

# New Mexico State University



## Water Science and Management

# Graduate Student Handbook

## Master of Science And Doctor of Philosophy

Drafted 05/02/17 – Updated 01/27/2020



Stucky Hall  
MSC 3167, PO Box 30001  
(3170 S. Espina St.)  
Las Cruces, NM 88003

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Welcome to New Mexico State University's Water Science and Management Program (WSM)! This handbook provides students with information about graduate school and program policies. This catalog represents official policy regarding the WSM Degree Program. Listed below are copies of other graduate student resources that are available through the NMSU Graduate School Office:

- Graduate School Catalog
- Graduate Student Handbook
- Guidelines for Preparing a Thesis or Dissertation

The Water Science and Management program offers an interdisciplinary Master of Science and Doctor of Philosophy degree which is supported by the following departments:

- Agricultural Economics & Agricultural Business
- Animal & Range Sciences
- Civil & Geological Engineering
- Geography
- Plant & Environmental Sciences

The program encourages students to interact and engage with faculty, staff, and other students across many different departments and areas of study. Graduate students are expected to excel in academics but also to enrich their studies with professional development and research. By the end of your graduate experience you will become an expert in water and hopefully a long term supporter of Water Science & Management at New Mexico State University.

To help provide you with the highest quality graduate training and experience, the WSM Steering Committee has drafted the following set of guidelines for graduate study. Please read these carefully and clarify any administrative questions with Dr. Alexander "Sam" Fernald, WSM Program Chair or Marcus Gay, WSM Student Program Coordinator.

We also suggest that you review the NMSU System Academic Regulations available online by visiting: (<https://catalogs.nmsu.edu/nmsu/regulations-policies/>).

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# Letter from Director

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Dear prospective and continuing students in the Water Science and Management (WSM) degree program,

Water issues are at the forefront of resource challenges facing the world now and in the foreseeable future. This is an exciting time to confront those challenges with multidisciplinary studies and new information based on research at New Mexico State University. The WSM degree program is designed to confront the myriad aspects of water with the finest resources that NMSU has to offer. The WSM degree is managed by a team of faculty from five academic departments in three colleges including, in addition to myself, Dr. Frank Ward in Agricultural Economics and Agricultural Business, Dr. K.C. Kenneth Carroll in Plant and Environmental Sciences, Dr. Chris Brown in Geography, and Dr. Phil King in Civil Engineering. This team helps forge connections to over 80 faculty teachers and researchers at NMSU involved in water. The NMSU water community provides linkages to specialists in water issues in New Mexico and beyond. Along with our accomplished faculty and the other outstanding students engaged in the "water degree", we welcome you to join us as we discover new ways to understand and solve today's many water issues.

A handwritten signature in black ink that reads "Alexander Fernald". The signature is written in a cursive, flowing style.

Alexander G. "Sam" Fernald, PhD  
Water Science & Management Program Chair

For students seeking further information or assistance, please contact the Water Science and Management Student Program Coordinator:

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MSC 3167  
New Mexico State University  
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Las Cruces, NM 88003-0001

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# Table of Contents

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Admission Requirements.....	1
I.    Application	
II.   Master of Science (M.S.)	
III.  Doctor of Philosophy (Ph.D.)	
Degree Requirements.....	2
I.    General Requirements for Graduate School	
II.   Establishment of Advisor and Committee	
III.  Communication Among the Committee	
IV.  Requirements for Master of Science (M.S.).....	3
A.  Curriculum	
B.  Research Proposal	
C.  Degree Plan and Program of Study	
D.  Graduate Committee	
E.  Completion and Defense of the Thesis	
F.  Outline of Required Events to Complete the M.S. Degree	
V.    Requirements for Doctor of Philosophy (Ph.D.).....	4
A.  Doctoral Qualifying Examination	
B.  Research Proposal	
C.  Curriculum	
D.  Program of Study	
E.  Graduate Committee	
F.  Comprehensive Exam	
G.  Dissertation and Final Exam	
H.  Outline of Required Events to Complete the Ph.D. Degree	
Timelines for Degree Completion.....	7
WSM Admissions Committee.....	8
WSM Affiliated Faculty.....	9
Water Research Faculty.....	10
WSM Program Contact Information.....	11
Financial Assistance.....	12
I.    University Financial Aid	
II.   Teaching Assistantships (TA)	
III.  Researching Assistantships (RA)	
IV.  Payroll Deduction	
Graduate Assistantship.....	14
I.    Orientation and Training	
II.   Rights and Responsibilities	
III.  Termination	
International Students.....	15
WSMGSO Water Science & Management Graduate Student Organization.....	16
Student Resources.....	16

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# Admission Requirements

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## I. Application

All prospective students must fill out an application for admission to the NMSU Graduate School ([gradadmissions.nmsu.edu](http://gradadmissions.nmsu.edu)) and pay a \$40 nonrefundable application fee (\$50 International students).

Prospective students applying to the Water Science and Management program must be accepted by the Water Science and Management Program and must be fully admitted to the NMSU Graduate School.

## II. Master of Science (M.S.)

- A. **Possession of a Bachelor's Degree** - from an accredited university with a cumulative grade point average of 3.5 or higher on a 4.0 scale. However, students with grade point averages between 3.0 and 3.5 will be given consideration, this degree being preparatory to the Water Science and Management degree.
- B. **Three Letters of Recommendation** - must be submitted directly from persons who know the applicant professionally, including a recommendation from the candidate's current employer/sponsor. These letters should provide evidence of professional ability, research experience, and the potential for professional development.
- C. **Letter of Intent or Statement of Purpose** - that addresses individual professional and personal goals related to water science and management and discusses how these goals fit within the WSM program at NMSU. It is expected that the candidate will have made contact with prospective advisor(s) at NMSU and speak to how he or she would work with said advisor(s) to advance their research and study. Please include a brief statement on your research interests as it pertains to water research or water issues and how these interests fit with the WSM program at NMSU.
- D. **Brief Resume or Curriculum Vitae** - not to exceed five pages that summarizes the candidate's background and qualifications.

## III. Doctor of Philosophy (Ph.D.)

- A. **Possession of a Master's Degree** - from an accredited university with a grade point average of 3.5 or higher on a 4.0 scale. However, students with grade point averages between 3.0 and 3.5 will be given consideration.
  - B. **Three Letters of Recommendation** - submitted directly from persons who know the applicant professionally, including a recommendation from the candidate's current employer/sponsor or master's thesis advisor. These letters should provide evidence of professional ability, research experience, and the potential for professional development.
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- C. **Evidence of Research Experience** - applicants to the PhD program should provide evidence of research experience. This could include a master's thesis, a professional paper, peer reviewed manuscripts, consulting reports, or other evidence of experience conducting research.
- D. **Letter of Intent or Statement of Purpose** - that addresses individual professional and personal goals related to water science and management and discusses how these goals fit within the WSM program at NMSU. It is expected that the candidate will have made contact with prospective advisor(s) at NMSU and speak to how he or she would work with said advisor(s) to advance their research and study. Please include a brief statement on your research interests as it pertains to water or water issues and how these interests fit with the WSM program at NMSU.
- E. **Brief Resume or Curriculum Vitae** - not to exceed five pages that summarizes the candidate's background and qualifications.

## Degree Requirements

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- I. **General Requirements for the Graduate School**

The general New Mexico State University requirements for the Graduate School are described in the Graduate Catalog available through the Dean of the Graduate School or on-line ([catalogs.nmsu.edu](http://catalogs.nmsu.edu)). Students should familiarize themselves with these requirements. For information regarding Graduate Student Orientation, contact the Graduate School at ([gradinfo@nmsu.edu](mailto:gradinfo@nmsu.edu)).
  - II. **Establishment of Advisor and Committee**

The selection of a research advisor is a critical aspect of a graduate program. Students are encouraged to seek out and contact potential advisors with which they share common research interests. The faculty advisor should be knowledgeable in the area of research that is the focus of the student's work. If an advisor is not established, an interim advisor will be selected from the WSM Core or Affiliated faculty. The interim advisor is only a temporary assignment lasting at most one semester. During that time, the student and interim advisor will come to an agreement on the assignment of permanent advisor (and possibly the focus of the research), and the interim advisor will transfer the role of advisor to the permanent advisor within the WSM program through documentation with the Student Program Coordinator.
  - III. **Communication among the Committee**

The advisor-advisee relationship is similar to any other professional relationship, and clear communication concerning expectations, responsibilities, and obligations is key. The role of the advisor (who is also committee chair) is to direct the thesis or dissertation research. If students require clarification of general expectations, responsibilities, and obligations, or direction on specific technical issues, students should consult directly and promptly with the
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committee chairperson. If these discussions do not clarify the issues, students are to discuss the matter further with the WSM Management Team by appointment with the Student Program Coordinator. If students are not able to resolve issues at this level, an appeals process exists within the Graduate School; details on this are provided in the Regulation and Procedures section of the Graduate Catalog ([catalogs.nmsu.edu](http://catalogs.nmsu.edu)).

#### IV. Requirements for Master of Science (M.S.)

A. **Curriculum** – The following classes are required to be completed for the student to graduate from the M.S. program<sup>1</sup>:

1. AEEC 575 Advanced Water Resource Management and Policy (3 credits)
2. RGSC 518 Watershed Methods and Management, OR SOIL 456 Irrigation and Drainage (3 credits)
3. A ST 505 Statistical Inference I<sup>2</sup> (4 credits)
4. Seminar<sup>3</sup> (1 credit)
5. Electives for the relevant concentration in consultation with the student's committee (15 credits)
6. Thesis (6 credits)

B. **Research Proposal** - Although the thesis chair and committee guide the specifics of a student's research approach and strategy and have the "last word" in this area, it is strongly recommended that students develop, refine, and base their research on a formal, written thesis proposal.

C. **Program of Study** – As noted in the Graduate School guidelines, all graduate students are expected to complete the "Program of Study for Master's Students" after completing 12 credits. See ([https://provost.nmsu.edu/gradschool/wp-content/uploads/sites/5/2015/04/masters\\_program\\_of\\_study.pdf](https://provost.nmsu.edu/gradschool/wp-content/uploads/sites/5/2015/04/masters_program_of_study.pdf)) for this form. This form must be signed and filled out by the student and approved by the advisor. The form is then circulated for signatures, by way of the Student Program Coordinator, from the WSM Program Chair, ACES Academic Associate Dean and then submitted to the Graduate School for degree certification.

D. **Graduate Committee**

1. The graduate committee is selected by the student and the student's advisor, with approval of the Program Director and the Graduate Dean.
2. The committee will consist of three or more members, as follows: The chair must be a member of the recognized Water Faculty, and only 2 of 3 can be from the same academic department. The Graduate Dean's

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<sup>1</sup> Students are expected to have a basic foundation in Geographic Information System and Technologies (GIS&T) within a classroom, research, or professional experience. Students without this background are required to take an appropriate GIS class as advised by their advisor such as: [GEOG 578](#) - Fundamentals of Geographic Information System, or [GEOG 521](#) - GIS Application, or [FWCE 571](#) - GIS for Natural Resources.

<sup>2</sup> With the consent of the instructor and the approval of the student's advisor, the following courses may be used to substitute for A ST 505: [C E 582](#) Statistical Hydrology (3.0 credits) or [GEOG 585](#) Advanced Spatial Analysis (3.0 credits).

<sup>3</sup> Seminar credits can be substituted by [WSAM 605](#), [WSAM 610](#) or [GEOG 501](#).

representative must be outside of the department in which the chair resides.

3. Success in the graduate program is greatly enhanced by timely and logical selection of a thesis advisor and the assembly of a strong thesis committee. Students are required to select a thesis chair among the WSM Core and Affiliated faculty by the end of the first semester in the program, the second and third members subject to the rule outlined in item D.2 above, no later than the start of the second semester in the Program.
4. The committee normally includes at least three members of the University Graduate Faculty. The third person on the committee shall serve as the Graduate Dean's representative. Selection of committee members should be based on guidance from the thesis committee chair, with the intention of developing the strongest committee possible to guide the student's research.

**F. Completion and Defense of the Thesis** - As students near completion of their research and the final defense of the thesis, it is important that they coordinate closely with the advisor. Several important milestones of this process are detailed below. Students are expected to complete a thesis. The thesis requires completion of research suitable for publication in a scientific journal. A minimum of 26 semester credits is required, including a minimum of 15 credits numbered 500 or above. Additional requirements are detailed in the NMSU System Academic Regulations and Policies section of the Graduate Catalog. The final exam is administered by the student's committee. It is an oral defense of the thesis or research report, and also a general examination on the student's field of study.

**G. Outline of Required Events to Complete the M.S. Degree**

1. Meet with graduate committee no later than second semester to outline planned coursework and to discuss planned research for thesis.
2. File the "Program of Study for Master's Students" no later than after the completion of 12 credits of graduate work.
3. File the "Masters Final Examination Form" with Graduate School at least 10 working days before exam.
4. Deliver the thesis in hard or digital copy (at the discretion of the Committee Chair) to each committee member 7 business days before final exam.
5. Successfully defend the thesis and pass the accompanying oral exam by the relevant deadlines for the term in which this exam is held.
6. Complete the Master's Thesis Student [Checklist & Procedures](#) on the NMSU Graduate School website.
7. Submit your approved Thesis to ProQuest at <http://www.etsadmin.com/nmsuetd>

**V. Requirements for Doctor of Philosophy (Ph.D.)** - The general university requirements for a Ph.D. degree are described in the Graduate Catalog, available

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through the Dean of the Graduate School or online at ([catalogs.nmsu.edu](http://catalogs.nmsu.edu)). Entering doctoral students are required to meet with their advisor, set up an examination date and pass the qualifying oral examination to further work towards the doctorate. It is recommended that this take place during the first enrollment semester. As arrangements are being made to take the qualifying oral exam, The “Doctoral Qualifying Examination Form” ([https://provost.nmsu.edu/gradschool/wp-content/uploads/sites/5/2015/04/doctoral\\_qualifying\\_exam\\_form.pdf](https://provost.nmsu.edu/gradschool/wp-content/uploads/sites/5/2015/04/doctoral_qualifying_exam_form.pdf) ) must be signed and approved by both the student and the advisor. The form must contain all committee members’ names, signatures from the WSM Program Chair and ACES Academic Associate Dean and must be submitted to the Graduate School.

A. **Doctoral Qualifying Examination**<sup>4</sup> - The Ph.D. qualifying exam serves three functions:

1. Demonstrates competence in the student’s field of concentration.
2. Guides development of a program of study to complete the dissertation.
3. Supports a dissertation proposal with acceptable scholarship, value, and utility.

In collaboration with their advisor, students will present both of the following areas:

1. Past research (recap of student’s master’s thesis defense)
2. Student’s early ideas on areas of research they will pursue and methods involved in their proposed dissertation research.

Students also discuss the skills and knowledge base their proposed research will require, along with a discussion of what gaps exist in their knowledge base and skill set and how they propose to fill the gaps.

Members of the student’s Doctoral Committee can then pose questions to further explore the student’s area of research as needed.

The outcomes of the qualifying exam are noted below:

1. Unconditional pass - Student has the background and skill set needed to continue towards a doctoral degree with no conditions.
2. Conditional pass - Student is allowed to continue work towards a doctoral degree with specific conditions, and the student works with his/her committee to develop a plan that addresses how conditions will be met.
3. Unsatisfactory - Recommendation for student to stop their work in the Program at Master’s Degree.

Doctoral students must notify the WSM Student Program Coordinator 10 business days before the date of the qualifying exam is scheduled.

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<sup>4</sup> *Students who have completed a Master’s degree at NMSU may use their previous thesis defense as evidence of past research ability.*

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- B. Research Proposal** - Although the thesis chair and committee guide the specifics of a student's research approach and strategy and have the "last word" in this area, it is strongly recommended that students develop, refine, and base their research on a formal, written thesis proposal.
- C. Curriculum** - The following classes are required to be completed for the student to graduate from the Ph.D. program:
1. AEEC 575 Advanced Water Resources Management and Policy (3 credits)
  2. RGSC 518 Watershed Methods and Management, OR SOIL 456 Irrigation and Drainage (3 credits)
  3. CE 557 Water Resources Development (3 credits)
  4. GEOG 578 Fundamentals of Geographic Information Systems (4 credits) OR GEOG 521 GIS Applications (3 credits) OR GEOG 588 GIS And Water Resources (3 credits)
  5. A ST 505 Statistical Inference I<sup>5</sup> (4 credits)
  6. Seminar<sup>6</sup> (2 credits) in two different departments
  7. Electives for the relevant concentration in consultation with the student's committee (38-39 credits)
  8. Dissertation (18 credits)
- D. Program of Study** - As noted in the Graduate School guidelines, all graduate students are expected to complete the "Program of Study and Committee for Doctoral Students" before completing 12 credits. See ([https://provost.nmsu.edu/gradschool/wp-content/uploads/sites/5/2015/04/doctoral\\_program\\_of\\_study.pdf](https://provost.nmsu.edu/gradschool/wp-content/uploads/sites/5/2015/04/doctoral_program_of_study.pdf)) for this form. This form must be signed and filled out by the student and approved by the advisor. The form is then circulated for signatures, by way of the Student Program Coordinator, from the WSM Program Chair, ACES Academic Associate Dean and then submitted to the Graduate School for degree certification.
- E. Graduate Committee**
1. Will be composed of at least four members. Two of whom must have an appointment in WSM and one from a related area who may be the Graduate Dean's representative. See the graduate catalog for rules governing the Graduate Dean's representative. All members will attend the dissertation defense and final, oral exam. The Doctoral Committee guides the candidate in the research, evaluates the merits of the dissertation and verifies satisfactory completion of requirements.
  2. The graduate committee is selected by the student and the student's advisor along with approval of the Department Head and the Graduate Dean.
  3. The committee will consist of four or more members as follows: The committee chair (advisor) and at least two other members must be within

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<sup>5</sup> With the consent of the instructor and the approval of the student's advisor, the following courses may be used to substitute for A ST 505: [C E 582](#) Statistical Hydrology (3.0 credits) or [GEOG 585](#) Advanced Spatial Analysis (3.0 credits)

<sup>6</sup> Seminar credits can be substituted by [WSAM 605](#), [WSAM 610](#) or [GEOG 501](#).

the WSM Affiliated Faculty or the WSM Management Committee. And at least one member must be from a department other than the advisor and may serve as the Graduate Dean's representative.

- F. **Comprehensive Exam** - This exam covers all phases of the major and minor fields of study and is given after completion of the agreed-upon course work, and when sufficient progress has been made toward fulfilling "additional" requirements. The examination must contain both oral and written portions. Good practice requires advance planning to allow time for candidates to receive written questions and complete them, and for committee members to grade the written portion before the oral portion. Generally, there should be a time lapse of at least one year between the comprehensive and final, oral examination (i.e. the dissertation defense). At least 9 credits must be taken after the comprehensive exam. Dissertation credits can only be taken once the comprehensive exam is completed, or in the same semester as the comprehensive exam is completed. In all cases there must be at least one semester between the comprehensive and the final oral exam.

**Dissertation and Final Exam** - A dissertation subject chosen by the candidate in their major field must receive final approval from the Doctoral Committee. Where appropriate, the dissertation proposal is presented to the Doctoral Committee. An example presentation to the committee consists of the following components:

1. Introduction
2. Literature review
3. Gaps in the literature and how to fill the gaps
4. Objectives, research questions or problem statement
5. Data and methods
6. Anticipated results
7. Relevance of the work

The committee will require the candidate to defend the dissertation in a final, oral examination. The presentation of research results is open to the public, while the exam takes place in a closed committee meeting. Original research described in the dissertation must be suitable for publication in a peer-reviewed journal. General guidelines are that the dissertation include content for 3 peer-reviewed publications. The minimum expectation is that 1 publication is accepted, 1 publication is submitted and in review, and 1 publication is drafted and ready for submission.

#### G. **Outline of Required Events to Complete the Ph.D. Degree**

1. Meet with graduate committee no later than second semester to outline planned coursework and to discuss planned research for thesis. This normally leads to a formal proposal being written by the student and approved by the Doctoral Committee.
  2. File the "Program of Study and Committee for Doctoral Students" no later than after the completion of 12 credits of graduate work.
  3. File the "Doctoral Final Examination Form" with Graduate School at least 10 working days before exam.
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4. Deliver the thesis in hard or digital copy (at the discretion of the Committee Chair) to each committee member 7 business days before final exam.
5. Successfully defend the dissertation and pass the accompanying oral exam by the relevant deadlines for the term in which this exam is held.
6. Complete the Doctoral Dissertation Student [Checklist & Procedures](#) on the NMSU Graduate School website.
7. Submit your approved Thesis to ProQuest at <http://www.etsadmin.com/nmsuetd>

## WSM Executive Committee

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Dr. Christopher Brown	Geography	GIS Applications, Binational & Transboundary Water Research	575-646-1892 brownchr@nmsu.edu
Dr. Kenneth "KC" Carroll	Plant & Environmental Sciences	Groundwater & Contamination	575-646-5929 kccarr@nmsu.edu
Dr. A.G. "Sam" Fernald	Animal & Range Sciences	Watershed Management, Community Water Systems Science	575-646-1041 afernald@nmsu.edu
Dr. J. Philip King	Civil & Geological Engineering	Surface Water Hydrology	575-646-5377 jpkking@nmsu.edu
Dr. Frank A. Ward	Agricultural Economics & Agricultural Business	Economics & Policy	575-646-1220 fward@nmsu.edu

# WSM Affiliated Faculty and Researchers

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All "646" numbers have a (575) area code

Faculty	Department	Field of Study	Email	Phone
Sangamesh V. Angadi	Plant and Environmental Sciences	Water Efficient Crops	angadis@nmsu.edu	646-3405
Steven Archambault	Ag Economics and Ag Business	Resource and Development Economics	sarchamb@nmsu.edu	646-5737
Richard Arnold	Ag Science Center at Farmington	Revegetation with produced water	riarnold@nmsu.edu	(505) 960-7757
A. Salim Bawazir	Civil and Geological Engineering	Evapotranspiration/Irrigation and drainage	abawazir@nmsu.edu	646-6044
Max P. Bleiweiss	Entomology Plant Path and Weed Science	Remote sensing	maxb@nmsu.edu	646-1367
Wiebke Boeing	Fish, Wildlife and Conservation Ecology	Aquatic ecology	wboeing@nmsu.edu	646-1707
Kenneth Boykin	Fish, Wildlife and Conservation Ecology	River Riparian areas, Fish, Wildlife, and Conservation Ecology	kboykin@nmsu.edu	646-6303
Christopher Brown	Geography	GIS applications and binational water research	brownchr@nmsu.edu	646-1892
Susan Brown	Institute For Excel In Math & Science Ed		susanbro@nmsu.edu	646-1397
Kenneth "KC" Carroll	Plant and Environmental Sciences	Hydrology, hydrogeology, water resources, environmental science, soil science, geochemistry, and environmental engineering	kccarr@nmsu.edu	646-5929
David E. Cowley	Fishery and Wildlife Science	Aquatic ecology	dcowley@nmsu.edu	646-1346
Doug Cram	Extension Animal Resources	Forest and Fire Management	dcram@nmsu.edu	646-8130
Michael N. DeMers	Geography	Geographic Information Science and Technology, Landscape Ecology	mdemers@nmsu.edu	496-5231
Shuguang Deng	Chemical Engineering	Water treatment technology	sdeng@nmsu.edu	646-4346
Cara Meghan Downes	Economics, Applied Statistics & International Business	Economics, sustainability	cdownes@nmsu.edu	646-6021
David W. DuBois	Plant and Environmental Sciences	Climatology	dwdubois@nmsu.edu	646-2974
Daniel P. Dugas	Geography	Geomorphology	ddugas@nmsu.edu	646-1045
Ahmed Elaksher	Engineering Technology and Surveying Engineering	Water surveying and hydrography	elaksher@nmsu.edu	646-6107
Willis M. Fedio	Food Safety Laboratory & Assoc.	Pathogenic bacteria in chile, rapid detection and isolation of bacterial pathogens	wfedio@nmsu.edu	646-7352
A.G. "Sam" Fernald	Animal and Range Sciences	Water quality hydrology	aferald@nmsu.edu	646-1041
Rolando Flores	Agricultural, Consumer & Environmental Sciences	Food Science and Technology	agdean@nmsu.edu	646-3748
Reza Foudazi	Chemical & Materials Engineering	Membranes	rfoudazi@nmsu.edu	646-3691
Amy Ganguli	Animal and Range Sciences	Rangeland restoration, agroecosystem resilience	ganguli@nmsu.edu	6463427
Abbas Ghassemi	Waste Mgmt Ed and Res Consortium	Energy and water management	aghassem@nmsu.edu	646-2357
R. Edmund Gomez	Extension Economics	Small farm irrigation outreach	Gr@nmsu.edu	(505) 852-2668
Aravamudan Gopalan	Chemistry and Biochemistry	Water remediation	agopalan@nmsu.edu	646-2589
Ryan M. Goss	Plant and Environmental Sciences	Irrigation of Urban Landscapes and Turfgrasses	ryangoss@nmsu.edu	646-2397
William R. Gould	Economics and International Business	Statistical analysis	wgould@nmsu.edu	646-3986
Steven J. Guldan	Ag Science Ctr at Alcalde	Acequia irrigation systems	sguldan@nmsu.edu	(505) 852-4241
Jeffrey Herrick	Wooton Hall	Land evaluation and monitoring	jherrick@nmsu.edu	646-5194
Brian H. Hurd	Ag Economics and Ag Business	Economics and policy	Bhurd@nmsu.edu	646-2674

Michael D. Johnson	Chemistry and Biochemistry	Environmental applications of ferrate ion, FeO <sub>4</sub> <sup>2-</sup> ; arsenic, selenium and antimony remediation from ground water	johnson@nmsu.edu	646-3627
J. Philip King	Civil and Geological Engineering	Surface water hydrology	jpking@nmsu.edu	646-5377
Antonio S. Lara	Chemistry and biochemistry	Water quality and arsenic removal	alara@nmsu.edu	646-2918
Saeed Langarudi	Animal and Range Sciences	Modeling, decision system, social-hydrology systems	lang@nmsu.edu	646-2515
Bernd Leinauer	Extensn Plant Sciences	Irrigation water conservation, irrigation of turfgrass with saline and potable water	leinauer@nmsu.edu	646-2546
Hongmei Luo	Chemical Engineering	Related water science research, Photocatalyst for water splitting and removal of emerging contaminants	hluo@nmsu.edu	646-4204
Julie Maitland	NMDA Ag Pgms and Resources Div	Water policy and law	jmaitlan@nmsu.edu	646-2642
Martha C. Mitchell	Engineering Research Center	Water quality and arsenic removal	martmitc@nmsu.edu	646-3422
H. Curtis Monger	Plant and Environmental Sciences	Water/wastewater treatment and reuse	cmonger@nmsu.edu	646-1910
Lambis Papelis	Civil and Geological Engineering	Aquatic Chemistry	lpapelis@nmsu.edu	646-3801
Geno A. Picchioni	Plant and Environmental Sciences	Plant physiology and water stress	gpicchio@nmsu.edu	646-1820
Richard C. Pratt	Plant and Environmental Sciences	Cropping Systems Research and Plant Breeding	ricpratt@nmsu.edu	646-3406
Albert Rango	Jornada Exper Range Headquarters	Snow hydrology, climate change, and remote sensing	alrango@nmsu.edu	646-2120
Lakshmi Reddi	Engineering	Civil and Environmental Engineering	engrdean@nmsu.edu	6463647
David A. Rockstraw	Chemical Engineering	Water treatment technology	drockstr@nmsu.edu	646-7705
Carlos Rosencrans	Agricultural and Extension Education (AXED)	Windmills, Agricultural mechanics	croscncr@nmsu.edu	646-4511
Rossana Sallenave	Extension Animal Resources & Natural Resources	Aquatic Ecology	rsallena@nmsu.edu	646-6093
Zohrab A. Samani	Civil and Geological Engineering	Water resource development	zsamani@nmsu.edu	646-2904
Tanner Schaub	Bio Security And Food Safety Center	Water chemical analysis	tschaub@nmsu.edu	646-7582
Gerald "Jerry" Sims	Entomology Plant Pathology and Weed Science	Environmental microbiology	gksims@nmsu.edu	646-3225
Manoj K. Shukla	Plant and Environmental Sciences	Water and Solute Transport in Soils	shuklamk@nmsu.edu	646-2324
Sergei N. Smirnov	Chemistry & Biochemistry	Nanofluidics, nanoporous membranes, biosensors, drug delivery, photoinduced charge transfer, scanning probe microscopy	snsn@nmsu.edu	646-1547
Geoffrey B. Smith	Biology	Environmental microbiology	gsmith@nmsu.edu	646-6080
Robert G. Smits	Mathematical Sciences	Stochastic transport of chemicals and biological mechanisms in porous media	rsmits@nmsu.edu	646-2884
Rolston St. Hilaire	Plant and Environmental Sciences	Environmental stress physiology	rsthilai@nmsu.edu	646-3638
Daniel Smeal	Ag Science Center at Farmington	Consumptive-use of agricultural and horticultural crops	dsmeal@nmsu.edu	(505) 960-7757
Caiti M. Steele	Jornada Exper Range Headquarters	Remote Sensing, Snow Hydrology, Agriculture & Climate Change	caiti@nmsu.edu	646-4144
Kenny Stevens	Engineering Technology	Solar water distillation and groundwater hydrology	kstevens@nmsu.edu	646-2491
Blair L. Stringam	Plant and Environmental Sciences	Irrigation, Open Channel Flow Measurement, Sensor Applications	blairs@nmsu.edu	646-7665
Patrick Torres	Northern District Supervisory Unit	Small farm irrigation education and water conservation	patorres@nmsu.edu	(505)983-4615
April L. Ulery	Plant and Environmental Sciences	Environmental Soil Chemistry	aulery@nmsu.edu	646-2219
Jacob Urquidi	Physics	Physics of molecular liquids (water in particular) and amorphous materials	jurquidi@nmsu.edu	646-5199
Tony Valdez	Taos County Extension Office	Taos County Extension and Youth River Program and Small Farm Water Use	tonvalde@nmsu.edu	758-3982
Frank A. Ward	Ag Economics and Ag Business	Economics and policy	fward@nmsu.edu	646-1220
Cindy Watkins	Reference and Research Services	Agriculture and life sciences librarian	cwatkins@lib.nmsu.edu	646-7484

Nicolas Webb	Jornada Exper Range Headquarters	Rangeland management, Land degradation processes and climate-management interactions, Spatiotemporal patterns and drivers of wind and water erosion, Climate change impacts and adaptation in socio-ecological systems	nwebb@nmsu.edu	646-3584
Benjamin Widner	Economics and International Business	Urban and regional economics	bwidner@nmsu.edu	646-5989
Pei Xu	Civil Engineering	Water and wastewater engineering; membrane processes; desalination; potable and non-potable water reuse; produced water treatment; advanced oxidation and disinfection; biological and bioelectrochemical processes; removal of emerging contaminants; membrane fouling	pxu@nmsu.edu	646-5870

## WSM Program Contact Information

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MSC 3167  
 New Mexico State University  
 PO Box 30001  
 Las Cruces, NM 88003-8001

WSM E-mail: [wsm@nmsu.edu](mailto:wsm@nmsu.edu)  
 Website: [wsm.nmsu.edu](http://wsm.nmsu.edu)  
 Phone: 575-646-4198  
 Fax: 575-646-6418

## Financial Assistance

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### I. University Student Financial Aid

Financial support may be available for graduate students in the form of assistantships, fellowships, scholarships, and loans, however admission to the program does not equate to any offer or guarantee of financial assistance. Departmental assistantships and university fellowships are generally limited and are awarded on a competitive basis. As a research assistant (RA) or teaching assistant (TA), graduate students pay resident (in-state) tuition, and are committed to work at least 10 hours per week.

The financial aid office (<http://fa.nmsu.edu>) helps new graduate students apply for many types of financial support. Perkins Loans (national direct student loans), Stafford Loans (GSL), and college work-study are all available to graduate students. The amount of aid awarded will be based on the financial need of the student.

The granting of either a Teaching Assistantship (TA) and or a Research Assistantship (RA) is based on the applicant's qualifications and available funding. The allocation of a TA or RA is based primarily on teaching or research

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needs in the department that is providing funding, not on a students' desire for the type of work they wish to do. Continuation of funding is contingent upon students adequately fulfilling their TA or RA duties, making adequate progress in their coursework and making sufficient progress on their thesis or dissertation research. WSM will withdraw funding if any of these criteria are not met. Students working as TAs are primarily responsible to the department head or faculty advisor in the department providing the funding. Students working as RAs are primarily responsible to the faculty advisor who is funding the research on which the students are working. In either case, the supervising faculty advisor evaluates whether or not the TA or RA is adequately fulfilling their duties. "Adequate Progress" in coursework is defined as maintaining a 3.0 grade point average in all graduate work and "Sufficient Progress on Research" depends upon meeting the research goals in a timely manner. Graduate students wishing to apply for any of the above types of financial aid must maintain a GPA of 3.0 and must be enrolled for at least 9 graduate credits in a regular semester (fall and spring).

## **II. Teaching Assistantship (TA)**

Each year founding departments (Agricultural Economics & Agricultural Business, Animal & Range Sciences, Civil & Geological Engineering, Geography, and Plant & Environmental Sciences) and the WSM Program are issued a limited number of Teaching Assistantships through the Graduate School as well as relevant colleges and academic departments. If a student wants to be considered for a teaching assistantship, the student should make the request through their advisor. The PhD students are eligible for TA support up to six semesters and MS students for four semesters, subject to available funding and students making adequate progress towards their degree. All new TAs must attend the New Graduate Student Orientation presented by the Graduate School at the beginning of the fall semester. New international students must pass the NMSU International Teaching Assistant (ITA) Screening administered by the Department of Communications. If they do not pass the ITA Screening, a student must attend courses offered through the Department of Communications to ensure that they have command of English and will be able to teach.

Teaching assistantships start at the beginning of the semester in August (on or around August 16) and run through the end of the spring semester in May (on or around May 15). Each year assistantships are reassigned. Continuation of TA support will be based in part on course evaluation forms associated with the course(s) taught by the student and on the needs of the department; therefore, a student receiving a teaching assistantship one year is not guaranteed an assistantship the next year. Available assistantships are assigned in July and December. Teaching assistants are paid twice per month (the 15th and last working day). Internal Revenue Service tax withholding guidelines require NMSU graduate students to maintain three (3) credit hours of course work for summer sessions to be eligible for the student FICA tax exception. Student employees who do not meet this requirement during any given pay period will be subject to Social Security taxes and Medicare taxes.

## **III. Research Assistantship (RA)**

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A research assistant is responsible for working on research programs under the direction of a faculty advisor. Duties vary among research programs but can include fieldwork, data recording and analysis, lab analysis, report writing, and other assignments as necessary to perform the research.

A research assistantship is granted by an individual professor, and contracts are renewed on timelines that match the funding source schedule. A full research assistant is required to work 20 hours per week. Half-time research assistantships (10 hours per week) may also be available. Research assistants are paid twice per month (the 15th and last working day). Payroll deduction for tuition also applies to research assistants.

#### **IV. Payroll Deduction**

All graduate assistants will pay tuition. Graduate students on a half-time (10 hours per week) assistantship or more per week will be eligible for the New Mexico resident tuition rate during the first 12 months of tenure. If New Mexico resident status (an application is available from the Registrar's Office) has not been established by the time of reappointment, the graduate student may be subject to the non-resident tuition rate. Contact the Registrar's Office for further details. Tuition payments can be deducted from the student's paycheck by the University Bursar's Office. When enrolling, if a student has signed a contract for an assistantship, the graduate school will supply a payroll deduction card.

## **Graduate Assistantship**

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### **I. Mandatory Orientation and Training**

The NMSU Graduate School requires that all first time Graduate Assistants (GA), attend a "face-to-face" mandatory orientation and training. In accordance with NMSU policy 5.45.20.j and at the beginning of each semester the WSM Department Head or WSM Program will send the graduate school all new GAs' name, Aggie ID number and NMSU email to ensure participation in GA orientation. For more information, please visit, <https://gradschool.nmsu.edu/ga-resources/> or call 575-646-5746.

### **II. Termination**

The WSM faculty may need to terminate an appointment of a student's graduate assistantship. Ordinarily, termination of an appointment for unsatisfactory performance will not occur without a probationary period, during which time the student will be given the opportunity to improve performance. The WSM Admissions Committee reserves the right, however, to terminate an appointment without such a probationary period if such an action is needed to protect the integrity of the WSM program. The Graduate School will not allow reappointment of TAs or RAs who are no longer in good academic standing.

### **III. Graduate Assistantship Handbook**

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As briefly mentioned under the Financial Assistance section, GAs are required to attend a mandatory orientation in the fall semester. In addition, GAs must familiarize themselves with the Graduate Assistantship Handbook. Information regarding general rules and regulations, detailed responsibilities, preparation and organization, presentation techniques, testing and grading, all may be found by visiting the Graduate School's website (<http://gradschool.nmsu.edu>).

## International Students

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The NMSU International Student & Scholar Services (ISSS) is the focal point for the University's international activities (<http://iss.nmsu.edu>). ISSS provides services and advisement to international students who come from approximately 72 countries. ISSS also cooperates with international student associations and community organizations to organize socio-cultural activities for international students and their families. ISSS offers several international scholarships to students seeking additional funding. Student can contact ISSS for additional information. International students must have a current Social Security number in order to be employed at NMSU. ISSS can also be reached at 575-646-2834 or via email at ([issn@nmsu.edu](mailto:issn@nmsu.edu)).

## WSMGSO (Water Science & Management Graduate Student Organization)

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WSMGSO is an association of graduate students primarily in the WSM program. The mission of WSMGSO is to provide students with resources to further their studies and careers while providing services and education to the community. Its purpose is to create fellowship among WSM students and provide them with valuable resources and information related to the program and field of water resources. In addition, to provide professional development activities to further WSM students' career goals and to provide public service and education to the community.

## Student Resources

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**NMSU Graduate School and Catalog** - For contact information and additional services provided through the graduate school, please visit, (<http://gradschool.nmsu.edu/>), call 575-646-5746 or e-mail ([gradinfo@nmsu.edu](mailto:gradinfo@nmsu.edu)). The online graduate catalog can be viewed at, (<http://catalogs.nmsu.edu/>).

**"myNMSU" Student Portal** - Once a prospective student is admitted to NMSU, students are required to create their username and password by accessing, (<https://my.nmsu.edu/web/mycampus/home>) in order to establish their NMSU emails, gain access to registration, class search, student records, student account, tuition payments, financial aid, degree audit and schedule of classes.

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**Academic Calendar** – The NMSU academic calendar provides information on dates of instruction, exam week, deadlines, holidays and commencement. For detailed information please access, (<http://academiccalendar.nmsu.edu/>).

**Tuition and Fees** – Each year NMSU updates its assessment of tuition and fees for all students. Depending on how the student was first admitted to NMSU, the tuition and fees will be charged to a student’s account depending on their residency, the number of credits registered for and their classification. Please see Tuition and Fees chart for further explanation, (<http://uar.nmsu.edu/tuition-fees/tuition-rates/>). University Accounts Receivable contact information is as follows, (<http://uar.nmsu.edu>), ([uar@nmsu.edu](mailto:uar@nmsu.edu)), or call 575-646-4911.

**University Student Records Office** – Provides services to all current and former students. Services include residency information, registration, enrollment verification, STAR degree audit, transcripts (official/unofficial), FERPA, graduation and degree application deadlines. Contact information is as follows, (<http://records.nmsu.edu/>), ([records@nmsu.edu](mailto:records@nmsu.edu)), or call 575-646-3411.

**Housing & Residential Life** – Finding a place to live at NMSU is convenient. This department offers housing to just about any walk of life. Housing communities include residential, apartment, family, living and learning, theme, graduate and international housing. Contact information is as follows, (<http://housing.nmsu.edu/>), ([hsgandcl@nmsu.edu](mailto:hsgandcl@nmsu.edu)), or call 575-646-3202

**Career Services** – The NMSU Career Services office provides a variety of services all current students and alumni. Services include establishing the Aggie Career Manager, co-op/internships, financial literacy, career fairs, professional development workshops on campus and connecting with employers. Contact information is as follows, (<http://careerservices.nmsu.edu/>), ([hireNMSU@nmsu.edu](mailto:hireNMSU@nmsu.edu)), or call 575-646-1631.

**Writing Center** - The NMSU Writing Center values the work of student writers. It strives to help students become more knowledgeable, practiced, and confident writers through collaborative, dialogue-centered consultations. The center works with all students at any level of experience and can assist with assignment directions and revising final drafts. Contact information is as follows, (<http://towc.nmsu.edu/>).

**Activity Center** – The NMSU Activity Center offers programs and services for all of the NMSU community. Students are encouraged to get involved with intramural sports, outdoor recreation or simply utilize the facilities such as the weight room, basketball courts, indoor track, climbing wall, aquatic center and rent equipment. Contact information is as follows, (<http://recsports.nmsu.edu/>), ([aggiefit@nmsu.edu](mailto:aggiefit@nmsu.edu)), or call 575-646-2885.

**Campus Health Center** – The NMSU Campus Health Center provides non-emergency services to all students and staff. The Fees for Health Services are typically included in the tuition bill for full-time students. Part-time students may have to pay additional fees depending on your registration status. Services include clinic services, self-care, routine office visits and travel and immunization. Contact information is as follows, (<http://chc.nmsu.edu/>), ([campus\\_health@nmsu.edu](mailto:campus_health@nmsu.edu)), or call 575-646-1512.

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