While every effort has been made to provide accurate information, this minor sheet is for advising purposes only and is not an official document. Refer to the online O'Neill Undergraduate Academic Bulletin at www.indiana.edu/~bulletin/iub/ for comprehensive information about minor requirements.

- Students with an O'Neill major and minor may double count up to two courses for both the major and minor.
- Students with a major in another school may have different or additional minor requirements; see an advisor in your school for details (e.g., the College requires that at least nine credits be at 300-400 level.)
- O'Neill offers 17 minors on the Bloomington campus.
- Students follow the O'Neill minor requirements in effect at the time they apply for the minor.
- O'Neill minors require five courses or 15 credit hours, except the Environmental and Sustainability Studies minor, which requires 18 credits.
- The minimum grade point average for all O'Neill minors is 2.00.
- In some cases, O'Neill study abroad courses may count for O'Neill minors; see an O'Neill advisor for additional information.
- Courses may have pre-requisites; these are listed in each school's online academic bulletin at www.indiana.edu/~bulletin/iub/.

### ARTS MANAGEMENT

The following **two** courses:
- SPEA-A 163 Art Worlds: Management, Markets, and Policy
- SPEA-A 236 Music Industry I
- SPEA-A 241 Community Engagement in the Arts
- SPEA-A 336 Music Industry II
- SPEA-A 405 Programming in the Performing Arts
- SPEA-A 410 Artists, Galleries and Collectors
- SPEA-A 411 Auditorium Management
- SPEA-A 412 Creative Thinking Strategies for Arts Management
- SPEA-A 418 Theatre and Dance Management
- SPEA-A 422 IT Applications for the Arts
- SPEA-A 426 Art and Social Change
- SPEA-A 439 Fund Development for the Arts
- SPEA-A 450 Contemporary Topics in Arts Administration (repeatable with different topics)
- SPEA-A 459 Public Policy and the Arts
- SPEA-A 464 The Economics and Administration of Artistic Organizations
- SPEA-A 482 Overseas Topics in Arts Management (see advisor for policy)
- SPEA-V 236 Managing and Leading Organizations
- SPEA-V 246 Elements of Governmental and Nonprofit Financial Accounting Cycle (P: SPEA-V 186)
- SPEA-V 336 Managing External Collaboration and Networks (P: SPEA-V 185)
- SPEA-V 482 Overseas Topics in Public Affairs (approved topics only; consult O'Neill advisor; repeatable with different topics)
- AADM-Y 412 Opera Management

**List B:**
- FOLK-F 364 Children’s Folklore
- FOLK-X 402 Traditional Arts Indiana
- MSCH-A 347 Media Promotion and Marketing
- MSCH-C 207 Introduction to Media Industry and Management
- MSCH-C 208 Principles of Public Relations
- MSCH-M 330 Production Management
- MSCH-R 431 Public Relations for Nonprofits
- MUS-U 300 Introduction to Music Entrepreneurship
- MUS-U 315 Arts Education and Outreach
- MUS-U 340 Practicum in Music Entrepreneurship
- MUS-U 413/2 313 Legal Aspects of the Music Industry

### EDUCATION POLICY

**Joint minor with O'Neill and School of Education.**

At least nine credits must be at the 300-400 level.

All courses must have minimum grade of C.

The following **two** courses:
- EDUC-A 308 Legal Issues for Secondary Teachers
- EDUC-H 200 Introduction to Education Policy

**One** of the following courses:
- EDUC-H 205 Introduction to Educational Thought
- EDUC-H 340 Education and American Culture
- LAT-S 380 Latino Education Across the Americas
- SOC-S 312 Education and Society

**One** of the following courses:
- SPEA-V 236 Managing and Leading Organizations
- SPEA-V 263 Public Management
- SPEA-V 336 Managing External Collaboration and Networks (P: SPEA-V 185)
- SPEA-V 362 Nonprofit Management and Leadership
- SPEA-V 373 Human Resource Management in the Public Sector
- SPEA-V 412 Leadership and Ethics
- SPEA-V 443 Managing Workforce Diversity

**One** of the following courses:
- SPEA-V 246 Elements of Governmental and Nonprofit Financial Accounting Cycle (P: SPEA-V 186)
- SPEA-V 348 Management Science (P: SPEA-K 300, MATH-M 025 or MATH-M 118)
- SPEA-V 361 Financial Management (P: SPEA-V 246 or BUS-A 201)
- SPEA-V 370 Research Methods and Statistical Modeling (P: SPEA-K 300)
- SPEA-V 374 Intermediate Public Budgeting & Finance (P: SPEA-V 186)
- SPEA-V 379 Performance Measurement and Program Evaluation
- SPEA-V 401 Financial and Cost Benefit Analysis (P: SPEA-V 202)
- SPEA-V 449 Senior Policy Seminar
- other courses approved by the minor oversight committee

### ENVIRONMENTAL AND SUSTAINABILITY STUDIES

**Joint minor with O'Neill and College of Arts and Sciences.**

Minor requires 18 credit hours.

At least nine credits must be at 300-400 level.

At least nine courses must be completed on Bloomington campus.

All courses must have minimum grade of C-.
ENVIRONMENTAL MANAGEMENT

The following three courses:

- SPEA-E 183 Environment & People
- SPEA-E 272 Introduction to Environmental Sciences (R: SPEA-E 183)
- SPEA-E 363 Environmental Management (R: SPEA-E 183)

One of the following courses:

- SPEA-E 311 Introduction to Risk Assessment and Risk Communication
- SPEA-E 340 Environmental Economics and Finance
- SPEA-E 465 Environmental Management in the Tropics
- SPEA-E 466 International and Comparative Environmental Policy
- SPEA-E 476 Environmental Law and Regulation

One additional course from the above list or the following list:

- SPEA-E 325 Computing for Environmental Scientists
- SPEA-E 355 Introduction to Limnology
- SPEA-E 375 Techniques of Environmental Science
- SPEA-E 400 Topics in Environmental Studies (repeatable with different topics)
- SPEA-E 410 Introduction to Environmental Toxicology
- SPEA-E 411 Introduction to Groundwater Hydrology
- SPEA-E 412 Risk Communication
- SPEA-E 417 Fundamentals of Sustainable Agriculture
- SPEA-E 419 Applied Remote Sensing of the Environment
- SPEA-E 422 Urban Forest Management
- SPEA-E 431 Water Supply and Wastewater Treatment
- SPEA-E 440 Wetlands Ecology and Management (P: SPEA-E 272)
- SPEA-E 451 Air Pollution and Control
- SPEA-E 452 Solid and Hazardous Waste Management
- SPEA-E 456 Lake and Watershed Management
- SPEA-E 457 Introduction to Conservation Biology
- SPEA-E 460 Fisheries and Wildlife Management
- SPEA-E 461 Fisheries and Wildlife Management Laboratory
- SPEA-E 470 Introduction to Public Affairs
- SPEA-E 472 Introduction to Environmental Science
- SPEA-E 474 Environmental Law and Regulation
- SPEA-E 478 Environmental Management in the Tropics
- SPEA-E 482 Overseas Topics in Public Affairs (approved topics only; consult O'Neill advisor; repeatable with different topics)
- other courses in environmental science and health approved by an O'Neill advisor

ENVIRONMENTAL SCIENCE

Joint minor with O'Neill and College of Arts and Sciences.

All courses must have minimum grade of C-.

It is recommended that students have taken MATH-M 119 or higher and CHEM-C 117 or higher (or equivalents).

One of the following courses:

- GEOG-G 208 Environment and Society
- SPEA-E 272 Introduction to Environmental Sciences (R: SPEA-E 183)

Four additional courses; at least three must be at the 300-400 level:

- See SBS website for current list of approved courses http://www.indiana.edu/~bses/curriculum/index/php. Only courses in section III.2. Environmental Science Courses are approved for the minor. Selection of these four courses should be done in consultation with the environmental science faculty or BSES director.
- other courses approved by the BSES program director

ENVIRONMENTAL SCIENCE AND HEALTH

The following three courses:

- SPEA-E 183 Environment & People
- SPEA-E 272 Introduction to Environmental Sciences (R: SPEA-E 183)
- SPEA-H 316 Environmental Health Science (P: SPEA-H 124 or permission of instructor)

Two of the following courses:

- SPEA-E 311 Introduction to Risk Assessment and Risk Communication
- SPEA-E 316 Insects and the Environment
- SPEA-E 324 Controversies in Environmental Health
- SPEA-E 375 Techniques of Environmental Science
- SPEA-E 410 Introduction to Environment Toxicology
- SPEA-E 431 Water Supply and Wastewater Treatment
- SPEA-E 451 Air Pollution and Control
- SPEA-E 452 Solid and Hazardous Waste Management
- SPEA-E/V 482 Overseas Topics in Public Affairs (approved topics only; consult O'Neill advisor; repeatable with different topics)
- other courses in environmental science and health approved by an O'Neill advisor

HEALTHCARE MANAGEMENT AND POLICY

The following three courses:

- SPEA-H 124 Overview of the US Healthcare System
- SPEA-H 324 Health Policy (P: SPEA-H 124 or permission of instructor)

One of the following courses:

- SPEA-H 316 Environmental Health Science (P: SPEA-H 124 or permission of instructor)
- SPEA-H 341 Legal Aspects of Health Care Administration (P: SPEA-H 124 or permission of instructor)
- SPEA-H 342 Community Health Education (P: SPEA-H 124 or permission of instructor)
- SPEA-H 354 Health Economics (P: SPEA-H 124 and ECON-E 201 or permission of instructor)
- SPEA-H 374 Health Management Ethics (P: SPEA-H 124 or permission of instructor)
- SPEA-H 401 Strategic Planning in Health Organizations (P: SPEA-H 353 or concurrent)
- SPEA-H 402 Hospital Administration (P: SPEA-H 124 or permission of instructor)
- SPEA-H 405 Pharmaceutical Industry & Public Policy (P: SPEA-H 124 or permission of instructor)
- SPEA-H 411 Chronic and Long-Term Care Administration (P: SPEA-H 124 or permission of instructor)
- SPEA-H 432 Health Care Marketing
- SPEA-H 455 Topics in Public Health (May be repeated)
- SPEA-H 456 Healthcare Reimbursement (P: SPEA-H 353 or concurrent)

One of the following courses:

- Any course not selected from the list above
- SPEA-V 373 Human Resource Management in the Public Sector
- BUS-J 375 Strategic Management
- BUS-P 300 (or P-304 Honors) Operations Management
- ECON-E 321 Intermediate Microeconomic Theory
- BIOT-T 312 Societal Issues in Biotechnology
- SOC-S 358 Social Inequalities in Health and Health Care
- STAT-S 303 Applied Statistical Methods for the Life Sciences
- SPH-B 403 Public Health Program Planning

HUMAN RESOURCE MANAGEMENT

The following three courses:

- SPEA-V 236 Managing and Leading Organizations
- SPEA-V 373 Human Resource Management in the Public Sector
- SPEA-V 477 Strategic Human Resource Management (P: SPEA-V 373)

Two of the following courses:

- SPEA-V 432 Labor Relations in the Public Sector
- SPEA-V 435 Negotiation and Alternative Dispute Resolution
- SPEA-V 443 Managing Workforce Diversity
- SPEA-V 450 Contemporary Issues in Public Affairs (approved topics only; consult O'Neill advisor)
The following three courses:
- SPEA-V 261 Technology in Public Affairs
- SPEA-V 369 Managing Information Technology
- SPEA-V 475 Database Management Systems (P: SPEA-V 261, SPEA-V 369, or equivalent)

Two of the following courses:
- SPEA-E 325 Computing for Environmental Scientists
- SPEA-E 418 Vector-based GIS
- SPEA-E 419 Applied Remote Sensing of the Environment
- SPEA-V 348 Management Science
- SPEA-V 450 Contemporary Issues in Public Affairs (approved topics only; consult O’Neill advisor; repeatable with different topics)
- SPEA-V 461 Computer Applications in Public Affairs
- SPEA-V 465 GIS for Public and Environmental Affairs
- SPEA-V 482 Overseas Topics in Public Affairs (approved topics only; consult SPEA advisor)
- other courses in information systems approved by an O’Neill advisor

PUBLIC AND ENVIRONMENTAL AFFAIRS
This minor is for non-O’Neill students only.

One of the following courses:
- SPEA-V 161 Urban Problems and Solutions
- SPEA-V 181 US Policy & Administration
- SPEA-V 182 Policy-making around the World: Comparative and International Approaches

The following course:
- SPEA-E 183 Environment and People

Three of the following courses:
- SPEA-E 272 Introduction to Environmental Science (R: SPEA-E 183)
- SPEA-E 400 Topics in Environmental Science (repeatable with different topics)
- SPEA-V 184 Law and Public Affairs
- SPEA-V 236 Managing and Leading Organizations
- SPEA-V 263 Public Management
- SPEA-V 336 Managing External Collaboration and Networks (P: SPEA-V 185)
- SPEA-V 373 Human Resource Management in the Public Sector
- SPEA-V 424 Environmental Law, Justice, and Politics
- SPEA-V 425 Homeland Security: Policy and Practice
- SPEA-V 432 Labor Relations in the Public Sector (P: SPEA-V 373)
- SPEA-V 450 Contemporary Issues in Public Affairs (approved topics only; consult an O’Neill advisor; repeatable with different topics)
- SPEA-V 482 Overseas Topics in Public Affairs (approved topics only; consult an O’Neill advisor; repeatable with different topics)
- other courses in Public and Environmental Affairs approved by an O’Neill advisor
(approved topics only; consult an O'Neill advisor; repeatable with different topics)

PUBLIC MANAGEMENT

One of the following courses:
- SPEA-V 161 Urban Problems and Solutions
- SPEA-V 181 US Policy & Administration
- SPEA-V 182 Policy-making around the World: Comparative and International Approaches

The following course:
- SPEA-V 185 Management of Public Problems and Solutions

Three of the following courses:
- SPEA-V 184 Law and Public Affairs
- SPEA-V 236 Managing and Leading Organizations
- SPEA-V 263 Public Management
- SPEA-V 336 Managing External Collaboration and Networks (P: SPEA-V 185)
- SPEA-V 340 Urban Government Administration
- SPEA-V 361 Financial Management (P: SPEA-V 246, or BUS-A 201)
- SPEA-V 362 Nonprofit Management and Leadership
- SPEA-V 368 Managing Government Operations (P: SPEA-V 348)
- SPEA-V 369 Managing Information Technology
- SPEA-V 373 Human Resource Management in the Public Sector
- SPEA-V 374 Intermediate Public Budgeting & Finance (P: SPEA-V 186)
- SPEA-V 424 Environmental Law, Justice, and Politics
- SPEA-V 432 Labor Relations in the Public Sector (P: SPEA-V 373)
- SPEA-V 435 Negotiation and Alternative Dispute Resolution
- SPEA-V 443 Managing Workforce Diversity
- SPEA-V 450 Contemporary Issues in Public Affairs (approved topics only; consult an O'Neill advisor; repeatable with different topics)
- SPEA-V 463 Interpersonal Relations in the Workplace
- SPEA-V 465 Geographic Information Systems (GIS) for Public and Environmental Affairs
- SPEA-V 475 Database Management Systems (P: SPEA-V 261, SPEA-V 369, or equivalent)
- SPEA-V 482 Overseas Topics in Public Affairs (approved topics only; consult an O'Neill advisor; repeatable with different topics)

URBAN PLANNING AND COMMUNITY DEVELOPMENT

The two following courses:
- SPEA-V 161 Urban Problems and Solutions
- SPEA-V 365 Urban Development and Planning (P: SPEA-V 161)

Three of the following courses; at least one course must be outside O'Neill:
- GEOG-G 314 Urban Geography
- GEOG-G 316 Economic Geography
- GEOG-G 415 Advanced Urban Geography
- HIST-A 300 Issues in United States History
- HIST-A 347 American Urban History
- HIST-W 125 Cities and History
- POLS-Y 103 Introduction to American Politics
- POLS-Y 306 State Politics in the United States
- POLS-Y 308 Urban Politics
- SOC-S 215 Social Change
- SOC-S 309 The Community
- SOC-S 339 Sociology of Media
- SPEA-V 226 Managing Emergency Services
- SPEA-V 275 Introduction to Emergency Management
- SPEA-V 340 Urban Government Administration
- SPEA-V 412 Leadership and Ethics
- SPEA-V 421 Metropolitan Development
- SPEA-V 422 Transportation Policy Analysis
- SPEA-V 424 Environmental Law, Justice, and Politics
- SPEA-V 425 Homeland Security: Policy and Practice
- SPEA-V 450 Contemporary Issues in Public Affairs (approved topics only; consult an O'Neill advisor; repeatable with different topics)
- SPEA-V 462 Community Development
- SPEA-V 482 Overseas Topics in Public Affairs (approved topics only; consult an O'Neill advisor; repeatable with different topics)

WATER RESOURCES SCIENCE, POLICY, AND MANAGEMENT

(1) Take one of the following core courses:
- GEOG-G 259/347 Water Security and Sustainability
- EAS-E 118 Sustainability: Water Resources
- SPEA-E 260 Introduction to Water Resources

(2) Take at least three credits from each of categories 1-3 below.

Category 1: Physical hydrology & the water cycle (at least 3 credits)
- GEOG-G 304 Physical Climatology
- GEOG-G 451 Physical Hydrology
- GEOG-G 467 Ecohydrology
- EAS-X 429 Field Geology Rocky Mountains – subdiscipline E. (Specific concentration is E. Environmental Geology and Hydrology, 6 cr.)
- EAS-E 451 Principles of Hydrogeology
- EAS-A 466 Hydrometeorology

Category 2: Water and ecosystems (at least 3 credits)
- SPEA-E 355 Introduction to Limnology*
- SPEA-E 440 Wetlands Ecology and Management
- SPEA-E 443 Habitat Analysis – Aquatic
- SPEA-E 455 Limnology*
- * students can only get credit for one of SPEA-E 355 or SPEA-E 455 toward the minor

Category 3: Water and human systems (at least 3 credits)
- GEOG-G 341 Ecological Restoration: Science, Politics, and Ethics
- GEOG-G 368 Water in the Midwest
- GEOG-G 453 Water and Society
- GEOG-G 461 Human Dimensions of Global Environmental Change
- SPEA-E 456 Lake and Watershed Management
- SPH-O 305 Integrated Resource Management

(3) Complete three additional credits
To meet the total requirement of 15 credit hours, 3 additional credit hours are required. These 3 credits can be satisfied by taking any of the courses from the core or Categories 1-3 above. Additionally, the following courses that may be used toward the total credit requirement to provide breadth or depth of understanding in the area of Water Resources Science, Policy, and Management.
- BUS-L 302 Sustainability Law & Policy
- GEOG-G 336 Environmental Remote Sensing
- GEOG-G 350 Field Methods in Physical Geography
- GEOG-G 439 GIS and Environmental Analysis
- GEOG-G 444 Climate Change Impacts
- EAS-X 329 Introductory Field Experience in Environmental Science
- EAS-A 476 Climate Change Science
- EAS-E 415 Principles of Geomorphology
- PHYS-P 310 Environmental Physics
- SPEA-E 340 Environmental Economics and Finance
- SPEA-E 363 Environmental Management
- SPEA-E 375 Techniques of Environmental Science
- SPEA-E 402 Water Quality Modeling
- SPEA-E 412 Risk Communication
- SPEA-E 431 Water Supply and Wastewater Treatment
- SPEA-E 460 Fisheries and Wildlife Management
- SPEA-E 470 Elements of Fluid Mechanics
- SPEA-E 476 Environmental Law and Regulation
- SPH-O 244 Natural History and Field Ecology
- SPH-O 310 Ecosystem Management
- SPH-O 343/CLLC-L 300 Sustainable Agriculture
- SPH-V 214 Environmental Regulations and Code Compliance
- SPH-V 443 Environmental Sampling and Analysis

(4) Additional Requirements:
- At least 9 credit hours in the minor must be completed at the 300-400 level.
- At least 9 credit hours must be completed on the Bloomington campus.
- GPA > 2.00 in minor courses
- Substitutions for core and category 1-3 courses for extenuating circumstances may be made with approval of the program director