

Indigenous Food, Energy and Water Systems PhD Minor

Course Requirements for GIDP PhD Students

The minor is comprised of five (5) courses: one “Indigenous research and outreach ethics” Seminar, one “Systems” course, one “Fundamentals” course, one “Society” course, and the “Unit Operations” course.

| Seminar Course | Course Name | Semester | Units | Prerequisites | Instructor |
|-----------------------------|---|--------------------------------|--------------|--|----------------------|
| ENVS 696N | Indigenous Food, Energy, and Water Security and Sovereignty Seminar | Fall | 1 unit | None | Karletta Chief |
| Systems Courses | Course Name | Semester | Units | Prerequisites | Instructor |
| BE 579 | Applied instrumentation for controlled environment agriculture | Spring | 3 units | MATH 113 Calculus PHYS 102 Intro to Physics 1 | Murat Kacira |
| BE 582 | Integrated engineering solutions in the food-energy-water nexus | Fall | 3 units | none | Joel L. Cuello |
| ENVS 596B | Water policy in Arizona and semi-arid regions | Spring | 3 units | none | Sharon Megdal |
| GEOG 596J | Water, Energy, Food Nexus <i>(note: Course Catalog Title is “Water Management and Policy”)</i> | TBD | 3 units | none | <i>TBD</i> |
| Fundamentals Courses | Course Name | Semester | Units | Prerequisites | Instructor |
| ECE/OPTI 514A | Photovoltaic solar energy systems | Spring | 3 units | Graduate standing | Raymond K. Kostuk |
| ECE/MSE/OPTI 534 | Advanced topics in optical and electronic materials | Spring, even years only | 3 units | | Kelly Simmons-Potter |
| MSE 530 | Organic electronic materials and devices | Fall, even years only | 3 units | | Erin Ratcliff |
| MSE 550 | Materials selection for the environment | Spring | 3 units | MSE110 Solid State Chemistry MSE222 Intro to MSE MSE331R Fund of Materials for Engrs | Barett G. Potter |
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| Society Courses | Course Name | Semester | Units | Prerequisites | Instructor |
|-------------------------------|---|--------------------------------------|--------------|----------------------|-----------------------------|
| AIS 526A | Principles of Indigenous economics | TBD | 3 units | none | Ronald Trosper |
| AIS 531A | Traditional ecological knowledge | Fall | 3 units | none | Ronald Trosper |
| AIS 541A | Natural resource management in native communities | Spring | 3 units | none | Benedict Colombi |
| Unit Operations Course | Course Name | Semester | Units | Prerequisites | Instructor |
| CHEE 514 | Sustainable Water Supplies for Remote Communities | Spring, non-consecutive years | 4 units | none | Vasiliki “Vicky” Karanikola |

Graduate College Catalog <https://grad.arizona.edu/catalog/programinfo/IFEWSMING>

Graduate Interdisciplinary Programs <https://gidp.arizona.edu/indige-fews>