

3 days of Swiftwater Rescue training, as well as 3 days of Level I Avalanche training. An overnight, winter rescue scenario typically in conjunction with Missoula County Sheriff's Search and Rescue team, as well as training in rescue helicopter operations with St. Patrick Hospital's LifeFlight medics, complete the suite of practical experiences. Co-Requisites include HHP 332, Emergency Medical Technician and Incident Management; and PTRM 355, Wilderness Medicine and Risk Management.

#### PTRM 380 - Rec Admin & Leadership

Credits: 3. Offered spring. The theories, principles and practices that shape the administration of recreation opportunities offered through public, nonprofit and private agencies and organizations. Course content includes leadership roles of recreation managers, organizational structure, management, legality, risk management, staffing, communication and public relations.

#### PTRM 391 - Special Topics

Credits: 1 TO 12. (R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.

#### PTRM 392 - Independent Study

Credits: 1 TO 6. (R-6) Offered every term. Course material appropriate to the needs and objectives of the individual student.

#### PTRM 394 - Seminar

Credits: 1 TO 4. (R-4) Offered intermittently. Variable topics by visiting scholars.

#### PTRM 398 - Internship

Credits: 1 TO 6. Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Course Attributes: Internships/Practicums

#### PTRM 407 - Mnging Rec Res in Wilderness

Credits: 3. Examination of strategies to management recreation in a wilderness setting. Addresses management of visitor use and experiences, measuring and monitoring biophysical and social impacts, effective education and interpretation, and law enforcement.

#### PTRM 418 - Winter Wilderness Field Studies

Credits: 3. Examination of wilderness values, management issues and strategies, winter ecology and snow science, risk management and group leadership, and traditional skills. Winter field course in the Swan Valley and Mission Mountains Wilderness. Offered wintersession.

#### PTRM 450 - Pre-Practicum Prof Prep

Credits: 1. Offered spring. A pre-practicum class to provide orientation for the practicum, PTRM 495 (RECM 460).

#### PTRM 451 - Tourism & Sustainability

Credits: 3. Offered spring. Prereq., PTRM 210, or consent of instructor. Theories and conceptual models are applied to analyzing relationships between the integration of planning theories to sustainability concepts. Course Attributes: Writing Course-Advanced

#### PTRM 482 - Wilderness & Protctd Area Mgt

Credits: 3. Offered spring. Prereq., PTRM 217S, or consent of instructor. Examination of the origin, evolution, and application of the park concept on state, federal, and international levels. Evaluation of legislation, philosophy, and policy leading to consideration of goals, objectives, and strategies for wilderness and protected area management.

Course Attributes: Writing Course-Advanced

PTRM 484 - PTRM Field Measurement Tech

Credits: 3. Offered autumn. Co-req. with either PTRM 485 or PTRM 451. Field measurement and management techniques critical in park, tourism & recreation management. Includes measurement of impacts on biophysical and social attributes of park, tourism & recreation settings.

PTRM 485 - Recreation Planning

Credits: 4. Offered spring. Prereq., PTRM 217S and PTRM 300. Offered autumn. Needs of recreation opportunities and response to those needs through planning, demand assessment and resource analysis.

PTRM 491 - Special Topics

Credits: 1 TO 12. (R-12) Offered intermittently. Experimental offerings of visiting professors, new courses or one-time offerings of current topics.

PTRM 492 - Independent Study

Credits: 1 TO 6. (R-6) Offered every term. Prereq., consent of instr. Individual study of research problems.

PTRM 494 - Seminar

Credits: 1 TO 4. Offered autumn and spring. Prereq., senior standing in wildlife biology or consent of instr. Analysis and discussion led by students of current topics in wildlife biology.

PTRM 495 - Practicum in PTRM

Credits: 1 TO 6. (R-15) Offered every term. Prereq., PTRM 380, PTRM 450, senior standing, and consent of instr. Supervised pre-professional practice in approved parks, tourism & recreation management agencies. Course

Attributes: Internships/Practicums

PTRM 498 - Internship

Credits: 1 TO 6. Offered autumn and spring. Prereq., consent of instr. Extended classroom learning during placements off campus. Prior approval must be obtained from faculty advisor and Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Course Attributes:

Internships/Practicums

PTRM 499 - Senior Thesis

Credits: 1 TO 3. (R-6) Offered autumn and spring. Prereq., consent of instr.; senior standing. Preparation of major paper based on study or research of a topic selected with an advisor according to needs and objectives of student.

PTRM 500 - Conserv Social Sci Methods

Credits: 3. Offered autumn. Prereq., a course in statistics or consent of instr. The nature of scientific research, planning research projects, organization and presentation of research results. Level: Graduate

PTRM 517 - Advanced Visitor Mgmt

Credits: 3. Managing visitors in protected areas is an increasingly important. The U.S. National Park Service, for example, receives about 275 million visits per year. These visits impact both the parks and society on numerous levels. Many of the most perplexing issues associated with Protected Area Management are also visitor experience or access related. Visitors are managed to fulfill mandates, build constituencies for protected areas, generate

income and improve the human condition. In the past four decades several visitor management strategies and tactics have been developed and evaluated. Examples of these strategies include changing physical places or facilities to accommodate use, changing the character of uses and visitors, emphasizing education or law enforcement, developing concessions etc. Within those broad strategies are also numerous tactics that have been tried in numerous contexts. Charging user fees, rationing use, using passive vs. active interventions into the visitor experience are tactical examples. In our globalizing profession these strategies and tactics are being challenged to perform within the context of a variety of governance and institutional arrangements. While most approaches were developed for public land settings, they are now being used on private lands, in communal settings, or in areas of international importance. The central challenge of this course is to analyze the effectiveness and appropriateness of visitor management strategies for a variety of issues and in a variety of institutional contexts. To be sure our efforts connect both theoretical and applied perspectives, we will use a single case for the organization of the course. That case is developing a visitor management plan for the Going to the Sun Road Corridor in Glacier National Park. This is a real process that the professor is cooperatively involved with. We will meet one or two times per week depending on the needs of the group. Level: Graduate

#### PTRM 554 - Geographies of Tourism

Credits: 3. Consent of Instructor. This graduate level course will focus on geographic concepts such as place, space, and scale and their applications in tourism research. We will also cover spatial analysis techniques and their uses in tourism studies. The course will begin with an introduction to geography and its importance in tourism studies. Next, background on concepts and theories developed within the field of geography will be provided. From there we will begin to discuss ideas of space, place, landscapes and scale. In our discussion of scale we will focus on the politics of scale and ideas of globalization and the global-local nexus. This will lead into a discussion of networks and flows as they apply to tourism. We will also explore political geographies and gendered landscapes as they apply to tourism. Finally, we will explore some spatial analysis techniques used by geographers studying tourism. The course materials will be structured to give students information on how each topic is conceptualized by geographers, current theoretical debates relating to the topic and its applications in tourism research. The course will rely heavily on current literature, mainly from peer-reviewed journals and book chapters. Students will be expected to engage with these concepts through the literature in writing and discussion. Level: Graduate

#### PTRM 562 - Manage Rec Res Wilderness

Credits: 3. Same as FORS 562. Current research, theory, and management approaches to recreation management in wilderness, including monitoring and management of visitor impacts and experiences. Level: Graduate

#### PTRM 574 - Perspectives in Human Dimen

Credits: 3. Consent of instructor. This course will provide graduate students with an understanding of multiple perspectives in human dimensions of natural resources. The course is intended to be broad in nature in order to provide students with a comprehensive understanding of the topics. Students will read and discuss foundational pieces by Orr and Leopold (among others) and explore newer readings on current research. The course will cover social psychological and sociological perspectives and discuss key issues such as scale, multidisciplinary research, sustainability and social diversity in natural resources. Students will be challenged to approach natural resources issues from multiple perspectives, not just the perspective they are most familiar with. Students will be able to communicate effectively among social scientists and be able to integrate diverse perspectives. Level: Graduate

PTRM 582 - Concept of Wilderness & PA

Credits: 3. (R-3). Offered autumn. Theoretical and philosophical imperatives for the establishment of different forms of parks, wilderness and protected areas. In-depth discussion of the objectives and purposes for management of these areas, and of the current criticisms and attacks on their intellectual foundation. Level: Graduate

PTRM 583 - Research & Dev. Tourism & Rec.

Credits: 3. This course will use Montana as a case study to understand tourism and recreation research and the tourism and recreation industry. From an applied research prospective, students will learn the intricacies of how to design a research program to support a tourism and recreation industry where the data and decision making tools for marketing professionals, land managers, planners, and political entities are generated. How do you build your relationships, work with advisory councils, pick your issues to study, design your methodologies, collect and analyze data, and tell the story so it is applicable to the industry yet objective and science driven? Level: Graduate

PTRM 594 - Conservation Soc Sci Seminar

Credits: 1 TO 2. (R-3) Offered Spring. Same as NRSM 594. Prereq. graduate standing. Presentations by students, faculty, and associates on issues and topics in their field. Level: Graduate

PTRM 595 - Special Topics

Credits: 1 TO 12. (R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics. Level: Graduate Course Attributes: Internships/Practicums

PTRM 596 - Independent Study

Credits: 1 TO 10. (R-10) Offered every term. Prereq., consent of instr. Individual study or research problems. Level: Graduate Course Attributes: Service Learning/Volunteer

PTRM 597 - Research

Credits: 1 TO 12. (R-12) Offered every term. Prereq., graduate standing. Independent graduate research in parks, tourism, and recreation management. Level: Graduate

PTRM 598 - Internship

Credits: 1 TO 12. (R-12) Offered every term. Prereq., consent of instr. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from faculty advisor and Internship Services office. Level: Graduate Course Attributes: Internships/Practicums

PTRM 599 - Professional Paper

Credits: 1 TO 15. (R-15) Offered every term. Preparation of professional paper. Level: Graduate

PTRM 695 - Special Topics

Credits: 1 TO 6. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate Course Attributes: Internships/Practicums

PTRM 697 - Research

Credits: 1 TO 15. (R-15) Offered every term. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

PTRM 699 - Thesis

Credits: 1 TO 15. (R-15) Offered every term. Prereq., graduate standing. Preparation of thesis/dissertation. Level: Graduate

## Recreation Management

### RECM 405 - Manage Wilderness Res

Credits: 4. An ecology-based treatment of wilderness management. Brief overview of fundamental ecological principles followed by an examination of their specific and often unique application to wilderness ecosystems. Presentation of basic wilderness management principles and guidelines. Discussion of nonconforming wilderness uses.

## Fish, Wildlife Science & Management

### WILD 105N - Wildlife & People

Credits: 3. Offered autumn. Intended for non-wildlife biology majors. Interactions of wildlife and people in today's society. Course Attributes: Natural Science Course

### WILD 170 - Fish & Wildlife Interest Group

Credits: 1. Offered autumn. Discussion section for incoming students.

### WILD 191 - Special Topics

Credits: 1 TO 6. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### WILD 240 - Intro to Biostatistics

Credits: 3. Offered autumn. Prereq., calculus and consent of instr. Introduction to statistical ecology: distributions, hypothesis testing, and fitting models to data with emphasis on problems in ecological sampling. Course Attributes: Honors Course

### WILD 275 - Wildlife Conservation

Credits: 2. Offered spring. Prereq., sophomore standing or consent of instr. Principles of animal ecology and framework of wildlife administration as a basis for the conservation of wild birds and animals, and biodiversity. Intended for non-wildlife biology majors.

### WILD 291 - Special Topics

Credits: 1 TO 6. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

### WILD 346 - Wildlife Physiological Ecology

Credits: 3. Offered autumn. Prereq., BIOB 272. How physiological and biochemical processes in animals influence behavior and ecology. Application of physiological approaches to wildlife conservation such as assessment of animal health, nutritional condition, and physiological performance.

### WILD 370 - Wildlife Habitat Cons & Mgmt

Credits: 3. Offered autumn and spring. Prereq., junior/senior standing in wildlife biology, BIOE 370, or consent of instr. Application of principles of wildlife biology to conservation and management of wild bird and mammal habitats including field applications.

### WILD 374 - Hunter Check Station

Credits: 1. (R-2) Offered autumn. Students learn techniques for determining species, age and sex of game animals, then work 3-5 days as volunteers at hunter check stations operated by management agencies.

#### WILD 391 - Special Topics

Credits: 1 TO 12. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

#### WILD 392 - Independent Study

Credits: 1 TO 6. (R-6) Offered every term. Course material appropriate to the needs and objectives of the individual student.

#### WILD 398 - Internship

Credits: 1 TO 6. (R-6) Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Course Attributes: Internships/Practicums

#### WILD 408 - Advanced Fisheries

Credits: 3. Offered spring. Prereq., BIOO 340. Quantitative analysis and interpretation of fish populations and community data for use in management. Selection, application and evaluation of management techniques. Course Attributes: Writing Course-Advanced

#### WILD 410 - Wildlife Policy & Biopolitics

Credits: 3. Offered autumn. Prereq., junior standing. Overview of the laws affecting wildlife and how those laws are initiated, implemented, and enforced; impact of politics, interest groups, and agency jurisdictions.

#### WILD 460 - Internat Wildlife Cons Issues

Credits: 2. Offered spring. Prereq., a course in wildlife biology and/or conservation biology. Review of major international wildlife conservation issues with emphasis on the social context of the issues and applied solutions.

#### WILD 470 - Conserv of Wildlife Populatns

Credits: 3. Offered autumn and spring. Prereq., BIOE 370, M 162 or M 171, and senior standing in Biology, Forestry, Resource Conservation, Recreation Management or Wildlife Biology. Application of population ecology principles and theory to the conservation and management of wildlife populations. Course Attributes: Writing Course-Advanced

#### WILD 472 - Wildlife Hand & Chem Immobiliz

Credits: 2. Offered spring. Principles of wildlife chemical immobilization for researchers and managers. Ethical and legal issues, field organization, animal care and handling, immobilizing drugs, drug delivery systems, animal monitoring and veterinary emergencies. No labs.

#### WILD 480 - The Upshot--Appld Wildlife Mgt

Credits: 3. Offered spring. Prereq/Coreq., WILD 370 or WILD 470. Designed for students to apply their knowledge in the development of wildlife management planning.

#### WILD 485 - Aquatic Invertebrate Ecology

Credits: 3. Offered autumn. Prereq., one 300-400 level ecology course: BIOE 370, BIOE 428, BIOE 447, BIOE 448, FORS 330, or NRSM 462. This course is designed to provide students an understanding of the life histories, ecology and importance of macroinvertebrates in freshwater aquatic systems. The primary focus will be on insects,

although an introduction to other invertebrates will also be included. The lab portion will involve identification of major groups of aquatic macroinvertebrates and participation in an environmental assessment using invertebrates as indicators of stream condition and restoration efficacy.

#### WILD 491 - Special Topics

Credits: 1 TO 12. (R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.

#### WILD 492 - Independent Study

Credits: 1 TO 10. (R-10) Offered every term. Prereq., consent of instr. Original investigations or problems not related to student's thesis.

#### WILD 494 - Senior Wildlife Seminar

Credits: 1. Offered autumn and spring. Prereq., senior standing in wildlife biology or consent of instr. Analysis and discussion led by students of current topics in wildlife biology.

#### WILD 498 - Internship

Credits: 1 TO 6. Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Course Attributes: Internships/Practicums

#### WILD 499 - Thesis

Credits: 1 TO 3. (R-6) Offered autumn and spring. Prereq., consent of instr.; senior standing. Preparation of major paper based on study or research of a topic selected with an advisor according to needs and objectives of student.

#### WILD 540 - Research Design

Credits: 3. Offered autumn. Prereq., introductory statistics course or consent of instr. Examination of study designs for experiments, quasiexperiments, observational studies, and sampling surveys with an emphasis on application.

Level: Graduate

#### WILD 542 - Statistical Applications in Wildlife Biology

Credits: 1 TO 2. (R-5) Offered autumn odd-numbered years. Explores statistical problems encountered by wildlife biology and ecology graduate students. Students will bring statistical problems of interest to class where, as a group, we will explore analysis options, assumptions, pitfalls, and alternative solutions. Level: Graduate

#### WILD 545 - Strong Inference Science

Credits: 1. (R-7) Offered every fall. Graduate level, or consent of instructor for advanced undergraduates. Teach principles and philosophy of conducting strong inference science. Practical application to student's own thesis research. Level: Graduate

#### WILD 560 - Landscape Conservation

Credits: 3. Offered spring. Examination of how various spatial and temporal scales influence wildlife and their habitats. Level: Graduate

#### WILD 562 - Wildlife Habitat Modeling

Credits: 4. Offered spring, odd years. Prereq., consent of instr. A survey of theory and applications in the study of resource selection by animals. Level: Graduate

#### WILD 563 - Topics in Habitat Ecology

Credits: 1. (R-15) Offered every term. Prereq., consent of instr. Discussion of recent scientific papers on advances in ecology, conservation, and population dynamics as related to habitat ecology and conservation. WBIO 562 or equivalent strongly recommended. Level: Graduate

#### WILD 564 - Scientific Writing

Credits: 3. Offered spring, even years. Exploration of the major components and process of scientific writing within the field of Wildlife Biology, primarily focusing on research proposals and peer-review publications. Level: Graduate

#### WILD 568 - Topics in Aquatic Ecology

Credits: 1. (R-15) Offered every term. Prereq., consent of instr. Review and synthesis of the scientific literature current issues and analyses in aquatic ecology. We assume a general understanding of fish biology, aquatic ecology, as well as a background in population, community and ecosystem ecological concepts. Level: Graduate

#### WILD 570 - Applied Population Ecology

Credits: 3. Offered spring even-numbered years. Prereq., courses in ecology, statistics, and calculus. Application of advanced population ecology tools and concepts to the evaluation of human perturbations on wildlife populations. Topics include methods to detect declining trends, the interacting components of population viability analysis, and identification of strategies to reverse declines. Level: Graduate

#### WILD 580 - Populations Dynamics

Credits: 1. (R-15) Offered autumn and spring. Prereq., consent of instr. Discussion of recent papers on interface of population dynamics, ecological interactions, and wildlife management. Level: Graduate

#### WILD 594 - Grad Sem Wldlf Biol

Credits: 1. (R-15) Offered autumn and spring. Prereq., graduate standing in wildlife biology or Fish Wildlife Biology or consent of instr. Analysis of selected problems in wildlife biology and conservation. Level: Graduate

#### WILD 595 - Special Topics

Credits: 1 TO 12. (R 20) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics. Level: Graduate Course Attributes: Internships/Practicums

#### WILD 596 - Independent Study

Credits: 1 TO 15. (R-15) Offered every term. Prereq., graduate standing and consent of instr. Original investigations or problems not related to student's thesis. Level: Graduate Course Attributes: Service Learning/Volunteer

#### WILD 597 - Research

Credits: 1 TO 15. (R 15) Offered every term. Prereq., graduate standing in wildlife biology or consent of instr. Graded pass/not pass only. Level: Graduate

#### WILD 599 - Professional Paper

Credits: 1 TO 15. (R-15) Offered every term. Prereq., graduate standing in wildlife biology and consent of instr. Professional paper written in the area of the student's major interest based on either primary or secondary research. Subject matter must be approved by graduate committee. Graded pass/not pass only. Level: Graduate

#### WILD 697 - Research

Credits: 1 TO 20. (R-20) Offered every term. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Graduate

#### WILD 699 - Thesis

Credits: 1 TO 20. (R-20) Offered every term. Prereq., graduate standing in wildlife biology. Preparation of thesis.  
Level: Graduate

## Writing

### WRIT 222 - Technical Approach to Writing

Credits: 2. Offered every term. Restricted to majors in Forestry, Resource Management, Park and Recreation, Wilderness Studies, and Wildlife Biology. Emphasis on strategy, style and tone in effective technical prose. Traditions of technical writing and how to adopt a wide range of tones and styles in writing various technical documents to diverse audiences. Focus on more effective technical sentences, paragraphs and larger writing components. Assignments include analyses, summaries, employment documents, research reports, case studies and editing/revision exercises. Course Attributes: Writing Course-Intermediate

### WRIT 325 - Science Writing

Credits: 3. Offered spring. Prereq., WRIT 101 or equiv. and sophomore standing. Discussion of different types of science writing and focus on methods to achieve more fluent prose. Includes material on logic, inference, and developing arguments that rely on data. Course Attributes: Writing Course-Intermediate

## Department Faculty

### Professor

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- Anna Klene, Associate Professor
- Ashley Ballantyne, Assistant Professor of Bioclimatology
- Bill Borrie, Professor of Park and Recreation Management
- Chad Bishop, Director, Wildlife Biology Program
- Dave Naugle, Professor Large Scale Wildlife Ecology
- David L. Moore, Professor
- Diana Six, Professor of Forest Entomology/Pathology; Chair, Department of Ecosystems & Conservation Sciences
- Edwin Burke, Professor of Wood Science & Technology; Chair, Department of Forest Management
- Erick Greene, Professor
- F. Richard Hauer, UM Director-Institute on Ecosystems
- Jill M. Belsky, Professor of Rural & Environmental Sociology; Chair, Department of Society & Conservation
- Joel Berger, John J. Craighead Chair
- Johnnie N. Moore, Ph.D., University of California (Los Angeles), 1976
- Len Broberg, Professor
- LLoyd Paul Queen, Professor of Remote Sensing; Director, National Center for Landscape Fire Analysis
- Martin Nie, Professor, Natural Resource Policy; Director, Bolle Center for People & Forests
- Maryann Bonjorni, Professor
- Norma Nickerson, Research Professor; Director of ITRR
- Patrick Burke, Adjunct Instructor of Philosophy

- Paul Krausman, Boone and Crockett Professor of Wildlife Conservation
- Ragan Callaway, Professor
- Richmond Clow, Professor
- Stephen F. Siebert, Professor of Tropical Forest Conservation & Management; Undergraduate Program Director, Resource Conservation
- Steve Running, Regents Professor of Ecology; Director, Numerical Terradynamics Simulation Group
- Wayne Freimund, Interim Dean; Professor, Protected Area Management
- Zachary Cheviron, Assistant Professor

## Associate Professor

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- Anna Klene, Associate Professor
- Beth Dodson, Associate Professor of Integrated Natural Resource; Undergraduate Program Director, Forestry
- Cara Nelson, Associate Professor of Restoration Ecology
- Carl Seielstad, Associate Research Professor; Fire/Fuels Program Manager, National Center for Landscape Fire Analysis
- Christopher R. Keyes, Research Professor of Silviculture
- Cory Cleveland, Associate Professor of Terrestrial Ecosystem Ecology
- Creagh Breuner, Professor
- Dan Spencer, Associate Professor
- Dane Scott, Associate Professor of Ethics; Director of the Center for Ethics
- David Affleck, Associate Professor of Biometrics; Director of the Inland Northwest Growth & Yield Cooperative
- Derek Kellenberg, Associate Professor
- Joel T. Harper, Ph.D, University of Wyoming, 1998
- John Goodburn, Associate Professor of Silviculture
- Keith Bosak, Associate Professor of Nature Based Tourism and Recreation
- Laurie Yung, Associate Professor of Natural Resource Social Science
- Lisa Eby, Associate Professor of Aquatic Vertebrate Ecology; Undergraduate Program Director, Ecological Science & Restoration
- Louise Economides, Associate Professor
- Mark Hebblewhite, Associate Professor of Ungulate Habitat Ecology
- Nancy Cook, Professor
- Peter Koehn, Comparative Government & Politics & Public Administration
- Peter Kolb, Associate Professor of Forest Ecology & Management
- Philip Higuera, Associate Professor of Fire Ecology
- Robin Saha, Associate Professor
- Solomon Dobrowski, Associate Professor of Forest Landscape Ecology
- Steve Schwarze, Professor & Department Chair
- Ulrich Kamp, Professor
- Winsor Lowe, Associate Professor

## Assistant Professor

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- Alexander L. Metcalf, Research Assistant Professor
- Andrew Larson, Associate Professor of Forest Ecology

- Angela Luis, Assistant Professor of Population & Disease Ecology
- Ashley Ballantyne, Assistant Professor of Bioclimatology
- Ben Colman, Assistant professor of aquatic ecosystem ecology
- Bradley Layton, Energy Technology Program Director/Associate Professor
- Brady Allred, Assistant Professor of Rangeland Ecology
- Brian Chaffin, Assistant Professor of Water Policy
- Elizabeth Covelli Metcalf, Assistant Professor of Recreation Management & Human Dimensions of Natural Resources; Undergraduate Program Director, PTRM
- James Riddering, Adjunct Research Assistant Professor; Remote Sensing Program Manager, National Center for Landscape Fire Analysis
- Jeffrey Good, Assistant Professor
- Jennifer Thomsen, Assistant Professor of Park, Recreation, and Tourism Management
- Kelsey Jencso, Assistant Professor, Watershed Hydrologist
- Natalie Dawson, Director of the Wilderness Institute
- Paul M. Lukacs, Associate Professor of Quantitative Wildlife Ecology
- Victoria Dreitz, Assistant Professor, Wildlife Biology Program; Director, Avian Science Center

## Adjunct

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- James Riddering, Adjunct Research Assistant Professor; Remote Sensing Program Manager, National Center for Landscape Fire Analysis
- Kevin McManigal, Lecturer & GIST Certificate Coordinator
- Mike Mitchell, Unit Leader, Montana Cooperative Wildlife Research Unit; Research Professor
- Nicky Phear, Climate Change Studies Instructor and Program Coordinator
- Thomas E Martin, DBS Associated Faculty

## Affiliates

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- Michael Schwartz, Adjunct Reseach Assistant Professor of Wildlife Biology

## Emeritus

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- Daniel Pletscher, Professor of Wildlife Biology, Emeritus
- Kerry Foresman, Professor Emeritus
- Paul Alaback, Professor Emeritus of Forest Ecology
- Richard Hutto, Professor Emeritus
- Steve McCool, Professor Emeritus of Wildland Recreation Management

# Graduate School

## **J.B. Alexander Ross, Ph.D. - Dean of the Graduate School**

Graduate education explores and advances knowledge boundaries and re-defines the state-of-the-art in every discipline. A master's degree will improve a person's expertise in their given field while a doctoral degree will promote original research that advances the current knowledge in the field.

The mission of the Graduate School is to improve and advance graduate education at the University of Montana. Our graduate programs train the next generation of scholars and enable the generation of new knowledge that will contribute to the scientific, economic and cultural needs of the state, the nation and the global community in the 21<sup>st</sup> century. The Graduate School carries out its mission through student advocacy, promotion of diversity and inclusivity, promotion of research, and development of dynamic, synergistic paths for education.

The Graduate School administers admission to masters and doctoral graduate programs at the University of Montana. Questions about specific programs should be directed to the appropriate college or school. There are currently 83 different graduate programs at the University of Montana that provide curricula for Master's, Educational Specialist, and Doctoral degrees. A complete list of programs is found in the [Graduate School webpage](#) and on the [Degree and Majors webpage](#). The [Skaggs School of Pharmacy](#), the [School of Physical Therapy and Rehabilitation Science](#), and the [School of Law](#) administer the Professional Doctorates in Pharmacy, Physical Therapy, and Juris Doctor, respectively.

Applicants complete an online application, providing the information required by the graduate program of interest. Official test scores are sent to the Graduate School, while transcripts are sent to the program. Many, but not all, graduate programs have a specific application deadline. Each program has an admissions committee that evaluates the application, and the committee's final decision is forwarded as a recommendation to the Graduate School. The applicant then receives an electronic decision letter from the Graduate School.

Please refer to the [graduate school website](#) for degree programs offered. For further questions, please call us at 406-243-2572 or via email at [grad.school@umontana.edu](mailto:grad.school@umontana.edu).

# College of Health Professions and Biomedical Sciences

**Reed Humphrey, Dean**

**Howard D. Beall, Associate Dean for Pharmacy**

The College of Health Professions and Biomedical Sciences offers the Bachelor of Arts in Social Work, the Doctor of Pharmacy (Pharm.D.) degree; Master of Science degrees in Neuroscience, Pharmaceutical Sciences, Toxicology, and Medicinal Chemistry; the Master of Public Health degree; the Master of Social Work degree; the Doctor of Physical Therapy degree; and the Doctor of Philosophy (Ph.D.) degrees in Biomedical Sciences, Neuroscience, Toxicology, and Medicinal Chemistry.

The focus of these programs is to provide a composite of educational experiences that will produce a well-educated person and a highly trained, professional social worker, health care practitioner or scientist.

# Health Sciences

Health science courses are concerned with fundamental issues in human health and disease and are, therefore, interdisciplinary in both scope and content. They have been designed not only for students anticipating careers in medicine, dentistry, nursing, public health, pharmacy, social work, medical technology, physical therapy, cytotechnology, and numerous other health care professions and services, but for all students interested in individual and community health, the clinical and paramedical arts, and the biomedical sciences. Health sciences courses are listed under two designations: 1) Allied Health: Health Sciences; 2) other disciplines.

## Health Sciences Courses

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### Allied Health: Health Sciences

- AHHS 191 Special Topics
- AHHS 201 Living Well: Health and Disability
- AHHS 291 Special Topics
- AHHS 320 American Indian Health Issues
- AHHS 325 Introduction to Gerontology
- AHHS 327 Montana Gerontology Society Meeting
- AHHS 389 Recent Advances in Clinical Medicine
- AHHS 390 Research
- AHHS 391 Special Topics
- AHHS 394 Medical Preparation and Overview
- AHHS 395 Geriatric Practicum
- AHHS 420 Geriatric Health Issues
- AHHS 430 Health Aspects of Aging
- AHHS 440 Psychosocial Aspects of Illness and Disability in Older Persons
- AHHS 490 Research
- AHHS 491 Special Topics

### Anthropology

- ANTY 211 Anthropological Genetics
- ANTY 227 Human Sexuality
- ANTY 333 Culture and Population
- ANTY 426 Culture, Health and Healing

### Economics

- ECNS 310 Health Economics

## Health and Human Performance

- HEE 110 Personal Health and Wellness
- NUTR 221N Nutrition

## Microbiology

- BIOM 250N Elementary Microbiology
- BIOM 251 Elementary Microbiology Laboratory
- BIOM 400 Medical Microbiology

## Native American Studies

- NASX 388 Native American Health and Healing

## Social Work

- SW 423 Addiction Studies
- SW 455 Social Gerontology

## Pharmacy

- PHAR 110N Use and Abuse of Drugs
- PHAR 145N Intro to Cancer Biology
- PHAR 320 American Indian Health Issues

## Philosophy

- PHL 321E Philosophy and Biomedical Ethics

# School of Physical Therapy and Rehabilitation Science

## **Anita Santasier, Chair**

The professional program in physical therapy grants the Doctor of Physical Therapy (DPT) degree. The program has an entry-level DPT program, an entry-level DPT/MBA program, and a post-entry level transitional DPT curriculum leading to the DPT degree. The following section describes the profession and the pre-professional

requirements and application procedures. This information also is available on the program website at [www.health.umt.edu/schools/pt](http://www.health.umt.edu/schools/pt).

## The Profession

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Physical Therapy is a health care profession concerned with the habilitation and rehabilitation of individuals having limitations resulting from pathological, surgical, or traumatic conditions. The profession is also concerned with health, wellness and prevention of disability in an effort to promote maximal use of an individual's capacities and reduce their risk of illness. Physical therapists are trained to evaluate neurological, musculoskeletal, cardiovascular, respiratory, and integumentary disorders. Exercise and physical agents, such as heat, cold, light, electricity, and massage are used to promote healing, relieve pain, maintain or restore strength, and improve joint range of motion and functional capabilities. Physical therapists play key roles in: 1) the physical therapy diagnosis and treatment of musculoskeletal injuries, 2) wellness and injury prevention, 3) rehabilitating injured workers to return to their jobs, 4) rehabilitating senior citizens after debilitating disease to enable them to remain independent, 5) helping handicapped children to live within the least restrictive environment, 6) preventing and treating sports-related injuries, and 7) conducting research in the basic and clinical sciences. Knowledge of the psychological and social ramifications of disability affecting the individual and his or her family is an integral part of physical therapy intervention.

Physical therapy is practiced in diverse settings, including hospitals, clinics, skilled nursing facilities, sports medicine programs, public schools, and private practices. Legislation in Montana permits direct public access to physical therapists for evaluation and treatment without a physician referral. Even so, physical therapists remain committed to functioning as an integral member of the health care team.

The physical therapy educational program at the University of Montana seeks to prepare physical therapists who have a broad base of skills upon graduation, and who will be able to implement physical therapy services in many settings, especially rural environments. Rural settings require a physical therapist to serve not only as a provider of direct patient care, but also to fulfill the roles of administrator, supervisor, teacher, consultant, and researcher. Students successfully completing the professional program meet the competencies for physical therapy as determined by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, receive a Doctor of Physical Therapy degree, and are prepared for state licensure.

The Physical Therapy Program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association through 2018.

## High School Preparation:

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Specific high school courses are not required but a background is recommended in mathematics, chemistry, biology, physics, English, and communication skills.

# Pre-Professional Physical Therapy Curriculum and Application Process

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Students wishing to apply to the professional physical therapy program at the University of Montana-Missoula may select any major for their undergraduate degree. While pre-physical therapy is not a degree-granting major at the University, prospective applicants should list pre-professional physical therapy (PPPT) as their second major. This will allow them also to receive advising from the School of Physical Therapy and Rehabilitation Science in order to assure adequate preparation for the professional program. In addition to completing a baccalaureate degree, applicants must take the following prerequisite courses and meet the additional application requirements listed. All prerequisite courses must be taken for a traditional letter grade and must be completed with a grade of "C" (2.00) or better.

## Prerequisite Courses and Credits

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**Human Anatomy and Physiology:** minimum of two semesters or two to three quarters of human anatomy and physiology. This coursework must be completed either in a biology-based science department or a kinesiology-based department with an accompanying lab. A full sequence must be completed of two semesters or two to three quarters, depending upon what is offered by the institution. A comparative vertebrate anatomy and an animal physiology course may be substituted for human anatomy and physiology.

**Chemistry:** A full sequence must be completed of two semesters or two to three quarters, depending upon what is offered by the institution.

**Physics:** A full sequence must be completed of two semesters or two to three quarters, depending upon what is offered by the institution.

**Statistics:** minimum of one semester or quarter of statistics coursework.

**Social Sciences:** minimum of two semesters or three quarters of social/behavioral science classes. These classes may include courses offered by Psychology, Educational Psychology, Sociology, Social Work, Cultural Geography or Anthropology departments.

Certification in adult, child, and infant CPR is assumed.

Computer literacy is assumed. You should be able to utilize email communication, word processing, statistical and spreadsheet programs and be able to complete searches on the Web.

## Department Faculty

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## Professor

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- Charles Leonard, Professor, Physical Therapy

## Associate Professor

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- James J. Laskin, Associate Professor, Physical Therapy
- Ryan L. Mizner, Associate Professor
- Anita Santasier, Chair

## Assistant Professor

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- Jennifer Bell, Clinical Assistant Professor/Associate Director of Clinical Education
- David Levison, Clinical Assistant Professor, Director of Clinical Education
- Sambit Mohapatra, Assistant Professor, Physical Therapy
- Alex Santos, Assistant Professor, Physical Therapy, Director of Motor Control Laboratory

## Research Faculty

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- Ryan Mays, Research Assistant Professor of Exercise Physiology

## Affiliates

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- Kimberly Mize, Affiliated Clinical Faculty

## Course Descriptions

Allied Health: Health Sciences

AHHS 582 - Implementing Value Based System Change in Rehabilitation

Credits: 1. Offered autumn, spring, summer. Prereq. Enrolled in the Rehabilitation Business Administration Certificate. Enhance the learner's appreciation of the management, data, and system skills needed to successfully innovate and implement necessary value based practice changes to compete in the changing rehabilitation healthcare landscape. Level: Graduate

AHHS 584 - Leadership to Develop Innovative Clinical Practice for Value Based Care

Credits: 2. This course will explore the drivers of health care reform, the key strategies to implement value based care. The required leadership and organizational characteristics to support innovations and transformative health care. Level: Graduate

AHHS 599 - System Skills to Thrive in a Changing Health Care Environment - Capstone Project

Credits: 4. This course will culminate in a capstone project describing the concept of system skills (ie., intrinsic interest in data, the ability to devise solutions to problems identified by the data; and understanding of how to implement practice innovations on a large scale) with relevance to physical therapy practice. The course has three components 1) the importance of measurement and the resultant systems data, 2) the concept of 'positive deviants'

and provides case examples of innovators who are using systems data to solve clinical challenges, and 3) performance of a capstone project by the student related to their clinical issue. Level: Graduate

## Physical Therapy

### P T 503 - PT and Health Care System

Credits: 4. Offered autumn. An introduction to physical therapy and its relationship to the health care system. Topics include introduction to PT as a profession, medical terminology, medical records, teaching and learning, ethics, laws and professional issues in physical therapy. Level: Graduate

### P T 510 - Applied Clinical Anatomy

Credits: 5. Offered autumn. Prereq., course in human anatomy or comparative vertebrate anatomy. Anatomy of the neuromusculoskeletal system and body cavities in relation to movement and function with clinical correlates. Course lab fee. Level: Graduate

### P T 516 - Movement System Exam & Eval

Credits: 5. Offered autumn. Prereq., PT 510, 529. Principles of musculoskeletal examination and evaluation including posture, neurologic screen, palpation, measurement of ROM and muscle performance, assessment of muscle length, and joint play. Level: Graduate

### P T 519 - Musculoskeletal Management I

Credits: 4. Offered spring. Prereq., PT 510, 516, 529. Coreq., PT 530, 524. Principles of musculoskeletal examination, evaluation, and intervention. The focus is application of anatomic and biomechanical principles when examining posture and movement, identification of abnormal movement patterns, and analysis of underlying neuromuscular impairments. Level: Graduate

### P T 520 - Development Through Life Span

Credits: 2. Offered spring. Presentation of changes in adults they progress through the lifespan. Includes the functional changes associated with aging, assessing and managing fall risk, performance and interpretation of functional outcome measures. Level: Graduate

### P T 523 - Clinical Medicine I: Intro to Med

Credits: 1. Introduction to medical screening within the patient/client management model. Level: Graduate

### P T 524 - Clin Med II Intro to Med

Credits: 1. Offered spring. Prereq., PT 523. Introduction to pharmacology, medical management of selected orthopedic and hematological conditions. Level: Graduate

### P T 525 - Clin Med III

Credits: 2. Offered autumn. Prereq., PT 523 or PT 516, and PT 524 or 519. Pathophysiology, medical and pharmacological management of hepatic, oncological, immunological diseases and organ transplantation. Level: Graduate

### P T 526 - Foundational Skills & Intervention

Credits: 3. Offered autumn. Coreq., PT 510, 516. Basic skills of transfers, bed mobility, gait assistive device use, and soft tissue mobilization. Level: Graduate

### P T 527 - Physical & Electrophysical Agents

Credits: 3. Offered spring. Physiology, indications, contraindications, and application of electrotherapy and physical agents. Theory and application of electrodiagnostic and electrotherapeutic procedures. Level: Graduate  
P T 529 - Biomechanics

Credits: 4. Offered autumn. Coreq., PT 510. Principles of biomechanics and application to physical therapy. Level: Graduate  
P T 530 - PhysClinical Applied Exercise Physiology

Credits: 4. Offered spring. Prereq., PT 510. Principles and applications of the physiological adaptations to acute and chronic exercise stresses, exercise assessment/testing, prescription and progression of the exercise program, and the adaptations of exercise interventions in the clinical environment. Basic principles and application of Proprioceptive Neuromuscular Facilitation (PNF). Level: Graduate  
P T 536 - Neurosciences

Credits: 5. Offered spring. Anatomy of the head and neck, and neuroanatomy of the human nervous system with emphasis on evaluation of central nervous system lesions and pathological conditions, clinical applications to physical therapy. Level: Graduate  
P T 560 - Clinical Reasoning I

Credits: 1. Offered spring. Introduction to the clinical reasoning process in physical therapy, faculty research and scholarship options, and laboratory orientation. Level: Graduate  
P T 563 - Cardiopulmonary PT

Credits: 3. Offered autumn. Prereq., PT 510, 516, 530. Cardiovascular and pulmonary pathology, pharmacology, and differential diagnosis. Physical therapy assessment and interventions for patients with cardiovascular and/or pulmonary disease. Level: Graduate  
P T 565 - PT for Children

Credits: 2. Offered autumn. Prereq., PT 520, PT 536. Normal development throughout childhood. Evaluation and intervention of neuromotor and musculoskeletal physical therapy rehabilitation of children. Physical therapy for children in school systems. Level: Graduate  
P T 567 - Neurorehabilitation I

Credits: 3. Offered autumn. Prereq., PT 536. Neurologic physical therapy assessment and intervention of adults with cerebrovascular accidents, Parkinson disease, or multiple sclerosis. Motor control and motor learning and application to physical therapy neurorehabilitation. Includes wheelchair and home assessment. Level: Graduate  
P T 568 - Neurorehab II

Credits: 3. Offered spring. Prereq., PT 536. Neurologic physical therapy assessment and intervention of adults with traumatic brain injury or spinal cord injury, degenerative neurological conditions, neurological diseases. Also includes assessment and treatment of vestibular system and conditions. Level: Graduate  
P T 569 - Musculoskeletal Management II

Credits: 5. Offered autumn. Prereq., PT 510, 516, 519, 529, 530. Principles of musculoskeletal examination, evaluation, and intervention for the hip, knee, ankle, foot, and lumbar spine. Level: Graduate  
P T 570 - Psych of Illness & Disability

Credits: 2. Offered autumn. Psychological response to illness and disability to include patient motivation, patient/professional interaction, and treatment of persons with chronic pain. Level: Graduate

P T 572 - Practice & Administration

Credits: 2. Offered spring. Practice management and operations explored with emphasis on strategic planning, human resource management, regulatory compliance/risk management, quality improvement and coding payment.

Level: Graduate

P T 573 - Musculoskeletal Management III

Credits: 4. Offered spring. Prereq., PT 510, 516, 519, 529, 530. Principles of musculoskeletal examination, evaluation, and intervention for the shoulder, elbow, wrist, hand, temporomandibular joint (TMJ), thoracic and cervical spine. Level: Graduate

P T 576 - Clinical Reasoning II

Credits: 2. Offered autumn. This course will build on the foundations established in Clinical Reasoning I. Issues related to clinical and research ethics will be discussed. The principles of evidence based practice (EBP), including the application of evidence and the creation of evidence, will be part of the discussion. Limitations of EBP and its role in the changing health care environment, critical appraisal of the literature, statistical knowledge, and weighing evidence for clinical decision making will be presented. A writing assignment, application of debate/persuasive argument techniques, and collaborative group exercise will be a part of this course. Level: Graduate

P T 577 - App Clin Teaching in PT

Credits: 1 TO 2. Offered autumn. Teaching experience in practical application of clinical therapy. Level: Graduate

P T 578 - PT for Select Populations

Credits: 6. Offered spring. Prereq., PT 510, 516, 529, 530. Physical therapy assessment and interventions are addressed in the areas of occupational health, pregnancy and pelvic floor dysfunction, wound management and prosthetic management. This course also addresses the needs and concerns of special populations in the clinical environment. Level: Graduate

P T 582 - Clinical Experience

Credits: 1. Offered spring. A mix of classroom and clinical experiences to introduce students to the expectations of professional practice. CR/NCR grading. Level: Graduate

P T 583 - Integrated Clinical Experience-Orthopedic Physical Therapy

Credits: 2. Offered autumn and spring. Prereq., P T 587 and successful completion of all prior coursework and clinical experiences. An integrated, part-time clinical experience with emphasis on evaluation and management of patients with orthopedic conditions. Only CR/NCR grading. Level: Graduate

P T 584 - Integrated Clinical Experience-Neurologic Physical Therapy

Credits: 2. Offered autumn and spring. Prereq., PT 587 and successful completion of all prior coursework and clinical experiences. An integrated, part-time clinical experience with emphasis on evaluation and management of patients with neurological conditions. CR/NCR grading. Level: Graduate

P T 587 - Full-Time Clinical Experience I

Credits: 4. Offered summer. Prereq., successful completion of all first-year DPT courses and PT 582. Eight weeks of full-time clinical experience with emphasis on developing patient evaluation and treatment skills. CR/NCR grading.

Level: Graduate

P T 589 - Full-Time Clinical Experience II

Credits: 5. Offered summer. Prereq., Successful completion of second year DPT courses and all previous clinical education courses. Eight weeks of full-time clinical experience with emphasis on learning about administrative issues, problem solving, time management, and communication skills. Continuation of development of patient treatment and evaluation skills. CR/NCR grading. Level: Graduate

P T 598 - Internship

Credits: 1. Offered summer. Prereq., Successful completion of all prior clinical experiences, and previous DPT coursework. Eight weeks of full-time clinical experience with emphasis on learning about administrative issues, problem solving, time management, and communication skills. Continuation of development of patient treatment and evaluation skills. Only CR/NCR grading. Level: Graduate

P T 626 - Clinical Medicine IV

Credits: 3. Offered autumn. Prereqs., PT 523 or PT 516, PT 524 or PT 519, and PT 525. Course will focus on the role of the physical therapist in a Direct Access environment. Pathology, differential screening, pharmacotherapeutics, evaluation and management of integumentary, gastrointestinal, endocrine/metabolic and urogenital disease. Course will address abdominal and dermatological screening. Level: Graduate

P T 627 - Prevention & Wellness Education

Credits: 2. Offered autumn. Nutrition, health promotion, patient and support network education, exercise/fitness, disease and injury prevention, life span emphasis. Level: Graduate

P T 628 - PT Student Clinic

Credits: 1. Offered autumn and spring. Open to 2nd and 3rd year DPT students. Supervised service learning experience for students providing physical therapy rehabilitation and wellness activities to individuals without health insurance. Level: Graduate Course Attributes: Service Learning

P T 650 - Screening for Medical Disorder

Credits: 2. Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding appropriate referral of a patient to a physician for evaluation of medical conditions outside the scope of physical therapy. Level: Graduate

P T 651 - Med Imaging in Rehabilitation

Credits: 2. Offered autumn, summer. Prereq. Enrolled in t-DPT curriculum. Provide the physical therapy clinical learner with the tools needed to interpret and apply specialized medical imaging information to the rehabilitation patient. Level: Graduate

P T 652 - Pharmacology in Rehab

Credits: 2. Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. Provide clinical learners with the primary drug classes and the physiologic basis of their action. Level: Graduate

P T 653 - Legal and Ethical Issues

Credits: 1. Offered spring, summer. Prereq. Enrolled in t-DPT curriculum. Foundational information as to the legal, ethical and administrative decision making process often facing physical therapists in clinical practice. Level: Graduate

P T 654 - Clinical Decision Making

Credits: 1. Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. Provide ways to utilize the Guide to PT Practice for effective and efficient clinical decision making. Level: Graduate

P T 655 - Business and Marketing

Credits: 2. Offered spring, summer. Prereq. Enrolled in t-DPT curriculum. Enhance the PT clinical learner's appreciation of business and management practices needed to succeed within the current healthcare landscape.

Level: Graduate

P T 656 - Coding and Reimbursement

Credits: 1. Offered autumn, summer. Prereq. Enrolled in t-DPT curriculum. Educate the clinical learner in analyzing reimbursement of current billing, accounts receivable, collection procedures and use of proper coding. Level:

Graduate

P T 657 - Professionalism

Credits: 2. Prereq. Enrolled in t-DPT curriculum. This seminar course provides the clinical learner with the opportunity to analyze and discuss the roles/responsibilities and challenges/opportunities inherent in doctoral level physical therapy practice. Only CR/NCR grading. Level: Graduate

P T 658 - Critical Assessment

Credits: 3. Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. Develop skills in the application of evidence-based practice as a model for effective clinical decision-making. Level: Graduate

P T 659 - Capstone Project

Credits: 4. Prereq. Enrolled in t-DPT curriculum. Development of the skills needed by physical therapists to fulfill their role as effective participants in the research process. Guide student through the capstone case report completion process. Only CR/NCR grading. Level: Graduate

P T 660 - Mgmt of MS Disorders

Credits: 2. Offered autumn, spring, summer. Prereq., enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with musculoskeletal disorders. Level: Graduate

P T 661 - Mgmt of CVP Disorders

Credits: 2. Offered autumn, spring and summer. prereq., Enrolled in t-DPT curriculum. PT's role, responsibilities and decision-making processes regarding appropriate patient management of persons with cardiovascular and/or pulmonary disorders. Level: Graduate

P T 662 - Mgmt of Neuro Disorders

Credits: 2. Offered autumn, spring, summer. Prereq., enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with neurological disorders. Level: Graduate

P T 663 - Mgmt of Integ Disorders

Credits: 2. Offered autumn, spring, summer. Prereq., Enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with integumentary disorders. Level: Graduate

P T 664 - Wellenss Hlth Promotion

Credits: 2. Offered autumn, spring, summer. Prereq., Enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patient/client involvement with wellness and health promotion. Level:

Graduate

P T 672 - Research in PT II

Credits: 2. Offered autumn. Data analysis, writing of research manuscript, presentation of project. Level: Graduate

P T 676 - Clinical Reasoning III

Credits: 3. Offered autumn. Course addresses elements of clinical mastery, professional development, career options, ethics and patient advocacy. Each student develops and presents a case report and provides peer review and feedback. Level: Graduate

P T 679 - Trends & Scholarly Act.

Credits: 1 TO 6. (R-6) Offered autumn and spring. Students are required to complete at least 6 credits during their 2nd and 3rd years. Seminar sections that focus on advanced clinical topics in physical therapy and/or engagement in research with an individual faculty advisor. Traditional or CR/NCR grading as determined by instructor. Level: Graduate

P T 680 - Clinical Internship

Credits: 12. Prereq., Successful completion of all prior DPT coursework and clinical experiences. Final summative experience is a 15 week clinical internship. Includes writing and presentation of case study or special project.

CR/NCR grading. Level: Graduate

P T 690 - Research

Credits: 1 TO 10. (R-10) Prereq., consent of instr. Traditional or CR/NCR grading as determined by instructor. Level: Graduate

P T 691 - Special Topics

Credits: 1 TO 6. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Traditional or CR/NCR grading as determined by instructor. Level: Graduate

P T 692 - Independent Study

Credits: 1 TO 4. (R-6) Prereq., consent of instructor. Traditional or CR/NCR grading as determined by instructor. Level: Graduate

P T 694 - Seminar/Workshop

Credits: 1 TO 6. (R-6) Traditional or CR/NCR grading as determined by course instructor. Level: Graduate

P T 699 - Thesis/Dissertation

Credits: 1 TO 10. (R-10) Offered every term. Only CR/NCR grading. Preparation of a thesis or manuscript based on research for presentation and/or publication. Level: Graduate

# Pre-Medical Sciences

**Mark A. Pershouse (Director and Associate Professor)**

Health care continues to be one of the most rapidly expanding areas of our society. Careers in the health professions have expanded, both in numbers and in the variety of opportunities. The rewards of a career in health care include excellent salaries, stability of employment, geographic mobility, and the opportunity to help other people. The Pre-Medical Sciences Program is an advising program that helps students become well-informed, well-prepared applicants to programs in allopathic medicine, osteopathic medicine, chiropractic medicine, dentistry, naturopathic medicine, optometry, physician assistant studies, podiatry and veterinary medicine.

Pre-Medical Sciences is not a major at the University of Montana. The Pre-Medical coursework will help students to gain admission to a professional school or program while completing a degree in a field of study. Students may select any major as a field of study, but specific pre-professional courses must be completed. When selecting a major, remember that a science major is not required for admissions into professional schools. It is more important to perform well in your chosen major. Professional schools are most concerned with the overall quality, scope and difficulty of undergraduate work rather than the major.

Pre-professional courses are designed to provide a strong foundation in the sciences, highly developed communication skills, and a solid background in the social sciences and humanities. Curriculum guides outlining minimal course requirements established by professional schools are available from the Pre-medical Sciences office and from the Pre-Medical Sciences website (<http://umt.edu/premed>). Because many majors within the sciences, social sciences and humanities can provide strong preparation for medical school, the Pre-Medical Sciences Advising Program gives students the opportunity to interact with advisors from diverse disciplines in addition to their advisor for their major.

The minimal requirements for professional school should be completed by the end of the third year of study or prior to taking the admission test required by professional schools. Since specific subject requirements vary among institutions, students should discuss their academic plans with their Pre-Medical Sciences advisor.

Admission to a professional school is very competitive. Students must maintain a high grade-point average in college if they expect to be admitted. All required courses must be taken for letter grades. In addition, the applicant must score well on the appropriate professional admissions test. These tests are designed to measure basic academic ability in the natural sciences, reading ability and problem solving skills. These examinations are usually taken during the third year of study.

Besides academic accomplishments and admission exam scores, acceptance by a professional school is also dependent upon letters of recommendation, volunteer experience, job shadowing, and personal interviews conducted by the professional school. It is important that students consult with a Pre-Medical Sciences advisor and with an academic advisor in their major each year to make sure that they can satisfy the necessary requirements for graduation within the time available. The Pre-Medical Sciences Director will also discuss procedures, advise and assist the student during the process of applying to a professional school.

**High School Preparation:** High school students contemplating a career in the health professions should have three to four years of mathematics, courses in chemistry and physics and a solid background in literature and social science.

# School of Public and Community Health Sciences

## Craig Molgaard, Professor and Chair

Accredited by the Council on Education for Public Health (CEPH) in 2012, the School of Public and Community Health Sciences is a multi-disciplinary program that offers the Master of Public Health (M.P.H.) degree and a graduate Certificate of Public Health (C.P.H.). The program is designed to prepare public health practitioners who will use global insight to improve the health of the people of Montana and other rural areas. Predominantly on-line, web-based instruction allows both traditional students and working professionals to pursue a degree or certificate.

## Department Faculty

### Professor

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- Jean Carter, Pharm.D., Ph.D., Professor
- Ann Cook, Research Professor Bioethics
- Amanda Golbeck, Professor and Dr.
- Willard Granath Jr., Professor
- Kari Harris, Ph.D., M.P.H., Professor
- Rosemary Hughes, Research Professor
- Peter Koehn, Ph.D., Professor
- Kimber Haddix McKay, Professor
- Craig Molgaard, Ph.D., M.P.H., Chair and Professor
- Liz Putnam, Chair, Associate Professor
- Gilbert Quintero, Professor
- Annie Sondag, Professor

### Associate Professor

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- Duncan G Campbell, Associate Professor Clinical Psychology
- Bryan Cochran, Associate Professor of Psychology and Director of Clinical Training
- Curtis Noonan, Associate Professor
- Craig Ravesloot, Research Associate Professor Clinical Psychology
- Robin Saha, Associate Professor
- Gyda Swaney, Associate Professor Clinical Psychology
- Tony Ward, Ph.D., Vice-Chair and Associate Professor

### Assistant Professor

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- Annjeanette Belcourt, Assistant Professor

### Adjunct

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- Julie Fife, MPH
- Kathryn Fox, MPH
- Erin Semmens, PhD, MPH, Postdoctoral Fellow

### Research Faculty

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