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 2009. 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.

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 course/s 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 1A    Beginning Composition (ELWR)
- ENGL 1B    Intermediate Composition (ENGL 1A)
- ENGL 1C or ENGL 1SC    Applied Intermediate Composition (ENGL 1B)

II. HUMANITIES: 3 courses *(UCR R6.3)*

A. ONE course in World History, chosen from among:

- HIST 10    World History: Prehistory to 1500
- HIST 15    World History: 1500 to 1900
- HIST 20    World History: Twentieth Century

B. ONE course in Fine Arts, Literature, Philosophy or Religious Studies, chosen from among:

- AHS 7    World Art: Images, Issues, Ideas
- AHS 8/MCS 8    Modern Western Visual Culture
- AHS 15    Arts of Asia
- AHS 17A    History of Western Art: Prehistory to Byzantium
- AHS 17B    History of Western Art: Early Medieval to Renaissance
- AHS 17C    History of Western Art: Baroque to Modern
- AHS 20/FVC 23    Introduction to Media Art
- AHS 21/URST 21    Introduction to Architecture and Urbanism
- AHS 27    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 10A, B, or C    Ancient Civilization
- CLA 40    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 15    Language, Literature, and Culture
- CPLT 17A, B, or C    Masterworks of Western Literature
- CPLT 29    The Arts: Approach, Comparison, and Culture
- CPLT 110    Literary Analysis and Criticism
- WRIT 170/ETST 170    Third World Literature
- CPLT 180(E-Z)    Literature and Related Fields
- CRWT 56    Introduction to Creative Writing (ENGL 1A prerequisite)

- ENGL 12A    Introduction to Poetry
- ENGL 12B    Introduction to Fiction
- ENGL 12C    Introduction to Drama
- ENGL 14    Major American Writers
- ENGL 15    Modern Literature
- ENGL 17    Shakespeare
- ENGL 20A/31    American Literary Traditions
- ENGL 20B    British Literary Traditions
ENGL 101    Critical Theory
ENGL 112    History of the English Language
ETST 114    Contemporary Latina Writing in the US
ETST 120    Contemporary Native American Literature
ETST 151    Contemporary Asian American Literature

MUS 2        Introduction to Western Music
MUS/ANTH 6   Introduction to World Music (may fulfill either Humanities OR Social Science)
MUS 8        Popular Music Cultures of the US
MUS 14/ETST14 Popular Music of the World
MUS 118      Music, Politics and Social Movements
MUS 127/ANTH 176/ETST 172 Music Cultures of Southeast Asia (may fulfill either Humanities OR Social Science)

PHIL 1       Introduction to Philosophy
PHIL 2       Contemporary Moral Issues
PHIL 3       Ethics and the Meaning of Life
PHIL 6       Reason, Belief, and Truth
PHIL 7       Introduction to Critical Thinking
PHIL 8       Introduction to Logic
PHIL 30E-Z   Introduction to the History of Philosophy
PHIL 114     Science and Human Understanding
PHIL 116     Business Ethics
PHIL 124     Formal Logic (CS/EE 120A or CS 150 or PHIL 8)
PHIL 130     Theory of Knowledge
PHIL 131     Twentieth Century Analytical Philosophy (1 PHIL course)
PHIL 132     Philosophy of Language
PHIL 167     Biomedical Ethics

RLST 2       Introduction to Comparative Scripture
RLST 5       Introduction to Asian Religions
RLST 7       Introduction to Western Religion
RLST 11      Modern Christianities and World Cultures
RLST/ETST12  Religious Myths and Rituals
RLST 14      Religion and Science
RLST 15      Death
RLST 111     Islam
RLST 113     Topics in Modern Islam
RLST 116     Religion and Violence
RLST 175     Religion and Human Rights
RLST 179     Pilgrimage

C. ONE course in the History of Science, chosen from among:

HIST 103     History of Science from Antiquity to Copernicus
HIST 104     The Scientific Revolution
HIST 105     Science in the Modern World
HIST 106     Science in Triumph and Crisis
HIST 107     Myth and Science in Antiquity
HIST 108     Technology in Pre-modern World
HIST 109     Technology in Modern Europe and America, 1700 to Present
PHIL 137     Philosophy Science (one course in PHIL)
CLA 131/CPAC 131 Readings in the Origins of Science in China and Greece
III. SOCIAL SCIENCES: 3 courses *(UCR R6.4)*

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

- ECON 2  Introduction to Macroeconomics
- ECON 3  Introduction to Microeconomics
- ECON 6  Man, Scarcity, and the Environment
- ECON 102  Intermediate Microeconomics (ECON 3)
- ECON 103  Intermediate Macroeconomics (ECON 2)
- ECON 111  Research Methods on Business and Economics (ECON 2 or 3 or 4)
- ECON 119  Law and Economics (ECON 2 or 3 or 4)
- ECON 120  The Great Economists (SUMMER ONLY)
- ECON 123/HISA 123  American Economic History
- ECON 124  World Economic History (ECON 2 or 3 or 4)
- ECON 125  History of Economic Thought (ECON 2 or 3 or 4)
- ECON 129  Health Economics (ECON 3)
- ECON 143A  Environmental Economics (ECON 3 or 4, MATH022 or equivalent prerequisite)
- ECON 155/WMST 155  Women’s Labor and The Economy (ECON 2 or 3 or 4)
- ECON 178/BUS 178  International Trade (ECON 3)
- ECON 181  Economic Development: Theory and Policy (ECON 2, 3 or 4)
- POSC 10  American Politics
- POSC 15  Comparative Politics
- POSC 20  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 20)
- POSC 126  The Politics of International Trade, Finance and Development (POSC 20)
- POSC 127  International Environmental Politics (POSC 20)
- 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 164S  The Nation State and Capitalism
- POSC 182  Politics and Economic Policy
- POSC 183  Administrative Politics and Theory (POSC 10)
- POSC 186  Regulation: A Political Perspective

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

- ANTH 1  Cultural Anthropology
- ANTH 2  Biological Anthropology
- ANTH 3  World Prehistory
- ANTH 4  World Civilizations
- ANTH 5  Introduction to Archaeology
- ANTH 6/MUS 6  Introduction to World Music (may fulfill either Humanities OR Social Science)
- ANTH 12  Great Discoveries in Archaeology
- ANTH 20  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 1 or 2 or 3)
- 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 1 or 3 or 5)
- ANTH 122  Economic Anthropology (ANTH 1 and ECON 1)
- ANTH 124  Ritual and Religion
ANTH 125    Kinship Organization (ANTH 1)
ANTH 127    Political Anthropology (ANTH 1)
ANTH 129    Human Evolutionary Ecology (ANTH 1)
ANTH 132    Cultural Ecology
ANTH 134    Anthropology of Resource Management (ANTH 1)
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/MUS 127/ETST 172 Music Cultures of Southeast Asia (may fulfill either Humanities OR Social Science)

PSYC 1     Introductory Psychology
PSYC 2     Introductory Psychology
PSYC 13    Skepticism and Pseudoscience in Psychology (C- or better in ENGL 1A)
PYSC 110   The Brain and Behavior (BIO 2 or 3 or 5A with C- or better)
PSYC 142   Industrial/Organizational Psychology (PSYC 2)
PSYC 178   Health Psychology (PSYC 2 or SOC 1)
PSYC 179   Health and Behavior Change (PSYC 2 or PSYC 178 with C- or better)

SOC 1     Introduction to Sociology
SOC 10/URST 10 The City: An Introduction
SOC 15    Social Problems
SOC 20    American Society
SOC 120   Human Social Institutions (SOC 1)
SOC 122    Social Change (SOC 1)
SOC 123    Human Societies (SOC 1 or ANTH 1)
SOC 137    Population (SOC 1)
SOC 143/URST 143 Urban Sociology (SOC 1)
SOC 150    The Sociology of Economic Organizations
SOC 151    Formal Organizations
SOC 156    Community (SOC 1)
SOC 157    Social Networks (SOC 1)
SOC 160    Sociology of Education
SOC 169    Modern Sociological Theory (SOC 1)
SOC 176/BUS 176 The Sociology of Work in Organizations
SOC 181   World-Systems and Globalizations (SOC 1)
SOC 182/URST 182 Urban Problems
SOC 184    Environmental Sociology (SOC 1)

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 1     Gender and Sexuality
WMST 10    Women and Culture
WMST 100   Gender Theory
WMST 109/ANTH 109 Women, Politics and Social Movements: Global Perspectives
WMST 161   Gender and Science (WMST 1)
WMST 187   Women, Gender and Technology (WMST 1)
IV. ETHNICITY: 1 course (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/RLST 12: Religious Myths and Rituals
- ETST/MUS 14: 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 1: Introduction to the Study of Race and Ethnicity
- ETST 2: Introduction to Chicano Studies in Comparative Perspective
- ETST 3: Introduction to African American Studies in Comparative Perspective
- ETST 5: Introduction to Asian American Studies in Comparative Perspective
- ETST 7: 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 3)
- ETST 131: Race, Class, and Gender
- ETST 172/ANTH 176/MUS 127: Music Cultures of Southeast Asia (may fulfill either Humanities OR Social Science)

V. NATURAL SCIENCES: 4 courses (UCR R6.2)

A. One course, chosen from among:
- BIOL 2: Cellular Basis of Life
- BIOL 3: Organisms in Their Environment
- BIOL 5A/LA: Introduction to Cell and Molecular Biology (CHEM 1A)

B. One course, chosen from among:
- CHEM 1A/1LA: General Chemistry (C- in MATH 5 or concurrent enrollment in MATH 8B)
- CHEM 1B/1LB: General Chemistry (CHEM 1A/1LA)
- CHEM 1C/1LC: General Chemistry (CHEM 1B/1LB)
- PHYS 40A: General Physics (MATH 8B or MATH 9A with C- or better)
- PHYS 40B: General Physics (MATH 9B, PHYS 40A)
- PHYS 40C: General Physics (MATH 9C, PHYS 40B)

C. Two additional courses, chosen from among the Natural Science courses listed above (Category V, Parts A and B). These requirements are typically already fulfilled by courses required for the major.

** Business Informatics students ONLY may also choose from the following:**
- GEO 1: The Earth’s Crust and Interior
- ENSC 1: 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 1A: score of 3
- English Language/Comp or Literature/Comp: ENGL 1A & 1B: 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
- Macroeconomics, 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, CEN, CS, and EE 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.