic compounds. Credit for either or both semes­
ters. Pre: Chemistry 132, 144.

423-424 [239] INORGANIC CHEMISTRY LABORATORY (1-1) Yr.  WAUGH
Techniques and reactions of inorganic chemistry. Lab fee $10.00. Pre: Chemistry
132, 144; credit or concurrent registration in 421-422.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Units</th>
<th>Instructor</th>
<th>Description</th>
<th>Pre-Requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>441</td>
<td>[248] PREPARATIVE ORGANIC CHEMISTRY (3) I</td>
<td>1</td>
<td>L, 2</td>
<td>Larson</td>
<td>Techniques and reagents; their application in organic synthesis. Lab fee $15.00. Pre: Chemistry 132, 144.</td>
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<tr>
<td>442</td>
<td>[252] ORGANIC CHEMISTRY THEORY (3) II</td>
<td>2</td>
<td></td>
<td>Scheuer</td>
<td>Structural theory; reaction mechanisms. Pre: Chemistry 132, 144.</td>
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<tr>
<td>444</td>
<td>[250] QUALITATIVE ORGANIC ANALYSIS (4) II</td>
<td>2</td>
<td></td>
<td>Larson</td>
<td>Identification and characterization of pure organic compounds and mixtures. Lab fee $10.00. Pre: Chemistry 132, 144.</td>
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<tr>
<td>446</td>
<td>[251] QUANTITATIVE ORGANIC ANALYSIS (3) II</td>
<td>1</td>
<td></td>
<td>Larson</td>
<td>Elemental and functional group analysis by semimicro and micro methods. Lab fee $10.00. Pre: Chemistry 132, 144. (Not offered 1959-60.)</td>
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<tr>
<td>483-484</td>
<td>[246] INTRODUCTION TO CHEMICAL ENGINEERING (3-3)</td>
<td>2</td>
<td></td>
<td></td>
<td>Unit operations in chemical engineering practice. Lab fee $8.00. Pre: Chemistry 101; Mathematics 132. (Not offered 1959-60.)</td>
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<tr>
<td>491-492</td>
<td>[360] SEMINAR (1-1) Yr.</td>
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<td></td>
<td>IHRIG</td>
<td>Current work in chemistry. Open to seniors and graduates.</td>
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<tr>
<td>551-552</td>
<td>[255] PHYSICAL CHEMISTRY (4-4) Yr.</td>
<td>3</td>
<td></td>
<td>IHRIG</td>
<td>Principles and theories; physicochemical procedures. Lab fee $8.00 each semester. Pre: Chemistry 132, 144; Mathematics 132; Physics 181.</td>
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<tr>
<td>571-572</td>
<td>[272] BIOCHEMISTRY (4-4) Yr.</td>
<td>3</td>
<td></td>
<td>YASUNOBU</td>
<td>Chemistry of biological compounds and systems. Lab fee $2.00. Pre: Chemistry 132, 144.</td>
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<tr>
<td>580</td>
<td>[260] OCEANOGRAPHIC CHEMISTRY (3) II</td>
<td>2</td>
<td></td>
<td>Zeitlin</td>
<td>Chemistry of oceans. Analytical oceanographic methods. Lab fee $8.00. Pre: Chemistry 132 or consent of instructor. (Not offered 1959-60.)</td>
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<tr>
<td>581</td>
<td>[290] RECENT ADVANCES IN CHEMISTRY (2) I</td>
<td></td>
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<td></td>
<td>Advances in different fields. May be repeated with change in content. Open to seniors or graduates, or with consent of instructor.</td>
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<tr>
<td>582</td>
<td>[295] CHEMICAL LITERATURE (2) II</td>
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<td></td>
<td>Use of literature. Library problems. One lecture, one library period. Open to seniors and graduates.</td>
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<tr>
<td>621-622</td>
<td>[328] ATOMIC STRUCTURE (3-3) Yr.</td>
<td></td>
<td></td>
<td>WAUGH</td>
<td>Theories of atomic and nuclear structure. Pre: credit or concurrent registration in Chemistry 551-552; Mathematics 132; Physics 180-181. Either or both semesters. (Not offered 1959-60.)</td>
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</tr>
<tr>
<td>631-632</td>
<td>[352] INSTRUMENTAL METHODS OF ANALYSIS (2-2) Yr.</td>
<td></td>
<td></td>
<td>NAUGHTON</td>
<td>Four-semester cycle; optical, electrometric, radiometric, general physical. Lab fee $5.00. May be taken four semesters. Pre: credit or concurrent registration in Chemistry 551-552.</td>
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<tr>
<td>651-652</td>
<td>[350] SPECIAL TOPICS IN PHYSICAL CHEMISTRY (3-3)</td>
<td></td>
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<td></td>
<td>Four-semester cycle; kinetics, thermodynamics, molecular structure, colloids. May be taken four semesters. Pre: Chemistry 552.</td>
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<tr>
<td>671</td>
<td>ADVANCED BIOCHEMISTRY LABORATORY (2) I</td>
<td></td>
<td></td>
<td></td>
<td>Advanced instruction in the research instruments and methods of biochemistry. Pre: Chemistry 572.</td>
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</tbody>
</table>
674  **ENZYMES (3) II**
Kinetics, mode of action and properties of enzymes. Specific enzymes and enzyme systems. Pre: Chemistry 572.

675  **PLANT BIOCHEMISTRY (3) I**
Chemistry of important plant constituents and processes; photosynthesis, respiration, carbohydrate, nitrogen, fat metabolism. Pre: Chemistry 572. (Not offered 1959-60.)

676  **PROTEINS (3) II**
The occurrence, nature, and properties of proteins and nucleic acids. Pre: Chemistry 572. (Not offered 1959-60.)

677  **MEDICAL BIOCHEMISTRY (3) I**
Special topics in biochemistry of diseases. Blood chemistry and other related topics. Pre: Chemistry 572. (Not offered 1959-60.)

678  **PHYSICAL BIOCHEMISTRY (3) II**
Application of modern physical concepts to problems of molecules of biological interest. Pre: Chemistry 552, 572. (Not offered 1959-60.)

679  **CARBOHYDRATES AND LIPIDS (3) I**
The chemistry and biochemistry of carbohydrates and lipids. Pre: Chemistry 572. (Not offered 1959-60.)

680  **VITAMINS AND HORMONES (3) II**
Survey of the biochemistry of vitamins and hormones. Pre: Chemistry 572. (Not offered 1959-60.)

699  **DENTAL HYGIENE (Ar.) I, II**
**STAFF**
Pre: candidacy for the M.S. degree; consent of department chairman. Fee $5.00 per credit.

741–742  **SPECIAL TOPICS IN ORGANIC CHEMISTRY (3-3) Yr.**
**SCHUER, LARSON**
Four-semester cycle; stereochemistry, mechanisms, cyclic compounds, natural products. May be taken four semesters. Pre: Chemistry 442.

745–746  **NATURAL PRODUCTS COLLOQUIUM (1-1) Yr.**
**SCHUER**
Discussion of recent and current research in the field. May be repeated. Pre: consent of instructor.

Dental Hygiene

**Instructor KOGA; Lecturers AKAMINE, BELLANDO, DAWE, GLYNN, MAJOSKA, SAMPLE, B. SHERMAN**

Some Dental Hygiene courses may be elected by students in other colleges and curricula with consent of instructor.

100  **INTRODUCTION TO DENTAL HYGIENE (1) I**
**KOGA**
Orientation to the profession; relationship of dental hygienist to dental hygiene and dentistry; ethics and economics involved.

110  **DENTAL OFFICE PROCEDURES (1) II**
**KOGA**
To give a knowledge of procedures necessary to an efficient dental practice.

120  **SURVEY OF DENTAL MATERIALS (1) II**
Preparation and use of materials; laboratory techniques; observation and participation in dental offices, laboratories, clinics.
200 TOOTH MORPHOLOGY (1) I
Designed to provide the student with an opportunity to carve models of anterior and posterior teeth, showing general form, cusps, planes, and angles.

201 DENTAL HYGIENE EDUCATION (2) II
Basic principles of teaching and learning dental health education as related to school and public health dentistry; methods and materials in teaching.

210 DENTAL ASSISTING (1) II
To acquaint the student with duties in an office; instruction and clinical assisting in the specialized fields of dentistry.

251 ORAL ANATOMY (3) I
Anatomy of the teeth; bones of the skull; muscles of mastication, tongue, face, pharynx; glands of the oral cavity; 5th, 7th cranial nerves; blood vessels of the head and neck.

252 ORAL HYGIENE (1) I
Prophylactic treatment of the mouth, with special attention to measures which can prevent or arrest dental caries and adjacent-tissue degeneration.

254-255 CLINICAL PRACTICE (5-5) Yr.
Instruction and practice on manikin in operative technical procedures of instrumentation and polishing: clinical training in dental prophylaxis.

258-259 DENTAL HISTOLOGY AND EMBRYOLOGY (1-1) Yr.
Fundamentals of dental embryology and histology. Formation, structure, and function of enamel, dentin, cementum, pulp, periodontium, alveolar process, and gingiva.

260-261 ORAL PATHOLOGY (1-1) Yr.
Study of general disease processes with emphasis upon oral diseases of interest to the dental hygienist.

262 MATERIA MEDICA (2) I
Derivation and effects of drugs most commonly used in dentistry. Relative values of germicides, antiseptics, disinfectants; analysis of formulae of dentifrices, mouth washes.

264 ORTHODONTICS (1) II
Basic principles, normal occlusion, malocclusion, case analysis for classification, etiology of malocclusion, growth of the cranium, facial bones, and tooth eruption.

265 DENTAL ROENTGENOGRAPHY (2) II
A lecture-laboratory course in the study, technique, and use of the roentgen ray in its application to dentistry.

266 PUBLIC HEALTH (1) II
Theory and practice of preventive dentistry with emphasis upon community dental health; role of the dental hygienist in dental public health.

370 [270] DENTAL HEALTH EDUCATION IN THE SCHOOLS (2) II
School organization and personnel as related to a school dental health program; methods, materials, and practice teaching in dental health.

372 [272] DENTAL HYGIENE AND DENTAL PROPHYLAXIS IN SCHOOLS (2) II
Clinical prophylactic practice on children and adults with emphasis on criteria and coding system used in the schools.

690 [590] DENTAL HYGIENE INTERNSHIP (14) I, II
 Supervised intern practice—the teaching of dental health in conjunction with clinical and follow-up work in selected public schools; dental hygiene seminar.
Drama and Theatre

Professors Ernst, Trapido; Associate Professor Bentley; Assistant Professor Langhans

140 INTRODUCTION TO DRAMA AND THEATRE (3) I, II  Ernst, Trapido
Representative plays from Miller's *Death of a Salesman* to Aeschylus' *Agamemnon*, studied as illustrative of changing forms in the theatre and dramatic literature.

150–151 DRAMATIC PRODUCTION (3-3) Yr.  Trapido
Introduction to basic theories and practices of the theatre. Coordinated with activities of the Theatre Group. Students may enter the second semester.

200 THEATRE PRACTICE (2) I, II  Trapido, Staff
Supervised work in one or more areas: lighting, costuming, make-up, business, publicity, and, with consent of instructor, acting. May be repeated once.

399 [299] DIRECTED WORK (Ar.) I, II  Staff
Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in drama and theatre.

410 [210] CREATIVE DRAMATICS (3) I, II  Bentley
Intensive study of dramatic activities for children and young people. Designed for teachers, group workers, recreation majors, and others dealing with children.

415 [216] PLAYWRITING (3) II  Langhans
Study of one-act plays; practice in writing in the dramatic form; possibility of production by the Theatre Group. Pre: consent of instructor.

420–421 [220–221] ACTING (3–3) Yr.  Bentley
Individual exercises and group rehearsals. Coordinated with the productions of the Theatre Group. Students may enter the second semester.

430–431 [230] DIRECTION (3–3) Yr.  Ernst, Langhans
Readings, reports, discussion of the theory and practice of stage direction.

440 [240] STAGECRAFT AND THEATRE PLANNING (3) I  Trapido
Principles and practices of modern stagecraft: theories of stage production; planning of small theatres; stage arrangement. (Alt. yrs.; offered 1959-60.)

445 [245] STAGE LIGHTING (3) I  Trapido
Modern and historic methods of lighting the stage; elementary electrical theory as used on stage; stage lighting equipment. (Alt. yrs.; not offered 1959-60.)

550 [250] HISTORY OF THE THEATRE (3) I  Langhans
Survey of the development of the theatre from the earliest times to the present. (Alt. yrs.; not offered 1959-60.)

560 [260] MODERN THEORIES OF STAGE PRESENTATION (3) I  Ernst
Recent and current theories of production critically analyzed and reviewed. (Alt. yrs.; offered 1959-60.)

570 [265] AESTHETICS OF THE THEATRE (3) I  Ernst
Consideration of the aesthetic bases of the theatre. Readings, discussion, reports. (Alt. yrs.; not offered 1959-60.)

600 ADVANCED THEATRE PRACTICE (2) I, II  Staff
Supervised work in one or more areas: lighting, costuming, make-up, business, publicity, and, with the consent of instructor, acting. May be repeated once.

620 [320] SEMINAR IN DRAMA AND THEATRE (3) II  Ernst
Significant topics and problems in the field of drama. Pre: consent of instructor. May be repeated. (Not offered 1959-60.)
650 [350] SEMINAR IN ORIENTAL THEATRE (3) II

Special topics in the drama and theatre of the Orient. Reading, discussion, reports. Pre: consent of instructor.

699 [300] DIRECTED WORK (Ar.) I, II

Reading or research in theatre theory or history; reading and practice in particular areas of dramatic production. Pre: consent of instructor.

Economics

Senior Professor ROBERTS; Professors IGE, KAMINS, LEONG; Associate Professors FERGUSON, MARK, PENDLETON; Assistant Professors BELL, CONGDON, KIRKPATRICK, SLATE, STELLMACHER

Economics 150-151 is prerequisite to all courses in economics except 140, 290, 300, 492, 494, 496.

140 INTRODUCTION TO ECONOMICS (3) I, II

Principles underlying consumption, production, exchange, and distribution. Not open to majors in economics or business. Credit cannot be obtained in this and 150-151.

150-151 PRINCIPLES OF ECONOMICS (3-3) Yr.

Principles of production, income, prices and distribution in the American economy.

240 [256] MONEY AND BANKING (3) I, II

KIRKPATRICK

United States monetary system, principles of commercial and central banking; the Federal Reserve, the Treasury, and credit control; monetary theory.

290 [281] LABOR PROBLEMS (3) I

PENDLETON

Study of wages, hours, working conditions, employment, and other labor problems. Structure and operation of trade unions.

300 [287] PUBLIC RELATIONS (3) II

Basic principles of public relations as a function of modern business. Mediums and tools defined, and use studied.

399 [299] DIRECTED READING (Ar.) I, II

Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in economics.

400 [264] INTERMEDIATE ECONOMIC THEORY (3) I

SLATE

Price determination and resource allocation under competition, monopoly, oligopoly, and monopolistic competition. Theories of demand, cost, partial and general equilibrium.

402 [266] NATIONAL INCOME AND EMPLOYMENT (3) II

SLATE

National income concepts; determination of income, employment, and price levels; effects of fiscal, monetary, and other policies. Pre: Economics 240 or consent of instructor.

404 [296] HISTORY OF ECONOMIC THOUGHT (3) I

KIRKPATRICK

Survey of economic thought from Adam Smith to the present with emphasis on the theory of value and distribution. Pre: senior standing.

410 [253] ECONOMIC PROBLEMS OF ASIA AND THE FAR EAST (3) II

MARK

China, India, Japan, and Southeast Asia. Resource development, capital formation, industrialization; planning in underdeveloped areas. (Alt. yrs.; offered 1959-60.)

430 [254] COMPARATIVE ECONOMIC SYSTEMS (3) I

LEONG

Comparative study of existing economic systems; analysis of assumptions underlying their operations; appraisal of their effectiveness in solving economic problems.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>450 [261]</td>
<td><strong>PUBLIC FINANCE (3) I, II</strong></td>
<td>Kamins, Leong</td>
</tr>
<tr>
<td></td>
<td>Government expenditures; taxes and other revenues; public debts; budgeting. Examination of institutions, economic effects, and fiscal policy.</td>
<td></td>
</tr>
<tr>
<td>452 [262]</td>
<td><strong>PUBLIC FINANCE IN HAWAII (3) I</strong></td>
<td>Kamins</td>
</tr>
<tr>
<td></td>
<td>Territorial and county revenues, expenditures, debts, and fiscal administration. Tax structure. Pre: Economics 450 or consent of instructor. (Alt. yrs.; offered 1959-60.)</td>
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</tr>
<tr>
<td>460 [285]</td>
<td><strong>INTERNATIONAL TRADE AND FINANCE (3) II</strong></td>
<td>Kirkpatrick</td>
</tr>
<tr>
<td></td>
<td>Theory, foreign exchange rates, balance of payments adjustment; recent international commercial and financial policy. Pre: Economics 240 or consent of instructor.</td>
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<tr>
<td>470 [265]</td>
<td><strong>GOVERNMENT AND BUSINESS (3) I, II</strong></td>
<td>Piiianaia</td>
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<tr>
<td></td>
<td>Economic aspects and consequences of public policy and regulation of business activity.</td>
<td></td>
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<tr>
<td>472 [270]</td>
<td><strong>PUBLIC UTILITIES (3) I</strong></td>
<td>Piiianaia</td>
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<td></td>
<td>Economic nature and history of public utilities; critical discussion of their control by governments.</td>
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<tr>
<td>480 [291]</td>
<td><strong>AGRICULTURAL ECONOMICS (3) I</strong></td>
<td>Bell</td>
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<tr>
<td></td>
<td>The economic aspects of agricultural production, marketing, credit, taxation, prices, and income. Pre: Economics 140 may be substituted for 150-151.</td>
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<tr>
<td>482 [292]</td>
<td><strong>LAND ECONOMICS (3) I</strong></td>
<td>Bell</td>
</tr>
<tr>
<td></td>
<td>Economic principles and institutions that influence land utilization and ownership. Pre: Economics 140 may be substituted for 150-151.</td>
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<tr>
<td>490 [282]</td>
<td><strong>AMERICAN TRADE UNIONISM (3) II</strong></td>
<td>Pendleton</td>
</tr>
<tr>
<td></td>
<td>Growth and development of American trade unionism.</td>
<td></td>
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<tr>
<td>492 [283]</td>
<td><strong>LABOR LEGISLATION (3) I</strong></td>
<td></td>
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<tr>
<td></td>
<td>General principles of labor law; emphasis upon applicable statutes and their economic implications.</td>
<td></td>
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<tr>
<td>494 [289]</td>
<td><strong>ARBITRATION OF GRIEVANCES (3) II</strong></td>
<td>Roberts</td>
</tr>
<tr>
<td></td>
<td>Purpose and functions of grievance procedure; background and procedure of arbitration; substance of arbitration; illustrative cases. Pre: Economics 290.</td>
<td></td>
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<tr>
<td>496 [294]</td>
<td><strong>RESEARCH IN INDUSTRIAL RELATIONS (3) I</strong></td>
<td>Slate</td>
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<tr>
<td></td>
<td>Individual practice in the techniques and procedures of social research as applied to an actual problem of labor-management relations.</td>
<td></td>
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<tr>
<td>600 [301]</td>
<td><strong>THEORY OF PRICE AND DISTRIBUTION (3) I</strong></td>
<td>Slate</td>
</tr>
<tr>
<td>602 [302]</td>
<td><strong>THEORY OF INCOME AND GROWTH (3) II</strong></td>
<td>Slate</td>
</tr>
<tr>
<td>610</td>
<td><strong>SEMINAR IN ECONOMIC DEVELOPMENT (3) I</strong></td>
<td>Staff</td>
</tr>
<tr>
<td></td>
<td>Pre: Economics 400, 402. (Alt. yrs.; not offered 1959-60.)</td>
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<tr>
<td>640</td>
<td><strong>SEMINAR IN MONEY AND BANKING (3) II</strong></td>
<td>Staff</td>
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<tr>
<td></td>
<td>Pre: Economics 240, 402. (Alt. yrs.; not offered 1959-60.)</td>
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<tr>
<td>650</td>
<td><strong>SEMINAR IN FISCAL PROBLEMS (3) I</strong></td>
<td>Staff</td>
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<tr>
<td></td>
<td>Pre: Economics 450. (Alt. yrs.; offered 1959-60.)</td>
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</tbody>
</table>
660 SEMINAR IN INTERNATIONAL ECONOMICS (3) II  
Pre: Economics 400, 460. (Alt. yrs.; offered 1959-60.)  

690 [310] SEMINAR IN CURRENT LABOR PROBLEMS (3) II  
Pre: consent of instructor.  

699 [300] DIRECTED READING OR RESEARCH (2–2) Yr.  
Pre: consent of department chairman.  

Education  

Professors Bevers, Clark, Clopton, Crossley, Everly, Feiber, Porter; Associate Professors R. Alm, Cross, In, Jackson, Lampard, Martin, Meyer, Tull; Assistant Professors Bennett, Bilous, Breneman, A. Carr, C. L. Chang, O. Davis, Fitzsimmons, Fletcher, Fujita, Geiser, Hayes, Inn, Jenkins, Kramer, E. Leib, McIntosh, Nelson, Nightingale, Reddin, Sax, Sueoka, Tinker, Traut; Instructors J. Alm, Campbell, Crooker, Erickson, H. Johnson, Mizuno, Munivy, St. Dennis, Sanner, Schuman, Snow, Uehara, S. Yamamoto  

Enrollment in education courses is restricted to College of Education students except by permission of the chairman. Credit in 210–211 or 220–221 or 222 or 230, or the equivalent, is required for registration in courses numbered 400 or above. See note under the division of History and Philosophy of Education.  

100–101 [100] ORIENTATION (1–1) Yr.  
Survey of students' problems of University adjustment; teaching as a profession; choice of a teaching field. Course fee $1.00 first semester.  

304 [287] AUDIO-VISUAL EDUCATION (3) I, II  
Theory, preparation and use on all school levels of sensory aids to learning. Course fee $3.00.  

309 [261] TESTS AND MEASUREMENTS (3) I, II  
Theory and techniques of evaluation in education. Course fee $8.00, including $7.00 for the National Teacher Examination. Pre: Education 211 or 221 or 222 or 230.  

507 [294] REMEDIAL READING (2) II  
R. Alm  
Techniques for motivating and helping children whose reading skills are below their capacity and needs.  

601 [266] GUIDANCE MATERIALS AND RESOURCES (3) I  
Clark  
Services within the school guidance program with special emphasis on available materials and resources.  

602 [268] ELEMENTARY SCHOOL GUIDANCE (2) II  
Clark  
Principles, techniques, and organization of guidance services in the elementary school. Pre: Education 221 and 309; consent of instructor.  

604 [267] OCCUPATIONAL INFORMATION IN GUIDANCE (2) II  
Clark  
Occupational research and survey techniques; trends; sources of materials, use of occupational information in vocational guidance.  

605 [269] PROBLEMS OF SCHOOL ADJUSTMENT (2) II  
Clark  
Principles of behavior which affect human relationships in the school, with emphasis upon application to actual situations. Pre: teaching experience.  

607 [332] CLINICAL PROCEDURES IN READING (3) I, II  
R. Alm  
Diagnosis and improvement of reading in elementary and secondary schools. Pre: course in teaching of reading; consent of instructor.
609 [364] TESTS AND INVENTORIES IN GUIDANCE (2) II
Tests and inventories for measuring aptitudes, interests, and modes of behavior. Pre: Education 309.

708 [380] EDUCATIONAL RESEARCH METHODS (3) I, II
Research techniques and thesis development. Pre: Education 309; consent of instructor. $4.00 fee for Graduate Record Examination.

709 [382] EDUCATIONAL EVALUATION (3) II
Educational objectives and evaluation methods; synthesis of data from objective and subjective sources. Pre: Education 309; consent of instructor.

PRESCHOOL-PRIMARY EDUCATION

210–211 [283–284] PRESCHOOL-PRIMARY EDUCATION (4-4) Yr. NIGHTINGALE, BILOUS
Basic course in the major problems in the education of children of ages two to seven. Pre: Psychology 150; 210 is prerequisite to 211.

310–311 [236] BASIC SKILLS, PRESCHOOL-PRIMARY (2-2) Yr. STAFF
Materials and procedures for teaching language arts and arithmetic to children three to seven. Pre: Education 210.

312 [239] SCIENCE, PRESCHOOL-PRIMARY (2) I, II CROOKER

316 [238] PRESCHOOL-PRIMARY ART (2) I, II C. L. CHANG
Materials and procedures in a variety of art media; construction activities for children from two to seven. Course fee $2.00. Pre: Education 210.

317 [237] PRESCHOOL-PRIMARY MUSIC (2) I, II BILOUS
Singing, simple work with instruments, rhythmic activities, dancing, dramatic play, and listening experiences for children two to seven. Pre: Education 210.

ELEMENTARY EDUCATION

220–221 [285–286] ELEMENTARY EDUCATION (4-4) Yr. STAFF
Basic course in the education of children of ages seven to twelve; observation and work with children. Pre: Psychology 150; 220 is prerequisite to 221.

222 [280] PRINCIPLES OF ELEMENTARY EDUCATION (4) I JENKINS
Survey of principles of elementary education. Credit toward certificate, but not degree. May not be taken by those who have credit in 220–221.

223 [230] CURRICULUM IN ELEMENTARY EDUCATION (10) I JENKINS
Teaching elementary school social studies, science, mathematics, language arts, and children's literature. Pre: Education 222.

225 [244] CHILDREN'S LITERATURE (2) I, II HAYES
Acquaintance with a wide range of children's books; criteria for judging literature on the basis of needs and interests. Pre: Education 210 or 220.

228–229 [242] HAWAIIAN NATURAL HISTORY (2-2) Yr. TINKER
Survey of the local physical and biological environment with special reference to the needs of teachers in the schools of Hawaii. Students may enter the second semester.

320 [243] LANGUAGE ARTS, ELEMENTARY (3) I, II HAYES
Modern approach to the teaching of language arts—reading, oral and written expression; materials for grades 1-6. Pre: Education 220.
### SOCIAL STUDIES, ELEMENTARY (2) I, II
- **Fitzsimmons**
  - Scope and organization of the social studies for the elementary school. Pre: Education 220.

### SCIENCE, ELEMENTARY (2) I, II
- **Carr**
  - Science education in the elementary school; developing concepts and understandings in grades 1–6. Pre: Education 220.

### MATHEMATICS, ELEMENTARY (2) I, II
- **Fitzsimmons**
  - Scope and organization of mathematics in the elementary curriculum. Pre: Education 220.

### CREATIVE ART, ELEMENTARY (2) I, II
- **Schuman, Yamamoto**
  - Understanding the creative use of art materials, tools, ideas, and their sources. Course fee $5.00. Pre: Education 220; Art 103.

### SECONDARY EDUCATION

#### SECONDARY EDUCATION (5) I, II
- **Meyer, Nelson**
  - Basic course dealing with the major problems of secondary education. Pre: Psychology 152.

#### LITERATURE FOR ADOLESCENTS (2) I
- **J. Alm**
  - Literature for the secondary school level; helping students appreciate the significance and meaning of literature; materials suitable for varying levels of ability and interests.

#### LANGUAGE ARTS, SECONDARY (3) I, II
- **Davis**
  - Teaching of speaking, reading, writing, and listening in the secondary school; literature, grammar, usage, and spelling. Pre: Education 230.

#### TEACHING OF READING IN INTERMEDIATE AND HIGH SCHOOL (2) II
- **J. Alm**
  - Techniques and materials for teaching reading and improving reading skills in the intermediate and high school.

#### SOCIAL STUDIES, SECONDARY (3) I, II
- **Nelson**
  - Scope and organization of social studies in the secondary school; development of social knowledge and understanding. Pre: Education 230.

#### SCIENCE, SECONDARY (3) I, II
- **Campbell**
  - Purposes and procedures; development of scientific attitude; review of the major generalizations of the biological and physical sciences. Pre: Education 230.

#### MATHEMATICS, SECONDARY (3) I, II
- **St. Denis**
  - Purposes and procedures; development of basic mathematical concepts. Pre: Education 230.

#### FOREIGN LANGUAGE, SECONDARY (3) II
- Techniques and materials for teaching foreign language; aims, motivation, tests; infusion of cultures; use of instructional aids. Pre: Education 230.

#### CREATIVE ART, SECONDARY (2) I, II
- **Schuman**
  - Teaching art in secondary schools; the arts in relation to all school subjects. Course fee $5.00. Pre: Education 230.

#### SCHOOL MUSIC, SECONDARY (2–2) Yr.
- **Mundy**
  - Objectives, materials, and procedures of general, instrumental, and choral music in the secondary school. Pre: Education 230.

#### SPEECH AND DRAMATICS, SECONDARY (3) I
- **Breneman**
  - Techniques for teaching types of speech and play analysis and direction, production and management problems. Pre: Education 230.
HISTORY AND PHILOSOPHY OF EDUCATION

Qualified graduate students in other departments may enroll in courses in this division with consent of the instructor.

341 [252] PHYSICAL EDUCATION, SECONDARY (2) I  TOMINAGA
Methods and materials in the conduct of the physical activities program, techniques in leadership; selection of activities and program evaluation. Pre: Education 230.

346 [203, 212] INDUSTRIAL ARTS (3) I  FEIRER
Techniques of individual and group instruction in shop and related classes; evaluation of various methods. Pre: Education 230.

347 [204] SHOP ORGANIZATION AND MANAGEMENT (2) II  FEIRER
Organization of shop instruction; handling supplies; maintaining equipment and tools; purchasing materials; keeping records and making inventories. Pre: Education 230.

348 [249] TYPWRITING AND SHORTHAND (2) I  KRAMER

349 [216] BOOKKEEPING AND OFFICE PRACTICE (2) II  KRAMER

HISTORY AND PHILOSOPHY OF EDUCATION

HISTORY OF EDUCATION (3) I, II  CLOPTON
History of educational thought and practice as a basis for the study of modern school problems.

PHILOSOPHY OF EDUCATION (3) I, II  CLOPTON
Philosophy and science in education; social, psychological, and ethical considerations essential to a philosophy of education.

COMPARATIVE EDUCATION: EUROPE AND AMERICA (2) I  R. ALM
A comparison of the ways in which contemporary Western societies undertake to meet their educational problems.

COMPARATIVE EDUCATION: THE ORIENT (2) II  JACKSON
A study of the educational problems, practices, and institutions in the countries of Asia.

SEMINAR IN PHILOSOPHY OF EDUCATION (2) II  CLOPTON
Social and psychological theory involved in educational issues. Pre: Education 650, 655.

CURRENT ISSUES IN EDUCATION (2) II  STAFF
Consideration of problems and issues raised in professional journals and books of recent copyright. Pre: Education 655.

CURRICULUM

THE MODERN LANGUAGE ARTS PROGRAM (3) II  R. ALM
Survey of research; critical examination of educational procedures in teaching the language arts. Pre: basic course in teaching language arts.

ELEMENTARY SCHOOL CURRICULUM (3) I  JACKSON
Principles and techniques of curriculum improvement at the elementary school level. Resources and teaching units. Pre: teaching experience.
663 [329] SECONDARY SCHOOL CURRICULUM (3) I
Meyer
Principles and techniques of curriculum improvement at the secondary school level. Pre: teaching experience.

664 [322] EXTRACLASS ACTIVITIES IN SECONDARY SCHOOLS (2) II
Martin
Planning and supervising student government, dramatics, athletics, school journalism, and other activities.

668 [290] EDUCATION OF SLOW LEARNERS (2) I
Mcintosh
Analysis of the special problems of the slow learners and the development of techniques and programs for serving them. Pre: Education 662 or 663; consent of instructor.

669 [291] EDUCATION OF RAPID LEARNERS (2) II
Mcintosh
Analysis of the special problems of the rapid learners and the development of techniques and programs for serving them. Pre: Education 662 or 663; consent of instructor.

760 [396] SEMINAR IN CURRICULUM (3) I
Crossley
Advanced study in the development and improvement of the curriculum of the elementary and secondary schools. Pre: Education 662 or 663; consent of instructor.

SUPERVISION AND ADMINISTRATION

670 [328] SUPERVISION OF INSTRUCTION (2) II
Jackson
Principles of supervision and the development of supervisory programs in the school. Pre: Education 662 or 663.

679 SUPERVISION OF STUDENT TEACHING (2) I
Staff
Principles and methods; role of the supervisor; human relations in supervision of student teaching. Pre: teaching experience; consent of instructor.

680 [390] PUBLIC SCHOOL ORGANIZATION (2) I, II
Everly, Jackson
The function of the teacher in school administration; state and territorial organization of public education; Hawaii school law and D. P. I. regulations.

681 [362] LEGAL AND BUSINESS ASPECTS OF SCHOOL ADMINISTRATION (2) II
Jackson
Advanced course in legal and business controls and practices in the public school system. Pre: Education 682 or 683; consent of instructor. May be repeated.

781 [360] LEGAL AND BUSINESS ASPECTS OF SCHOOL ADMINISTRATION (2) II
Jackson
Advanced course in legal and business controls and practices in the public school system. Pre: Education 682 or 683; consent of instructor.
SUPERVISED EXPERIENCE AND DIRECTED STUDY

Credit for Education 690, 691, 694, 697, and 698 does not apply to graduate degree programs.

390 [254] STUDENT TEACHING (14) I, II
Supervised experience in the University Laboratory Schools. Pre: Education 211, 221, 222, or 230. Follows Laboratory School calendar.

391 [255] SEMINAR FOR STUDENT TEACHERS (2) I, II
Study of problems arising from experience as student teachers. To be taken concurrently with Education 390 or 392.

392 [253] STUDENT TEACHING IN HOME ECONOMICS (6) I, II
Observation, supervised teaching, and conferences. Pre: senior standing; credit or concurrent registration in Home Economics 270.

399 [299] DIRECTED READING (Ar.) I, II
Individual reading in (1) preschool education, (2) elementary education, (3) secondary education, (4) vocational education, (5) history and philosophy of education, (6) curriculum, (7) supervision, (8) administration, (9) library science, (10) educational psychology. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in education. Pre: consent of instructor and department chairman.

690 [354] INTERNSHIP (14) I, II
Full-time teaching under special supervision. Restricted to fifth-year students. First semester work begins September 1, 1959; second semester ends June 10, 1960.

691 [395] SEMINAR FOR INTERN TEACHERS (2) I, II
Problems arising from classroom experiences of intern teachers. Restricted to fifth-year students. To be taken concurrently with Education 690.

694 [356] GUIDANCE PRACTICUM (3) I, II
Supervised experience in guidance activities in schools. Guidance majors only. Pre: consent of instructor.

697–698 [368] INTERNSHIP IN EDUCATIONAL LEADERSHIP (4–4) Yr.
Seminar and supervised field work in educational leadership. Pre: acceptance in D. P. I. Leadership Training Program.

699 [300] DIRECTED READING OR RESEARCH (Ar.) I, II
Individual reading or research in the same fields as in 399. Pre: graduate standing; consent of instructor and department chairman.

INDUSTRIAL ARTS

101 HAND WOODWORKING (3) I
Fundamental operations and information topics in woodworking. Construction of projects. Fee $10.00.

102 GENERAL METALWORKING (3) II
Fundamental operations and information topics in metalworking. Projects in bench-metal, sheetmetal, tempering, casehardening, and other operations. Fee $10.00.

103 MACHINE WOODWORKING (3) I
Nomenclature, setup and operation of power equipment. Working drawings, patterns, jigs, and templates; bills of material and routing procedures. Fee $10.00.

104 ADVANCED METALWORKING (3) II
Organization, layout, equipment, management, uses of instructional material. Selected projects in benchmetal, forging, heat-treating, machine shop, oxyacetylene welding and cutting. Fee $10.00.
201 ELECTRICITY (3) I
Static and current electricity, series and parallel circuits, magnetism and electromagnetism, measuring instruments, generator and motor principles. Fee $10.00.

202 ELECTRICITY (3) II
Magnetic circuits, coils, motors, generators, and transformers; insulation, armature windings; mutual and self-inductance; conduit wiring. Introduction to radio. Fee $10.00.

301 GENERAL CRAFTS (3) I
Crafts in wood, leather, plastic, ceramics. Appropriate projects and related information. Fee $10.00.

302 GENERAL CRAFTS (3) II
Crafts in art metal, jewelry, graphic arts, and others appropriate to the school situation. Projects and related information. Fee $10.00.

Engineering

Professors Daniel, Harloe, Holmen, Tinniswood; Associate Professors Avery, Engman, Evans, Go, Mitsuda, Partridge; Assistant Professors Corba, Lau, Walker, Yuen; Lecturers Ching, Chou, Kohloss, Landstreet, Wimer

CIVIL

CE 100 ENGINEERING ORIENTATION (1) I
AVERY

CE 101 [MD 101] ENGINEERING DRAWING (2) I (2 Lb) CORBA, STAFF
Basic fundamentals, freehand orthographic and pictorial sketching, instrument drawing and principles related to the graphic language of engineering. Lab fee $2.00.

CE 102 [MD 152] DESCRIPTIVE GEOMETRY (2) II (2 Lb) CORBA, STAFF
Graphical solution of problems involving points, lines, and surfaces, and their application to engineering. Prereq: CE 101. Lab fee $2.00.

CE 111 [101] SURVEYING (4) I (2 L, 2 Lb) DANIEL, STAFF
Use of tape, level, and transit; horizontal and vertical control surveys; computations. Prereq: Mathematics 102; CE 101. Lab fee $3.00.

CE 112 [102] ADVANCED SURVEYING (4) II (2 L, 2 Lb) DANIEL, STAFF
Topographic mapping; curves; earthwork computations; hydrographic and city surveys; route problems. Prereq: Mathematics 103, 104; CE 101, 111. Lab fee $3.00.

CE 170 [251] MECHANICS (STATICS) (3) II
AVERY, STAFF

CE 213 [227] ROUTE SURVEYING (3)
DANIEL, STAFF
Field work; curves, earthwork, grades, reconnaissance, preliminary surveys, route location, design. Prereq: CE 112. Lab fee $4.00. Summer session only.

CE 220 [255] FLUID MECHANICS (4) II (3 L, 1 Lb) TINNISWOOD, STAFF
Fluid statics, kinematics of fluid flow, momentum and energy equations, flow in pipes, open channel flow, and fluid measurements. Prereq: CE 271 or Physics 310. Lab fee $1.00.

CE 241 [254] MECHANICS OF MATERIALS LABORATORY (1) I (1 Lb) EVANS, STAFF
Testing and observation of materials under various stress conditions. Lab fee $4.00.
CE 242 [262] CONCRETE (2) II (1 L, 1 Lb)  EVANS, STAFF
Standard tests for concrete, cement, and aggregates used in making concrete. Pre: credit or concurrent registration in CE 273. Lab fee $5.00.

CE 271 [252] MECHANICS (DYNAMICS) (3) I  MITSUDA, STAFF
Plane dynamics and kinematics of particles. Rigid bodies in translation, rotation, and plane motion. Work, energy, power. Pre: CE 170.

CE 273 [253] MECHANICS OF MATERIALS (4) I (3 L, 1 Lb)  ENGMAN, STAFF

CE 280 [276] STRUCTURAL THEORY (3) II (2 L, 1 Lb)  ENGMAN, STAFF
Shear and moment diagrams, bridge and roof trusses, graphic statics, moving loads and influence lines, three-hinged arch and space frameworks. Pre: CE 273.

CE 300 [291] ENGINEERING ECONOMY (2) I  HARLOE, STAFF
Application of economic principles to engineering problems. Pre: Economics 140; senior standing.

CE 302 [292] CONTRACTS AND SPECIFICATIONS (2) II  HARLOE, STAFF
Business, legal, and ethical aspects of engineering; contracts and specifications with special reference to local requirements. Pre: senior standing.

CE 311 [293] PHOTOGRAMMETRY (3) I  DANIEL, STAFF
Basic principles; photographic equipment; control; methods of compilation; mosaics. Pre: CE 213. Lab fee $2.00.

CE 321 [296] ADVANCED HYDRAULICS (3) I  WALKER, STAFF
Nonuniform flow, theory of hydraulic jump, water hammer, backwater curves; pipe networks; hydraulic machinery. Pre: CE 220.

CE 322 [297] HYDRAULIC STRUCTURES (3) II  YUEN, STAFF
Hydraulic and structural considerations in the design of dams, gates, canals, breakwaters, and piers. Pre: CE 220, 381, 383.

CE 325 [295] HYDROLOGY (3) I  WALKER, STAFF

CE 331 [228] SANITARY ENGINEERING (3) I  LAU, TINNISWOOD
Design, construction, and maintenance of water works; water purification and control. Pre: CE 220.

CE 332 [229] SANITARY ENGINEERING (3) II  LAU, TINNISWOOD
Design, construction, and maintenance of sewage works; sewage and industrial waste treatment. Pre: CE 220, 331.

CE 340 [263] ADVANCED MATERIALS TESTING (Ar.) II  EVANS
Application of tests to investigations of physical characteristics of local engineering materials. Pre: CE 241, 242. Lab fee $5.00.

CE 351 [231] SOIL MECHANICS (3) I (2 L, 1 Lb)  EVANS
Physical factors in earth pressure phenomena; soil stability; soil properties in earthwork operations and foundations. Pre: CE 273. Lab fee $1.00.

CE 360 [257] HIGHWAY ENGINEERING (3) II  EVANS, STAFF
Design, construction, and maintenance of streets and highways; planning, financing. Pre: CE 213, 351.

CE 381 [278] INDETERMINATE STRUCTURES (3) I  ENGMAN, GO, STAFF
Analysis of indeterminate trusses, beams, rigid frames, and continuous structures by classical methods, moment distribution and column analogy. Pre: CE 280.
CE 382 [298] ADVANCED STRUCTURAL THEORY (3) II  
Column analogy, moment distribution, haunched beams, continuous girders, rigid frames, arches; secondary stresses. Pre: CE 381, 383.

CE 383 [279] REINFORCED CONCRETE (3) I (2 L, 1 Lab)  
Theory and design of reinforced concrete beams, columns, combined stresses, footings, and retaining walls. Pre: CE 273, 280.

CE 384 [280] REINFORCED CONCRETE DESIGN (3) II (2 L, 1 Lab)  

CE 386 [277] STRUCTURAL DESIGN (3) II (2 L, 1 Lab)  

CE 399 [299] SPECIAL PROBLEMS (Ar.) I, II  
Individual investigation in engineering as approved by instructor. Limited to seniors with 2.7 grade-point ratio, or 3.0 grade-point ratio in engineering.

ELECTRICAL

EE 102 [122] ELEMENTS OF ELECTRICAL ENGINEERING (4) II  
Designed to develop electrical engineering concepts from concurrently studied physics of electricity and magnetism. Pre: Mathematics 132; Physics 181.

EE 201 [Physics 202] ELECTRICAL ENGINEERING (4) I, II (1 Lab)  

EE 211 [234] BASIC CIRCUIT ANALYSIS (4) I (1 Lab)  
Mathematical analysis of circuit problems. Constant-frequency single phase and balanced polyphase circuits. Pre: EE 102; Mathematics 133.

EE 212 CIRCUIT ANALYSIS (4) II (1 Lab)  

EE 221 [267] BASIC ELECTRONICS LABORATORY (1) I (1 Lab)  

EE 232 TRANSIENTS (2) II  
Transient behavior of electrical and mechanical circuits and mechanical circuits and networks. Mathematical and experimental solutions. Pre: EE 211; Mathematics 133.

EE 242 NETWORKS AND TRANSMISSION LINES (3) II  
Generalized network theories. Maxwell equation and repeated network approaches to transmission lines. Pre: EE 211; Mathematics 133; registration in Physics 550.

EE 301 [Physics 279] GENERAL CIRCUIT ANALYSIS (3) II  

MECHANICAL

ME 231 [283] THERMODYNAMICS (3) I, II  
Fundamentals of thermodynamics and their application to the efficient production and utilization of power. Pre: Chemistry 104; Physics 181; Mathematics 132.
ME 260 [210] KINEMATICS (3) II  
AVERY, STAFF  
The motion of machine elements and the transmission of motion through mechanical devices. Pre: CE 102, 271.

ME 331 [284] STEAM POWER (3) I  
CHOU, STAFF  
Performance of steam generating and consuming equipment. Selection of industrial steam equipment. Pre: ME 291; registration in ME 333.

ME 333 [285] HEAT POWER LABORATORY (1) I (1 Lb)  
CHOU, STAFF  
Use of mechanical, electrical, and electronic equipment in testing mechanical and thermodynamic machinery. Pre: registration in ME 331. Lab fee $5.00.

ME 334 [287] HEAT POWER LABORATORY (1) II (1 Lb)  
AVERY, STAFF  
Use of mechanical and electronic equipment used in testing mechanical and thermodynamic machinery. Internal combustion engine tests. Pre: ME 333. Lab fee $5.00.

ME 341 [286] INTERNAL COMBUSTION ENGINES (3) I  
AVERY, STAFF  
Basic principles underlying the functioning of internal combustion engines. Emphasis upon fuels, combustion, heat transfer, lubrication. Pre: ME 231.

ME 342 [293] AIR CONDITIONING AND REFRIGERATION (3) II  
STAFF  
Refrigeration and air conditioning apparatus and their application to industrial and residential use. Pre: ME 231.

English

Senior Professor STROVEN; Professors BOUSLOG, DAY, GREEN, HEISER, KORN; Associate Professors FUJIMURA, GEORGE, LOWERS, STEMPBEL, SUMMERSGILL; Assistant Professors BROWN, FRIERSON, HUNTSBERRY, LANGHANS, LEIB, MANEY, R. SCOTT, TEEVAN, WINTERS; INSTRUCTORS ABREMS, BRENNISEN, CASTRO, CRYMES, DERSTINE, V. MILLER, MORTENSEN, NEWTON, SINCLAIR, TOPHAM, P. WHITE

50 INSTITUTE COMPOSITION (0) I, II  
CRYMES  
Fundamentals of English usage and composition. For those whose native language is not English and who do not qualify for English 101.

51 INSTITUTE REPORT WRITING (0) I, II  
STEMPEL  
Fundamentals of composition; library usage; research projects. For those whose native language is not English and who do not qualify for English 101. Primarily for graduate students.

101-102 [101] COMPOSITION (3-3) Yr.  
STAFF  
101: fundamentals. 102: rhetorical principles; a research project.

105 [102] INTERMEDIATE COMPOSITION (3) I  
GEORGE  
Accelerated course for entering freshmen with experience in writing. Substitutes for 101-102. Admission through the Dean and department chairman.

109 BUSINESS ENGLISH (3) II  
STAFF  
Forms of business communication: letters, reports, analyses, records. Open only to students in business administration. Pre: English 102 or the equivalent.

111 [119] JOURNALISM WORKSHOP (1) I, II  
SCOTT  
Reporting, proofreading, copy editing, or photography, under supervision of Ka Leo editors and adviser.

112 [123] EDITORIAL WORKSHOP (1) I, II  
SCOTT  
Restricted to, and required of executives of Ka Leo.
115 [120] NEWSWRITING (3) I
News style, story structure; work on Ka Leo. Pre: English 102. Course fee $2.00.

116 [124] NEWS MECHANICS (2) II
Newspaper organization; editing; headlines; makeup; typography; photos; rewriting. Pre: English 115. Course fee $2.00.

150-151 [150] MAJOR WORKS OF BRITISH AND AMERICAN LITERATURE (3-3) Yr. STAFF
150: Middle Ages to 1800; 151: 1800 to the present. This course or 152-153 is prerequisite to all advanced courses in English and American literature.

152-153 [152] WORLD LITERATURE (3-3) Yr. STAFF
Major works of classical, Oriental, European, and American literature. 152: classical times to the Renaissance; 153: 1600 to the present. May be substituted for 150-151.

155 TYPES OF EUROPEAN AND AMERICAN LITERATURE (3) I, II STAFF
Poetry, drama, essays, prose fiction; sixteenth century to the present. Open only to students in agriculture, business administration, engineering, and nursing.

201 EXPOSITORY WRITING (3) I, II STAFF
Principles and practice of exposition. Not open to English majors.

210 REPORT WRITING (3) I, II STAFF
Technical exposition: reports and other types of professional writing. Pre: junior or senior standing.

212 [202] ADVANCED EXPOSITORY WRITING (3) I, II STAFF
Expository and descriptive writing, with emphasis upon the development of idea and style. Pre: consent of instructor.

213 [203] NARRATIVE WRITING (3) I, II HUNTSBERRY
Analysis and writing of narrative, including the short story. Pre: consent of instructor.

220 [204] CURRENT ENGLISH (3) II MANEY
Methods of linguistic analysis; description of English structure; current usage.

231 [208] INTRODUCTION TO POETRY (3) I KORN
Analysis of selected English and American poems, emphasizing problems of communication and appreciation.

235 [205] BACKGROUNDS OF ENGLISH LITERATURE (3) I GREEN
The most important sources of English literary themes and allusions, including the King James Bible and Western European myth and legend.

313 [218] ADVANCED FICTION WRITING (3) II DAY
Study of modern fiction; application of principles of narrative craftsmanship. Pre: consent of instructor. (Alt. yrs.; not offered 1959-60.)

399 [299] DIRECTED READING (Ar.) I, II STAFF
Individual reading. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in English. Pre: consent of instructor and department chairman.

420 [272] HISTORY OF THE ENGLISH LANGUAGE (3) II GREEN
Growth and development of the English language; sources, forms, mutations, and standards of usage. (Alt. yrs.; not offered 1959-60.)

436 [240] HISTORY OF LITERARY CRITICISM (3) II STEMPEL
Chief theories of literary criticism, with readings (in English) from Plato to the present. (Alt. yrs.; offered 1959-60.)
440 [274] ENGLISH DRAMA TO 1642 (3) I SUMMERSGILL
Origins of English drama; medieval drama and theatre; contemporaries and successors of Shakespeare. (Alt. yrs.; offered 1959–60.)


447 [285] THE ENGLISH NOVEL TO 1832 (3) I KORN
Principal English novels and novelists from the beginnings to 1832. (Alt. yrs.; offered 1959–60.)

448 [286] THE ENGLISH NOVEL, 1832–1900 (3) II KORN
Principal English novels and novelists. (Alt. yrs.; offered 1959–60.)

451 MEDIEVAL ENGLISH LITERATURE (3) I GREEN
Representative Old and Middle English poetry, prose, drama, exclusive of Chaucer, with continental backgrounds; chiefly in translation. (Alt. yrs.; offered 1959–60.)

452 [270] CHAUCER (3) II SUMMERSGILL
Life, times, and major works of Chaucer, with emphasis on The Canterbury Tales. (Alt. yrs.; offered 1959–60.)

455 [273] SIXTEENTH-CENTURY ENGLISH LITERATURE (3) I LOWERS
Poetry and prose of the Tudor period, exclusive of the drama. (Alt. yrs.; not offered 1959–60.)

457: histories and comedies. 458: tragedies.

465 [278] RESTORATION LITERATURE (3) I FUJIMURA
Poetry, prose, and drama from 1660 to 1700, exclusive of Milton. (Alt. yrs.; not offered 1959–60.)

466 [279] MILTON (3) II KORN
Selected poetry and prose. (Alt. yrs.; not offered 1959–60.)

470 [280] EIGHTEENTH-CENTURY ENGLISH LITERATURE (3) I GEORGE
Poetry, prose, and drama from 1700 to 1780, exclusive of the novel. (Alt. yrs.; not offered 1959–60.)

480 [282] THE ROMANTIC MOVEMENT IN ENGLAND (3) I BOUSLOG
Poetry and prose from 1780 to 1832, exclusive of the novel. (Alt. yrs.; offered 1959–60.)

485 [284] VICTORIAN LITERATURE (3) II FRIERSON
Poetry and prose from 1832 to 1900, exclusive of the novel. (Alt. yrs.; not offered 1959–60.)

490 [288] TWENTIETH-CENTURY BRITISH LITERATURE (3) I DAY
Representative works of the leading British novelists and poets since 1900.

571: from the beginnings to the Civil War. 572: from the Civil War to the early twentieth century.

573 [262] AMERICAN LITERATURE AND CULTURAL HISTORY (3) II HEISER
Studies in the relations of American literature to American culture before 1900. Pre: English 571 or the equivalent.
585 [263] LITERATURE OF THE PACIFIC (3) II
STROVEN
Pacific islands, Australia: narratives of voyagers, translations of native literature, fiction by Melville, Stevenson, London, Becke, Nordhoff and Hall. (Alt. yrs.; not offered 1959-60.)

590 [289] TWENTIETH-CENTURY AMERICAN LITERATURE (3) II
DAY
Representative works of the leading American novelists and poets since 1900.

620 [312] SEMINAR IN TEACHING COMPOSITION (2) I
FUJIMURA
Theory and observation of the teaching of composition at the college level. Pre: graduate standing or consent of instructor.

630 [313] SEMINAR IN RESEARCH METHODS (2) I
HEISER
Kinds of research; problems of bibliography; fundamentals of thesis writing. Required of all candidates for the M.A. degree in English. Pre: graduate standing.

635 [314] SEMINAR IN COMPARATIVE LITERATURE (1) II
GREEN
Introduction to comparative literature; relationship of English to other European literatures; sources and influences. Pre: graduate standing or consent of instructor.

685 [311] SEMINAR IN ENGLISH LITERATURE (2) II
STAFF
Study of problems, authors, or a period. Pre: graduate standing or consent of instructor.

699 [300] DIRECTED READING OR RESEARCH (Ar.) I, II
STAFF
Individual reading or research. Pre: graduate standing; consent of instructor.

785 [310] SEMINAR IN AMERICAN LITERATURE (2) I, II
STAFF
Study of a problem or a period. Pre: graduate standing or consent of instructor.

790 [340] SEMINAR IN HISTORY AND LITERATURE (2) II
HEISER
Problems in contemporary American culture, with emphasis on the history of ideas. History 790 the first semester; English 790 the second. Pre: History 790.

European Languages
Professors ASPINWALL, MUELLER; Associate Professor KNOWLTON; Assistant Professors JACKSON, JENSON, PAVLANTOS, ROTH, WISWELL; Instructors BURKETT, SINGER

FRENCH

101-102 [100] ELEMENTARY FRENCH (3-3) Yr.
STAFF
Reading, conversation, laboratory drill, grammar. Lab fee $1.00.

151-152 [101] INTERMEDIATE FRENCH (3-3) Yr.
STAFF
Reading, conversation, laboratory drill, composition. Pre: French 102 or the equivalent. Lab fee $1.00.

201-202 [201] LITERATURE OF THE TWENTIETH CENTURY (3-3) Yr.
ASPINWALL
Novels, plays, poetry. Conducted in French as far as feasible. Pre: French 152 or the equivalent.

399 [299] DIRECTED READING (Ar.) I, II
STAFF
Designed to round out a knowledge of French literature. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in French.
### European Languages

#### Literature Since 1800 in Translation (2) II
- **Course:** LITERATURE SINCE 1800 IN TRANSLATION (2) II
- **Instructor:** ASPINWALL
- **Description:** Rapid reading in translation; lectures, discussion, and reports. Not open to French majors. Pre: English 151.

#### Literature of the Golden Age (2) I
- **Course:** LITERATURE OF THE GOLDEN AGE (2) I
- **Instructor:** ASPINWALL
- **Description:** Emphasis on Moliere, Racine, Corneille. Conducted in French. Pre: French 202 or the equivalent.

#### The Eighteenth Century (2-2) Yr.
- **Courses:** 413-414 [280-281] THE EIGHTEENTH CENTURY (2-2) Yr., 415-416 [282-283] LITERATURE OF THE NINETEENTH CENTURY (2-2) Yr.
- **Instructor:** JACKSON
- **Description:** Novels, plays, and poetry representative of the schools of romanticism, realism, naturalism, and symbolism. Conducted in French. Pre: French 202 or the equivalent. (Alternates with 413-414; not offered 1959-60.)

#### The Nineteenth Century (2-2) Yr.
- **Course:** LITERATURE OF THE NINETEENTH CENTURY (2-2) Yr.
- **Instructor:** ASPINWALL
- **Description:** Novels, plays, and poetry representative of the schools of romanticism, realism, naturalism, and symbolism. Conducted in French. Pre: French 202 or the equivalent. (Alternates with 413-414; not offered 1959-60.)

#### History of the French Language (2)
- **Course:** HISTORY OF THE FRENCH LANGUAGE (2)
- **Instructor:** KNOWLTON
- **Description:** Emphasis on the literature of the Middle Ages and sixteenth century. Pre: French 152, and Latin 102 or the equivalent. (Alternates with 411; not offered 1959-60.)

#### German

- **Course:** ELEMENTARY GERMAN (3-3) Yr.
- **Instructor:** STAFF
- **Description:** Reading, conversation, laboratory drill, grammar. Lab fee $1.00.

- **Course:** INTERMEDIATE: INTRODUCTION TO GERMAN LITERATURE (3-3) Yr.
- **Instructor:** STAFF
- **Description:** Modern and classical authors; grammar review; conversation; laboratory drill. Pre: German 102 or two years of high school German. Lab fee $1.00.

- **Course:** INTERMEDIATE: SCIENTIFIC GERMAN (3-3) Yr.
- **Instructor:** STAFF
- **Description:** Accurate reading over a wide range of subjects. Emphasis on sentence construction and vocabulary building. Pre: Germany 102.

- **Course:** DIRECTED READING (Ar.) Yr.
- **Instructor:** STAFF
- **Description:** Designed to round out a knowledge of German literature, or allow intensive reading. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in German.

- **Course:** THE CLASSICAL PERIOD (3-3) Yr.
- **Instructor:** JENSON
- **Description:** Representative works of Lessing, Goethe, Schiller, interpreted within the literary framework of their time. Pre: German 152 or the equivalent. (Not offered 1959-60.)

- **Course:** THE MODERN PERIOD (3-3) Yr.
- **Instructor:** MUELLER
- **Description:** Representative works of the schools of romanticism, poetic realism, naturalism, impressionism, new objectivity. Pre: German 152 or the equivalent. (Alternates with 411-412.)

- **Course:** ADVANCED TRANSLATION (Ar.) I
- **Instructor:** STAFF
- **Description:** Reading in a field of specialization: science, literary history, etc. Required of German majors. May be repeated once. Pre: two years of college German; consent of instructor.

#### Greek

- **Course:** ELEMENTARY GREEK (3-3) Yr.
- **Instructor:** STAFF
- **Description:** Vocabulary and grammar with reading of simple Greek. (Not offered 1959-60.)

- **Course:** INTERMEDIATE GREEK (3-3) Yr.
- **Instructor:** STAFF
- **Description:** Review of grammar; reading from selected prose and poetry. Pre: Greek 102 or the equivalent. (Not offered 1959-60.)
399 [299] DIRECTED READING (Ar.) I, II  
Pavlantos  
Limited to seniors with 2.7 grade-point ratio, or 3.0 in Greek. (Not offered 1959-60.)

401 [250] GREEK CIVILIZATION (3) I  
Pavlantos  
Study of the history, art, and culture of Greece. (Not offered 1959-60.)

403 [260] GREEK LITERATURE (3) I  
Pavlantos  
Major writers of Greece in translation. (Not offered 1959-60.)

LATIN

101–102 [100] ELEMENTARY LATIN (3–3) Yr.  
Vocabulary and grammar, with reading of simple Latin.

151–152 [101] INTERMEDIATE LATIN (3–3) Yr.  
Review of grammar, reading of selections from prose and poetry. Pre: Latin 102 or the equivalent.

399 [299] DIRECTED READING (Ar.) I, II  
Pavlantos  
Limited to seniors with 2.7 grade-point ratio, or 3.0 grade-point ratio in Latin. (Not offered 1959-60.)

402 [251] ROMAN CIVILIZATION (3) II  
Pavlantos  
Study of the history, art, and culture of Rome. (Not offered 1959-60.)

404 [261] ROMAN LITERATURE (3) II  
Pavlantos  
Major writers of Rome in translation. (Not offered 1959-60.)

RUSSIAN

101–102 [100] ELEMENTARY RUSSIAN (3–3) Yr.  
Wiswell  
Reading, writing, grammar; conversation, laboratory drill. Lab fee $1.00.

151–152 [101] INTERMEDIATE: INTRODUCTION TO RUSSIAN LITERATURE (3–3) Yr.  
Wiswell  
Reading from classical and modern authors; grammar review, conversation, laboratory drill. Pre: Russian 102 or the equivalent. Lab fee $1.00.

153–154 INTERMEDIATE: SCIENTIFIC RUSSIAN (3–3) Yr.  
Wiswell  
Rapid reading and translation: sentence structure and vocabulary. Pre: Russian 102 or the equivalent.

399 [299] DIRECTED READING (Ar.) I, II  
Wiswell  
Limited to seniors with 2.7 grade-point ratio, or 3.0 in Russian.

402 [261] NINETEENTH-CENTURY NOVEL (2) II  
Wiswell  
Survey of important novelists in translation, particularly Gogol, Goncharov, Turgenev, Dostoevsky, and Tolstoi.

SPANISH

101–102 [100] ELEMENTARY SPANISH (3–3) Yr.  
Staff  
Reading, conversation, laboratory drill, grammar. Lab fee $1.00.

151–152 [101] INTERMEDIATE SPANISH (3–3)  
Staff  
Reading, conversation, laboratory drill, some grammar and composition. Pre: Spanish 102 or the equivalent. Lab fee $1.00.

258 SPANISH CONVERSATION AND COMPOSITION (2) I  
Roth  
Designed to develop skill in oral expression and composition. Pre: Spanish 152 or the equivalent. (Not offered 1959-60.)
259 ADVANCED CONVERSATION AND COMPOSITION (2) II  ROTH
Further training in oral expression and composition. Pre: Spanish 258 or the equi-
valent. (Not offered 1959-60.)

399 [299] DIRECTED READING (Ar.) I, II  STAFF
(1) Spanish peninsular literature, (2) Spanish-American literature, (3) Hispanic
linguistics. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point in
Spanish.

454 [254] INTRODUCTION TO SPANISH-AMERICAN LITERATURE (2) I  KNOWLTON
Readings and reports; some attention to Spanish literature of the Philippines. Pre:
Spanish 152 or the equivalent. (Alternates with 455; not offered 1959-60.)

455 [255] INTRODUCTION TO LITERATURE OF MEXICO (2) II  KNOWLTON
Cultural history and representative writers. Pre: Spanish 152 or the equivalent.
(Alternates with 457; not offered 1959-60.)

456 [256] SPANISH LITERATURE TO 1700 (2) I  JACKSON
Representative selections from medieval and Golden Age literature. Pre: Spanish
152 or the equivalent. (Alternates with 454.)

457 [257] SPANISH LITERATURE FROM 1700 (2) II  ROTH
Representative selections from modern and contemporary literature. Pre: Spanish
152 or the equivalent. (Alternates with 455.)

471 [260] HISTORY OF THE SPANISH LANGUAGE (2) I  KNOWLTON
Pre: Spanish 101 or the equivalent; one semester of college Latin or the equivalent.
(Alternates with 258.)

Geography

Professors Bowers, Manchester; Assistant Professor Fuchs; Lecturer Phanaiia

Geography 101, 151, 401, or consent of instructor is prerequisite to all advanced
courses.

101 [150] ELEMENTS OF GEOGRAPHY (3) I, II (2 L, 1 Lab)  MANCHESTER
Introduction. Emphasis on the interrelationship between man and his natural en·
vironment. Course fee $1.50.

151 ECONOMIC GEOGRAPHY (3) I, II  FUCHS
Analysis of the world's major agricultural, industrial, and commercial regions and
their interconnecting trade routes. Course fee $1.50.

399 [299] DIRECTED READING (Ar.) I, II  STAFF
Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in
geography.

401 [261] WORLD GEOGRAPHIC PATTERNS (3) I, II  BOWERS
Physical character and human use of geographic regions. For prospective teachers.
Course fee $1.00.

410 [240] PHYSICAL GEOGRAPHY (3) I  FUCHS
Basic principles of the earth sciences, selected to provide an understanding of the
physical landscape. Course fee $1.00.

420 [262] WEATHER AND CLIMATE (3) I  BOWERS
Basic elements of meteorology and climatology. Course fee $1.00.

430 [250] CARTOGRAPHY (3) I  FUCHS
History of map making, the construction of projections, and techniques of drafting
maps. Course fee $5.00.
440 [251] FIELD METHODS (2) II
MANCHESTER
Field and laboratory techniques of mapping. Pre: Geography 430 or consent of instructor. Course fee $5.00.

448 [272] NAVIGATION (3) I
PIIANAIA
Principles; position fixing by terrestrial and celestial objects. Course fee $1.00.

460 [271] POLITICAL GEOGRAPHY (3) II
BOWERS
Geographic background of international politics and national power. Course fee $1.00.

501 [252] GEOGRAPHY OF NORTH AMERICA (3) II
FUCHS
Regional geography of Anglo-America. Geographic aspects of the historic and economic development of the continent. Course fee $1.00.

507 [254] ECONOMIC RESOURCES OF THE UNITED STATES (3) II
BOWERS
Extent and development of major United States resources; emphasis on the localization of associated industries. Course fee $1.00.

521 [258] GEOGRAPHY OF EUROPE (3) I
FUCHS
Physical and human geography. European geography as a background of present problems. Course fee $1.00.

526 [259] GEOGRAPHY OF THE SOVIET UNION (3) II
FUCHS
Regional geography. Physical basis of Soviet strength. Course fee $1.00.

541 [255] GEOGRAPHY OF ASIA (3) I
BOWERS
Physical regions of Asia and their human occupancy. Geographic background of current Asian problems. Course fee $1.00.

552 [256] GEOGRAPHY OF JAPAN (3) I
MANCHESTER
Regional study; emphasis on people and use of the land. Course fee $1.00.

553 [257] GEOGRAPHY OF CHINA (3) II
BOWERS
People and environment on a regional basis; emphasis on current problems of occupation and land use. Course fee $1.00.

554 [264] GEOGRAPHY OF INDIA AND SOUTHEAST ASIA (3) I
BOWERS
Physical and human-use regions; attention to geographic factors in the history, politics, and economics of the area. Course fee $1.00. (Not offered 1959-60.)

561 [265] GEOGRAPHY OF AUSTRALIA (2) II
FUCHS
Physical and human geography; emphasis on the relationships between population, land use, and resources. Course fee $1.00.

571 [263] GEOGRAPHY OF THE PACIFIC ISLANDS (3) I
MANCHESTER
Polynesia (except Hawaii), Micronesia, and Melanesia. Course fee $1.00.

574 [280] GEOGRAPHY OF MICRONESIA (3) I
BOWERS
Physical character of the islands and their occupancy and use by man. Course fee $1.00.

575 [281] GEOGRAPHY OF POLYNESIA (3) II
PIIANAIA
Physical, economic, and political geography of the Polynesian islands. Course fee $1.00. (Not offered 1959-60.)

578 [260] GEOGRAPHY OF HAWAII (3) II
PIIANAIA
Regional, physical, and cultural geography. Detailed study of the people and resources. Course fee $1.00.
601 [309] HISTORY OF GEOGRAPHY (3) I
Development of geographic thought from early Greece to the present. Special emphasis on the modern period.

660 [308] SEMINAR IN GEOGRAPHY OF JAPAN (3) II
Pre: consent of instructor.

680 [310] SEMINAR IN GEOGRAPHY (3) II
Study and discussion of significant topics and problems. May be repeated.

699 [300] DIRECTED RESEARCH (Ar.) I, II
Pre: consent of instructor.

Geology and Geophysics

Senior Professor Macdonald; Professors Noffsinger, Ramage; Associate Professor Abbott; Assistant Professor Orgill

GEOLOGY

150 PHYSICAL GEOLOGY (3) I
Geologic work of oceans, glaciers, streams, wind; rocks and minerals; volcanoes, earthquakes, mountain building. Geology 152 should be taken concurrently.

151 HISTORICAL GEOLOGY (3) II
Geologic changes as recorded by fossil remains in rocks; ancient seas and continents. Geology 153 should be taken concurrently. Pre: Geology 150.

152 LABORATORY GEOLOGY (1) I
Identification of common minerals and rocks. Reading of topographic and geologic maps. Pre: credit or concurrent registration in Geology 150. Lab fee $1.00.

153 LABORATORY GEOLOGY (1) II
Identification of important fossil forms. Exercises in stratigraphy. Pre: credit or concurrent registration in Geology 151. Lab fee $1.00.

200 GEOLOGY OF THE HAWAIIAN ISLANDS (2) I
Survey of Hawaiian volcanism, rock types, engineering materials, and ground water. Pre: Geology 150. (Alt. yrs.; offered 1959-60.)

255 GEOLOGY OF GROUND WATER (2) II
Origin, circulation, recovery, and quality of ground water, with emphasis on fresh water problems of the Hawaiian Islands. Pre: Geology 150. (Not offered 1959-60.)

265 STRUCTURAL GEOLOGY (3) II

300 [270] PALEONTOLOGY (3) I
Morphology and identification of index fossils; their value in determining stratigraphic sequence. Pre: Geology 151, 153.

310 PRINCIPLES OF STRATIGRAPHY (3) II
Order and arrangement of sedimentary systems and the principles upon which they are based. Pre: Geology 300.
399 [299] DIRECTED READING (Ar.) I, II
  STAFF
  Limited to seniors with 2.7 grade-point ratio, or 3.0 grade-point ratio in geology.

410 [210] MINERALOGY (3) I
  ABBOTT
  (2 L, 1 3-Hr Lb)
  Origin, physical and chemical characteristics; economic value of minerals. Elementary crystallography. Pre: Geology 150; Chemistry 102 or 104.

415 [215] PETROLOGY (4) II
  MACDONALD
  (2 ½, 2 3-Hr Lb)
  Petrology and hand specimen identification of igneous, sedimentary, and metamorphic rocks. Pre: Geology 150 or consent of instructor.

420 [220] OPTICAL MINERALOGY (3) I
  ABBOTT
  (2 L, 1 3-Hr Lb)
  Introduction to petrographic microscope and to optical properties of minerals. Pre: Geology 410; Physics 161; or consent of instructor.

454 [254] ECONOMIC GEOLOGY (3) I
  ABBOTT
  Distribution, nature, and origin of deposits of metallic and nonmetallic minerals. Pre: Geology 150.

460 [260] GEOMORPHOLOGY (3) II
  ABBOTT
  Study of landforms and their relation to geologic structure. Pre: Geology 151, or consent of instructor.

470 MARINE GEOLOGY (2) I
  Features of the earth's crust beneath the sea. Pre: Geology 151.

480 PETROGRAPHY AND PETROLOGY (3) II
  MACDONALD
  (1 L, 2 3-Hr Lb)
  Microscopic study of minerals and rocks. Origin and alteration of the several types of rocks. Pre: Geology 420; Chemistry 102 or 104.

699 [300] DIRECTED READING (Ar.) I, II
  STAFF
  Pre: graduate standing and consent of instructor.

METEOROLOGY

160 INTRODUCTION TO METEOROLOGY (2) II
  RAMAGE
  General survey of meteorology; instruction and practice in observation, coding, plotting, elementary analysis.

202 METEOROLOGICAL INSTRUMENTS AND OBSERVATIONS (3) I
  RAMAGE
  (2 L, 1 3-Hr Lb)
  Principles of meteorological instruments and their care; instrumental and visual weather observation; coding. (Not offered 1959-60.)

204 APPLIED TROPICAL METEOROLOGY (3) I
  RAMAGE
  The arid and humid tropics and their effects on evaporation, the hydrologic cycle, preservation of materials, aircraft operations, health and comfort, air conditioning, building design.

206 PHYSICAL CLIMATOLOGY (3) II
  NOFFSINGER
  Climates related to physical processes and their regional variations; synoptic climatology. (Not offered 1959-60.)

220 GENERAL METEOROLOGY (4) I
  ORGILL
  Atmospheric structure and heat balance; thermodynamics of the atmosphere; condensation and hydrometeors; air masses and fronts. Pre: Mathematics 133; Physics 181. Physics 310, 530 concurrently.

221 DYNAMIC METEOROLOGY (4) II
  ORGILL
  Equations of atmospheric motion; divergence, vorticity, vertical motion, trajectories, friction, turbulence, wave motion; pressure changes. Pre: Meteorology 220.
225 TROPICAL METEOROLOGY (3) II
History; tropical clouds and hydrometeors; easterly waves and typhoons; monsoons; local and diurnal effects. Pre: Meteorology 220.

230 MID-LATITUDE SYNOPTIC METEOROLOGY AND FORECASTING (3) II (3 3-Hr Lab) STAFF
Techniques of analysing charts as applied especially to latitudes above 30°. Prognosis. Pre: Meteorology 220. (Not offered 1959-60.)

231 TROPICAL SYNOPTIC METEOROLOGY AND FORECASTING (3) II (3 3-Hr Lab) STAFF
Techniques of analysing charts as applied especially to latitudes below 30°. Prognosis. Pre: Meteorology 220.

575 ADVANCED TROPICAL METEOROLOGY (6) STAFF
Modern methods of analysis and forecasting in the tropics. Pre: consent of instructor.

Government

Professors MELLER, SAUNDERS, SPELLACY; Associate Professors STAUFFER, VAN DER VEUR; Assistant Professors KOSAKI, THROMBLEY, TUTTLE

Government 110, or the equivalent, is prerequisite to all other courses in government, except 120.

110 [150] INTRODUCTION TO GOVERNMENT (3) I, II STAUFFER, STAFF
Role of government in modern society. Types and practices of government; processes of political change; citizen participation.

120 [155] AMERICAN GOVERNMENT (3) II THROMBLEY
Development, organization, and functioning of national, state, and local government. Not open to students who have had 110. (Not offered 1959-60.)

260 INTRODUCTION TO INTERNATIONAL RELATIONS (2) I STAUFFER
Factors which condition the foreign policy of states: nationalism, imperialism, and power politics. Outstanding problems of world politics.

261 UNITED NATIONS (2) II STAUFFER
Problems involved in the development and structure of international organizations with special emphasis on the United Nations.

399 [299] DIRECTED READING OR RESEARCH (Ar.) I, II STAFF
Individual problems in (1) theory—Saunders; (2) American government—Thrombley, Tuttle; comparative government—Stauffer; (4) international relations—Stauffer, van der Veur; (5) politics—Tuttle, Meller; (6) public administration—Meller, Thrombley. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in government.

400 [289] POLITICAL THEORY: MAJOR CONCEPTS (3) I SAUNDERS
Analysis of some of the major concepts of political theory; their statement by the major political philosophers.

401 [290] POLITICAL THEORY: PROBLEMS (3) II SAUNDERS
Intensive analysis of one or two problems in political theory. Pre: Government 400 or consent of instructor.

402 [240] DEMOCRACY AND COMMUNISM (3)
Survey of the ideological development of the rivals for man's political allegiance. (Not offered 1959-60.)

420 [248] STATE GOVERNMENT AND ADMINISTRATION (3) I THROMBLEY
Constitutions; historical evolution; structure with reference to judicial, legislative, and executive branches; limitations on authority.
421 [254] MUNICIPAL GOVERNMENT AND ADMINISTRATION (3) II TUTLE
The city as a political subdivision and as a municipal corporation; powers and liabilities; forms of government; the metropolitan problem; related matters.

422 [270] GOVERNMENT OF HAWAII (3) I MELLER
Territorial and local government; consideration of the state constitution; formative political factors in Hawaii.

423 [252] INTRODUCTION TO CONSTITUTIONAL LAW (3) I SPELLACY
Examination of principal cases concerned with state relations, due process of law, interstate commerce, and related subjects.

424 [253] CIVIL RIGHTS (3) II THROMBLEY
Study of the principal court decisions on freedom of speech, press, assembly, conscience, and other basic civil liberties.

425 [287] PROBLEMS IN AMERICAN GOVERNMENT (3) I THROMBLEY
Special topics in the field of American government and politics. Varied from year to year. Training in research methods. Pre: consent of instructor.

426 [265] COMPARATIVE POLITICS: POLITICAL PARTIES (3) I STAUFFER
Nature and morphology of political parties; party systems; relation to electoral systems.

427 [266] COMPARATIVE POLITICS: INSTITUTIONS AND PROCESSES (3) II STAUFFER
Classification of major structural types; levels, range, and "universe" of decision-making; patterns in executive-legislative relations.

428 [271] COMPARATIVE COLONIAL GOVERNMENT (3) STAUFFER
Comparative survey of various national solutions to certain basic problems arising from the rule of subject peoples. (Not offered 1959-60.)

429 [262] GOVERNMENT AND POLITICS OF CHINA AND JAPAN (3) I
The changing patterns of government; emphasis on problems faced and the institutional, ideological, and political answers created through time. (Not offered 1959-60.)

430 [273] GOVERNMENT AND POLITICS OF SOUTH AND SOUTHEAST ASIA (3)
Analysis of relevant colonial patterns that have conditioned the newly created governmental structures, followed by a study of present developments. (Not offered 1959-60.)

431 [264] PROBLEMS IN INTERNATIONAL RELATIONS (3) II van der VEUR
Special topics in international relations; change in the nation-state system; emergent regionalism; military blocs; neutralism; new dimensions of international cooperation.

432 [267] FORMULATION AND ADMINISTRATION OF FOREIGN POLICY (3) II van der VEUR
Historical, institutional, political, and economic influences on the formation and execution of American foreign policy.

433 [263] INTERNATIONAL RELATIONS OF THE FAR EAST (3)
Rise and fall of eastern Asia and the re-emergence of this area as a pivotal factor in world politics. (Not offered 1959-60.)

434 [274] INTERNATIONAL RELATIONS OF SOUTH AND SOUTHEAST ASIA (3)
Emergence from colonialism of these new states. "Neutralism"; intra-regional struggles; cooperation; Afro-Asian bloc; United Nations' activities. (Not offered 1959-60.)

435 [258] POLITICAL BEHAVIOR (2)
Review and analysis of the methodology and findings of some recent "behavioral science" studies in politics. (Not offered 1959-60.)
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Instructor(s)</th>
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</thead>
<tbody>
<tr>
<td>481 [256]</td>
<td>AMERICAN POLITICAL PARTIES (3) II</td>
<td>TUTTLE</td>
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<tr>
<td></td>
<td>Organization, methods, and functions of political parties, with special attention to the electoral and organizational aspects of party behavior.</td>
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<tr>
<td>482 [257]</td>
<td>CAMPAIGNS AND ELECTIONS (2) I</td>
<td>TUTTLE</td>
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<tr>
<td></td>
<td>Management and conduct of elections, with attention to techniques employed by candidates for public office. Field investigations.</td>
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<tr>
<td>483 [259]</td>
<td>PROPAGANDA AND PUBLIC OPINION (3) I</td>
<td>TUTTLE</td>
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<tr>
<td></td>
<td>Characteristics, methods, and results of propaganda and pressure group activity. Nature of public opinion; methods of influencing it; techniques for measuring political opinions.</td>
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<tr>
<td>484 [276]</td>
<td>THE LEGISLATIVE PROCESS (3) II</td>
<td>MELLER</td>
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<tr>
<td></td>
<td>The lawmaking process in the United States. Role of representative assemblies, the executive branch, interest groups, and the public.</td>
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<tr>
<td>500 [282]</td>
<td>INTRODUCTION TO PUBLIC ADMINISTRATION (3) I</td>
<td>THROMBLEY</td>
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<tr>
<td></td>
<td>Relationship of administration to policy-forming agencies and to the courts; structure of administration; devices for integration; related materials.</td>
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<tr>
<td>501 [281]</td>
<td>PRINCIPLES OF MANAGEMENT (3) I</td>
<td>MELLER</td>
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<td></td>
<td>Basic principles of management and techniques of application; human relations in management.</td>
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<tr>
<td>502 [283]</td>
<td>PERSONNEL ADMINISTRATION (3) II</td>
<td>TUTTLE</td>
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<tr>
<td></td>
<td>Organization and administration of civil service systems; recruitment, classification, discipline, and status of civil servants. Pre: Government 500.</td>
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<tr>
<td>503 [284]</td>
<td>INTRODUCTION TO ADMINISTRATIVE LAW (3) II</td>
<td>SPELLACY</td>
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<td></td>
<td>Laws relating to public officers, status, rights, and obligations; laws governing relations between government and the public, e.g., rights to notice and hearing, due process.</td>
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<tr>
<td>504 [288]</td>
<td>PROBLEMS IN PUBLIC ADMINISTRATION (3) II</td>
<td>THROMBLEY</td>
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<tr>
<td></td>
<td>Introduction to materials and research methods used in public administration. Individual and group research projects. Restricted to seniors.</td>
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<tr>
<td>600 [307]</td>
<td>SEMINAR IN POLITICAL THEORY (3)</td>
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<td></td>
<td>Pre: consent of instructor. (Not offered 1959–60.)</td>
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<tr>
<td>620 [303]</td>
<td>SEMINAR IN FAR EASTERN POLITICS (3) II</td>
<td>STAUFFER</td>
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<tr>
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<td>Pre: consent of instructor.</td>
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<tr>
<td>621 [309]</td>
<td>SEMINAR IN SOUTH AND SOUTHEAST ASIA (3) II</td>
<td>VANDER VEUR</td>
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<td></td>
<td>Pre: consent of instructor.</td>
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<tr>
<td>630 [302]</td>
<td>SEMINAR IN INTERNATIONAL RELATIONS (3) I</td>
<td>STAUFFER</td>
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<td>Pre: consent of instructor.</td>
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<tr>
<td>640 [305]</td>
<td>SEMINAR IN POLITICS (3) II</td>
<td>TUTTLE</td>
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<td></td>
<td>Pre: consent of instructor.</td>
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<tr>
<td>650 [310]</td>
<td>SEMINAR IN PUBLIC ADMINISTRATION (3) I</td>
<td>MELLER</td>
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<td>Pre: consent of instructor.</td>
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<tr>
<td>699 [300]</td>
<td>DIRECTED READING AND RESEARCH (Ar.) I, II</td>
<td>STAFF</td>
</tr>
<tr>
<td></td>
<td>Individual problems in the same fields as in 399. Pre: consent of instructor.</td>
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</tbody>
</table>
Health and Physical Education

Associate Professor SAAKE; Assistant Professors CHUI, GAY, GUSTUSON, O'BRIEN, SAKAMOTO, VASCONCELOS; Instructors ASATO, BEAMER, FURUKAWA, GIBSON, RATHBURN; Assistant BRUHN

An activities and locker fee of $3.00 is assessed in Health and Physical Education 101-120.

101 INDIVIDUAL AND TEAM SPORTS (1) I, II
Swimming and/or tennis. Freshmen.

102 INDIVIDUAL AND TEAM SPORTS (1) I, II
Golf and social dancing. Freshmen.

103 INDIVIDUAL AND TEAM SPORTS (1) II
Basketball and volleyball. Sophomores.

109 RESTRICTED ACTIVITIES (1) I, II
For physically handicapped students. Admittance only upon recommendation of University physician.

111 INTERMEDIATE SWIMMING (1) II SAKAMOTO
For students who have met basic requirements and desire to develop additional skills in swimming and diving.

113 ADVANCED TENNIS (1) II SAAKE
For those interested in developing advanced skills and strategy in tennis.

114 DEVELOPMENTAL ACTIVITIES (1-1) Yr. GUSTUSON
Exercises with and without apparatus selected to meet personal needs; various forms and systems of exercise surveyed.

115 TUMBLING (1) I GUSTUSON
Exercises suitable for use with child and adult groups.

116 HEAVY APPARATUS (1) II GUSTUSON
Heavy apparatus, including trampoline, for the development of balance, strength, and skills.

120 MUSIC AND RHYTHMS IN PHYSICAL EDUCATION (2) II GAY
The use of music in the activity program. Includes a brief survey of the various rhythmic patterns and their application.

123 FOLK AND NATIONAL DANCES (1) I GAY
Selected dances of various national groups now in popular use. Square dances included.

124 DANCES OF HAWAII (1) I GAY
Introduction to the hula. The background and fundamentals will be presented, and selected dances given. Activities and locker fee $3.00.

130 PERSONAL HYGIENE (1) I, II STAFF
Scientific health information as a basis for hygienic living. Personal health problems.

132 PERSONAL HEALTH (2) I RATHBURN
The proper care of the body and development of desirable health habits and attitudes. Intended primarily for majors in physical education and recreation.

140 NATURE AND FUNCTION OF PLAY (2) II SAAKE
Place of play in community and school life; applications to the various age groups.
170 INTRODUCTION TO PHYSICAL EDUCATION (2) II
   Designed for prospective teachers and leaders in physical education and recreation; objectives, needs, procedures, and outcomes in physical education activities.

215 ATHLETIC COACHING, FOOTBALL AND BASKETBALL (2) I
   Fundamentals, position play, team play, and strategy in football and basketball.

217 ATHLETIC COACHING, BASEBALL AND TRACK (2) II
   Fundamentals, team play, and strategy in baseball; basic skills, analysis of form, and conditioning in track.

219 COACHING OF SWIMMING (2) II
   Designed for those interested in the development of swimming teams in schools and other agencies. Content and method emphasized. (Not offered 1959-60.)

221 PHYSICAL EDUCATION, ELEMENTARY (2) I, II
   Content and method for elementary school programs. Adaptations to meet situations with like age groups outside of school. Activities and locker fee $3.00.

222 PHYSICAL EDUCATION, SECONDARY (2) II
   Activities and methods for junior and senior high school programs. Activities and locker fee $3.00.

225 THE TEACHING OF INDIVIDUAL SPORTS (2) I
   Organization and teaching of athletic activities for girls, such as tennis, archery, badminton, golf, etc., on the secondary level.

227 THE TEACHING OF TEAM SPORTS (2) II
   Techniques of teaching fundamentals and strategy of team games for girls and women.

230 SCHOOL HEALTH PROBLEMS (2) I, II
   Health needs of the school child and principles, methods, and materials applicable to the school health program.

231 HEALTH TEACHING IN SCHOOLS (2) I
   Methods used in teaching for health in elementary and secondary schools. (Not offered 1959-60.)

232 MATERIALS IN HEALTH EDUCATION (2) II
   Materials available in health education, their sources, authenticity and use. Methods of evaluation. (Not offered 1959-60.)

234 SAFETY PROCEDURES IN PHYSICAL EDUCATION (2) I
   Prevention and emergency treatment of injuries; emphasis upon school, playground, and athletic situations. Practical work in first aid. Red Cross Certificate may be earned.

235 THE HEALTH CURRICULUM (2) I
   Procedures for the development and construction of a health education program, including criteria for selection and evaluation of content. (Not offered 1959-60.)

236 EVALUATION IN HEALTH EDUCATION (2) II
   Processes involved in appraising the effectiveness of health education program. Practice in use and development of evaluation instruments.

237 PRINCIPLES OF HEALTH EDUCATION (2) I
   Historical development and present status of the health education program. Emphasis upon current trends and basic principles involved.
239 HEALTH OF THE SCHOOL CHILD (2) II  
RATHBURN  
Deals with various problems in child health and the role of the school in meeting 
them. (Not offered 1959–60.)

241 SOCIAL RECREATION (2) II  
GIBSON  
Activities and leadership techniques for parties, socials, etc.

245–246 [246] OFFICIATING IN ATHLETICS (2–2) Yr.  
CHUI  
Techniques used by officials in the various sports. Practice in officiating is included.

248 HOBBIES IN RECREATION (2) I  
GIBSON  
Development of procedures and skills in various hobbies for recreation majors. 
Others by permission of instructor only.

249 CAMP LEADERSHIP (2) II  
GIBSON  
Program development and procedures used in the modern camping movement. Rela­
tionships with educational and other agencies. For recreation majors; others with con­ 
sent of instructor.

250–251 [250] RECREATION LEADERSHIP (2–2) Yr.  
SAAKE, STAFF  
Students assigned to recreational agencies for orientation. One hour per week in 
discussion of individual and group problems. Pre: consent of instructor.

252–253 [252] FIELD WORK IN RECREATION (5–5) Yr.  
SAAKE, STAFF  
Students assigned to recreational agencies for experience. One hour each week in 
discussion of problems. Pre: consent of instructor. For recreation majors only.

263 INTRAMURAL ATHLETICS (2) I  
ASATO  
Organization, program, and procedures used in conducting a sports program for 
students outside of regular class hours.

276–277 [276] CURRENT TRENDS IN HEALTH (2–2) Yr.  
RATHBURN  
The health situation and functions of health agencies dealing with specific diseases 
and problems. Primarily for teachers and school administrators.

280 ANATOMY IN PHYSICAL EDUCATION (3) I  
CHUI  
Designed to develop an understanding of muscle action during activity. Primarily 
for leaders in physical education and recreation but open to others.

285 PHYSIOLOGY IN PHYSICAL EDUCATION (3) II  
CHUI  
Essentials necessary in teaching health practices; activities to meet individual and 
group needs. Primarily for leaders in physical education and recreation but open to 
others.

399 [299] DIRECTED READING (Ar.) I, II  
SAAKE  
Individual problems. Limited to seniors in the recreation leadership curriculum 
with 2.7 grade-point ratio, or 3.0 grade-point ratio in health and physical education.

430 [330] SEMINAR IN HEALTH EDUCATION (2) II  
RATHBURN  
Study and discussion of selected problems in health education as determined by in­ 
dividual and group interests and needs.

History

Senior Professor MARDER; Professors HUNTER, D. JOHNSON, MURPHY, SAKAMAKI, J. WHITE; 
Associate Professors INOUYE, STALKER; Assistant Professors COWING, ERNEST, SHINODA

151–152 [100] WORLD CIVILIZATION (3–3) Yr.  
STAFF  
Development of civilization from the ancient Orient and classical Greece and Rome 
to the present; emphasis on Western civilizations. Prerequisite for advanced courses.
161-162 [101] WORLD CULTURES IN PERSPECTIVE (3-3) Yr. STAFF
Problems in world history; development of ideas, institutions. Alternative for 151-152. Admission only by approval of the dean and instructor.

171 [110] INTRODUCTION TO AMERICAN HISTORY (3) I, II STAFF
Religious, cultural, and social backgrounds of the American people. Prerequisite for advanced courses in American history.
See Greek 401, Greek Civilization, and Latin 402, Roman Civilization.

396 [298] SENIOR SEMINAR IN EUROPEAN HISTORY (3) I MARDER
Selected problems; use of historic materials; form and content of historical writing.

397 [298] SENIOR SEMINAR IN AMERICAN HISTORY (3)
Same as in 396. (Not offered 1959-60.)

398 [298] SENIOR SEMINAR IN ASIAN-PACIFIC HISTORY (3) II WHITE
Same as in 396.

399 [299] DIRECTED READING (Ar.) I, II WHITE
Individual reading in (1) American history—Cowing, Stalker; (2) Pacific history—Murphy; (3) Japanese history—Shinoda; (4) European history—Marder, Ernest; (5) English history—Murphy; (6) Hispanic-American history—Johnson; (7) Chinese history—White; (8) Hawaiian history—Hunter. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in history.

405-406 [232-233] MEDIEVAL EUROPE, 300-1300 (3-3) Yr. ERNEST
Cultural, social, economic, and political changes in the development of the European community.

409 [234] RENAISSANCE AND REFORMATION, 1300-1600 (3) I ERNEST
Ideas and institutions in the early period of commercial and national development.

410 [235] EARLY MODERN EUROPE, 1600-1800 (3) II ERNEST
Thought and culture of Europe in the age of expansion.

415 [208] EXPANSION OF EUROPEAN CIVILIZATION (3) I SHINODA
Survey of cultural changes and developments in Europe, the Western Hemisphere, and Asia resulting from European expansion. Interchangeable credit: Asian or European.

419-420 [236] EUROPEAN IDEAS AND THE WORLD SINCE 1800 (3-3) Yr. ERNEST
Development of the major ideas and movements that have influenced Europe and the world community.

425 [257] EUROPE IN THE NINETEENTH CENTURY (3) I MARDER
Major political, social, economic, and intellectual trends in the evolution of Europe from Napoleon to the end of World War I.

426 [258] EUROPE SINCE VERSAILLES (3) II MARDER
Problems of contemporary Europe and their historical background.

427 CONTEMPORARY WESTERN EUROPE (3) MARDER
Land, people, institutions, historical and cultural heritage of northern Europe, especially England and Germany. (Not offered 1959-60.)

428 CONTEMPORARY WESTERN EUROPE (3) MARDER
Land, people, institutions, historical and cultural heritage of southern Europe, especially France, Italy, and Spain. (Not offered 1959-60.)

431 [209] HISTORY OF ENGLAND TO 1688 (3) I MURPHY
Major trends in the development of English civilization from the origins to the Glorious Revolution.
158

GENERAL CATALOGUE, 1959-60

432 [210] HISTORY OF ENGLAND FROM 1688 (3) II
MURPHY
Major trends in modern English history; origins of twentieth-century developments.

435 [211] CONSTITUTIONAL HISTORY OF ENGLAND (3) I
HUNTER
Anglo-Saxon institutions; Norman innovations; legal, administrative, and parliamen-
tary development under Angevins; rise of cabinet system. (Alt. yrs.; offered 1959-60.)

438 [221] BRITISH EMPIRE AND COMMONWEALTH FROM 1815 (3)
MURPHY
The Empire; transformation of colonies and dependencies into member nations ofthe Commonwealth; present problems; relationships. (Alt. yrs.; not offered 1959-60.)

439 [279] AUSTRALIA AND NEW ZEALAND (3) II
MURPHY
Major historical developments from colonization to independent nationhood; present
problems and policies. (Alt. yrs.; offered 1959-60.)

451 [213] HISTORY OF RUSSIA TO 1850 (3) I
WHITE
Survey of the development of thought and institutions, and of territorial expansion.

452 [214] HISTORY OF IMPERIAL AND SOVIET RUSSIA SINCE 1850 (3) II
WHITE
The impact of revolutionary changes on recent Russian thought and institutions.

461-462 [240-241] HISTORY OF THE UNITED STATES TO 1876 (3-3) Yr.
COWING
Expansion of Europe into the Western Hemisphere; establishment of American
Independence; the Federal Union to the close of the Reconstruction Period.

463-464 [242-243] HISTORY OF THE UNITED STATES SINCE 1877 (3-3) Yr.
STALKER
A detailed political, economic, and social survey of the history of the American
people, 1877 to the present.

471-472 [244-245] DIPLOMATIC HISTORY OF THE UNITED STATES (3-3) Yr.
JOHNSON
History of American foreign policy, with emphasis upon recent developments.

475 [252] CONSTITUTIONAL HISTORY OF THE UNITED STATES (3) II
STALKER
The genesis, drafting, ratification, and development of the federal Constitution.

477 [248] AMERICAN ECONOMIC HISTORY (3) I
STALKER
Emphasis on the role of techniques, agricultural developments, the entrepreneur and
the rise of the labor movement. Economics 150-151 recommended as preparation.

481 [246] AMERICAN THOUGHT AND CULTURE (3)
An advanced course in American social customs, institutions, and intellectual pur-
suits. (Alt. yrs.; not offered 1959-60.)

483 [260] AMERICAN SOCIAL REFORM MOVEMENTS SINCE 1865 (3) II
COWING
A detailed survey of America's quest for social justice.

491 [259] THE WEST IN AMERICAN HISTORY (3) I
COWING
Western expansion forces in the development of the economic, cultural, and political
trends of the nation.

501 [249] REPRESENTATIVE AMERICANS (3) II
STALKER
A series of biographical sketches of leading characters in American history from the
Revolution to the present.

511-512 [253-254] HISTORY OF HISPANIC AMERICA (3-3) Yr.
JOHNSON
Political, economic, and social development of the Hispanic-American republics from
colonial times to the present. (Alt. yrs.; offered 1959-60.)

515 [255] THE UNITED STATES AND HISPANIC AMERICA (3)
Development of political and economic problems and policies in inter-American
relations. (Not offered 1959-60.)
Survey of the political, social, and economic history of the Far East as a unit.

523 [250] EARLY CIVILIZATION IN THE FAR EAST (3) I
Study of the origins of the peoples and cultures in Eastern Asia.

527 [285] RUSSIAN SIBERIA AND THE PACIFIC (3) II
Russia's eastward expansion; dynamic role as a Far Eastern power; relations with China and Japan. (Alt. yrs.; offered 1959–60.) Interchangeable credit: Asian or European.

529 [227] SOUTHEAST ASIA (3) I
General survey of Burma, Siam, Indo-China, Malaya, Indonesia, and the Philippine Republic; history of these states; relations with European nations and the United States.

531 [225] HISTORY OF CHINA TO 1800 (3)
Thought and institutions from ancient to early modern times.

532 [225] HISTORY OF CHINA SINCE 1800 (3)
Response to Western culture; recent revolutionary changes.

539 [229] AMERICAN-CHINESE RELATIONS (3)
Diplomatic, economic, and cultural relations of the United States and China, with emphasis on American Far Eastern policy. Interchangeable credit: Asian or European.

541–542 [226] HISTORY OF JAPAN (3–3) Yr.
Historical survey of Japanese culture, government, economics, and institutions.

545 [251] HISTORY OF THOUGHT IN JAPAN (3) II
Major schools of thought and important thinkers, social reformers, economists, statesmen, and educators of Japan.

551 [230] INDIA, PAKISTAN, AND CEYLON (3) I
General historical survey of South Asia from earliest times to the present.

553 [284] RUSSIAN CENTRAL ASIA AND THE CAUCASUS (3)
Russia's expansion; impact of Russian rule on Muhammadan and Christian peoples; relations with Middle East. (Alt. yrs.; not offered 1959–60.) Interchangeable credit: Asian or European.

571 [277] PACIFIC EXPLORATION AND DISCOVERY TO 1779 (3) I
Europe in the Pacific; first contacts through Cook's voyages. Emphasis on island areas. (Alt. yrs.; offered 1959–60.)

572 [278] PACIFIC ISLANDS FROM 1779 (3) I
Expansion of European commerce, missionary activity, settlement; effects on native peoples in Australasia, Melanesia, Micronesia, Polynesia. (Alt. yrs.; not offered 1959–60.)

575 [273] THE UNITED STATES IN THE PACIFIC (3) I
Growth of economic and political interests and policies in the Pacific area. (Alt. yrs.; offered 1959–60.) Interchangeable credit: Asian, Pacific, or American.

577 [276] HISTORY OF THE HAWAIIAN ISLANDS (3) II
A general course with some detail. Emphasis on the period of the monarchy. Interchangeable credit: Asian, Pacific, or American.

665 [315] SEMINAR IN JAPANESE HISTORY (3) II
Main fields of Japanese historical research; the principal sources of bibliographical information; selected problems in modern Japanese history.

699 [300] DIRECTED RESEARCH (Ar.) I, II
Individual research in the same fields as in 399.
711 [310] SEMINAR IN HISTORICAL METHOD (3) I  
Training in the evaluation of sources and the preparation of theses.  
HUNTER

712 [313] SEMINAR IN HISTORIOGRAPHY (3) II  
The history of history and historians.  
HUNTER

750 SEMINAR IN CURRENT PROBLEMS OF NATIONAL DEVELOPMENT (2) I  
Dealings with peoples of Asia, Africa, Latin America, and the Middle East. May be repeated. Pre: consent of instructor.  
WHITE

790 [340] SEMINAR IN HISTORY AND LITERATURE (2) I  
Problems in contemporary American culture, with emphasis on the history of ideas. History 790 the first semester; English 790 the second. Pre: consent of instructor.  
STALKER

Home Economics

Associate Professors Boatman, Gruelle, Tull, Umbel; Assistant Professors Cooksey, Forker, Mural, Sidwell; Instructors Bartow, Murakami, Sato; Lecturer Furier

The following courses have no prerequisites, except for year level, and are open to students in any college or curriculum: Home Economics 100, 101, 110, 112, 126, 218, 221, 250, 251, 262.

100 ORIENTATION IN HOME ECONOMICS (2) I  
Factors contributing to success in college and development of habits for effective living. Home economics in education; vocational study and planning.  
UMBEL

101 HOME NURSING (2) I, II  
(1 L, 1 Lb)  
SATO

Nursing procedures for home care and emergencies. Prevention of disease; physiological aspects of reproduction and the prenatal period; care of mother and infant.

103 [HE 252] CHILD CARE AND TRAINING (3) II  
(2 L, 1 Lb)  
SIDWELL

Importance of the preschool years in development of the individual; a constructive program for the normal child in the home. Pre: Psychology 102 or 104.

110 [HA 150] AESTHETICS OF CLOTHING AND PERSONAL APPEARANCE (3) I, II  
FURER

Individual analysis; principles of color, design, grooming, wardrobe planning. Personality projection through clothing. Fee $3.00.

112 [HA 110] CLOTHING CONSTRUCTION (2) I  
(2 Lb)  
UMBEL

Selection and use of equipment and commercial patterns. Principles of fitting. Open to all students. Fee $2.00.

113 [HA 111] FAMILY CLOTHING PROBLEMS (2) II  
(2 Lb)  
UMBEL

Conservation of family clothing; selection of children's clothing; continuation of clothing construction. Pre: Home Economics 112. Fee $2.00.

114 TEXTILE FABRICS (2) I  
FURER

Fibers, yarns, fabric construction and finishes as related to selection, use, and care of textile fabrics. Open to all students. Fee $2.00.

120 [HS 150] ELEMENTARY FOOD PREPARATION (3) I, II  
(1 L, 2 Lb)  
BARTOW

Fundamental processes of food preparation; practical application in meal planning to provide good nutrition and promote good food habits. Lab fee $8.00.

122-123 [HS 102] ADVANCED FOOD PREPARATION (3-3) Yr.  
(1 L, 2 Lb)  
BARTOW, GRUELLE

Economics of food selection; experimental food preparation; meal planning and serving. Pre: Home Economics 120, Chemistry 102 or 104. Lab fee $8.00 each semester.
126 [HS 156] SURVEY OF NUTRITION (2) I, II  
COOKSEY  
Factors involved in good nutrition with emphasis on foods used in Hawaii. For general students, men and women. Not open to HE majors.

127 [HS 157] DIET THERAPY (3) II  
(2 lb, 1 Lab)  
COOKSEY  
Adaptation of normal nutrition to meet special dietary needs in abnormal conditions. For nursing students. Pre: Home Economics 126. Lab fee $5.00.

(2 Lab)  
UMBEL  
Pattern blocking and costume draping; fitting techniques and design selection for individuals. Pre: Home Economics 113 or consent of instructor. Fee $4.00.

217 [HA 253] ADVANCED CLOTHING (3) II  
(2 Lab)  
UMBEL  
Study of fabrics, designs, and techniques in clothing construction; use of commercial patterns. Pre: Home Economics 113, or consent of instructor. Lab fee $2.00.

218 [HA 152] HISTORIC COSTUME (2) II  
FURER  
Survey of historic costume, showing how fashion has reflected the life of the people. Historic costume as inspiration for modern dress.

221 [HS 152] FOOD PREPARATION (3) I, II  
(2 3-Hr Lab)  
BARTOW  
Problems in preparation of adequate meals; practical experience in meal planning, preparation, and service. Not open to HE majors. Lab fee $8.00.

228 [HS 270] NUTRITION FOR PUBLIC HEALTH NURSES (3) I  
(2 Lab, 1 Lab)  
COOKSEY, GRUELLE  
Dietary needs of individuals and families; emphasis on nutritive values of local foods and racial diets. Lab fee $5.00.

234 [HS 260] QUANTITY COOKERY (3) I  
(1 Lab, 2 Lab)  
MURAKAMI  
Food problems of institutions; preparation and serving of food in large quantities, menu planning, and food costs. Pre: Home Economics 123.

235 [HS 263] INSTITUTIONAL BUYING (3) II  
STAFF  
Selection and purchase of foods and equipment for an institution. Pre: credit or concurrent registration in Home Economics 234.

236 [HS 261] INSTITUTIONAL MANAGEMENT (3) I  
STAFF  
Organization and administration of food departments in institutions such as college cafeterias, college residence halls, and hospitals. Pre: Home Economics 234.

237 [HS 265] INSTITUTIONAL ACCOUNTS (3) II  
(1 Lab, 2 Lab)  
STAFF  
Principles of accounting applied to management of school cafeterias, tearooms, residence halls, and other food-service units. Pre: Home Economics 234.

240 [HS 272] ELEMENTARY NUTRITION (2) I  
COOKSEY  
Basic principles of nutrition. Pre: Home Economics 123 or consent of instructor.

241 LABORATORY IN ELEMENTARY NUTRITION (2) I  
(2 Lab)  
COOKSEY  
Quantitative study of food materials, calculation of food values and food requirements. Credit or concurrent registration in Home Economics 240. Lab fee $8.00.

250 HOME MANAGEMENT (3) I  
(2 Lab, 1 Lab)  
GRUELLE  
Contribution of homemaker and family to better home living; management of time, energy, and money; selection and care of furnishings.

251 [HE 255] HOUSEHOLD EQUIPMENT (2) II  
(1 Lab, 1 Lab)  
SIDWELL  
Selection, care, repair, use, and limitations of gas and electrical appliances; demonstration techniques.

252 [HE 254] FAMILY HOUSING (2) I  
(2 Lab)  
UMBEL  
Evaluation of housing; needs, convenience, economy, aesthetic qualities, safety, health, etc. Pre: Art 104 or 132, or consent of instructor. Lab fee $2.00.
253 [HE 256] HOME FURNISHINGS (2) II (2 Lb) UMBEL
Selection and arrangement of furnishings and accessories in relation to family living. Pre: Home Economics 252. Lab fee $2.00.

258 [HE 291] HOME-MANAGEMENT LABORATORY (4) I, II SIDWELL
Living in a supervised residence for six weeks; practical application of training in home economics. Students share subsistence cost. Pre: senior standing.

260 [HE 201] CONSUMER EDUCATION (2) I SIDWELL
The marketing system as it affects consumers. Better buying, consumer protection and responsibility. Pre: Economics 140 or 150.

262 EDUCATION FOR FAMILY LIFE (3) I, II SIDWELL
Premarital factors affecting relationship problems in the family. Emphasis upon individual problems. Open to men and women.

270 [HE 251] HOME ECONOMICS EDUCATION (3) II TULL
Curriculum content, teaching procedures, and current educational philosophies and practices in home economics education. Pre: Psychology 102 or 104.

338 [HS 266] RESIDENCE HALL MANAGEMENT (4) I, II BOATMAN
Planning and directing preparation of meals in a university women’s residence hall; housekeeping. Pre: Home Economics 234, 235.

340 [HS 264] PROBLEMS IN HOSPITAL MANAGEMENT (4) I, II BOATMAN
Field practice for senior and graduate student dietitians in an approved institution. Pre: Home Economics 234, 243, 445; consent of instructor.

399 [299] DIRECTED READING OR RESEARCH (Ar.) I, II STAFF
(1) Agricultural extension, (2) child development, (3) clothing selection or construction, (4) consumer problems, (5) dietary problems, (6) experimental cookery, (7) historic costume or design, (8) home economics education, (9) home management, (10) nutrition, (11) related art, (12) textiles. Limited to senior majors with 2.7 grade-point ratio in home economics.

441 [HS 273] FOOD HABITS IN HAWAII (3) II (1 L, 2 Lb) GRUELLE
Meals for various racial groups at different income levels; emphasis on adequate diets at minimum cost. Pre: Home Economics 240, 241. Lab fee $8.00.

443 [HS 277] ADVANCED NUTRITION (3) II (2 L, 1 Lb) FORKER

445 [HS 250] DIET AND DISEASE (3) II (2 L, 1 Lb) COOKSEY
Diet therapy under abnormal conditions. Pre: credit or concurrent registration in Home Economics 443. Lab fee $5.00.

447 [HS 351] SEMINAR IN NUTRITION (1) II STAFF
Study and discussion of significant topics and problems in the field of nutrition. May be repeated. Pre: consent of instructor.

470 [HE 360] SPECIAL PROBLEMS IN HOME ECONOMICS (2) I, II TULL
Development of teaching material. Class and individual problems selected according to the needs of the fifth-year students in home economics education.

651 [HS 301] DIETARY STUDIES (Ar.) I STAFF
Individual, group, family, and/or institutional studies of the nutritive value of diets. Pre: Home Economics 443; consent of instructor.

652 [HS 305] LABORATORY METHODS IN NUTRITION (3) I FORKER
Experiments; vitamin determinations; food analyses; basal metabolism; balance experiments with animals or humans. Pre: Home Economics 443; Chemistry 132, 171. Lab fee $10.00.
699 [300] DIRECTED READING OR RESEARCH (Ar.) I, II
(1) Nutritional investigations; animal and human feeding experiments. Pre: Home Economics 443 and consent of instructor. Lab. fee $3.00 per credit hour—Forker; (2) agricultural extension; (3) clothing and textiles, (4) foods and nutrition, (5) home economics education, (6) home management, (7) institutional management. Pre: consent of department chairman and instructor.

Interdepartmental Courses

120–121 INTRODUCTION TO SCIENCE (4–4) Yr.
BERNATOWICZ, STAFF
Nature and objectives; understanding of nature; relationships of science and society. Lab fee $2.50 each semester.

600 [330] PACIFIC ISLANDS RESEARCH (3) I, II
CROWELL, MELLER
Interdepartmental seminar dealing with scientific hypotheses about social and cultural change in the Pacific islands area. May be repeated. Pre: consent of instructor.

750 [350] SEMINAR IN CURRENT PROBLEMS OF NATIONAL DEVELOPMENT (2) I
WHITE
See History 750.

790 [340] SEMINAR IN HISTORY AND LITERATURE (2–2) Yr.
BOUSLOG, STALKER
See English 790 and History 790.

Library Science

Students may enroll in library science courses only after consultation with instructors concerned.

300 [260] LIBRARY PARTICIPATION (1–1) Yr.
CRAWFORD, GEISER
Observation and participation in routines designed to determine aptitude for school library work. Second semester sophomores may register.

310 THE LIBRARY IN TEACHING (2) I, II
CRAWFORD
For prospective teachers and librarians. Use of the library in classroom instruction; use of school and public library resources; teaching library skills.

320 REFERENCE MATERIALS (3) I, II
Introduction to basic types of reference sources; their evaluation, content and use. Not limited to College of Education students.

330 [284] BOOK SELECTION AND READING GUIDANCE (3) II
GEISER
Selection and use of school library materials in terms of the curriculum and children's needs and interests. Pre: Education 225 or 235.

340 [268] CATALOGUING AND CLASSIFICATION (3) I
CRAWFORD
Introduction to the Dewey Decimal classification; dictionary cataloguing; subject headings and filing. Pre: typing ability. Lab fee $3.00.

380 [262] ADMINISTRATION OF SCHOOL LIBRARIES (3) I, II
CRAWFORD
Methods of organizing various types of library materials; keeping essential records. Objectives and contributions of the school library to the educational program.

590 [354] LIBRARY INTERNSHIP (14) I, II
CRAWFORD, GEISER
Full-time supervised service in laboratory or public school libraries. Pre: Library Science 300, 310, 320, 330, 340, 380; Education 680.
610 [286] PROMOTING LIBRARY USE (2) II CRAWFORD
Public relations techniques; book talks, story telling, library instruction, exhibits, clubs, and methods of integrating library and curriculum.

640 ADVANCED TECHNICAL PROCESSES (2) II CRAWFORD
More detailed cataloguing problems, including the organization of audio-visual aids. Pre: typing ability. Lab fee $3.00.

680 [290] SEMINAR IN SCHOOL LIBRARY PROBLEMS (2) I CRAWFORD
Analysis of major problems, issues, and practices in the school library field. For in-service librarians and graduate students.

Mathematics

Professors GREGORY, TOWNES; Associate Professor COMBA; Assistant Professors CLARK, F. DAVIS, RIFFENBURGH, SPILLER, YAMAUCHI, I. C. YOUNG; Instructors C. LEONG, SIU, G. WHITE

101 [149] INTERMEDIATE ALGEBRA (3) I, II WHITE

102 [150] PLANE TRIGONOMETRY (3) I, II STAFF
Pre: two years of high school algebra or Mathematics 101; one year of plane geometry. No credit if taken after 104.

103 [151] COLLEGE ALGEBRA (3) I, II STAFF
Pre: two years of high school algebra or Mathematics 101.

104 [152] PLANE ANALYTICAL GEOMETRY (3) I, II STAFF
Pre: Mathematics 102; credit or concurrent registration in Mathematics 103.

111 [120] INTRODUCTION TO MATHEMATICS (3) I DAVIS
To acquaint the nonspecialist with the position of mathematics in modern culture.

131 [153] DIFFERENTIAL CALCULUS (3) I, II STAFF
Pre: Mathematics 104.

132 [154] INTEGRAL CALCULUS (3) I, II STAFF
Pre: Mathematics 131.

133 [155] CALCULUS APPLICATIONS (3) I, II TOWNES, GREGORY
Includes partial differentiation, multiple integration, and elementary differential equations. Pre: Mathematics 132.

399 [299] DIRECTED READING (Ar.) I, II STAFF
Individual reading in advanced mathematics. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in mathematics.

401–402 [252–253] DIFFERENTIAL EQUATIONS (3–3) Yr. GREGORY

421 [279] INTRODUCTION TO MODERN ALGEBRA (3) I TOWNES
Matrices, determinants, groups, properties of number systems, and the theory of fields. Pre: consent of instructor.

422 [275] MATRICES AND THEORY OF EQUATIONS (3) II TOWNES
431–432 [254–255] ADVANCED CALCULUS (3–3) Yr. COMBA
Limits and continuity, functions of several variables, multiple integrals, infinite series, calculus of variations. Pre: Mathematics 133.

442 [276] VECTOR ANALYSIS (3) II YAMAUCHI

444 [278] THEORY OF FUNCTIONS OF A COMPLEX VARIABLE (3) II YAMAUCHI
Residue theory; contour integration; other topics of analysis. Pre: Mathematics 153.

471 [280] PROBABILITY (3) I RIFFENBURGH
Probability laws, discrete and continuous probability distributions, expectations, moments, cumulants, generating functions. Pre: Mathematics 133.

472 [281] STATISTICAL INFECTION (3) II RIFFENBURGH
Sampling and parameter estimation, tests of hypotheses, correlation, regression, analysis of variance, sequential analysis, rank order statistics. Pre: Mathematics 471.

699 [300] DIRECTED READING OR RESEARCH (Ar.) I, II STAFF
Pre: graduate standing in mathematics and consent of department chairman.

Medical Technology

To meet the technical requirements for the Registry of Medical Technologists of the American Society of Clinical Pathologists, this sequence of courses continues for twelve calendar months commencing with the official opening of summer sessions.

266 MEDICAL TECHNOLOGY (4) KAGAWA
Student technician training in a cooperating laboratory under the supervision of a qualified director. Pre: Bacteriology 262, 464. Offered only in summer sessions.

267–268 MEDICAL TECHNOLOGY (12–12) Yr. KAGAWA
Student technician training in a cooperating laboratory under the supervision of a qualified director. Pre: Medical Technology 266.

Military Science

Professor Hines; Associate Professor Bruyere; Assistant Professors Davis, McCaskill; Instructors Allen, Barnes, Cabral, Savery, Young

Uniform and awards fee, 75 cents each semester (not refundable).

101–102 [100] FIRST-YEAR MILITARY SCIENCE (1–1) Yr. STAFF
American military history, organization of the Army and ROTC, individual weapons and marksmanship, school of the soldier, exercise of command.

151–152 [150] SECOND-YEAR MILITARY SCIENCE (1–1) Yr. STAFF
Crew-served weapons and gunnery, map and aerial photograph reading, role of the Army, school of the soldier, exercise of command.

201–202 [200] THIRD-YEAR MILITARY SCIENCE (3–3) Yr. STAFF
Advanced military subjects and training in leadership leading to an Army Reserve commission. Selected students only. Pre: Military Science 151, 152, or equivalent.

230 [255] SUMMER CAMP (2) STAFF
251-252 [250] FOURTH-YEAR MILITARY SCIENCE (3-3) Yr.       STAFF
Logistics, operations, military administration and personnel management, school of

Music

Professor Rian; Associate Professors B. Smith, Vaught, Vine; Assistant Professors Ka-
hananui, Kerr; Instructors Brown, Gillett, Mundy, Saclausa, Uchima; Lecturer
Alexander

109 [166] UNIVERSITY FIELD BAND (1) I, II       BROWN
For ROTC band members but open to others. Two sessions weekly with an addi-
tional hour arranged.

111 [106] GROUP VOICE INSTRUCTION (1) I, II      STAFF
Basic principles of voice production and elementary music skills in classes of twenty.

112 [107] GROUP VOICE INSTRUCTION (1) I, II      STAFF
Continuation of 111. Pre: Music 111 or consent of instructor.

140 RECREATIONAL MUSIC (2) I       MUNDY
Elementary music skills including instruction on the ukulele. For recreation majors
but open to others.

150 ELEMENTARY MUSICIANSHIP (3) I, II       STAFF
Skills covering terminology, notation, sight singing, rhythmic and melodic dictation,
and ukulele instruction. For prospective teachers.

151-152 [159] INSTRUMENTAL MUSIC (2-2) Yr.       STAFF
Basic skills and teaching methods on stringed instruments. For students preparing
to teach instrumental music.

153 [159] INSTRUMENTAL MUSIC (2) II       STAFF
Similar to 151-152, with woodwind instruments.

154 [159] INSTRUMENTAL MUSIC (2) I       STAFF
Similar to 153, with brass instruments.

155 [159] INSTRUMENTAL MUSIC (2) I       STAFF
Similar to 154, with percussion instruments.

160 [110] INTRODUCTION TO MUSIC LITERATURE (3) I, II       VAUGHT
Orchestral literature from the classical through the modern period. From the listener's
point of view. Fee $2.00.

181-182 [160-161] THEORY (4-4) Yr.       SMITH
Basic rhythmic, melodic, harmonic, and formal elements of eighteenth and nine-
teenth century music.

183-184 [260-261] ADVANCED THEORY (3-3) Yr.       SMITH
Continuation of 182. Bach chorale style emphasized the first semester. Contemporary styles the second semester. Pre: Music 182.

200 [209] UNIVERSITY CHORUS (1) I, II       STAFF
Three hours a week. May be repeated.

251-252 MUSIC, ELEMENTARY CURRICULUM (2-2) Yr.       GILLET, KAHANANUI
Organization and direction of music in childhood experience. Materials and pro-
cedures. Pre: Music 150; junior standing in education. 251 is prerequisite to 252.
253 MUSIC, ELEMENTARY CURRICULUM (2) I  
   Combination of 251-252. Auxiliary Teacher Training Program only.

257-258 [270-271] CONDUCTING (2-2) Yr.  
   Preparation for school, community, and church conducting. Score reading, organizing and conducting choral and instrumental groups. Pre: Music 152, 182.

259 [287] PIANO METHODS (2) I  
   Methods and materials for class and private instruction in piano. Pre: Music 182 or consent of instructor.

261 [220] MUSIC OF THE BAROQUE PERIOD (2) I  
   Music literature 1580-1750, especially Bach and Handel. Oratorio, opera, and instrumental. Fee $2.00.

262 [221] MUSIC OF THE CLASSIC PERIOD (2) II  
   Haydn, Mozart, and Beethoven. Opera, choral, and instrumental music. Fee $2.00.

263 [222] MUSIC OF THE ROMANTIC PERIOD (2) I  
   Emergence of the romantic style of the nineteenth century. Major composers. Fee $2.00. (Not offered 1959-60.)

264 [223] CONTEMPORARY MUSIC (2) II  
   From Debussy to the present. Compositions by Schoenberg, Bartok, Hindemith, Stravinsky, and contemporary American composers. Fee $2.00. (Not offered 1959-60.)

269 [289] PIANO LITERATURE (2) I  
   Survey of styles and forms of music for the piano and its forerunners. Pre: Music 138 (piano) or consent of instructor. (Not offered 1959-60.)

281-282 [280-281] ORCHESTRATION (2-2) Yr.  
   Arranging and composing for band, orchestra, and chamber groups. Pre: Music 152, 182, or consent of instructor.

300 [210] UNIVERSITY CONCERT CHOIR (1-1) Yr.  
   Three hours a week. May be repeated. Auditions required.

301 [211] ENSEMBLE MUSIC (1) I, II  
   Vocal (11, opera workshop; 12, University singers); 21, keyboard; 31, string; 41, woodwind; 51, brass; keyboard instrumental ensembles. May be repeated. Pre: consent of instructor.

309 [266] UNIVERSITY CONCERT BAND (1) I, II  
   Three hours a week. May be repeated.

361-362 [272-273] HISTORY AND LITERATURE OF MUSIC (3-3) Yr.  
   Development of music from its origins to the present. Nationalities, schools, and composers. Pre: advanced standing in music. Fee $2.00.

383 [265] COUNTERPOINT (2) I  
   Contrapuntal elements of music and their use from the fourteenth century to the present. Pre: Music 182.

384 [268] COMPOSITION (2) II  
   Selected masterpieces and creative writing in smaller forms. Pre: recommendation of the department.

470 [230] MUSIC OF THE FAR EAST (3) II  
   Introduction to the folk and traditional music of Asia. Recordings, demonstrations, pictures, etc. Fee $3.00.
APPLIED MUSIC

Instruction is given in piano, organ, voice, and orchestral instruments in individual half-hour lessons either once or twice a week. Lessons are not made up unless the instructor is notified a reasonable time in advance of the absence. Lessons occurring on holidays are not made up.

Registration for lessons and choice of teachers must be approved by the department chairman.

One public appearance in both the junior and senior levels is required of all students majoring in music. This requirement is satisfied by successful participation in University student recitals.

Assignment to applied music courses is based on tests and auditions given by the department during the Freshman Orientation Period. To receive credit in Applied Music 135-136 and above, the following minimum requirements must be met:

Satisfactory work in Music 181-182, or the equivalent.

Piano and Organ—Play any major or minor scale in octaves, at a moderate tempo; Bach Two-Part Invention or a dance from one of the suites; a sonata by Haydn or Mozart; a modern composition as difficult as the sonata.

Voice—Sing on pitch, with correct phrasing and musical intelligence, standard songs in good English.

Orchestral instruments—Entrance requirements may be had by writing the Music Department.

FEES PER SEMESTER

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Fee</th>
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<tbody>
<tr>
<td>121-122</td>
<td>Class instruction (1-1) Yr.</td>
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<tr>
<td>123-124</td>
<td>Class instruction at the second-year level in voice</td>
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<tr>
<td>131-132</td>
<td>Individual instruction (Ar.) Yr.</td>
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<tr>
<td>135-136</td>
<td>Individual instruction (Ar.) Yr.</td>
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<tr>
<td>137-138</td>
<td>Individual instruction (Ar.) Yr.</td>
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<tr>
<td>235-236</td>
<td>Individual instruction (Ar.) Yr.</td>
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Class instruction at the beginning level in piano, voice, orchestra, and band instruments.

Class instruction at the second-year level in voice.

Piano, organ, voice, or orchestral instruments. For nonmusic majors, or music majors who intend it as a secondary medium of performance. May be repeated.

Piano, organ, voice, or orchestral instruments at the freshman level. For prospective music majors. Pre: Music 132 or consent of instructor.

Piano, organ, voice, or orchestral instruments at the sophomore level. For prospective music majors. Pre: Music 136 or consent of instructor.

Piano, voice, organ, or orchestral instruments at the junior level. Recital required second semester (236). For music majors. Pre: Music 138 or consent of instructor.
237–238 [269] INDIVIDUAL INSTRUCTION (Ar.) Yr. 
   Piano, voice, organ, or orchestral instruments at the senior level. Recital required for graduation (238-71). For music majors. Pre: Music 236 or consent of instructor.

435–436 [349] INDIVIDUAL INSTRUCTION (Ar.) Yr. 
   Piano, voice, organ, or orchestral instruments at the graduate level. For music majors. Pre: Music 238 or consent of instructor.

Nursing

Professor V. Jones; Assistant Professors Adam, Canfield, Frojen, Gross, E. R. Smith, Wolfe; Instructors Cranch, Najita, Ozaki, Schmidt; Lecturers Harrison, Hirschy, McLaren, Uyeda

Registration in nursing courses is restricted to students in the College of Nursing except by special permission.

101–102 [100–101] INTRODUCTION TO NURSING (2–2) Yr. 
   REICHERT
   Functions of the nurse in the community: professional and ethical responsibilities. Supervised care of patients to develop beginning nursing skills.

110–111 NURSING I, II (8–8) Yr. 
   SCHMIDT, SMITH, STAFF
   Study and supervised experience in total care of patients with medical and surgical disorders, including operating-room nursing.

115 PHARMACOLOGY (3) I 
   SCHMIDT
   Study of drugs; expected action, uses, effects, toxicology. Common dosage and methods of administration. Associated fundamentals of mathematics and terminology.

120 [210] TUBERCULOSIS NURSING (6) 
   UYEDA
   Study and supervised experience in total care of patients with tuberculosis.

220–230 MATERNAL AND CHILD HEALTH NURSING (8–8) I, II 
   NAJITA, OZAKI
   Study and supervised experience in total care of maternity patients, and of children from birth through adolescence.

231 HUMAN RELATIONS IN NURSING (2) I 
   CANFIELD
   Study and application of principles and methods of interviewing pertinent to nursing care. Emphasis on interpersonal relationships.

281 HEALTH TEACHING IN NURSING (2) II 
   CANFIELD, JONES
   Basic principles underlying teaching and learning; selection and organization of materials and methods for groups and individuals.

300 [200] PSYCHIATRIC NURSING (7) I, II 
   CRANCH
   Mental health concepts in nursing and their significance to the nurse herself. Guided experience in total care of patients with mental illness.

340 [240] PUBLIC HEALTH NURSING (7) I, II 
   ADAM
   Principles of public health nursing and guided experience, including home visiting, clinic services, school health programs, and use of community agencies.

345 [245] SENIOR NURSING (10) I, II 
   FROJEN, WOLFE
   Trends and demands in nursing in light of their historical background. Experience in team nursing and managerial responsibilities.

   REICHERT
   Methods of planning, practice, organization, evaluation and supervision of comprehensive nursing; solution of problems through scientific principles. Graduate nurses only.
357  OCCUPATIONAL HEALTH NURSING (3) II  JONES
Functions and activities of nurses in industry. Distinctive aspects and special health and human relations problems. Pre: consent of instructor.

380  [280]  PUBLIC HEALTH NURSING (2-2) Yr.  CANFIELD
Principles, functions, responsibilities, and relationships in public health as a family and community service; orientation to field practice. Graduate nurses only.

383  [283]  PUBLIC HEALTH (3) I  HIRSCHY
Principles of public health and preventive medicine; application in protecting the health of citizens through organized community effort.

390  [290]  PUBLIC HEALTH NURSING FIELD PROGRAM (4-4) Yr.  McLaren
Guided practice in application of principles of public health nursing in an official generalized service. Graduate nurses only.

391  [291]  INTERVIEWING IN PUBLIC HEALTH NURSING (3) I, II  CANFIELD
Study and application of principles and methods of interviewing in public health nursing activities. Graduate nurses only.

393  [293]  DYNAMICS OF DEVELOPMENT (3) II  HARRISON
Study of the successive stages of psychosocial development of the individual and their significance in interpersonal relationships.

399  [299]  DIRECTED READING (Ar.) I, II  STAFF
(1) Public health nursing, (2) nursing service, (3) nursing education. Limited to seniors in nursing with 2.7 grade-point ratio, or 3.0 grade-point ratio in nursing.

Oceanography

The University does not offer a degree program in this area, but the courses listed below are available. Course descriptions are given under the respective departments.

BOTANY 586  BIOLOGICAL PRODUCTIVITY OF THE SEA (3) II  AUSTIN, DOTY
CHEMISTRY 580  OCEANOGRAPHIC CHEMISTRY (3) II  ZEITLIN
GEOLGY 320  MARINE GEOLOGY
ZOOLOGY 201  SCIENCE OF THE SEA (3) I  HIATT
ZOOLOGY 536  OCEANOGRAPHY (3) II  BANNER

Philosophy

Senior Professor MOORE; Professor McCarthy; Associate Professor Nagley

100  INTRODUCTION TO PHILOSOPHY (3) I, II  STAFF
Problems, methods, and fields of philosophy.

110  BUSINESS ETHICS (3) I, II  MOORE
Consideration of basic ethical concepts for business enterprise and the professions.

150  HISTORY OF PHILOSOPHY (3) I  MOORE
Western philosophy from the era of great Greek thinkers to the Renaissance. Pre: sophomore standing.

155  [151]  MODERN PHILOSOPHY (3) II  MOORE
Western philosophy from the Renaissance to the present. Desirable preparation: Philosophy 150.
250 [200] ETHICS (3) I, II
Relevance of the major theories of the good life to the process of decision making.

350 [280] LOGIC (3) I, II
Principles of deductive and inductive logic, traditional and modern.

399 [299] DIRECTED READING (Ar.) I, II
(1) Metaphysics, (2) methodology, (5) ethics, (4) Indian philosophy, (5) Chinese philosophy, (6) Buddhist philosophy, (7) East-West philosophy. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in philosophy.

400 [210] CONTEMPORARY PHILOSOPHY (3) II
Survey of recent developments in Western philosophy. Pre: one of the following, Philosophy 100, 150, 155.

410 [268] AMERICAN PHILOSOPHY (3) I
Major trends in the development of American philosophy in relation to socio-political background and influence.

420 [253] PROBLEMS OF PHILOSOPHY (3) II
Persistent specific problems of philosophy, primarily those concerning nature, man, God, etc. (Not offered 1959-60.)

450 [270] INTRODUCTION TO INDIAN PHILOSOPHY (2) I
Philosophical systems and movements in India; the Vedas, Upanishads, Six Systems of Hinduism, Charvaka, Jainism, and Buddhism. (Not offered 1959-60.)

455 [271] INTRODUCTION TO CHINESE PHILOSOPHY (2) II
Historical survey of the important philosophical schools and tendencies in China, ancient and modern. (Not offered 1959-60.)

460 INTRODUCTION TO BUDDHIST PHILOSOPHY (2) I
Survey of the basic schools and tenets of Buddhist philosophy.

465 [265] PHILOSOPHY, EAST AND WEST (2) II
Basic systems and methods of Eastern and Western philosophy, with special attention to similarities and contrasts.

500 [262] PHILOSOPHY OF ART (3) I
Study of art from the points of view of creation, appreciation, and criticism. Particular attention to painting, sculpture, music, and poetry.

505 [275] PHILOSOPHY OF RELIGION (3) I
Western religious philosophy: Thomism, Mysticism, Reformationism, Rationalism, Agnosticism, Romanticism, Humanism, and Existentialism. (Not offered 1959-60.)

510 [240] PHILOSOPHY IN LITERATURE (3) II
Literary expression of philosophical ideas. Consideration of such writers as Beckett, Camus, Hemingway, Kafka, Rilke, Sartre, and T. S. Eliot.

515 PHILOSOPHICAL INTERPRETATIONS OF HISTORY (3) I
Occidental and Oriental conceptions of the meaning of historical processes. Particular attention to Augustine, Hegel, Marx-Engels.

520 EXISTENTIAL PHILOSOPHY (3) II
Survey of the main themes of European existential philosophy. Particular attention to Kierkegaard, Heidegger, Jaspers, Buber, and Sartre.

550 [287] SCIENTIFIC METHOD (3) II
A systematic study of the methods and procedures of reliable knowledge in the formal, natural, and social sciences. (Not offered 1959-60.)
555 [285] FOUNDATIONS OF SCIENCE (3) I
Philosophical foundations and implications of modern physical science. Particular reference to Copernicus, Galileo, Newton, and Einstein.

560 [286] PHILOSOPHY IN CONTEMPORARY SCIENCE (3) I
Philosophical implications of recent trends in physical science. Particular attention to the development of operationalism. (Not offered 1959-60.)

610 [310] SEMINAR IN PROBLEMS OF PHILOSOPHY (3) II
Aims, methods, and fields of philosophy. Pre: graduate standing; consent of instructor. May be repeated.

699 [300] READING AND RESEARCH (Ar.) I, II
Reading and research in the same fields as in 399. Pre: graduate standing; consent of instructor.

Physics

Professors I. Miyake, Watanabe; Associate Professors Kudar, Steiger; Assistant Professors McAllister; Instructors Chang, Metzger

Mathematics 132 and Physics 160-161 or 180-181 are prerequisite to all courses numbered 200 or above.

110 ASTRONOMY (3) II
Introduction to the nature of the astronomical universe; survey of observational methods and historical development. Pre: Mathematics 101 or equivalent.

151 FUNDAMENTALS OF COMMUNICATION (3) I (2 L, 1 Lb)
An electricity course covering DC and AC theory and applications; emphasis on communication circuits. Pre: Mathematics 102. Lab fee $6.00.

153 PRINCIPLES OF RADIO (3) II (2 L, 1 Lb)
Fundamentals of radio theory and design; construction of receiving and amplifying equipment. Pre: Physics 151. Lab fee $6.00.

160-161 COLLEGE PHYSICS (4-4) Yr. (3 L, 1 Lb)
Fundamental principles, theories, and experimental methods. Pre: Mathematics 102 and credit or concurrent registration in Mathematics 103. Lab fee $6.00 each semester.

180-181 ENGINEERING PHYSICS (5-5) Yr. (4 L, 1 Lb)
Basic principles, theories, experimental methods, and use of calculus. Pre: credit or concurrent registration in Mathematics 132. Lab fee $6.00 each semester.

253-254 ELECTRICAL MEASUREMENTS (1-1) Yr.
Experimental determination of fundamental electromagnetic quantities and applications to high vacuum and microwaves. Lab fee $6.00 each semester.

280 A SURVEY OF MODERN PHYSICS (3) I
Introductory treatment of quantization of energy and atomicity of matter.

310 THEORETICAL MECHANICS (3) I

350 ELECTRICITY AND MAGNETISM (3) I
Experimental laws, field theory, and mathematical application to special problems.

399 INDIVIDUAL WORK IN ADVANCED PHYSICS (Ar.) I, II
Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in physics.
420 SOUNO (3) II
Theory of sound and its application.

440 ELECTRONICS (3) II

460 LIGHT (3) II
Geometrical optics, interference, diffraction, and other topics of physical optics.

461 OPTICS LABORATORY (1) II (1 Lab)
Experiments in geometric and physical optics. Pre: credit or concurrent registration in Physics 460. Lab fee $6.00.

480 ATOMIC AND NUCLEAR PHYSICS (3) II
Quantum mechanics, atomic and nuclear structure, nuclear reactions, cosmic rays, and electrons in solids. Pre: Physics 280.

530 HEAT (3) I
Laws of thermodynamics, heat transfer, kinetic theory, and statistical mechanics.

550 ELECTROMAGNETIC WAVES (3) II
Field equations, plane and spherical waves, and guided waves. Pre: Physics 350; Mathematics 133.

610 THEORETICAL PHYSICS—ANALYTICAL DYNAMICS (3) I
Dynamics of rigid bodies and fluids, Lagrangian and Hamiltonian methods, and theory of vibration. Pre: Physics 263; Mathematics 402.

650 THEORETICAL PHYSICS—ELECTROMAGNETISM (3) II

670 INTRODUCTION TO QUANTUM MECHANICS (3) I
McAllister
Formulation of theory and solution of Schroedinger’s equation. Pre: Physics 280 or equivalent; Mathematics 133.

680 ATOMIC AND MOLECULAR SPECTRA (3) II
Watanabe
Study of atomic and molecular structure by quantum mechanical interpretation of line, band, and continuous spectra. Pre: Physics 670.

690-691 SEMINAR (1-1) Yr.
Staff
Discussion and reports on physical theory and recent development. Pre: graduate standing or consent of the chairman.

Psychology

Senior Professor Livesay; Professors Bitner, Herrick, Vinacke, Weaver; Associate Professors Arkoff, Crowell, Diamond, Dzeigen, Dole; Assistant Professor Grinder

Psychology 102 is prerequisite to all other courses except 104. Qualified seniors may enroll in some graduate courses with consent of instructor.

102 [150] GENERAL PSYCHOLOGY (4) I, II (3 L, 1 Lab)
Staff
Principles of human behavior. Individual differences, motivation, emotion, perceiving, learning, etc. Lab fee $1.00. Not open to those who have had 104.

104 [156] INTRODUCTION TO PSYCHOLOGY (3) I, II
Livesay
Similar to 102 but without laboratory. Not open to those who have had 102.
150 [185] PSYCHOLOGY OF INFANCY AND CHILDHOOD (2) I, II
CROWELL, GRINDER
Principles basic to the normal development of the infant and child; emphasis upon physical, emotional, intellectual, and social development.

152 [186] PSYCHOLOGY OF ADOLESCENCE AND MATURITY (2) I, II
GRINDER, HERRICK
Developmental characteristics during preadolescent, adolescent, and adult years; emphasis upon physical, emotional, intellectual, and social factors and changes.

230 [210] INTRODUCTORY EXPERIMENTAL PSYCHOLOGY (4) I
(2 L, 1 4-Hr Lab)
DIGMAN
Basic methodology and experimental literature. Sensation, perception, emotion, conditioning, thinking, social phenomena.

270 [250] APPLIED PSYCHOLOGY (3) I
WEAVER
Application of psychological principles to problems of personal efficiency and to the fields of commerce, highway traffic, law, and medicine.

280 [191] PSYCHOLOGY OF ADJUSTMENT (3) I, II
ARKOFF
Understanding and improving personal adjustment. Adjustment in family, school, vocation, sex, marriage, and later maturity.

404 [284] PSYCHOLOGY OF MOTIVATION (2) I
VINACKE
Instinct, drive, motives, emotion, and attitudes; their biological bases, modification, and organization. (Alt. yrs.; offered 1959–60.)

406 [272] PSYCHOLOGY OF LEARNING (3) I
DIGMAN
The major conditions influencing learning and forgetting; the role of motivation, rewards, and practice; theoretical interpretations of the learning process.

408 [274] PSYCHOLOGY OF THINKING (2) II
VINACKE
Concept formation, problem solving, creative imagination, autistic thinking, attitudes, and opinions. (Not offered 1959–60.)

410 [275] HISTORY OF PSYCHOLOGY (3) I
HERRICK
The background of modern psychology. Origins and development of contemporary points of view. Relationship to Western thought.

420 [260] STATISTICAL TECHNIQUES (3) I, II
WEAVER
Measures of central tendency and variability; graphic methods; correlation; reliability; tests of significance. Pre: two years of high school algebra or Mathematics 101.

426 [264] PSYCHOLOGICAL MEASUREMENTS (3) I
WEAVER
Construction, validation, and administration of tests; interpretation and application of scores; familiarization with types of group tests. Pre: Psychology 420.

430 [267] INTERMEDIATE EXPERIMENTAL PSYCHOLOGY (3) II
DIAMOND
Original experiments with emphasis upon laboratory techniques. Control of variables, apparatus design, and statistics in research.

440 [270] PHYSIOLOGICAL PSYCHOLOGY (3) I
DIAMOND
Physiological explanation of behavior in terms of sense organs, the nervous system, and muscles and glands.

456 [293] PSYCHOLOGY OF EXCEPTIONAL CHILDREN (3) I
CROWELL
Evaluation of physical, emotional, and intellectual deviations and their effects upon the growth and development of children. Pre: Psychology 150, 152.

460 [283] PSYCHOLOGY OF PERSONALITY (3) I
(2 L, 1 Lab)
VINACKE
Development of personality; components; critical evaluation of research. Lab fee $2.00.

462 [280] SOCIAL PSYCHOLOGY (2) II
VINACKE
Psychology of human relations; psychological factors that determine the behavior of an individual in his social relationships. (Not offered 1959–60.)
463 [281] SOCIAL PSYCHOLOGY LABORATORY (1) II VINACKE
   Experimental study of human relations; techniques pertinent to group work; evaluation. Pre: credit or registration in 402. Lab fee $1.00. (Not offered 1959-60.)

468 [286] POLITICAL PSYCHOLOGY (2) I VINACKE
   Political behavior of individuals and groups; the voter, the politician, political parties; psychological problems which arise in the conduct of government. (Not offered 1959-60.)

472 [255] EDUCATIONAL PSYCHOLOGY (3) I, II GRINDER, LIVESAY
   Major factors of learning and mental health as they apply to the educative process.

474 [256] INDUSTRIAL AND BUSINESS PSYCHOLOGY (3) I, II WEaver
   Job analysis, rating methods, selection and classification, fatigue and efficiency, human engineering, safety, training, motivation, social factors.

480 [295] ABNORMAL PSYCHOLOGY (3) I, II CROWELL
   Nature and causes of psychoneuroses and psychoses; abnormalities of intelligence; incipient abnormal traits manifested in everyday life; psychotherapy.

574 [256] PROBLEMS IN INDUSTRIAL AND BUSINESS PSYCHOLOGY (3) II WEaver
   Consideration of special problems in the area. Pre: Psychology 474; consent of instructor.

600 [320, 321, 322] SEMINAR (2) I, II STAFF
   (1) General, (2) history and theory, (3) statistics and measurements, (4) experimental, (5) physiological, (6) personality, (7) social, (8) developmental, (9) applied, (10) clinical, (11) counseling. Pre: consent of instructor. May be repeated.

614 [382] CONTEMPORARY THEORY (3) II DIAMOND
   Examination of current theoretical systems. Special attention to meaning and uses of theory, theory construction, and basic concepts.

620 [360] ADVANCED STATISTICAL TECHNIQUES (3) II DIGMAN
   Sampling procedures, elementary probability theory, tests of statistical hypotheses, analysis of variance, correlational techniques, factor analysis.

630 [367] ADVANCED EXPERIMENTAL PSYCHOLOGY (3) I DIAMOND
   Advanced techniques and research procedures associated with experimental psychology.

642 [380] ADVANCED SOCIAL PSYCHOLOGY (3) II VINACKE
   Methods and objective verification of hypotheses; interpersonal relations, group structure and process, social conflict, propaganda, etc. (Not offered 1959-60.)

672 [351] ADVANCED EDUCATIONAL PSYCHOLOGY (3) II GRINDER
   Application of experimental evidence in psychology to major educational problems; the bearing of recent psychological theories upon education.

682 [362] PSYCHOLOGICAL APPRAISAL (3) I, II ARKOFF
   Practice in individual intelligence tests, primarily with nonclinical cases. Pre: Psychology 426; consent of instructor. Lab fee $5.00.

683 PSYCHOLOGICAL APPRAISAL (3) II ARKOFF
   Practice in individual intelligence tests and other special techniques, primarily with clinical cases. Pre: Psychology 682; consent of instructor. Lab fee $5.00.

684 [364] PSYCHOLOGICAL APPRAISAL (3) I ARKOFF
   Survey of individual personality tests with emphasis on the Rorschach and Thematic Apperception tests. Pre: Psychology 683; consent of instructor.
782 [354] PSYCHOLOGICAL COUNSELING (3) I
    Theory and technique in psychological counseling. Pre: Psychology 600-11; consent of instructor.

783 [363] PSYCHOLOGICAL COUNSELING (3) II
    Supervised experience in psychological counseling. Pre: Psychology 782; consent of instructor.

Religion

Assistant Professor Aoki

150 INTRODUCTION TO THE STUDY OF RELIGION (3) I
    The nature of religion; the world's living religions—Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, Islam.

151 RELIGION AND THE MEANING OF EXISTENCE (3) II
    Contemporary problems of religious thought: faith and knowledge, God, freedom, evil, man, science, and immortality.

200 UNDERSTANDING THE OLD TESTAMENT (3) I
    A study of the developing beliefs and practices of the Hebrew religion as set forth in the Old Testament. Emphasis on the meaning of its faith for the modern world.

201 UNDERSTANDING THE NEW TESTAMENT (3) II
    The origin and development of the early Christian message as set forth in the New Testament, with special attention to Jesus and Paul.

309 [209] THE LIFE AND TEACHINGS OF JESUS (3) II
    A critical study of the life and teachings of Jesus. An interpretation of the meaning of Jesus Christ for Christian faith.

310 [210] THE PROPHETS AND SAGES OF THE OLD TESTAMENT (3) I
    The prophetic and wisdom literature of the Old Testament.

321 [221] GREAT PERSONALITIES IN CHRISTIANITY (3) II
    An examination of the lives and thought of some outstanding representatives.

340 [240] WESTERN RELIGIOUS THOUGHT TO 1492 (3) I
    Ideas of major religious thinkers and movements in the history of the Western world to 1492; concluding with an evaluation of Roman Catholicism. (Not offered 1959-60.)

341 [241] WESTERN RELIGIOUS THOUGHT FROM 1500 (3) II
    The period of the Protestant Reformation to the present, with an evaluation of the Protestant movement. (Not offered 1959-60.)

    382: basic beliefs and practices of Hinduism, Confucianism, Taoism, Buddhism, Shintoism, Islam. 383: Judaism, Roman Catholicism, Protestantism, their history, beliefs, contributions. Semesters are independent. (Not offered 1959-60.)

386 [286] CHRISTIAN ETHICS (3) I
    A study of historical types of Christian ethics.
## Social Work

Professors Handley, Jambor; Associate Professors Cochran, Merritt, Walsh, Zaloha;

### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Instructor(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 [200]</td>
<td>THE FIELD OF SOCIAL WORK (3) I, II</td>
<td>STAFF</td>
<td>Nonprofessional orientation course intended to acquaint the student with the philosophy, scope, and aims of social work. Pre: junior standing.</td>
</tr>
<tr>
<td>375 [275]</td>
<td>INTRODUCTION TO SOCIAL GROUP WORK (3) II</td>
<td>ZALOHA</td>
<td>Introduction to the philosophy and aims underlying social group work.</td>
</tr>
<tr>
<td>605 [305]</td>
<td>SOCIAL CASEWORK (2) I</td>
<td>MERRITT</td>
<td>Introduction to the basic principles and processes of social casework.</td>
</tr>
<tr>
<td>608 [308]</td>
<td>SOCIAL GROUP WORK (2) I</td>
<td>ZALOHA</td>
<td>Introduction to the basic principles and processes of group work.</td>
</tr>
<tr>
<td>609 [309]</td>
<td>SOCIAL GROUP WORK (2) II</td>
<td>ZALOHA</td>
<td>Continuation of 608. Emphasis upon understanding the individual in groups, and skill in use of the helping process. Concurrent with 660-661. Pre: Social Work 608.</td>
</tr>
<tr>
<td>610-611 [310-311]</td>
<td>HUMAN GROWTH AND BEHAVIOR (3-3) Yr.</td>
<td>COCHRAN</td>
<td>Designed to provide a synthesized understanding of physical, mental, and emotional growth, with due regard to social and cultural influences on individual development.</td>
</tr>
<tr>
<td>626 [326]</td>
<td>TREATMENT OF JUVENILE DELinquency (2) II</td>
<td></td>
<td>Social work practice in relation to problems of juvenile delinquency.</td>
</tr>
<tr>
<td>650 [350]</td>
<td>PUBLIC WELFARE IN THE UNITED STATES (2) I</td>
<td>JAMBOR</td>
<td>Development of public welfare with emphasis upon public, federal, and state assistance, and social insurance programs. Open to seniors. Pre: Social Work 300.</td>
</tr>
<tr>
<td>652 [352]</td>
<td>SOCIAL STATISTICS AND RESEARCH (2) II</td>
<td></td>
<td>Problems and procedures in social research related to social work practice.</td>
</tr>
<tr>
<td>653 [353]</td>
<td>LEGAL ASPECTS OF SOCIAL WORK (2) I</td>
<td>JAMBOR</td>
<td>Problems in judicial administration and substantive law that affect individuals in relation to social problems.</td>
</tr>
<tr>
<td>656 [356]</td>
<td>SOCIAL WELFARE—ITS ORGANIZATION AND ADMINISTRATION (2) I</td>
<td>JAMBOR</td>
<td>Principles and problems of social agencies with respect to structure, management, and financing. Emphasis upon the effect of setting in relation to specialized practice.</td>
</tr>
<tr>
<td>660-661 [360-361]</td>
<td>SUPERVISED FIELD WORK (3-3) Yr.</td>
<td>STAFF</td>
<td>University units in public and private agencies. Concurrent with a method course (casework, group work, or community organization). Limited to full-time students.</td>
</tr>
<tr>
<td>760-761 [362-363]</td>
<td>ADVANCED SUPERVISED FIELD WORK (4-4) Yr.</td>
<td>STAFF</td>
<td>To be taken concurrently with an advanced course in social work method (casework, group work, or community organization). Limited to full-time students.</td>
</tr>
<tr>
<td>765 [365]</td>
<td>ADVANCED SOCIAL CASEWORK (2) I</td>
<td>MERRITT</td>
<td>Case discussion of generic casework concepts as they apply in work with emotionally disturbed individuals. Concurrent with 760.</td>
</tr>
</tbody>
</table>
766 [366] SEMINAR IN SOCIAL CASEWORK (2) II
Analysis and evaluation of case material contributed from the student's experience and from selected records.

767 [367] CASEWORK WITH CHILDREN (2) I
Casework concepts in the care of children. Pre: Social Work 765; consent of instructor.

768 [368] SEMINAR IN REHABILITATION (2) II
Problems of rehabilitation and the role of social work in this area.

770 [370] ADVANCED SOCIAL GROUP WORK (2) I
Analysis of the use of volunteers in group work; their recruitment, selection, placement, training, and supervision. Concurrent with 760.

771 [371] SEMINAR IN SOCIAL GROUP WORK (2) I
Analysis and evaluation of case material contributed from the student's experience and from selected records.

775 [375] ADVANCED SOCIAL PSYCHIATRY (2) I
Dynamics of behavior in the neuroses and in functional and organic psychoses, with emphasis on current treatment processes.

780 [383] ADMINISTRATIVE METHODS IN SOCIAL WORK (2) I
Administration of social work agencies with emphasis upon the relationship between structure and function. Problems of internal administration.

781 [381] SEMINAR IN SOCIAL WELFARE POLICY (2) II
Basic problems and policies in the major fields of social welfare.

785 [385] METHODS OF SUPERVISION IN SOCIAL WORK (2) II
Supervision in social work as it relates to casework and social group work. Open to agency workers who are potential or actual supervisors. Pre: consent of instructor.

790 [390] CULTURAL FACTORS IN SOCIAL WORK PRACTICE (2) II
Handley
Significance of psychocultural factors in personality development and behavior. Pre: Social Work 611.

799 [399] SEMINAR IN RESEARCH (2) I
Handley, Staff
Principles of objective fact-finding, primary and secondary sources of social data; preparation of a report or thesis.

Sociology
Senior Professor Lind; Visiting Professor Wittermans; Professors Cheng, Glick, Hormann; Associate Professor Yamamura; Assistant Professors Bartos, Krauss, Yamamoto; Instructor Voss

Sociology 151 or the equivalent is prerequisite to all advanced courses in sociology.

150 ORIENTATION FOR FOREIGN STUDENTS (0) I
McCabe
Introduction to the American community and university. For foreign students during the first semester of University residence. Course fee $5.00.

151 INTRODUCTION TO THE STUDY OF SOCIETY (3) I, II
Staff
An orientation course. The basic social relationships, the corresponding social structures, and the processes affecting social change.

232 [250] COMMUNITY FORCES IN HAWAII (3) I, II
Hormann, Lind
Basic factors and forces in contemporary society as exemplified in Hawaii. Preprofessional orientation course.
399 [299] DIRECTED READING (Ar.) I, II
STAFF
Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in
sociology.

410 [270] POPULATION AND SOCIETY (3) II
YAMAMURA
Society analyzed in terms of the quantitative and qualitative aspects of population.
Sociological aspects of birth and death rates, natural increase, and mobility.

418 [268] HUMAN MIGRATION (3) I
CHENG
Types, causes, and effects. Focuses. Development and administration of United
States immigration policy. Displaced persons and world migration.

420 [271] HUMAN ECOLOGY (3) I
YAMAMURA
Basic concepts, principles, and techniques. Factors affecting distribution and move­
ment of population, utilities, and social institutions.

424 [253] RURAL SOCIOLOGY (3) I
YAMAMURA
Organization of life in the rural environment. A comparative study of rural com·
munity types.

436 [254] THE URBAN COMMUNITY (3) II
VOSS
Sociological principles applied to the modern city. Structure, growth, social and
personal life organization.

440 [251] FOLK AND PEASANT SOCIETY (3) I
HORMANN
Folk-peasant society in contrast to urban-industrial; world-wide transition of one
into the other; reference to Chinese and Japanese peasant society.

444 [277] PEOPLE AND INSTITUTIONS OF CHINA (3) II
CHENG
Analysis of social philosophies and their influence on basic institutions and traits of
the people. Impacts of Western culture and Communism.

446 [259] PEOPLE AND INSTITUTIONS OF JAPAN (3) II
YAMAMOTO
Social change in the institutional patterns and attitudes of social classes in Japan,
with special attention to the accelerated change since World War II. (Not offered
1959–60.)

450 [256] RACE AND CULTURE CONTACTS IN HAWAII (3) II
LIND
Dominant conceptions of race and race relations: analysis of factors affecting them.
Problems in a commercial and plantation frontier.

452 [257] RACE RELATIONS IN THE PACIFIC (3) I
GLICK
Survey of typical situations of race and culture contacts in the Pacific area.

458 [258] RACE RELATIONS (3) II
GLICK
Race relations in world perspective; typical situations; conflict and accommodations;
caste; race prejudice; miscegenation; effects upon personality.

464 [266] SOCIAL INSTITUTIONS (3) II
CHENG
Culture as a conceptual tool. Origin, structure, functions, and growth of institu­
tions. Interrelations and integration.

472 [267] THE FAMILY (3) I, II
CHENG, YAMAMURA
Culturally distinctive family types as background for analysis and interpretation of
American family life in its societal contexts.

480 [252] SOCIOLOGY OF RELIGION (3) I
STAFF
Structure, function, and dynamics of religion in various types of society: folk,
peasant, and mass.
486 [285] INDUSTRIAL SOCIOLOGY (3) I


HORMANN

500 [255] SOCIAL DISORGANIZATION (3) II

Social factors in the disorganization of communities, institutions, and groups. Deviant and pathological personal behavior. An integrated approach to social problems.

VOSS

504 [264] JUVENILE DELINQUENCY (3) I


YAMAMURA

506 [265] CRIMINOLOGY (3) I, II


CHENG

520 [262] SOCIAL CONTROL (3) II

Analysis of the processes by which individuals become amenable to social and mass definitions of conduct and behavior.

STAFF

522 [269] PERSONALITY AND CULTURE (3) I, II

Origin and development of personality as the subjective aspect of culture; function of communication; human nature and the mores; personal life organization.

STAFF

524 [276] SOCIOLOGY OF SMALL GROUPS (3) I

Practical application of theories and research findings involving face-to-face relations between persons: leadership, prestige, group morale.

530 [261] SOCIOLOGY OF SMALL GROUPS (3) I

Practical application of theories and research findings involving face-to-face relations between persons: leadership, prestige, group morale.

540 [272] COLLECTIVE BEHAVIOR (3) I

Elementary forms of collective behavior; social unrest; crowd, public, mass behavior; operation of publics in democratic societies.

GLICK

542 [273] SOCIAL MOVEMENTS (3) II

Sociology of reform movements, countermovements, and revolution; their development and relation to social change. Case studies of contemporary social movements.

GLICK

544 [274] SOCIAL CHANGE (3) I

Structural-functional organization. Impact of technology on institutions, value orientation, power structures, system of role and stratification.

546 [263] PUBLIC OPINION AND THE COMMUNITY (3) II

Nature and functions of public opinion in the contemporary world. Formation and polling. Problems of interviewing and sampling.

548 [275] AMERICAN SOCIETY IN TRANSITION (3) II

Major trends, particularly as reflected in the war and post-war periods.

STAFF

560 [282] METHODS OF SOCIAL RESEARCH (3) I, II

Values and limitations of common methods of research for various types of studies. Laboratory, field work. Pre: 9 credits in sociology or consent of instructor.

GLICK

570 [280] SOCIAL STATISTICS (3) I

Introduction to statistical methods and resources as applied to social research data.

YAMAMURA

572 [281] ADVANCED SOCIAL STATISTICS (3) II

Treatment of sociological data: sampling procedures, tests of hypotheses, analysis of variance, correlation and regression, scale analysis. Pre: Sociology 570 or equivalent. (Not offered 1959-60.)

YAMAMURA

580 [276] SOCIOLOGICAL THEORY (3) II

History of sociology as reflected in writings ranging from early Greek thought to modern authors such as Durkheim, Pareto, Simmel, Parsons, Merton.
<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>602 [351]</td>
<td>GRADUATE SEMINAR (3) I</td>
<td>YAMAMURA</td>
<td>(1) Human ecology and demography; (2) social organization; (3) social disorganization; (4) the group and the persons; (5) collective behavior and social change. [ (5) Collective behavior and social change (1), 1959-60].</td>
<td>Pre: consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>628 [359]</td>
<td>SEMINAR IN RACE RELATIONS (3) II</td>
<td>Glick</td>
<td>Major theoretical developments and research problems in the field of race relations.</td>
<td>Pre: consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>680 [310]</td>
<td>SEMINAR IN SOCIOLOGICAL THEORY (3) I</td>
<td></td>
<td>Survey of contemporary sociological theory; principles of theory construction, analysis, and criticism.</td>
<td>Pre: consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>699 [300]</td>
<td>DIRECTED READING OR RESEARCH (Ar.) I, II</td>
<td>STAFF</td>
<td>Pre: graduate standing; consent of instructor.</td>
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<td></td>
</tr>
</tbody>
</table>

**Speech**

Professors ANSBERRY, J. SMITH; Associate Professors BENTLEY, CARR, HOSHOR, LEFFORGE; Assistant Professors BILSBORROW, BRENEMAN, M. GORDON, HERVEY, KLOPP, LARSON, LINN, NEWCOMER, H. WONG; Instructors LEWIS, LIN, McCABE, PHIPPS, SCOTT, SERENO, STEED, WATSON, YONAN

*Speech 100 is prerequisite to all other courses.*

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<tr>
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</thead>
<tbody>
<tr>
<td>100</td>
<td>FUNDAMENTALS OF SPEECH (1) I, II</td>
<td>STAFF</td>
<td>Communication for social interaction. Speech production; organization of ideas; training for mastery of speech standards. Conferences required.</td>
<td></td>
<td>$1.00</td>
</tr>
<tr>
<td>101</td>
<td>SOUNDS AND RHYTHMS OF SPOKEN ENGLISH (1) I, II</td>
<td>STAFF</td>
<td>Sounds and rhythms of General American speech; effective communication of ideas. International Phonetic Alphabet. Conferences required.</td>
<td></td>
<td>$2.00</td>
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<tr>
<td>102</td>
<td>DEVELOPMENT OF ORAL SKILL (1) I, II</td>
<td>STAFF</td>
<td>Speech sounds and rhythms in practical speaking situations. Idiom and grammar. Individual problems, using laboratory equipment. Conferences required.</td>
<td></td>
<td>$2.00</td>
</tr>
<tr>
<td>106-107 [106]</td>
<td>PRONUNCIATION AND GRAMMAR FOR PROSPECTIVE TEACHERS (1-1) Yr.</td>
<td>STAFF</td>
<td>Continued work on sounds and rhythms; idiom and grammar. Pre: Speech 110. Fee $1.00 each semester. 107 may be required by recommendation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>109 [107]</td>
<td>LANGUAGE SKILLS FOR PROSPECTIVE TEACHERS (1) I, II</td>
<td>STAFF</td>
<td>Practice course to give further experience in speaking. Individual problems of poise, voice, vocabulary, organization. Conferences required.</td>
<td>Pre: Speech 110.</td>
<td>$1.00</td>
</tr>
<tr>
<td>110 [105]</td>
<td>SOUNDS OF ENGLISH FOR PROSPECTIVE TEACHERS (1) I, II</td>
<td>STAFF</td>
<td>Sounds and rhythms of General American speech. Techniques for correction of pronunciation and improvement of rhythm.</td>
<td></td>
<td>$1.00</td>
</tr>
<tr>
<td>130 [131]</td>
<td>READING ALOUD (3) I, II</td>
<td>STAFF</td>
<td>Study of the relationships between silent and oral reading with intensive practice in getting and giving the meaning from the printed page.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>135 [230]</td>
<td>ORAL READING FOR PROSPECTIVE TEACHERS (1) I, II</td>
<td>STAFF</td>
<td>Oral interpretation of literature; getting and giving the meaning of the printed word. Conferences required.</td>
<td>Pre: Speech 110.</td>
<td>$1.00</td>
</tr>
</tbody>
</table>
150 PUBLIC SPEAKING (3) I, II  
Basic principles of speech composition and delivery; preparation and delivery of speeches with attention to principles studied; special attention to individual problems.  

152 BUSINESS AND PROFESSIONAL SPEECH (3) I, II  
Speaking in the business and professional world: interviews, conferences, committee work, oral reports, parliamentary procedure. (Credit only in 150 or 152.)

180 [155] PRINCIPLES AND TYPES OF DISCUSSION (2) II  
Discussion of social, political, and personal problems, using cooperative investigation, round table, panel, symposium, case and incident methods, parliamentary procedure.

210 [220] PHONETICS (3) I, II  
English pronunciation with attention to Hawaii's linguistic background. Articulation, standards of pronunciation, dialect study, teaching of speech.

214 [204] VOICE TRAINING FOR SPEECH (2) I, II  
Physical and physiological bases of voice production; problems of nasality, inaudibility, monotony. Pre: permission of instructor, or recommendation of department.

220–221 [221] FUNDAMENTALS OF SPEECH CORRECTION (3–3) Yr.  
First semester: survey; observation of diagnosis and therapy. Second semester: therapy for functional and organic speech disorders; observation and clinical practice.

270 INTRODUCTION TO BROADCASTING (3) I  
Analysis of radio and television as communications media and as industries. Comparison of American and foreign broadcasting; particular attention to the British system.

271 RADIO PRODUCTION (3) II  
Programs and analysis of techniques. Announcing; use of equipment; basic control operation. Study for operator's license optional. Pre: Speech 270 or consent of instructor.

285 [251] PUBLIC DISCUSSION AND DEBATE (1) I, II  
Training in debate and discussion: analysis of social, political, and economic problems. Public discussion and debate required. May be repeated for a total of 6 credits.

365 [265] SPEECH FOR THE CLASSROOM TEACHER (3) I, II  
Pedagogy for the classroom teacher. Integration of speech improvement in the curriculum; speech problems of Hawaii. Pre: Speech 110.

399 [299] DIRECTED READING (Ar.) I, II  
The same fields as in 598. Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in speech.

422 [222] SPEECH PATHOLOGY (3) I  
Diagnostic and therapeutic procedures involved in speech rehabilitation.

423 [223] PRACTICUM IN SPEECH CORRECTION (3) II  
Clinical experience in the use of rehabilitation techniques with a variety of defects and disorders at various age levels.

428 [224] FUNDAMENTALS OF AUDIOLOGY (3) I  
Hearing and its effects on speech. Problems of the deaf and hard-of-hearing with emphasis on educational techniques. Training in the use of audiometric equipment.

430 [232] ADVANCED INTERPRETATIVE READING (3) I, II  
Interpretative reading based on textual analysis of literary forms and careful study of principles of effective reading. Pre: English 151 or equivalent.
440 [228] SEMANTICS (3) II
Language in understanding; verbal meaning and implication; the role of assumption in interrelationships. Use of language for clarity, accuracy, and evaluation.

450 [235] ADVANCED PUBLIC ADDRESS (3) I
Composition and delivery; models from American Public Address; types of deliberative and ceremonial speeches. Pre: Speech 150 or consent of instructor.

455 [295] PERSUASION: A STUDY IN RHETORIC (3) I
Factors involved in influencing the attitudes, beliefs, and actions of audiences; analysis of oral propaganda. Classical and contemporary theories and examples are examined.

480 [250] GROUP LEADERSHIP AND DISCUSSION (3) I, II
Principles and techniques of effective group leadership; semantic and psychological barriers to communication. Analysis and discussion of social problems.

598 [298] SPECIAL PROBLEMS (Ar.) I, II
(1) General speech education; (2) speech correction; (3) phonetics and voice science; (4) interpretation; (5) forensics, public address; (6) radio; (8) pedagogy; (9) audiology. Pre: consent of instructor or recommendation of department chairman.

610 [340] SEMINAR IN PHONETICS AND VOICE SCIENCE (3) I
Problems in advanced phonetics and voice science. Pre: consent of instructor.

620 [320] SEMINAR IN SPEECH CORRECTION (3) II
Problems in the etiology and therapy of speech deviations.

630 [330] SEMINAR IN INTERPRETATION (3) I, II
Current literature in interpretation; reports; lecture recitals. Pre: consent of instructor.

650 [350] SEMINAR IN RHETORIC AND PUBLIC ADDRESS (3) II
Review of studies; preparation of reports. Pre: consent of instructor.

660 [360] GENERAL SEMINAR (2) I, II
Significant topics and problems in speech. May be repeated.

690 [300] RESEARCH (Ar.) I, II
The same fields as in 598. Four credits may be earned. Pre: undergraduate major in speech; consent of adviser or recommendation of department.

699 [310] SEMINAR IN RESEARCH METHODS (3) I, II
Research methods, analysis and reporting of data; bibliography; contemporary research.

Zoology and Entomology
Senior Professors Bess, Hiatt, Tester; Professors Banner, Carter, Chu, Gosline, Hardy, Hsiao, Matthews, M. Sherman, Tuthill, van Weel; Associate Professor Namba; Assistant Professor Townsley

Zoology 101 is prerequisite to all advanced courses with the exception of 111 and 115.

101 [100] GENERAL ZOOLOGY (4) I, II (2 L, 2 Lb) Banner, Matthews, Staff
Zoological principles; studies of structure, development, relationships, and distribution of animals. Lab fee $6.00.
111 [110] PRINCIPLES OF HUMAN BIOLOGY (3) I
MATTHEWS
Biological principles relating to man; man's place in nature; structure and function of the organ systems. Not open to students who have had 101.

115 [191] ELEMENTARY HUMAN ANATOMY AND PHYSIOLOGY (3) I, II (2 L, 1 Lb)
HSIAO
General survey of gross anatomy and physiology. Lab fee $3.00. Not open to students who have had 445.

161 [170] GENERAL ENTOMOLOGY (4) I, II (2 L, 2 Lb) HARDY, TUTHILL

201 [200] SCIENCE OF THE SEA (3) I
HIATT

311-312 [151, 261] COMPARATIVE VERTEBRATE ANATOMY AND EMBRYOLOGY (4-4) Yr.
(2 L, 2 Lb) HSIAO, STAFF
Structure and relationship of vertebrates; dissection of typical vertebrates; principles of embryology illustrated by frog, chick, and pig. Lab fee $8.00 per semester.

321 [210] HUMAN HEREDITY AND EUGENICS (3) I
SMITH
Laws of heredity by way of human pedigree analysis; survey of inheritable traits; interaction of heredity and environment.

361 [254] INSECT MORPHOLOGY (3) I (2 L-Lb)
NAMBA
Comparative and gross morphology; homologies of structures; anatomy; development in representative groups. Pre: Zoology 161. Lab fee $1.00.

362 [255] SYSTEMATIC ENTOMOLOGY (3) II (2 L-Lb)
TUTHILL
Classification of insects; orders and families. Use of taxonomic tools. Pre: Zoology 361. Lab fee $2.00.

372 [273] ECONOMIC ENTOMOLOGY (3) II (2 L, 2 Lb)
SHERMAN
Insect pests; chemical, biological, and cultural control. Laboratory exercises on Hawaiian insects of economic importance. Pre: Zoology 161. Lab fee $3.00.

390 [298] GENERAL ZOOLOGY SEMINAR (1) II
STAFF
Reports on research or reviews of literature. Pre: senior standing. Required of students majoring in zoology or entomology.

399 [299] DIRECTED READING OR RESEARCH (Ar.) I, II
STAFF
Limited to senior majors with 2.7 grade-point ratio, or 3.0 grade-point ratio in zoology.

401 [240] INTRODUCTION TO ECOLOGY (2) I
HIATT
Animals in relation to their biotic and physical environment; animal communities in the sea, on shore, and on land.

410 [253] PARASITOLOGY (3) II (2 L, 2 Lb)
CHU
Parasitology with reference to man and domestic animals; classification, comparative morphology, life history, control. Lab fee $5.00.

416 [260] HISTOLOGY (3) II (2 L, 2 Lb)
vAN WEEL
Studies of tissues, principles of histology, and microscopic anatomy of a limited number of vertebrate animals. Pre: Zoology 312. Lab fee $6.00.

425 [262] MICROTECHNIQUE (3) I, II (2 L-Lb)
MATTHEWS
Fixing, staining, and mounting of tissues and entire animals and organs. Lab fee $15.00.
431 [276] BIOMETRY (3) I (2 L-Lb) TESTER
Elementary statistical methods applied to biological data; confidence interval, chi-square, t-test, normal distributions, regression, correlation. Pre: Mathematics 103; desirable: 104

432 [277] ADVANCED BIOMETRY (3) II (2 L-Lb) TESTER
Analysis of variance and covariance, curvilinear regression, multiple correlation, design of experiments. Pre: Zoology 431; desirable: Mathematics 131.

441 [286] HISTORY OF ZOOLOGY (2) I BANNER
Development of zoological science as a specialized field of human knowledge.

445 [291] GENERAL PHYSIOLOGY (3) I (2 L, 2 Lb) van WEEL
Properties of protoplasm; functions of organ systems; fundamental principles. Pre: Chemistry 143; desirable: Chemistry 152; Physics 161. Lab fee $8.00.

461 [256] MEDICAL AND VETERINARY ENTOMOLOGY (3) I (2 L, 2 Lb) HARDY
Insects and other arthropods in relation to spread and causation of human and animal diseases. Pre: Zoology 161. Lab fee $3.00. (Alt. yrs.; offered 1959-60.)

501 [245] ZOOGEOGRAPHY (2) I GOSLINE
Animal distributions; physiographic, climatic, and historic factors. Desirable preparation: Zoology 401; Geology 151. (Alt. yrs.; not offered 1959-60.)

504 [285] ANIMAL EVOLUTION (2) II GOSLINE
Processes of evolution; interaction between population genetics and natural selection in animals. Desirable preparation: Genetics 451.

515-516 [280-281] INVERTEBRATE ZOOLOGY (3-3) Yr. (2 L, 2 Lb) TOWNSLEY
Comparative anatomy, development, and phylogeny of the invertebrate animals. Identification and classification of reef and shore fauna. Lab fee $6.00 per semester.

520 [282] MARINE ECOLOGY (3) II (2 L, 2 Lb) TOWNSLEY
Natural history, behavior, and relation of invertebrates and fishes to environment. Desirable preparation: Zoology 516. Lab fee $6.00. (Alt. yrs.; not offered 1959-60.)

525-526 [275] GENERAL ICHTHYOLOGY (3-3) Yr. GOSLINE

531 [287] METHODS OF FISHERY INVESTIGATION (3) II (2 L, 2 Lb) TESTER

536 [290] OCEANOGRAPHY (3) II (2 L, 2 Lb) BANNER
Physical, chemical, and biological oceanography. Pelagic life of oceans; relation to environment. Pre: Zoology 516; Chemistry 104; desirable: Zoology 401. Lab fee $5.00.

546 [284] COMPARATIVE INVERTEBRATE PHYSIOLOGY (3) II (2 L-Lb) van WEEL
Life processes with emphasis on marine invertebrates. Pre: Zoology 445; Physics 161. Lab fee $8.00.

561 [257] SCALE INSECTS (3) I (2 L-Lb) HARDY
Coccids of Hawaii. Taxonomy, techniques, economic importance, control. Pre: Zoology 161; desirable: Botany 460. Lab fee $5.00. (Alt. yrs.; not offered 1959-60.)

592 [313] SEMINAR IN FISHERIES BIOLOGY (1) II TESTER
Investigations and literature pertaining to fisheries biology; stress on problems relating to pelagic fisheries of the Pacific.
601 [315] ZOOLOGICAL LITERATURE (1) I
Survey of zoological literature with stress upon bibliographic tools. Required for advanced degrees in zoology or entomology.

602 [316] PREPARATION OF SCIENTIFIC MANUSCRIPTS (1) II
Styles and methods of preparation for publication; proofreading and editing. Required for advanced degrees in zoology or entomology.

611 [370] PRINCIPLES OF SYSTEMATIC ZOOLOGY (3) I
Taxonomic categories; processes of evolution in their development; taxonomic data; rules of nomenclature. (Alt. yrs.; offered 1959-60.)

621 [392] PHYSIOLOGICAL ECOLOGY (3) I (2 L-Lb)
Physiological adaptations to environmental, physical, and biotic features. Pre: Zoology 415; desirable: 401 or 520. Lab fee $8.00. (Alt. yrs.; offered 1959-60.)

632 [387-388] FISHERIES DYNAMICS AND MANAGEMENT (3) II

645 [391] ADVANCED GENERAL PHYSIOLOGY (3) I (2 L-Lb)
Major problems in general physiology and methods for their study. Pre: Zoology 415; desirable: 546. Lab fee $8.00. (Alt. yrs.; not offered 1959-60.)

662 [350] ADVANCED SYSTEMATIC ENTOMOLOGY (3) II (2 L-Lb)
Classification of special groups. Nomenclatorial problems; international code. Pre: Zoology 362. Lab fee $14.00. (Alt. yrs.; offered 1959-60.)

671 [352] INSECT ECOLOGY (3) I (2 L, 1 Lb)
Insects as living units in an environment of physical and biotic factors. Pre: Zoology 362. (Alt. yrs.; not offered 1959-60.)

673 [358] INSECT PATHOLOGY (3) II (2 L, 1 Lb)

675 [353] BIOLOGICAL CONTROL OF PESTS (3) I (2 L, 1 Lb)
Fundamental concepts. Critical study of major biological control projects. Pre: Zoology 362. (Alt. yrs.; not offered 1959-60.)

680 [354] INSECT TOXICOLOGY (4) I (2 L, 2 Lb)
Principles of chemical control. Relationship of toxicology and physiology to use of insecticides. Pre: Zoology 372; Chemistry 143. (Alt. yrs.; offered 1959-60.)

686 [355] INSECT-TRANSMITTED DISEASES OF PLANTS (3) II
Problems of insect transmission of plant diseases.

691 [312] SEMINAR IN MARINE ZOOLOGY (1) I
Reports on research or reviews of literature. Graduate students in marine zoology are required to take this course. 592, or 692.

692 [314] SEMINAR IN ADVANCED MARINE AND FISHERIES BIOLOGY (1) II
Literature of pelagic fishery problems; relation to oceanography and ecology. Open only to advanced students in marine and fisheries biology.

697 [311] ENTOMOLOGY SEMINAR (1) I, II
Current entomological literature. Reviews and reports. Required of graduate students in entomology.

699 [300] DIRECTED READING OR RESEARCH (Ar.) I, II
Directed research and reading in various fields of zoology.
## SUMMARY OF ENROLLMENT FOR 1958–59

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<th>Graduate School</th>
<th>1ST SEMESTER</th>
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<tr>
<td>Advanced degree candidates</td>
<td>141</td>
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<tr>
<td>Five-year diploma candidates</td>
<td>152</td>
<td>96</td>
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<tr>
<td>Unclassified</td>
<td>495</td>
<td>431</td>
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<tr>
<td>Professional Teaching Certificate</td>
<td>115</td>
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<tr>
<td>Total</td>
<td>903</td>
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<th>College of Arts and Sciences</th>
<th>1ST SEMESTER</th>
<th>2ND SEMESTER</th>
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<tr>
<td>Seniors</td>
<td>237</td>
<td>207</td>
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<tr>
<td>Juniors</td>
<td>287</td>
<td>294</td>
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<tr>
<td>Sophomores</td>
<td>331</td>
<td>311</td>
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<tr>
<td>Freshmen</td>
<td>615</td>
<td>511</td>
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<tr>
<td>Seniors</td>
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<tr>
<td>Juniors</td>
<td>221</td>
<td>213</td>
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<tr>
<td>Sophomores</td>
<td>246</td>
<td>235</td>
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<tr>
<td>Freshmen</td>
<td>405</td>
<td>362</td>
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<td>Total</td>
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<th>College of Education</th>
<th>1ST SEMESTER</th>
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<tr>
<td>Seniors</td>
<td>334</td>
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<tr>
<td>Juniors</td>
<td>335</td>
<td>332</td>
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<tr>
<td>Sophomores</td>
<td>271</td>
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<tr>
<td>Freshmen</td>
<td>472</td>
<td>466</td>
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<td>Auxiliary Teacher Training Program</td>
<td>43</td>
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<th>College of Agriculture</th>
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<tr>
<td>Seniors</td>
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<td>Juniors</td>
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<td>Sophomores</td>
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<tr>
<td>Freshmen</td>
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<td>Total</td>
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<th>College of Business Administration</th>
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<tr>
<td>Seniors</td>
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<tr>
<td>Juniors</td>
<td>158</td>
<td>146</td>
</tr>
<tr>
<td>Sophomores</td>
<td>173</td>
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<tr>
<td>Freshmen</td>
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<td>202</td>
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<tr>
<td>Total</td>
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| TOTAL DEGREE AND DIPLOMA CANDIDATES | 5,210 | 4,891 |

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<th>College of General Studies</th>
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<th>2ND SEMESTER</th>
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<td>Undergraduates in day credit courses</td>
<td>420</td>
<td>494</td>
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<tr>
<td>Auditors in day credit courses</td>
<td>59</td>
<td>68</td>
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<tr>
<td>Students in evening credit courses</td>
<td>1,398</td>
<td>1,398</td>
</tr>
<tr>
<td>Total</td>
<td>1,877</td>
<td>1,895</td>
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| Hilo Campus | 225 | 226 |
| Duplications | -76 | -108 |

| GRAND TOTAL IN CREDIT COURSES | 7,889 | 7,505 |
INDEX

Academic year, 3, 41
Accreditation of the University, 41
Adams Social Research Laboratory, 43
Administrative officers, University, 7
Admission requirements, 46-50
Affiliate graduate faculty, 38-40
Agricultural Engineering Institute, 73
Agricultural Experiment Station, 30-33, 73-74
Agricultural Extension Service, 33-37, 74
Agriculture, College of, 66-74
Agriculture, courses in, 105-109
Agriculture curricula, 66-73
Air Science, courses in, 109-110
Andrews Outdoor Theatre, 45
Anthropology, courses in, 110-112
Applied music, courses in, 168-169
Aquarium, 43
Arboretum, Lyon, 43
Architecture (See Prearchitecture)
Army, Department of the, 56-57, 61
Art, courses in, 112-115
Arts and Sciences, College of, 75-82
Asian and Pacific languages, courses in, 115-117
Associated Students of the University of Hawaii, 64
Atherton House, 45, 65
Athletics and recreation, 57-58
Attendance at classes, 53
Auditors, registration of, 50, 51
Auditors in classes, 46, 49
Awards and prizes, 60-62
Bacteriology, courses in, 117-118
Biological Laboratory, Marine, 45
Bishop, Bernice Pauahi, Museum, 44
Board of Athletic Control, 58
Board of Regents, 6
Bookstore, University, 44
Botany, courses in, 118-121
Buildings and campus, 44-45
Business, courses in, 121-125
Business Administration, College of, 83-85
Business curricula, 85-85
Cafeteria, University, 45, 64
Calendar, University, 3
Campus and buildings, 44-45
Certificates (See Degrees, diplomas, and certificates)
Changes in study programs, 50-51
Chemistry, courses in, 125-127
Chinese, courses in, 115-116
Coat of arms, University, 42
College aptitude tests, 47
College of Agriculture, 66-74
College of Arts and Sciences, 75-82
College of Business Administration, 83-85
College of Education, 86-93
College of Engineering, 94-97
College of General Studies, 98-99
College of Nursing, 100-103
Colors, University, 42
Control of the University, 41
Cooperating institutions, 43-44
Course examinations, 55
Courses, announcement of, 105-186
Credit by examination, 55
Credits, 51-52
Curricula:
College of Agriculture, 66-73
College of Arts and Sciences, 76-82
College of Business Administration, 83-85
College of Education, 87-93
College of Engineering, 94-97
College of General Studies, 98-99
College of Nursing, 100-103
Degree requirements, undergraduate, 54-55
Degrees, diplomas, and certificates:
  bachelor of arts, 75
  bachelor of business administration, 83
  bachelor of education, 86
  bachelor of fine arts, 75
  bachelor of science, 66, 75, 86
  five-year diploma, 86-87
  teacher's professional certificate, 87
Dental hygiene, courses in, 127-128
Dental hygiene curriculum, 90-91
Description of the University, 41
Dispensary, 57
Dormitories, 65
Drama and theatre, courses in, 129-130
Economics, courses in, 130-132
Education, College of, 86-93
Education, courses in, 132-138
Elementary curriculum, 88-90
Employment, 65
Engineering, College of, 94-97
Engineering, courses in, 138-141
Engineering curricula, 94-97
English, courses in, 141-144
Enrollment, 187
Entomology (See Zoology and Entomology)
Entomology, U. S. Bureau of, 44
European languages, courses in, 144-147
Examinations, course, 49
Expenses, student, 64-65
(See also Tuition and fees)
INDEX

Experiment Station, Hawaii Agricultural, 30-33, 73-74
Extension Service in Agriculture and Home Economics, 33-37, 74

Faculty and staff, 7-40
Fees and tuition, 55-56
Fellowships and scholarships, 58-60
Fine arts program, 79
Five-year diploma, 46, 86-87
Frear Hall, 45, 65
French, courses in, 144-145
Freshman orientation period, 49
Fruit Fly Laboratory, 44

General Studies, College of, 98-99
Geography, courses in, 147-149
Geology and geophysics, courses in, 149-151
German, courses in, 145
Government, courses in, 151-153
Grades, 51-52
Graduate School, 104
Graduate students, 46, 49-50, 104
Graduation requirements, 54-55
Greek, courses in, 145-146

Hale, Laulima, 45, 65
Hawaii Agricultural Experiment Station, 30-33, 73-74
Hawaiian, courses in, 116
Hawaiian Sugar Planters' Association, 44
Health and physical education, courses in, 154-156
Health requirements, 57
Hearing (See Speech and Hearing Clinic)
Herbaria, 45
Hilo branch, 99
History, courses in, 156-160
History of the University, 41
Home economics, courses in, 160-163
Home economics curricula, 71-73
Honolulu Academy of Arts, 44
Honolulu Stadium, 45
Honors at graduation, 62-63
(See also Prizes and awards)
Human Relations Area Files, 43

Industrial Relations Center, 43
Instructional staff (See Faculty)
Interdepartmental courses, 168

Japanese, courses in, 116-117
Johnson Hall, 45, 65

Korean, course in, 117

Laboratory schools, College of Education, 92
Land Study Bureau, 38

Latin, courses in, 146
Law (See Prelegal program)
Legislative Reference Bureau, 37-38, 42-43
Library, Sinclair, 44, 45
Library fines, 54
Library science, courses in, 163-164
Linguistics, 111-112
Literature (See English, courses in)
Living accommodations, 64-65
Loan funds, 63
Lyon Aboretum, 43

Majors in College of Arts and Sciences, 77-79
Marine Biological Laboratory, 45
Mathematics, courses in, 164-165
Medical technology, courses in, 165
Medical technology curriculum, 102-103
Medicine (See Premedicine)
Military Science, courses in, 165-166
Military training, 56-57
Music, courses in, 166-169

Noncredit courses (See College of General Studies)
Nursing, courses in, 169-170
Nursing, College of, 100-103

Oceanography, courses in, 170
Office of Student Personnel, 37
Office of Student Residences, 65
Officers of the University, 7
Organization and support of the University, 41, 42
Orientation period (See Freshman orientation period)
Outdoor Theatre, Andrews, 45

Pacific and Asian Affairs Council, 44
Pacific islands study program, 79-80
Pacific languages (See Asian and Pacific languages)
Philosophy, courses in, 170-172
Physical education (See Health and physical education)
Physics, courses in, 172-173
Pineapple Research Institute of Hawaii, 44
Prearchitectural program, 82
Pre dental program, 80
Prelegal program, 80
Premedical program, 80-81
Preministerial program, 81
Preosteopathic program, 81-82
Preschool-primary curriculum, 88-90
Presocial work program, 82
Prizes and awards, 60-62
Psychology, courses in, 173-176
Public administration program, 81
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Clinic</td>
<td>42</td>
</tr>
<tr>
<td>Recreation leadership curriculum</td>
<td>91-92</td>
</tr>
<tr>
<td>Regents, Board of</td>
<td>6, 41</td>
</tr>
<tr>
<td>Registration</td>
<td>50-51</td>
</tr>
<tr>
<td>Regular students</td>
<td>47-49</td>
</tr>
<tr>
<td>Related services</td>
<td>42-43</td>
</tr>
<tr>
<td>Religion, courses in</td>
<td>176</td>
</tr>
<tr>
<td>Requirements, admission</td>
<td>46-50</td>
</tr>
<tr>
<td>Requirements for continued registration</td>
<td>52-54</td>
</tr>
<tr>
<td>Reserve Officers' Training Corps (See Military Science and Air Science)</td>
<td></td>
</tr>
<tr>
<td>Residence accommodations</td>
<td>65</td>
</tr>
<tr>
<td>Residence requirements</td>
<td>54</td>
</tr>
<tr>
<td>Russian, courses in</td>
<td>146</td>
</tr>
<tr>
<td>Scholarships and fellowships</td>
<td>58-60</td>
</tr>
<tr>
<td>Scholastic standards</td>
<td>52-53</td>
</tr>
<tr>
<td>Seal of the University</td>
<td>42</td>
</tr>
<tr>
<td>Secondary curriculum</td>
<td>88-90</td>
</tr>
<tr>
<td>Senate, University</td>
<td>42</td>
</tr>
<tr>
<td>Sinclair Library</td>
<td>44, 45</td>
</tr>
<tr>
<td>Social Research Laboratory, Adams</td>
<td>43</td>
</tr>
<tr>
<td>Social work, courses in</td>
<td>177-178</td>
</tr>
<tr>
<td>Sociology, courses in</td>
<td>178-181</td>
</tr>
<tr>
<td>Spanish, courses in</td>
<td>146-147</td>
</tr>
<tr>
<td>Speech, courses in</td>
<td>181-183</td>
</tr>
<tr>
<td>Speech and Hearing Clinic</td>
<td>42</td>
</tr>
<tr>
<td>Sports</td>
<td>58</td>
</tr>
<tr>
<td>Student activities</td>
<td>64-65</td>
</tr>
<tr>
<td>Student discipline</td>
<td>54</td>
</tr>
<tr>
<td>Student housing</td>
<td>65</td>
</tr>
<tr>
<td>Student Personnel, Office of</td>
<td>37</td>
</tr>
<tr>
<td>Students, classification of</td>
<td>46</td>
</tr>
<tr>
<td>Summer session</td>
<td>63</td>
</tr>
<tr>
<td>Symbol of the University</td>
<td>42</td>
</tr>
<tr>
<td>Teacher's professional certificate</td>
<td>87</td>
</tr>
<tr>
<td>Technical agriculture</td>
<td>69-71</td>
</tr>
<tr>
<td>Theatre (See Drama and theatre)</td>
<td></td>
</tr>
<tr>
<td>Theatre Group</td>
<td>64</td>
</tr>
<tr>
<td>Traffic violations</td>
<td>54</td>
</tr>
<tr>
<td>Transfer by students between colleges of the University</td>
<td>51</td>
</tr>
<tr>
<td>Transfer to or from other institutions</td>
<td>52</td>
</tr>
<tr>
<td>Tropical crop production</td>
<td>68</td>
</tr>
<tr>
<td>Tuition and fees</td>
<td>55-56</td>
</tr>
<tr>
<td>Unclassified students</td>
<td>49</td>
</tr>
<tr>
<td>Undergraduate students</td>
<td>50</td>
</tr>
<tr>
<td>Unit, definition of</td>
<td>47</td>
</tr>
<tr>
<td>United States Fish and Wildlife Service</td>
<td>44</td>
</tr>
<tr>
<td>University calendar</td>
<td>3</td>
</tr>
<tr>
<td>Veterans, admission</td>
<td>47</td>
</tr>
<tr>
<td>Veterans, tuition and fees</td>
<td>55</td>
</tr>
<tr>
<td>Vocational home economic education</td>
<td>87</td>
</tr>
<tr>
<td>Volcano Research Laboratory</td>
<td>43</td>
</tr>
<tr>
<td>Withdrawal by students</td>
<td>51</td>
</tr>
<tr>
<td>Women's residence hall</td>
<td>65</td>
</tr>
<tr>
<td>Zoology and entomology, courses in</td>
<td>183-186</td>
</tr>
</tbody>
</table>