
Orientation: Masters of Water Resources Graduate Program

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Outline of Presentation

- Administrative aspects of WR program
- Academic requirements for MWR degree
- Guidance
 - Selecting an advisor
 - Selecting a research topic
 - Completing Professional Project
- See Program Guidelines - <http://www.unm.edu/~wrp/>

Program Guidelines
Master of Water Resources Degree

Water Resources Program
University of New Mexico

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www.unm.edu/~wrp



Top 10 Lies from Grad Students - 10

10. It doesn't bother me that my old roommate is making \$80K/yr working for a marketing firm.



Admission to MWR Program

(pg. 3 Program Guidelines)

- Requirements:
 - B.S. or B.A. degree
 - Prerequisites: math, econ, science
 - 3.0 GPA
 - 3 letters of recommendation
 - Letter of intent
- Admission is by Director of WR Programs with consent of WR Program Committee



Two Alternative Areas of Study for MWR Program

- Hydrosience (HS) Track - Emphasis on hydrology, hydraulics, biology, chemistry, environmental science, etc.
- Policy/Management (PM) Track - Emphasis on policy, management, administration, economics, planning, etc.



MWR Orientation

Undergraduate Course Preparation

Topic	Hydroscience Track	Policy/Management Track
Math	2 sem. calculus 1 sem. statistics	1 sem. calculus 1 sem. statistics
Economics	Microeconomics	Microeconomics
Science	≥ 3 courses in 2 fields	≥ 2 courses
Social Science		≥ 1 course in Sociology, Psychology, Political Science



Top 10 Lies from Grad. Students - 9

9. I'd be delighted to proof read your book/chapter/article



Residency Requirements

(<http://catalog.unm.edu/> - Search under “Student Services”)

- Out of state students should consider establishing residency as soon as possible. Requirements include:
 - 12 month consecutive presence
 - Financial independence
 - Written declaration of intent
 - Overt acts:
 - NM Drivers License
 - Voter registration
 - NM state income taxes
 - NM vehicle registration
 - NM employment
 - Etc.



Administrative Details

- WR offices - Lounge, computer pod, AWP offices
- Keys
- Other



MWR Degree Requirements - 1

(pg. 6 Program Guidelines)

- UNM 2011-2012 Catalog - <http://catalog.unm.edu/catalogs/2011-2012/>
- Plan II - Non Thesis Option
 - 39 credits
 - 12 credits of WR classes - WR 571, WR 572, WR 573
 - 3 credits of WR 598 - Professional project
 - 24 credits of HS & PM classes
- Substitution policy for WR 573 for students who can demonstrate knowledge & experience in appropriate field methods



Top 10 Lies from Grad. Students - 8

8. My work has a lot of practical importance



Hydroscience Core Classes

- Hydroscience Courses (Group 1) - 3 categories
 - Hydrology & hydraulics - CE & E&PS
 - Ecosystems, Environment, Health, Water Quality - Biology, CE, E&PS, Public Health
 - Climatology - E&PS



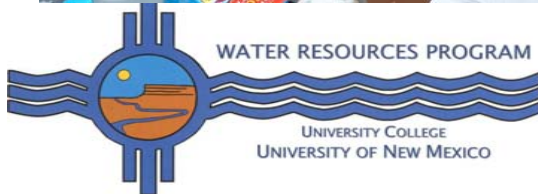
Policy & Management Core Classes

- Policy & Management Courses (Group II) - 4 categories
 - Law - Law school
 - Economics - Economics
 - Policy, Administration & Management - Geog., Pol. Sci., Schools of Pub. Admin. & Public Health
 - Sociology, Communication & Culture - CRP, Am. Studies, C&J



Utilities Courses

- Utilities Courses (Group III) - 3 categories
 - GIS - CE & Geography
 - Methods - Statistics, Economics, E&PS, Political Science
 - Modeling - E&PS, Economics, CRP



MWR Curriculum

Course Group	Hydroscience Concentration	Policy & Mgt. Concentration
Water Resources	WR 571, 572, 573, 598	WR 571, 572, 573, 598
Group I Hydroscience Classes	15 credits ≥ 1 course from each category	6 credits At least 2 categories
Group II Policy & Mgt. Classes	6 credits At least 2 categories	15 credits Courses in ≥ 3 categories
Group III Utilities Classes	3 credits	3 credits

Program Guidelines has a list of core classes & other classes students may take as electives. Class listings are frequently changed.



Dual Degree Program (MWR & MCRP)

(pg. 14 of Program Guidelines)

- 59 credits
- Classes in Planning:
 - CRP 500 - Planning Theory and Process (4)
 - CRP 510 - Planning Communications Workshop (2)
 - CRP 521 - Advanced Planning Studio (5)
 - CRP 580 - Community Growth and Land Use Planning (3)
 - CRP 511 - Analytical Methods for Planning (4)
 - CRP 532 - Foundations of Natural Resources Planning (3)
 - CRP 527 - Watershed Management (3)
 - CRP 588 Professional Project and Thesis Preparation (2)
 - CRP 589 Professional Project or Thesis (6)
- Classes in Water Resources:
 - WR 571 - Contemporary Issues in Water Resources (4)
 - WR 572 - Water Resources Models (4)
 - WR 573 – Field Methods (4)
 - Electives from MWR groups 1, 2 and 3 (15)



Top 10 Lies from Grad. Students - 7

7. I would never date an undergraduate



Administrative Considerations - WR Reqts.

- Coursework proposal (WRP web site) - Submit at end of second semester or when student has completed 12 credits
 - Identify concentration
 - List courses taken & planned
- Professional Project Proposal - Submit proposal with signature page similar to PP signed by committee members
- Notify WR Office of intent to graduate by 5/1 & 12/1 for fall & spring semesters respectively
- Completed Professional Project
 - 2 bound & signed copies, due 4/15, 7/15, 11/15
 - CD with pdf of entire report (including appendices). May include other material



Administrative Considerations - OGS Reqts.

- Really Important forms (www.unm.edu/~grad/)
 - MWR - “**Program of Studies**”
 - **Submit at least 1 semester before graduation** (7/1, 10/1, & 3/1)
 - Ideally submit after 18-21 credits
 - “Announcement of Examination”
 - Submit 2 weeks + 4 days before exam date to WR Office



Program of Studies Form

(www.unm.edu/~grad/)

SS# _____

THE UNIVERSITY OF NEW MEXICO
The Office of Graduate Studies
PROGRAM OF STUDIES FOR THE MASTER'S DEGREE

Submit one completed form to OGS.

The original is retained by OGS; a copy is returned by OGS to the graduate unit after approval.

Please print legibly or type this form completely. Leaving any question blank will result in a delay of approval.

Courses used for a master's degree may not be more than 7 years old at the time of graduation; departments may impose stricter limits.

DEADLINE: This form must be submitted to the Office of Graduate Studies no later than the last day of the semester prior to the one in which you intend to graduate. Early submission to your department or graduate unit is strongly recommended, as your faculty will need time to approve the form. Failure to submit this form on time will delay your graduation.

1. Personal Information

Social Security Number: _____ Date: _____

Name (as it appears on UNM record): _____
First Middle Last

Other Names used at UNM: _____
First Middle Last

Local Address: _____
Street City State ZIP Telephone

Permanent Address: _____
Street City State ZIP Telephone

E-mail Address: _____

2. Department or Graduate Unit: _____

3. List all degrees you currently hold (include both undergraduate and graduate degrees, major, institution, and date conferred for each):



Very Important Point

- Students are responsible for knowing all WR & OGS requirements
 - Ignorance of these requirements is no excuse
 - OGS (& WR) is less forgiving of missed deadlines and less flexible with waivers each year



Administrative Support from WR Office

- Program administrator will help with:
 - Forms (keys, non-UNM committee members, registration, Banner)
 - University information
 - Purchasing supplies
 - Scheduling rooms & presentation equipment
- Program administrator can't help with:
 - Contacting individual faculty (except Director)
 - Typing, copying, printing, clerical stuff
 - Filling out POS forms
 - Cleaning computer room & lounge



“Gotcha” Requirements

- “I” grades become “F” grade after 1 year
- Students can’t defend their Professional Project:
 - If their GPA < 3.0
 - If they have outstanding “I” grades
- Student must be enrolled in WR 598 during the semester in which they intend to graduate
- 7 years to complete the degree (no exceptions)
- Must have approved Program of Studies ≥ 1 semester before graduation



Top 10 Lies from Graduate Students - 6

6. Your latest article was so inspiring



Professional Project

(See “Faculty Approvals” in Catalog)

- Work with major professor to select topic & Committee
- Committees must have ≥ 3 members:
 - Committee must have ≥ 2 faculty
 - Chair must be UNM faculty, emeritus faculty, or research faculty
 - Outside member must be approved by WRP & OGS
 - Outside member must have Masters degree



Selecting a Topic

- Selecting a good Professional Paper topic is arguably the single most difficult task in a student's career
 - Generally topic selection requires iterative process
 - Work with major professor
 - Don't stress about topic until completed ≥ 24 credits
- Topic can be related to employment, however, there must be a component of project done explicitly to satisfy UNM degree requirements.



Criteria for a Good Professional Project Topic

- Clear statement of research hypothesis or question
 - Title
 - Statement of objectives
- Some info. on topic is available to student
- Expertise is available on-campus or within professional community for assistance
- Resources (money, equipment, time) are available for project
- Project has well defined end point.



A REALLY Bad Professional Project Proposal

- “I want to **look at** the water issues associated with”
 - Contains no research hypothesis or question
 - There is no definition of the project
 - Contains no end point - how do you know when you’re done “looking”?



Top 10 Lies from Grad. Students - 5

5. I turned down a lot of great job offers to come here



2 Strategies for Selecting Topic

- Traditional strategy – Full time, supported students
 - Pose research hypothesis or question
 - Generate information/data to test hypothesis
 - Analyze information to reach conclusion
- Inverse strategy - Frequently used by part time students
 - Identify source of information/data
 - Examine data to determine if hypothesis can be tested
 - Analyze information to reach conclusion



Recommended Professional Project Process

- Submit **detailed** outline of proposal to major professor
 - Clear title
 - Statement of objectives
 - Literature search with > 10 key references
 - Proposed research method
 - Description of how data will be generated
 - Expected results & how analyzed
- Begin work with major prof.'s consent
 - Start collecting data
 - Write Proposal



Top 10 Lies from Grad. Students - 4

4. I just have one more book/paper to read and then I'll start writing



Professional Project Proposal Requirements

- Title page
- Signature page
- Abstract
- Table of Contents and Lists of Figures & Tables
- Introduction
 - Statement of objectives
- Literature Review or Background Information
- Research Methods
- Expected Results & how they will be analyzed
- References
- ≤15 pages excluding front matter, references & appendices



Recommended Meetings with the Committee

- 30% completion meeting with Committee. Objectives:
 - Obtain “buy-in” on project
 - Obtain advice & guidance on how to conduct research
 - Obtain approval of Professional Project Proposal
- 70% completion meeting with Committee. Objectives:
 - Identify potential “fatal flaws”
 - Assistance in reaching conclusions
- Keep committee informed - Worst possible scenario is PP defense after > 1 semester of no contact with committee



Professional Project Defense

- “Announcement of Examination” to WRP Office 2 weeks + 4 d prior to defense
 - Provide WRP Office with announcement for distribution to List Serve
 - Date Time & Location
 - Title
 - Half page abstract
- Defense - 30 min. presentation, then questions from audience
- Turn in final copies by 4/15, 7/15, 11/15
 - Include CD on inside cover with PDF copy of report
 - Projects posted on WRP Website & UNM Library D-space



Top 10 Lies from Grad. Students - 3

3. The WR Program is giving me so much support



Comment on Professional Project

- The Professional Project should:
 - Demonstrate to UNM & the water profession the student's competence & professionalism
 - Reflect the best work that the student can do given the resources (time, \$\$, equipment, etc.) available
- The student should be proud of his work and should enjoy the opportunity to present to his professors, peers, friends & family.



Top 10 Lies from Grad. Students - 2

2. My job prospects look really good



Publication Issues

- Publishing their work should be the goal of every graduate student
- All WRP Professional Projects are published on UNM Library's Digital Library - <http://dspace.unm.edu>
- Authorship of paper
 - Projects resulting in a publication or work product (i.e. SAND reports) should include advisor as co-author
 - Negotiation between student & advisor as to who's first author



Top 10 Lies from Grad. Students - 1

1. No really, I'll be out of here in only 2 more years



Other Stuff

- Association of Water Professionals
 - “Maintains” blog
 - Sponsors seminars
 - Receives funding from GPSA
 - Owns a canoe
 - Sponsors parties



Most Feared Question of Graduate School

“How’s your project coming?”



Best Quote After Graduate Defense

“That was kind of fun.”

-G. Hall,
M.S. 1999



Questions?

