University of Arizona
School of Geography and Development

*Master's in Development Practice Student Handbook*

**Updated:** May 2018

This Handbook serves as a reference guide for students, faculty and administrators affiliated with the Master's in Development Practice (MDP) program at the University of Arizona, School of Geography and Development (SGD). It covers curriculum and degree requirements, standards of academic performance and conduct, registration, guidelines for graduation, tuition and fees, funding and financial aid, grievance procedures, professional development resource, and various related University of Arizona policies and regulations. In addition to the policies outlined in the MDP Student Handbook, students, faculty and administrators are subject to all applicable university-wide policies. Please consult these three essential UA Graduate College websites for the most current policy information: 1) Graduate College, [http://grad.arizona.edu](http://grad.arizona.edu); 2) Policies and Procedures, [http://grad.arizona.edu/degreecert](http://grad.arizona.edu/degreecert); and 3) New and Current Students, [http://grad.arizona.edu/current-students](http://grad.arizona.edu/current-students).
Contents

I. Academic Affairs .......................................................................................................................... 4

   MDP Degree Requirements & Curriculum ................................................................................. 4
       Required Core Courses ......................................................................................................... 4
       Electives ............................................................................................................................... 4
       Specialization ..................................................................................................................... 5

   Advising & Mentoring .............................................................................................................. 5

   Plan of Study ............................................................................................................................ 6

   Registration ............................................................................................................................... 6
       Course Load ........................................................................................................................ 6
       Course Waivers and Substitutions ....................................................................................... 6

   Desk space, Computing, and Printing ...................................................................................... 6

   Academic Standards and Satisfactory Progress ......................................................................... 7
       Leaves of Absence ................................................................................................................ 7
       Time Limits .......................................................................................................................... 7

   Grievance Procedure ............................................................................................................. 7

II. Practicum .................................................................................................................................... 7

   Finding and Choosing and Practicum Partner ........................................................................... 8

   International Partners ............................................................................................................. 9

   Expectations and Code of Conduct .......................................................................................... 10

   Tuition and Fees ....................................................................................................................... 10

   Summer Practicum Costs and Support ..................................................................................... 10

   Scholarships and Financial Aid ................................................................................................ 11

   Graduate Assistantships ......................................................................................................... 11

   On Campus Job Opportunities ................................................................................................. 11

III. Professional Development ....................................................................................................... 12

IV. Appendices & Resources ......................................................................................................... Error! Bookmark not defined.

   1. The Academic Landscape ..................................................................................................... Error! Bookmark not defined.

   2. Geography resources .......................................................................................................... Error! Bookmark not defined.


   Teamwork ............................................................................................................................... Error! Bookmark not defined.

   Time Management .................................................................................................................. Error! Bookmark not defined.
Other Reading and Resources ................................................................. Error! Bookmark not defined.
4. Preparing Proposals for Grant Funding .............................................. Error! Bookmark not defined.
5. Publishing: Writing and Submission .................................................. Error! Bookmark not defined.
    Peer Reviewing .................................................................................. Error! Bookmark not defined.
7. Making Presentations ......................................................................... Error! Bookmark not defined.
8. Attending Professional Conferences .................................................. Error! Bookmark not defined.
9. Writing a CV and Developing a Web Site .......................................... Error! Bookmark not defined.
    CVs .................................................................................................. Error! Bookmark not defined.
    Web sites .......................................................................................... Error! Bookmark not defined.
10. Careers and Securing a Job .............................................................. Error! Bookmark not defined.
    Application Process ......................................................................... Error! Bookmark not defined.
11. Ethics and Politics ............................................................................ Error! Bookmark not defined.

Appendix A: Useful websites

Appendix B: list of approved Electives

Appendix C: sample course load
I. Academic Affairs

MDP Degree Requirements & Curriculum
MDP students are required to complete 48 credits in order to graduate, including 27 credits in the required core curriculum areas, 12 credits of Integrative Coursework, and 9 credits of electives.

Required Core Courses
As part of the MDP core curriculum, students are required to take courses in the following four areas of study for a total of 27 credits:

- **Social Sciences** (9 credits), DVP 601 Principles of Social Science for Development (Fall, Year 1) and DVP 602 The Role of Culture in Sustainable Development (Fall, Year 1); AREC 512 Economic Policy in Developing Countries (in year 2).
- **Natural Sciences** (6 credits), DVP 620 Introduction to Natural Systems (Fall, Year 1) and your choice.
- **Health Sciences** (6 credits), your choice (recommended course for Year 1 is HPS 533 Global Health).
- **Development Management** (6 credits), DVP 630 Essential Management Principles for Development and your choice (recommended course for Year 1 is PA 582 Managing to Collaborate on Environmental and Natural Resources Conflicts)

In addition, students should complete 12 credits of Integrative Coursework, which includes:

- DVP 600 Foundations of Development/Boot Camp (1 credit) in Fall of Year 1
- DVP 640 Methods in Development Practice (3 Credits) in Spring of Year 1
- DVP 642A Cross-Cohort Professional Development Seminar (2 Credits) one 1-credit seminar in Year 1, another 1-credit seminar in Year 2
- DVP 697B - Field Practicum Analysis and Professional Development (1 Credit) in Fall of Year 2
- Summer Field Practicum (2-6 Credits)
- DVP 909 Master’s Report (3 credits) in Spring of Year 2

Electives
Along with integrative course work and courses in the core curriculum areas, students may take 3 elective courses (9 credits) in the student’s chosen area of specialization. Students should consult with their advisor when choosing from a list of approved electives, and be prepared to justify a course outside of that approved list.
*One recommended course for the first year is PA 552 Statistical Decision Making; MDP students in the past have recommended this highly. We also recommend having a good base in statistics to be able to succeed in other classes; this is a good graduate-level class that is not too advanced and therefore might be good to take in the first semester to refresh your statistical skills.

**Specialization**

The elective coursework, in combination with the core curriculum and summer practicum experience, allows students to develop a specialization within the field of development. In consultation with their advisors, students may either develop their own areas of specialization or follow one of three pre-existing tracks. These include:

- **Global Health and Development**: Offered through the Mel and Enid Zuckerman College of Public Health, students undertake coursework from the Global Health Certificate curriculum, including nutrition, project design and implementation, infectious disease, and the interplay between poverty and health.

- **Collaborative Governance**: Offered through the School of Government & Public Policy, students undertake coursework focusing on competencies that enable students to manage collaboration across institutional and sectoral boundaries. The concentration is designed for students who intend to work in government, non-profit organizations or the corporate sector where cooperation with other institutions, stakeholders and the public at large is important.

- **Natural Resource Management**: Specifically development for the MDP program in partnership with the School of Natural Resources and the Environment, this track allows MDP students to undertake coursework within several areas of interest related to natural resources.

In addition to the above specializations, the MDP program is also exploring optional concentrations in Water Policy and Human Rights. More details will become available as these option develops. Please inquire if interested.

**Advising & Mentoring**

Success in the MDP program relies on effective relationships between the student and their advisors. Upon arrival in the program, new students meet with the MDP Director to discuss their goals and interests. The Director and Assistant Director will be the student’s primary contact throughout their time in the MDP program and are available to advise students on course selection, practicum planning, professional development, the final report, and other matters. However, students are also highly encouraged to seek out, develop, and maintain informal mentoring relationship with different faculty members and practitioners affiliated with the MDP program. The Director and Assistant Director will guide students toward potential mentors who have professional experience related to the student’s field of interest. Students should also seek out advice from faculty whose courses they take as well as with professional practitioners or alumni who are occasionally invited to MDP events such as brown-bag lunches.
**Plan of Study**
In consultation with and approval from the MDP, each student is required to develop a Plan of Study outlining a list of proposed courses the student intends to take and when.

The Plan of Study should be completed as early as possible during the first few months of the program and must be submitted to the Graduate College no later than the second semester. The plan can be amended later if need be. The form can be submitted through [GradPath](#) on UAccess. There is a one-time submission fee of $35 associated with this form.

On GradPath, students may be prompted to submit names for their committee. As the MDP program does not require a Master’s thesis, students do not need to form an advisory committee and may write in the MDP Director’s name as their advisor.

**Registration**
Students can use UAccess to register for all regular graduate courses. Students must first get approval from the MDP Director before registering for Independent Study or Thesis credits. Following approval, students should contact the Program Coordinator (Liz Cordova) who can manually register them.

Students will receive an e-mail alert from the Graduate College notifying them about their registration window. Students can also register for classes during open enrollment following the priority registration period. International students cannot register for classes until after they have attended the University of Arizona orientation for international students. In order to avoid late fees or other inconveniences, students should consult these [dates and deadlines](#) outlined by the Office of the Registrar, and these from the Bursar’s Office.

**Course Load**
Students typically enroll in 10-13 credits each semester depending on their plan of study. Students can take a maximum of 16 credits each semester. More can be taken with approval from the Director, but this is not advised. International Students must be enrolled in a minimum of 6 credits to maintain their student visa status. Likewise, students receiving a Graduate Assistantship (TA or RA position) must be enrolled in a minimum of 6 credits.

**Course Waivers and Substitutions**
Requests for a course waiver or substitutions for required courses may be approved at the discretion of the MDP Director. If a student wishes to waive or substitute 2 or more courses, this requires approval from the Graduate College.

**Desk space, Computing, and Printing**
MDP Students requiring office space in SGD may request a desk from Amanda Percy, the Administration Manager. Desk space for MDP students is located in the graduate student pod areas on the 4th and 5th floors of ENR2.

Students who only require occasional access to a computer rather than permanent desk space can use the computers located in the Majors Lab on the 5th floor of ENR2. Students with laptops can also work
in the Research Room on the 4th floor. All students can obtain permission to print on the 5th floor printers by submitting a service request via SBS Ticket Dog.

**Academic Standards and Satisfactory Progress**
At the start of every Spring semester, each MDP student is required to meet with the MDP Director and/or Assistant Director to discuss their progress toward completion of the MDP degree. Students will have the opportunity to discuss the courses they have completed and their plans for future coursework, the field practicum, the final report, and graduation. If a student is failing to make satisfactory progress, the Director will recommend a corrective course of action.

**Leaves of Absence**
Students may request a leave of absence for one semester or one year to be approved by the MDP Director. Leaves of absence are approved on a case-by-case basis depending on the situation. If a student requires additional leave after completion of the initial leave of absence, another one semester or one year period of leave may be requested. Students who do not return at the end of the approved leave or who do not enroll for a semester without being granted official leave of absence will be considered to be making unsatisfactory academic progress.

**Time Limits**
Although it is not expected that students would need this much time, there is a seven year limit on all graduate coursework at the University of Arizona (excluding leaves of absence.)

**Grievance Procedure**
The MDP Program at Arizona prides itself on fostering a community of practice between and among students, faculty, staff and partners. As such, we encourage frequent and open communication between students and their professors or other advisers. We feel this kind of honest and ongoing communication is the best way to maintain good working relations and to find mutually satisfactory resolutions to conflicts before they start. Should a problem arise, it is important that students first try to seek resolution directly with the party involved. This can be done in writing or in person. The student may also seek the guidance or assistance of the MDP Director or the SGD Director in resolving the problem. If informal attempts at conflict resolution are unsuccessful, the student may file a formal grievance following Graduate College guidelines. The decision to file a formal grievance will not subject the student or any other party involved to reprisal by the MDP program, faculty advisors, SGD or the University. Nor will a student’s grades, evaluations, recommendations or other performance measure be affected by this procedure.

**II. Practicum**

The MDP program includes a summer practicum that creates an opportunity for field-based learning within an existing development project or program. Students can undertake this field practicum with international partners abroad; at the headquarters of national or international organizations and
agencies located in Washington, D.C. or elsewhere; or with local projects situated in the Tucson/Southwest/borderlands region. Although students may choose the site and type of organization based on their interests, the partner organization and the nature of the work must be related to the practice of sustainable development and related issues (including global public health, natural resource management, gender empowerment, education, youth development, livelihoods, agricultural and rural development, etc.) Although the position may involve some administrative tasks, the summer field practicum or internship should primarily be substantive and professional in nature. Finally, although students may work with smaller, grass-roots community organizations, such organizations must be registered with the proper local authorities and may not be an individual or family-owned organization or for-profit business. Summer practicums normally last between 8 and 12 weeks of full-time work (30-40 hr/week minimum), although highly structured 6 weeks programs may be acceptable. The work commitment can be intense, especially if the practicum involves a lot of travel to and from a remote field site. Students should be prepared to work independently with little supervision.

The purpose of the summer practicum is to:

- Gain first-hand experience with project management techniques including assessment and analysis, project design, research, implementation, monitoring and evaluation, and report.
- Integrate development practice with knowledge of cross-cutting development issues including gender, education, environment, agriculture, health, infrastructure, water, livelihoods, and community development.
- Develop a capacity for fostering community participation in development projects.
- Identify effective strategies and policies to advance sustainable development at the local, national and global levels.
- Demonstrate critical self-reflection and analysis of preconceived attitudes, beliefs and biases and how they impact development practice on both an individual and organizational level.
- Strengthen inter-personal and cross-cultural communication and problem-solving skills.
- Communicate project achievements and challenges to multiple audiences using a variety of media, including project reports, policy briefs, web writing, presentations, videos, social media, etc.

For more information, students should consult the Practicum Handbook.

**Finding and Choosing a Practicum Partner**

Students should begin to think about possible directions for their practicum experience early on. While deciding on a seemingly endless array of possible organizations to work with may seem like a daunting task, this task can be managed by first defining one’s own professional goals and interests. For example, do you primarily want to work on hands-on development project implementation, or development research and policy making? Do you prefer to work more with local, grassroots community
organizations, national agencies, or international non-governmental organizations? What themes are you most interested in or passionate about (e.g. education, gender empowerment, food security, health, etc.)? What skills do you have or would you like to develop (e.g., monitoring and evaluation, data management, program design, project management, communications, etc.)? Do you see yourself based in the field or in an office headquarters? Finally, in what region do you want to work? Bear in mind, it is not uncommon for development professionals to start in one region and move to another, or to gain experience working in the field before moving to the office headquarters. What is most important for you at this stage is to start zeroing in on your topic and skill specializations (e.g. monitoring and evaluation of health projects). Focus on skills that could be transferable to any location.

Once you are ready to start researching field internship opportunities, you can begin by pursuing online jobs sites like Idealist, Devex, and ReliefWeb. Organizations like Care International, Mercy Corps, or World Vision. Agencies like USAID and the World Bank also list internships opportunities on their websites. Students should bear in mind that these larger organizations receive hundreds of applications and are often take much longer to respond (if they respond at all.) This is another reason why you want to start applying as soon as possible. In addition, consider contacting local field or national offices of larger international organizations. Inquiring directly with a program manager will often get you a faster response than applying to a website. Finally, make use of personal networks and existing partnerships (below), as these are often the best ways to get your foot in the door. Please remember, though, when using the personal contacts and connections of your advisers you are putting their reputation and the reputation of the Arizona MDP program on the line. Try to avoid burning bridges both for yourself and for the students who will come after you.

International Partners
The Arizona MDP is proud to partner with Tango International, an internationally renowned, Tucson-based development practice firm; JustHope, a sustainable community development organization in Nicaragua; and World Fish a CGIAR affiliated research institute working to reduce hunger and poverty through promoting fisheries and aquaculture. We have well-established working relationships with these organizations. The director and other faculty at the University, also have strong partnerships with other organizations and agencies around the world. Arizona students are encouraged to make use of these existing linkages in their search for a practicum partner. JustHope is a good option for students interested in community-based health and education projects in Latin America, whereas World Fish provides an excellent structured introduction to a wide range of issues including agriculture and aquaculture, rural development, livelihoods, nutrition, as well as cross-cutting issues like gender. Finally, Tango International offers technical assistance to food security, livelihood and resilience projects all over the world.

Local Partners
Although the Arizona MDP program does not currently have any formal memoranda of understanding with a local organization, students have undertaken their practicums locally before, and we are committed to supporting students who choose to undertake their field practicum experience here in Tucson or elsewhere in the Southwest border region. Development is not just something that happens “over there,” but here in our own communities as well. We have many contacts with local city and
county government as well as local non-profit organizations working on a variety of issues related to sustainable development. Please let the MDP Director know if this is something that interests you.

**Expectations and Code of Conduct**

Students are expected to maintain the highest standards of professional and ethical practice while undertaking their summer field practicum, and to remember that they are representing the Arizona MDP program. This includes:

- Maintaining courteous and timely communication with the partner agency prior to departure and upon arrival.
- Complete all project assignments and duties in a timely and professional manner to the best of your ability.
- Respecting the guidelines of professional and culturally-appropriate dress and appearance as directed by the partner agency.
- Adhering to the partner agency’s policies regarding working hours and holidays.
- Maintain strict rules of confidentiality as set by the partner agency.

**Summer Practicum Costs and Support**

Although actual expenses will vary greatly, students should bear in mind the costs associated with their summer field practicum and budget accordingly. Students need to consider the cost of flights to and from the field site, housing in the field, per diem (food, transportation, etc.), health expenses/insurance, summer tuition, and the cost of rent or storage in Tucson while away. Again, these will vary considerably depending on how far the student is travelling for the field practicum as well as the cost of living in the field site. Often, practicum partners will cover all or part of the student’s expenses while in the field, including room and board and transportation. You will need to negotiate this up front with the organization and be clear about what they can provide. At the very least, you will likely need to cover your own airfare. Students should seek out external funding sources to cover travel costs such as the Graduate and Professional Student Council travel grant, travel or internship grants from various centers on campus (such as the Center for Middle Eastern Studies and the Institute of the Environment), or fellowships like the Pruitt Minority Fellowship, open to minority women in geography (which past students have received and used to help cover practicum expenses.)

**Tuition and Fees**

As with any investment, there are costs associated with graduate studies at the University of Arizona such as tuition, fees, books, and cost of living. Students should consult the Graduate College for the most accurate and up-to-date information regarding tuition, fees and expenses at the University of Arizona. The Graduate College has information on Costs and Fees, including Estimated Costs/Tuition Calculator. Be aware that late payment of tuition and fees may result in an added Bursar’s fee. Within the School of Geography and Development students also pay a program fee, and certain lab courses (including some GIS classes) may include a course fee.
Scholarships and Financial Aid
Although the MDP program cannot directly offer scholarships to students, MDP students can avail themselves of university resources that can help identify external funding opportunities. In particular, students should consult these two funding databases maintained by the university:

**Pivot** - Search Engine for funding for University of Arizona students

**Scholarship Universe** - Search Engine for funding for University of Arizona students

In addition, students should search other scholarship clearinghouse sites like the [Mcnair Scholars Funding List](#), which lists a variety of funding options for different disciplines. A more comprehensive list of resources is provided in the “Advice on Searching for International Funding” provided to all incoming domestic and international students.

Graduate Assistantships
The School of Geography and Development is contractually obligated by the University of Arizona and the Graduate College to give priority for Teaching Assistantships and Research Assistantships to MA and PhD students as part of their professional development for academic careers. Nevertheless, students enrolled in professional Master’s courses (like the MDP and MS-GIST programs) may still apply and be considered for these graduate assistantships. Prior to the start of each semester a call for Teaching Assistants is circulated amongst all graduate students in SGD. Students are asked to provide their top 3 teaching preferences and outline their teaching experience, including whether they have taken or taught those particular courses before. Taking into consideration scheduling and other personnel issues, the SGD Program Coordinator will allocate teaching assistantship assignments. There are always more applications for TA-hips than there are available positions, however MDP students have received them in the past.

Regarding Research Assistantships, these are allocated on an ad hoc basis depending on the availability of specific research funding and the needs of individual faculty for their funded research projects. Students should identify particular faculty with whom they are interested in working and inquire directly about the possibility of research assistantship opportunities. Students with a particular area focus or subject matter expertise should contact the appropriate departments to seek RA-hips outside of SGD.

On Campus Job Opportunities
There may be additional job opportunities on campus that carry benefits similar to those of TA/RA positions. On-campus jobs include student worker positions, Federal Work-Study (FWS) jobs, and hourly/part-time university employment. To be eligible for FWS, you must be eligible for financial aid and have completed the FAFSA (as with any scholarship opportunity.) Student worker positions can be found through the [Handshake](#), where UA students can easily search and apply for on-campus jobs, internships, and full-time opportunities with employers recruiting UA students and alumni. Students may also contact other Departments directly to inquire about Graduate Assistant positions. Part-time and hourly employment can also be found on the [UA Careers](#) website. For more information, please consult [career services](#).
III. Professional Development

As a professional Master’s program, preparation for the job market begins on day one. With each phase of your degree program you should ask yourself what knowledge, skill or experience can you gain that will translate into value for a future employer, and thus your own employability. This requires regular self-assessment. Don’t wait to the spring semester of your final year to prepare your professional résumé and start looking and searching for jobs. Start building your résumé now and start looking for what opportunities may be available to you when you finish and what skills or capacities are in highest demand. This kind of self-assessment and job market analysis will likely have an impact on your choice of courses, your areas of concentration and where you decide to do your practicum. Likewise, your coursework, graduate school performance, your practicum experience, and the professional networks you create and maintain over the course of your degree will all be important factors in securing a position in the future.

Students should consult with the MDP Director early in the program for advice on how to structure their degree to maximum effect on the job market. The MDP Director and other faculty advisers and mentors will work with students to seek employment and to provide courses that focus on career development skills. The cross-cohort seminar is designed to facilitate learning among students to enhance professional development and employability. This includes preparing CVs and cover letters, interviewing, giving presentations, and making the most of your practicum experience. In addition, the MDP program provides students with a variety of professional development opportunities, including guest speakers, conferences, professional contacts, and mentoring to help students achieve their career goals. As part of this, all current students and recent alumni are given full access to the Arizona MDP professional Devex membership, including job boards and webinars. There are also career and professional development resources on campus that students can avail themselves of, and to which students will be guided towards where relevant. Ultimately, it is the student’s responsibility to take charge of their own job search and to seek out opportunities for profession networking and development.
Appendix A

Useful job sites: devex, devnetjobs, idealist.org, unjobs.org, comminit.com, changephilanthropy, bridgespan.

Other useful websites for discussions and information about international development issues:

Institute of Development Studies, University of Sussex, UK.

International Institute for Environment and Development

Overseas Development Institute

Duncan Green’s poverty to power blog

Jason Hickel’s blog

The rules

Blogs highlighted in The Guardian

The secret aid worker
Appendix B

Approved Electives

ABE 552 - Globalization, Sustainability and Innovation

ACBS 505 Principles of Livestock Health Management

ANTH 507 - Intellectual Foundations of Applied Anthropology

This course traces the history of applied anthropology and examines the theory that has shaped its development.

ANTH 631 Anthropology and Development

ANTH 693 Internship

ENVS 554 Water Harvesting

GEOG 544 - Entrepreneurial Innovation for Sustainable International Development

This course examines development-driven social entrepreneurship strategies through which individuals and small groups can have an innovative, scalable impact on sustainable development in the impoverished world (e.g., Sub-Sahara Africa). Students will address two non-traditional development questions: what is the impact of innovative, development-driven entrepreneurship and how can I collaborate with my peers in the developing world to utilize technology and markets for the betterment of impoverished societies? Graduate level requirements include a requirement to transfer the basics of their personal development project into a preliminary Logframe, the standard organizational template for development proposals. That task includes providing some assessment of costs, local needs and the sources of finance for your development entrepreneurship.

GEOG 597F/ ENVS 597 Community and School Garden Workshop

GEOG 596M Making the Connection between Science and Decision Making

GEOG 579 - Spatial Statistics and Spatial Econometrics

This course provides the statistical and econometric techniques required for the analysis of geocoded data. Identification of spatial heterogeneity and inclusion in a formal regression model. An important aspect of the course is to gain hands-on experience in applying the appropriate techniques and using state-of-the-art software.

GEOG 596M - Making the Connection between Science and Decision Making
The overarching goal of this seminar is to provide students with an understanding of the dynamics behind the interface between scientists and decision making that result in scientific information being incorporated into decision making. This seminar explores foundational concepts of the science/decision-making interface, such as scientific information supply and demand, boundary organizations, co-production of knowledge, and knowledge networks, as well as the practical aspects of two-way communication to explore the ways in which exchanges take place between scientists and decision makers.

Law 525 Native Economic Development

PA 552 Statistical Decision Making

This course provides a graduate-level introduction in the application of statistical analysis to decision making in public and nonprofit organizations. The course emphasizes both the practical and theoretical aspects of statistical analysis, as well as instruction in the use of computer software (SPSS) for carrying out statistical analysis.

PA 553 – Quantitative Policy Analysis

The course will focus on quantitative tools to empower students to assess the effectiveness and impact of policy. First semester methods include Ordinary Least Squares, Hypothesis Testing, Logistic Regressions, Instrumental Variables, and Time Series Methods, as well as specification choice, robustness testing, and incorporating uncertainty. The semester will end with Cost Benefit Analysis and Cost Effectiveness. In addition to our core content, each week students will read an article utilizing a quantitative policy analysis method to understand the approach and critique the model assumptions. Homework assignments will put theory into practice and teach students coding skills using STATA. The second semester will introduce additional tools, including natural experiments, randomized control trials, quasi-experimental methods (including difference-in-difference, regression discontinuity, panel data techniques), and a primer on Computable General Equilibrium models.

PA 597W Grantwriting

POL 530A Dynamics of Civil Wars

RNR 546 Principles of Research

RNR 540 Climate Change Adaptation: Perspectives at the Nexus of Science, Society, & Resource Management

SOC 570A - Social Statistics I

STAT 574E – Environmental Statistics
Statistical methods for environmental and ecological sciences, including nonlinear regression, generalized linear models, temporal analyses, spatial analyses/kriging, quantitative risk assessment.

STAT 574S – Survey Sampling

Techniques of statistical sampling in finite populations with applications in the analysis of sample survey data. Topics include simple random sampling for means and proportions, stratified sampling, cluster sampling, ratio estimates, and two-stage sampling. Recommended prerequisite: introductory course on statistics and probability.

SWES 415/515 – Translating Environmental Science

In this course, students learn journalism techniques to translate environmental science topics into language a layperson could appreciate. The writing concepts will apply to any field of science, as well as grant proposals, public reports and media including web-based publishing. Students also learn techniques for converting numbers into relevant statistics. Students will "workshop" in groups and work closely with the instructor to produce publication-quality articles on assigned or agreed-upon topics. Graduate-level requirements include an additional final project writing a grant proposal or writing a feature article for a specified magazine or newspaper worth 50 points and a higher level of expectation regarding writing and reviews of their peers' work. For more information, see: http://ag.arizona.edu/swes/environmental_writing/

The classes below satisfy the Core requirements and can also be taken as electives.

These classes satisfy the Natural Sciences Core requirement:

ABE 555 (also CE 555) - Soil and Water Resources Engineering (3 units) Fall.

Introduction to soil and water relationships, irrigation systems, irrigation water supply, and irrigation management; basic designs.

ANTH 603J - Sustainability and Environmental Policy

Over the past twenty years "sustainability" (or "sustainable development") has emerged as a central goal of environmental policy making. Contemporary tools of environmental policy including ecosystem management, adaptive management, and restoration have been displaced by what seems like a clearer goal that captures ends as well as means. Sustainability has moved from the work of scholars and activists to laws and administrative regulations. The language of sustainability has extended to the world of business and commerce.
ARL 512 - Economic Policy in Developing Countries

ARL 641 - Natural and Human Impacts on Arid Lands

AREC 575 (also ARL 575, ECON 575, GEOG 575, HWR 575, RNR 575) - Economic Evaluation of Water and Environmental Policy (3 units) Fall.

Theory and application of economic concepts needed to evaluate water and environmental laws and policies, including benefit cost analysis, externalities, public goods and valuation methodologies. Case studies include federal, state, tribal and international water and environmental policies.

ENVS 541A  Natural Resource Management in Native Communities

ENVS 597: Community and School Garden Workshop

GEOG 503 - Applications of Geographic Information Systems

GEOG 516F - GIS for the Social Sciences

GEOG 517 - Geographic Information Systems for Natural and Social Sciences

GEOG 531A - Traditional Ecological Knowledge

An introduction to the growing literature on traditional ecological knowledge and its relationships to the ecological and social sciences. Graduate-level requirements include preparing for and leading a class discussion on a specific topic.

GEOG 532 - Climate and Water

This course explores the connections between climate and water resources from the perspective of the past, the present, and the future to foster an appreciation of the finite nature of water in the western U.S. and other regions in the face of a changing climate.

GEOG 538 - Biogeography

The role of historical events and ecological processes in determining the past and present geographic distribution of plants and animals. Graduate-level requirements include a research paper.

GEOG 568 - Water and Sustainability

Social and environmental conflicts over water are intensifying in much of the world. This course studies the physical basis, history, and political economy of water development and water policy in the U.S. and internationally. Graduate-level requirements include additional reading every week and a term paper instead of the final exam.

GEOG 578 - Global Change
Analysis of the Earth system through an examination of its component parts (particularly climate and biogeochemistry) and their interactions with human activities, emphasizing information needed to understand modern and future environmental changes. Graduate-level requirements include an in-depth written exercise and additional activities as described in the syllabus.

GEOG 580 - Power, Politics and Deforestation in the Brazilian Amazon

This course examines the wide variety of causal explanations for deforestation in the Brazilian Amazon and the policy proposals offered by Latin American and North American political scientists, economists, historians, anthropologists, geographers, ecologists, journalists and environmental activists.

GEOG/RNR 590 - Remote Sensing for the Study of Planet Earth

Remote Sensing for the Study of Planet Earth introduces basic and applied remote sensing science as a means to explore the diversity of our planetary environments (biosphere, atmosphere, lithosphere and hydrosphere) within the radiometric, spectral, spatial, angular and temporal domains of remote sensing systems. This survey course strikes a balance between theory, applications and hands-on labs and assignments. We explore how you can download, process, analyze and interpret multi-sensor data and integrate online remotely sensed data sources/products into your research of interest.

GEOG 596I – Comparative and International Water Policy (3 units) Spring.

This course examines major issues in comparative and international water policy, including water markets, privatization, dams and river basin management, environmental flows, social equity, and water governance. The course is interdisciplinary and builds on law, geography, political economy, and institutional economics. Professor: Carl Bauer

GEOG 596J – Water Management & Policy

Management and policy challenges driven by surface water and groundwater scarcity will be assessed for the Southwest US, Mexico, and globally. Critical review of institutions coupled with assessment of emerging management systems will lead to consideration of policy alternatives.

GEOG 696A - Economic Geography

Geog 696I – Political Ecology

GEOG 696L - Conservation and Community

An intensive exploration of the impact of conservation efforts, including protected areas, on rural peoples across the world.

GEOG 696O – Resilience and Adaptation
Climate change, urban growth, energy demand, and global food trade alter water in coupled human-natural systems. This seminar addresses adaptation and resilience using material on river basins, aquifers, infrastructure, policy, and institutions from Southwest U.S., transboundary U.S.-Mexico, and international cases.

PA 581 (also POL 581, HWR 581, RNR 581) - Environmental Policy (3 units) Spring.

Emphasis on the interactions among science, decision making, policy, and property rights in relation to natural resource dilemmas. Special attention paid to community based management. Case studies are drawn from water, forestry, fisheries, and grazing lands.

RNR 540 - Climate Change Adaptation: Perspectives at the Nexus of Science, Society, & Resource Management

RNR 548 - Conservation Planning & Wildland Recreation

RNR 572 - Environmental Land Use Planning

RAM 541A – Natural Resource Development in Native Communities

This course is a survey of basic issues and concepts in natural resource management and the environment in Native communities using integrated case studies that survey all the major varieties of environmental issues in Indian Country in the 21st century. A central theme will be developing tribally-specific solutions to rebuilding the resiliency of degraded ecosystems. We will consider particular case studies such as: tribal sovereignty, land tenure, reserved rights and Native claims; Native knowledge systems and Western science; co-management and restoration; water; fish and wildlife; agriculture and rangeland management; energy, mining and nuclear waste; and global climate change. Graduate-level requirements include increased length of writing assignments

RNR 548: Conservation Planning and Wildland Recreation

These Electives satisfy the Health Sciences Core requirement:

ANTH 536B – Ethnomedicine

Comparative medical systems and healing traditions, regional health arenas, and health care seeking. Topics include folk medicine, traditional medical systems, distinctive illness and public health problems, patterns of resort in the use of pluralistic medical resources, and the way in which the practice of biomedicine has been adapted to regional culture. Explores the medical cultures of Mexico and Latin America, Native America, Africa and Asia.

ANTH 675A (and 675B) - Anthropology and Global Health

BIOS 503 Introduction to Statistical Analysis Using STATA
This course provides an introduction to statistical analysis using the STATA software package. It will introduce methods for entering, modifying and managing data, and provide examples of commonly used statistical analyses.

BIOS 576A Biostatistics in Public Health

CPH 628-Public Health Research and Evaluation

CPH 566-Participatory Action Research and Policy Change

CPH 534 - Infectious Diseases, Global Health and Development

This course will analyze the etiology and distribution of major tropical infectious disease, and the environmental, economic, and cultural factors that lead to their proliferation. Impact on development and global prevention initiatives will be appraised.

EHS 518 Introduction to Human Health Risk Assessment

The purpose of this course is to enhance students knowledge and skills related to environmental risk assessment, including hazard assessment, exposure assessment, toxicity assessment, and risk characterization. Graduate-level requirements include conducting a case study that will require them to collect secondary data in the field.

GEOG 546 - Health and the Global Economy

This course deals with the interconnection of the global economy, local social structures, and health, as well as examining disease and spatial aspects of health care, including access to care. Graduate-level requirements include a more substantive research paper.

HPS 566 Participatory Action Research and Policy Change

HPS 577 Sociocultural and Behavioral Aspects of Public Health

This course is an overview of significant social, cultural and behavioral issues related to public health. Major public health problems and the influences of sociocultural issues are analyzed in relation to health behavior. Readings, discussions, films, and class experiences/assignments focus on understanding the social and cultural issues that influence health-related behavior among specific populations in the southwestern U.S., North America and internationally.

HPS 628 Public Health Research and Evaluation

PHPM 574 Public Health Policy and Management.

These Electives satisfy the Development Management Core requirement:

AED 621 – Program Planning and Evaluation
Developing and evaluating programs in teaching and extension; situation analysis, objectives, policies, content, procedures, and evaluative criteria. Examines program evaluation concepts, principles, and models; and identifies major steps in planning, conducting, and reporting results of evaluation objects.

AED 617 – Research, Methods and Project Design

Principles and practices of planning, designing, conducting and reporting research and scholarly activities in education, extension, other social science disciplines, and agricultural technology management. Course Goal: To develop an ability to consume and/or conduct quantitative social science research.

ANTH 537 – Data Management and Analysis

This course presents approaches to data management and analysis, with and without computer packages. Each approach is presented in lecture and applied in lab. Students complete weekly lab activities and homework assignments that have been created from datasets generated during research projects and illustrate representative analytical problems. Each student will select one dataset to analyze and present as a class project.

CPH 529: PROJECT DESIGN & IMPLEMENTATION IN GLOBAL HEALTH & DEVELOPMENT

This course is designed to equip participants with skills in conceptualizing, developing, implementing, and evaluating small-scale projects in global health and development. The course will provide instructions on sources of funding for health and development projects, how to assess and prioritize community health needs, how to write projects goals and objectives that are SMART (specific, measurable, achievable, realistic, and time-framed), how to select appropriate designs (including how to develop project conceptual and theoretical models), how to collect and organize data, how to implement and evaluate the project, including how to develop project logic models, how to develop and justify a budget, how to foster community participation, and approaches to promote project sustainability.

CPH 544 – Fundamentals of Evaluation

Evaluation is essential to all research and service based programs. The course provides all students interested in pursuing an advanced public health degree with the fundamentals of planning and evaluation. In addition to core issues surrounding evaluation (e.g., measurement and design) the role of the evaluator in the planning and implementation phases of research and service-based public health programs is highlighted. The relationship between areas of specialization and evaluation will be a central theme throughout the course.

CPH 652 - Grantsmanship for a Winning Proposal
The course will present principles and skills needed to write competitive public health research grants, prepare budgets, and understand the peer review process. Students will write an NIH R01 type grant proposal that will undergo internal review.

**CPH 644 Applied Program Planning and Evaluation**

The purpose of this course is to teach students how to integrate and apply evaluation, behavioral, environmental, policy, and program theories to plan, implement and evaluate public health policies and programs.

**GEOG 516D - PPGIS: Participatory Approaches in Geographic Information Science**

A project-based course focusing on applications and impacts of GIS and other spatial analysis technologies in grassroots community development, participatory decision making, and community-engaged social science. Class format includes discussion seminar, GIS workshop, collaboration, and out-of-classroom community involvement. Graduate-level requirements include writing an original research papers based on original data collected in the field.

**GEOG 696Q – Participatory Systems Design and Delivery**

This seminar is a graduate experience intended to improve the participants' ability to design, deliver and measure the performance of Participatory and Collaborative Systems (PCS) in their own work and research. The seminar covers philosophical considerations of PCS, performs a survey across a range of participatory and collaborative methods, and examines state-of-the-art efforts in PCS across a range of disciplines and application domains using case studies from a range of journals. To the degree possible during the semester, there will be active participation in a mandated public meeting process.

**MGMT 563 - Doing Business In/With Africa: A Cultural Perspective**

Going into the 21st century, Africa, (along with Asia and Latin America), is often referred to as one of the emerging markets of the world. This recognition has cast Africa as occupying the last frontier market of modern international business and global capitalism. AFAS 463 Doing Business In/ With Africa is designed to provide cultural grounding and competency in Africa for students and professionals interested in conducting business and/or working with government agencies and non-profit organizations in Africa. Its focus, therefore, is the cultural aspect of the international business environment of Africa. Graduate-level requirements include a 12-15 page proposal on a business or diplomatic venture in any African country. The proposal must demonstrate an understanding and appreciation of the cultural environment of the country that will host the venture. A Business/Diplomatic Proposal 20 minute Presentation.

**MGMT 516 - Nonprofit Consulting**

This course will provide graduate students with both academic and real-world knowledge and experience in management consulting for nonprofit organizations. Specifically, students will
complete readings, attend lectures, participate in class activities, and ultimately work in a team to consult with local organizations which cultivates effective philanthropists, strengthens nonprofits, and invests in collaborative solutions - building powerful relationships to tackle our community's social challenges.

MGMT 535 - International Management

Broaden perspectives on globalizing business and international integration. Enhance analytical and communication skills in approaching and resolving international issues.

MGMT 564E – Negotiations

PA 508 - Public and Nonprofit Financial Management

Financial management and budgeting in the public and nonprofit sectors; techniques and organizational issues.

PA 510 Civil Society and Public Policy Implementation

PA 555 Statistics for Public Policy II

PA 582 Managing to Collaborate on Environmental and Natural Resources Conflicts

PA 584 Environmental Management

PA 620A Collaborative Governance in Theory, Practice and Research

The aim of this course is to provide students with a grounding in collaborative governance: the underlying theories that support it; how it is practiced in various policy arenas; and the recent findings from research to improve its use. Students will be asked to critique the use of collaborative governance in different case studies, apply principles of practice to simulated contexts, and develop alternative collaborative approaches to hypothetical or contemporary governance challenges.

PA 622A Institutional Design and Learning for Collaborative Governance

PA 624A Collaborative Governance Tools

SOC 596F - Theory and Research on the Nonprofit Sector
Appendix C

Sample course load

This is an outline of what your course work could look like to finish the 48 credits in 2 years. The electives and Core Requirements that you choose can be arranged in any order. This is just one way to make it work, but it gives some suggestions you might find helpful. The courses below with specific course numbers, though, must be taken in that order/that semester.

<table>
<thead>
<tr>
<th>Semester 1 Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVP 600 Foundations of Development/ Boot Camp (1 credit, Integrative Coursework)</td>
</tr>
<tr>
<td>DVP 602 The Role of Culture in Sustainable Development (3 credits, Social Sciences Core)</td>
</tr>
<tr>
<td>DVP 620 Introduction to Natural Systems (3 credits, Natural Sciences Core)</td>
</tr>
<tr>
<td>Elective (3 credits)</td>
</tr>
<tr>
<td>Elective, your choice (3 credits; we suggest PA 552, Statistical Decision Making)</td>
</tr>
<tr>
<td>= 13 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2 Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences Core, your choice (3 credits)</td>
</tr>
<tr>
<td>DVP 640 Methods in Development Practice (3 credits, Integrative Coursework)</td>
</tr>
<tr>
<td>Health Sciences Core, your choice (3 credits)</td>
</tr>
<tr>
<td>DVP 601 Principles of Social Science for Development (3 credits, Social Sciences Core)</td>
</tr>
<tr>
<td>DVP 642 Cross-Cohort Professional Development Seminar (1 credit, Integrative Coursework)</td>
</tr>
<tr>
<td>= 13 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summer Practicum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-6 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Sciences Core, your choice (3 credits)</td>
</tr>
<tr>
<td>DVP 630 Essential Management Principles for Development (Development Management Core, 3 credits)</td>
</tr>
<tr>
<td>AREC 512 Economic Policy in Developing Countries (3 credits, Social Sciences Core)</td>
</tr>
<tr>
<td>DVP 697B Field Practicum Analysis and Professional Development (1 credit, Integrative Coursework)</td>
</tr>
<tr>
<td>= 10 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Management Core, your choice (3 credits)</td>
</tr>
<tr>
<td>Elective (3 credits)</td>
</tr>
<tr>
<td>DVP 642A Cross-Cohort Professional Development Seminar (1 credit, Integrative Coursework)</td>
</tr>
<tr>
<td>DVP 909 Master’s Report (3 credits, Integrative Coursework)</td>
</tr>
<tr>
<td>= 10 credits</td>
</tr>
</tbody>
</table>