In order to graduate, students must complete campus breadth requirements as determined by the Executive Committee of the Bourns College of Engineering. The courses on this list have been approved effective Fall 2010. The references included with each section heading indicate the campus’ Senate regulation where the specific requirement may be found [for example: *(UCR R6.1)*].

To meet ABET standards for accreditation; the Bourns College of Engineering requires that at least two courses used for breadth must be upper division (courses numbered 100-199 at UCR). This **ABET depth requirement** will be satisfied by taking upper division courses in the Humanities and/or Social Sciences. It is recommended that you have upper-division standing to enroll in courses number 100-199 at UCR.

Use the chart below to keep track of the breadth courses you’ve taken.

**Humanities: 3 courses total**

A. ONE course in World History: ______________________

B. ONE course in Fine Arts, Literature, Philosophy, or Religious Studies: ______________________

C. ONE course in the History of Science: ________________ (this will fulfill one ABET requirement)

**Social Sciences: 3 courses total**

A. ONE course in Economics or Political Science: ________________

B. ONE course in Anthropology, Psychology or Sociology: ________________

C. ONE additional course (a course numbered 100 or higher is recommended to fulfill second ABET requirement):
   ______________________

**Ethnicity: 1 course total:** ________________

**Natural Sciences: 4 courses total**

A. ONE course in Biology: ________________

B. ONE course from Chemistry or Physics: ________________

C. TWO additional courses from the Natural Sciences: ___________ and ___________
Courses are listed numerically by subject area. Courses with prerequisites have the prerequisite courses noted in parentheses following the course title.

I. ENGLISH COMPOSITION: 3 courses (UCR R6.1)
Demonstrated proficiency in English Composition by completing the following three courses, or approved replacement testing:

ENGL 001A  Beginning Composition (ELWR)
ENGL 001B  Intermediate Composition (C or better in ENGL 001A)
ENGL 001C or Alternate*  Applied Intermediate Composition/Technical Communications (C or better in ENGL 001B)

* Please consult with your Academic Advisor regarding appropriate course selection.

II. HUMANITIES: 3 courses (UCR R6.3)
A. ONE course in World History, chosen from among:
HIST 010  World History: Prehistory to 1500
HIST 015  World History: 1500 to 1900
HIST 020  World History: Twentieth Century

B. ONE course in Fine Arts, Literature, Philosophy or Religious Studies, chosen from among:
AHS 007  World Art: Images, Issues, Ideas
AHS 008/MCS 008  Modern Western Visual Culture
AHS 015  Arts of Asia
AHS 017A  History of Western Art: Prehistory to Byzantium
AHS 017B  History of Western Art: Early Medieval to Renaissance
AHS 017C  History of Western Art: Baroque to Modern
AHS 020/FVC 023  Introduction to Media Art
AHS 021/URST 021  Introduction to Architecture and Urbanism
AHS 027  Art of Pre-Columbian America
AHS 102/ANTH 102  Anthropology of Art (may fulfill either Humanities or Social Science)
AHS 134/HISE 134  Art and Society: Patrons and Museums
AHS 178/URST 178  The Modern City

CLA 010A  Ancient Civilization: Early Greece and the Mediterranean
CLA 010B  Ancient Civilization: Classical Greece
CLA 010C  Ancient Civilization: Rome
CLA 040  Classical Mythology
CLA 112/CPLT 112/RLST 117  Mythology
CLA 114/CPLT 114  The Classical Tradition

CPAC 133/HISE 114  Ancient Writing and Literacy

CPLT 015  Language, Literature, and Culture
CPLT 017A, B, or C  Masterworks of Western Literature
CPLT 029  The Arts: Approach, Comparison, and Culture
CPLT 110  Literary Analysis and Criticism
WRLT 170/ETST 170  Third World Literature
CPLT 180(E-Z)  Literature and Related Fields

CRWT 056  Introduction to Creative Writing
ENGL 012A  Introduction to Poetry
ENGL 012B  Introduction to Fiction
ENGL 012C  Introduction to Drama
ENGL 014  Major American Writers
ENGL 015  Modern Literature
ENGL 017  Shakespeare
ENGL 020A/031  American Literary Traditions
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ENGL 020B</td>
<td>British Literary Traditions</td>
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<tr>
<td>ENGL 101</td>
<td>Critical Theory</td>
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<tr>
<td>ENGL 112</td>
<td>History of the English Language</td>
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<tr>
<td>ETST 114</td>
<td>Contemporary Latina Writing in the US</td>
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<td>ETST 120</td>
<td>Contemporary Native American Literature</td>
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<td>ETST 151</td>
<td>Contemporary Asian American Literature</td>
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<tr>
<td>MUS 002</td>
<td>Introduction to Western Music</td>
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<tr>
<td>MUS 006/ANTH 006</td>
<td>Introduction to World Music (may fulfill either Humanities OR Social Science)</td>
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<tr>
<td>MUS 008</td>
<td>Popular Music Cultures of the US</td>
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<tr>
<td>MUS 014/ETST 014/URST 014</td>
<td>Popular Music of the World</td>
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<tr>
<td>MUS 118</td>
<td>Music, Politics and Social Movements</td>
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<tr>
<td>MUS 127/ANTH 176/ETST 172/ DNCE 127</td>
<td>Music Cultures of Southeast Asia (may fulfill either Humanities OR Social Science)</td>
</tr>
<tr>
<td>PHIL 001</td>
<td>Introduction to Philosophy</td>
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<tr>
<td>PHIL 002</td>
<td>Contemporary Moral Issues</td>
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<td>PHIL 003</td>
<td>Ethics and the Meaning of Life</td>
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<tr>
<td>PHIL 006</td>
<td>Reason, Belief, and Truth</td>
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<td>PHIL 007</td>
<td>Introduction to Critical Thinking</td>
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<td>PHIL 008</td>
<td>Introduction to Logic</td>
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<tr>
<td>PHIL 030(E-Z)</td>
<td>Introduction to the History of Philosophy</td>
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<tr>
<td>PHIL 114</td>
<td>Science and Human Understanding (1 Course in Philosophy)</td>
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<tr>
<td>PHIL 116</td>
<td>Business Ethics</td>
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<tr>
<td>PHIL 124</td>
<td>Formal Logic (CS/MATH 011 or CS/EE 120A or CS 150 or PHIL 008)</td>
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<tr>
<td>PHIL 130</td>
<td>Theory of Knowledge (1 Course in Philosophy)</td>
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<tr>
<td>PHIL 131</td>
<td>Twentieth Century Analytical Philosophy (1 Course in Philosophy)</td>
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<td>PHIL 132</td>
<td>Philosophy of Language</td>
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<td>PHIL 167</td>
<td>Biomedical Ethics</td>
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<tr>
<td>RLST 002</td>
<td>Introduction to Comparative Scripture</td>
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<tr>
<td>RLST 005</td>
<td>Introduction to Asian Religions</td>
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<tr>
<td>RLST 007</td>
<td>Introduction to Western Religions</td>
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<tr>
<td>RLST 011</td>
<td>Modern Christianities and World Cultures</td>
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<tr>
<td>RLST 012/ETST 012</td>
<td>Religious Myths and Rituals</td>
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<tr>
<td>RLST 014</td>
<td>Religion and Science</td>
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<tr>
<td>RLST 015</td>
<td>Death</td>
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<tr>
<td>RLST 111</td>
<td>Islam</td>
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<tr>
<td>RLST 113</td>
<td>Topics in Modern Islam</td>
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<td>RLST 116</td>
<td>Religion and Violence</td>
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<tr>
<td>RLST 175</td>
<td>Religion and Human Rights</td>
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<tr>
<td>RLST 179</td>
<td>Pilgrimage</td>
</tr>
<tr>
<td>C. ONE course in the History of Science, chosen from among:</td>
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<tr>
<td>HIST 103</td>
<td>History of Science from Antiquity to Copernicus</td>
</tr>
<tr>
<td>HIST 104</td>
<td>The Scientific Revolution</td>
</tr>
<tr>
<td>HIST 105</td>
<td>Science in the Modern World</td>
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<tr>
<td>HIST 106</td>
<td>Science in Triumph and Crisis</td>
</tr>
<tr>
<td>HIST 107</td>
<td>Disease and Society</td>
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<tr>
<td>HIST 108/ENGR 108</td>
<td>Technology in Pre-modern World</td>
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<tr>
<td>HIST 109/ENGR 109</td>
<td>Technology in Modern Europe and America, 1700 to Present</td>
</tr>
<tr>
<td>PHIL 137</td>
<td>Philosophy Science (1 Course in Philosophy)</td>
</tr>
<tr>
<td>CLA 131/CPAC 131</td>
<td>Readings in the Origins of Science in China and Greece</td>
</tr>
</tbody>
</table>
III. SOCIAL SCIENCES: 3 courses (UCR R6.4)

A. ONE course in Economics or Political Science, chosen from among:

- ECON 002  Introduction to Macroeconomics
- ECON 003  Introduction to Microeconomics
- ECON 006/ENSC 006  Introduction to Environmental Economics
- ECON 102  Intermediate Microeconomics (ECON 003 or 004 & MATH 008B or 009A or 022)
- ECON 103  Intermediate Macroeconomics (ECON 002 or 004)
- ECON 111  Research Methods in Business and Economics (ECON 002 or 003 or 004)
- ECON 119  Law and Economics (ECON 002 or 003 or 004)
- ECON 120  The Great Economists (SUMMER ONLY)
- ECON 123/HISA 123  American Economic History (ECON 002 & 003; or 004)
- ECON 124  World Economic History (ECON 002 & 003; or 004)
- ECON 125  History of Economic Thought (ECON 002 & 003; or 004)
- ECON 129  Health Economics (ECON 102)
- ECON 143A  Environmental Economics (ECON 003 or 004, MATH022 or equivalent)
- ECON 155/WMST 155  Women’s Labor and The Economy (ECON 003 or 004)
- ECON 178/BUS 178  International Trade (ECON 102 or 104A)
- ECON 181  Economic Development: Theory and Policy (ECON 002 & 003; or 004)

- POSC 010  American Politics
- POSC 015  Comparative Politics
- POSC 020  World Politics
- POSC 110  The Origins of Political Ideas
- POSC 111  Democracy and the Social Contract
- POSC 112  Modern Political Theory
- POSC 113  American Political Thought
- POSC 119  Political Thinkers in Depth
- POSC 124  International Relations (POSC 020)
- POSC 126  The Politics of International Trade, Finance and Development (POSC 020)
- POSC 127  International Environmental Politics (POSC 020)
- POSC 130  Politics and Economics of the Pacific Rim
- POSC 135  Ethics and International Politics
- POSC 154  The Government and Politics of the European Community
- POSC 164  The Nation State and Capitalism
- POSC 182  Politics and Economic Policy
- POSC 183  Administrative Politics and Theory (POSC 010)
- POSC 186  Regulation: A Political Perspective

B. ONE course in Anthropology, Psychology or Sociology, chosen from among:

- ANTH 001  Cultural Anthropology
- ANTH 002  Biological Anthropology
- ANTH 003  World Prehistory
- ANTH 004  World Civilizations
- ANTH 005  Introduction to Archaeology
- ANTH 006/MUS 006  Introduction to World Music (may fulfill either Humanities OR Social Science)
- ANTH 012  Great Discoveries in Archaeology
- ANTH 020  Culture, Health and Healing
- ANTH 102/AHS 102  Anthropology of Art (may fulfill either Humanities OR Social Science)
- ANTH 104  Human Social Organization
- ANTH 105/BUS 158  Organizations as Cultural Systems (SUMMER ONLY)
- ANTH 107  Evolution of the Capacity for Culture (ANTH 001 or 002 or 003)
- ANTH 109/WMST 109  Women, Politics and Social Movements: Global Perspectives
- ANTH 110  Prehistoric Agriculture
- ANTH 111  Peopling of the New World
- ANTH 118  Origins of Cities (ANTH 001 or 003 or 005)
ANTH 122    Economic Anthropology (ANTH 001 and ECON 001)
ANTH 124    Ritual and Religion
ANTH 125    Kinship Organization (ANTH 001)
ANTH 127    Political Anthropology (ANTH 001)
ANTH 129    Human Evolutionary Ecology (ANTH 001)
ANTH 132    Cultural Ecology
ANTH 134    Anthropology of Resource Management (ANTH 001)
ANTH 160    Political Economy of Health
ANTH 162    Culture and Medicine
ANTH 163    Transnational and Global Communities
ANTH 173    Social Meaning of Space
ANTH 176/AST 127/DNCE 127/    Music Cultures of Southeast Asia (may fulfill either Humanities OR Social ETST 172/MUS 127 Science)

PSYC 001    Introductory Psychology
PSYC 002    Introductory Psychology
PSYC 013    Skepticism and Pseudoscience in Psychology (C- or better in ENGL 001A)
PSYC 110    The Brain and Behavior (BIOL 002 or BIOL 003 or BIOL 005A or BIOL 034 with a grade of C- or better, or equivalents)
PSYC 142    Industrial/Organizational Psychology (PSYC 002)
PSYC 178    Health Psychology (HNPG 042K or PSYC 002 or SOC 001)
PSYC 179    Health and Behavior Change (a grade of C- or better in one of the following courses: HNPG 042K, PSYC 002, PSYC 178)

SOC 001    Introduction to Sociology
SOC 010/URST 010    The City: An Introduction
SOC 015    Social Problems
SOC 020    American Society
SOC 120    Human Social Institutions (SOC 001)
SOC 122    Social Change (SOC 001)
SOC 123    Human Societies (SOC 001 or ANTH 001)
SOC 137    Population (SOC 001)
SOC 143/URST 143    Urban Sociology (SOC 001)
SOC 150    The Sociology of Economic Organizations
SOC 151    Formal Organizations
SOC 156    Community (SOC 001)
SOC 157    Social Networks (SOC 001)
SOC 160    Sociology of Education
SOC 169    Modern Sociological Theory (SOC 001 with a grade of C or better)
SOC 176/BUS 176    The Sociology of Work in Organizations (SOC 001)
SOC 181    World-Systems and Globalizations (SOC 001)
SOC 182/URST 182    Urban Problems
SOC 184    Environmental Sociology (SOC 001)

C. ONE upper-division course to fulfill ABET requirements chosen from courses in Economics, Political Science, Anthropology, Psychology, Sociology, Women’s Studies, or Ethnicity.

WMST 001    Gender and Sexuality
WMST 010    Women and Culture
WMST 100    Gender Theory
WMST 109/ANTH 109    Women, Politics and Social Movements: Global Perspectives
WMST 161    Gender and Science (WMST 001)
WMST 187    Women, Gender and Technology (WMST 001)
IV. ETHNICITY: 1 course \textit{(UCR R6.5)}

One of the following courses can be chosen to simultaneously fulfill Ethnicity and the second Humanities requirement (category II, part B):

- ETST 012W/RLST 012W  Religious Myths and Rituals
- ETST 014/MUS 014  Popular Music of the World
- ETST 114  Contemporary Latina Writing in the US
- ETST 120  Contemporary Native American Literature
- ETST 151  Contemporary Asian American Literature
- ETST/WRLT 170  Third World Literature

One of the following courses can be chosen to simultaneously fulfill Ethnicity and the third Social Science requirement (category III, part C):

- ETST 001  Introduction to the Study of Race and Ethnicity
- ETST 002  Introduction to Chicano Studies in Comparative Perspective
- ETST 003  Introduction to African American Studies in Comparative Perspective
- ETST 005  Introduction to Asian American Studies in Comparative Perspective
- ETST 007  Introduction to Native American Studies in Comparative Perspective
- ETST 102  The Political Economy of Race and Class
- ETST 106  Theory in Asian American Studies
- ETST 109I  The Black Diaspora: Cultural, Political, and Historical Connections (ETST 003)
- ETST 131  Race, Class, and Gender
- ETST 172/AST 127/ANTH 176/ 127MUS 127  Music Cultures of Southeast Asia (may fulfill either Humanities OR Social Science)

V. NATURAL SCIENCES: 4 courses \textit{(UCR R6.2)}

A. One course, chosen from among:

- BIOL 002  Cellular Basis of Life
- BIOL 003  Organisms in Their Environment
- BIOL 005A/05LA  Introduction to Cell and Molecular Biology (grade of C- or better BIOL 05LA & CHEM 001A/01LA)

B. One course, chosen from among:

- CHEM 001A/01LA  General Chemistry (grade of C- or better in MATH 005 or concurrent enrollment in MATH 008B)
- CHEM 001B/01LB  General Chemistry (grade of C- or better in CHEM 001A & CHEM 01LA)
- CHEM 001C/01LC  General Chemistry (grade of C- or better in CHEM 001B & CHEM 01LB)
- PHYS 040A  General Physics (grade of C- or better in MATH 008B or 009A)
- PHYS 040B  General Physics (grade of C- or better in MATH 009C & PHYS 040A)
- PHYS 040C  General Physics (grade of C- or better in MATH 009C & PHYS 040B)

C. Two additional courses, chosen from among the Natural Science courses listed above (Category V, Parts and B).

These requirements are typically already fulfilled by courses required for the major with the exception of Business Informatics majors.

\textit{Both BIOL 05A/05LA and BIOL 002 may not be taken to satisfy the requirement.}

** Business Informatics students ONLY may also choose from the following to satisfy this requirement:**

- GEO 001  The Earth’s Crust and Interior
- ENSC 001  Intro to Environmental Sciences, Natural Resources
Advanced Placement Examination Credit
Credit is listed by breadth area fulfilled, including exam score required to earn credit.

English
- English Language/Comp or Literature/Comp: ENGL 001A: score of 3
- English Language/Comp or Literature/Comp: ENGL 001A & 001B: score of 4 or 5

World History
- World History: score of 3, 4, or 5

Humanities Part B
- Art History, 2-D Design, 3-D Design, or Drawing: score of 3, 4, or 5
- Chinese Language & Culture: score of 5
- European History: score of 3, 4, or 5
- French Literature: score of 5
- German Literature: score of 5
- Latin Literature: score of 3, 4, or 5
- Music Listen & Literature: score of 3, 4, or 5
- Music Theory: score of 3, 4, or 5
- Spanish Literature: score of 5

Social Sciences
- Macroeconomics, score of 3, 4, or 5: ECON 002
- Microeconomics, score of 3, 4, or 5: ECON 003
- Comparative Government, score of 3, 4, or 5: POSC 015
- U.S. Government, score of 3, 4, or 5: POSC 010
- Psychology, score of 3: one course in PSYC
- Psychology, score of 4 or 5: PSYC 002
- Human Geography, score of 3, 4, or 5: One course in ANTH, PSYC, or SOC

Natural Sciences
- Biology, score of 3, 4, or 5: Biology credit for BUNF, CEN, CS, EE, and MSE majors only
- Chemistry, score of 3, 4, or 5: CHEM 1W and Natural Sciences Breadth for BUNF and CEN majors only
- Environmental Science, score of 3: ENSC 001 (for BUNF majors only)
- Environmental Science, score of 4 or 5: ENSC 002
- Physics-Exam C: Electricity & Magnetism, score of 5: PHYS 002B
- Physics-Exam C: Mechanics, score of 5: PHYS 002A

Breadth Notes:
Courses must carry at least 4 quarter units to satisfy a breadth requirement. Honors sections of all approved courses are also eligible.

While the College may revise the list of breadth requirements on an annual basis, students are allowed to satisfy the requirement criteria with any courses that were on the approved list at the time they were taken, or were subsequently added to the list.

Students who foresee a strong and justified reason to deviate from the list of approved breadth requirements may petition the Executive Committee of the Bourns College of Engineering, via the Office of Student Academic Affairs, for permission. Such requests must be submitted and approved in advance of actual enrollment. Requests submitted after actual enrollment will be considered only in cases of new transfer students and changes of major. All petitions must provide an appropriate justification for the substitution.

IN ALL CASES: Students must note that major requirements may influence the choice of breadth requirements and may dictate which courses are most appropriate as breadth requirement selections. Always consult the list of requirements for the individual major before making selections for the breadth categories.