

| Course                                      | Instructor                       | Domain Leader (varies per person/course #) | Course Number or Institution                   | Credit Hours | Description   |
|---|----------------------------------|--|--|--------------|---|
| Clinical Preventative Services              | Preventive Med Didactic Faculty  | MSCR Director                              | BIOM 505                                       | 1            | <p><b>Didactic sessions</b> - provide an overview of concepts dealing with the prevention of disease from the clinical perspective. This includes epidemiology, etiology, screening techniques and therapeutic approaches to mitigate morbidity associated with diseases both acute and chronic. This will be carried out by lecture and expert guest presentations supported by computer simulated case scenarios and small group discussion. The course will use Public Health and Preventive Medicine Maxcy-Rosenau-Last (M/R/L 2007) as a core reference, supplemented with additional guided reading.</p> <p><b>Journal Club</b> will develop student's ability to critically evaluate and apply the published literature to a population/community health concern. Students are introduced to methods for defining a clinical preventive question in terms of – the population health issue, intervention, comparison and outcomes, refining a literature search strategy using a revised PICO and Search Strategy and Come prepared to provide a synopsis of your question, search strategy and the results of your literature search (types and critical appraisal of the articles identified).</p> |
| Behavior Health                             | Preventive Med Didactic Faculty  | MSCR Director                              | BIOM 505                                       | 1            | <p>Didactic sessions in Topics in Behavioral Health - are intended to provide an overview of concepts dealing with behavior change, epidemiology, prevention, intervention and risk factors related to mental health and substance abuse. This will be carried out by lecture and expert guest presentations supported by small group discussion. Required reading assignments for each session will develop student's ability to critically evaluate, apply and discuss the published literature related to behavior change theory, prevention/intervention programs, and health promotion and health education models for individuals and population groups</p>   |
| Cortical Spreading Depression (CSD) Seminar | Research Mentor                  | MSCR Director                              | BIOM 505                                       | 1            | <p>Attend Cortical Spreading Depression meetings weekly<br/>Integrate research into presentations and participation</p>   |
| Environmental Health Risk Assessment        | Preventive Med Didactic Faculty  | MSCR Director                              | BIOM 505                                       | 2            | <p>Overview of concepts and programs designed to evaluate, control and communicate health risks arising from exposures to biological, chemical, and physical agents, air and water pollution, radiation, noise and temperature. Also included are injury and vector control. Exposures to both the general and occupational populations are considered.</p>   |
| Health Services Management                  | Preventive Med Didactic Faculty  | MSCR Director                              | BIOM 505                                       | 1            | <p>Understanding the principles of Public Health and Health Services Administration through the eyes of a health economist/physician/administrator in meeting the requirements of the American Board of Preventive Medicine are the primary objectives of the course. In addition, students will learn about the inefficiencies of the United States healthcare systems in meeting the needs of the public. This course will assist the practitioner/researcher in understanding how to succeed in these systems.</p>   |
| Sociology of Abortion                       | Family Planning Didactic Faculty | MSCR Director                              | BIOM 505                                       | 1            | <p>Eight week on-line course (webinar) focusing on various aspects of the abortion issue in the United States, drawing mainly on literature from the social sciences and history. The course has been especially developed for those holding Fellowships in Family Planning and Abortion. Topics: The struggle for birth control in the U.S. Abortion before legalization in the U.S. The Politicization and Stigmatization of abortion in the U.S. The demographics of abortion, and the politics of the demographics. The challenges of abortion training. The challenges of abortion training. Contemporary Abortion Provision in challenging environments. Key legal cases</p>  |
| Intro to Systematic Review & Meta-Analysis  | Research Mentor                  | Domain Leader                              | Coursera - John Hopkins University<br>BIOM 505 | 1            | <p>We will introduce methods to perform systematic reviews and meta-analysis of clinical trials. We will cover how to formulate an answerable research question, define inclusion and exclusion criteria, search for the evidence, extract data, assess the risk of bias in clinical trials, and perform a meta-analysis.</p> <p>Upon successfully completing this course, participants will be able to:</p> <ul style="list-style-type: none"> <li>- Describe the steps in conducting a systematic review</li> <li>- Develop an answerable question using the "Participants Interventions Comparisons Outcomes" (PICO) framework</li> <li>- Describe the process used to collect and extract data from reports of clinical trials</li> <li>- Describe methods to critically assess the risk of bias of clinical trials</li> <li>- Describe and interpret the results of meta-analyses</li> </ul>   |
| Design & Interpretation of Clinical Trials  | Research Mentor                  | Domain Leader                              | Coursera - John Hopkins University<br>BIOM 505 | 1            | <p>The course will explain the basic principles for design of randomized clinical trials and how they should be reported. In the first part of the course, students will be introduced to terminology used in clinical trials and the several common designs used for clinical trials, such as parallel and cross-over designs. We will also explain some of the mechanics of clinical trials, like randomization and blinding of treatment. In the second half of the course, we will explain how clinical trials are analyzed and interpreted. Finally, we will review the essential ethical consideration involved in conducting experiments on people.</p>  |

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| Spanish for Successful Communication in Healthcare Settings | Research Mentor | MSCR Director | Coursera - Rice University<br>BIOM 505 | 1   | This course is structured in four modules, each one revolving on a topic related to the physician-patient interaction. Each module contains four lessons; on grammar, vocabulary, the dynamics of the spoken interaction, and aspects of sociocultural relevance. The video lessons are unlike regular "lectures" in which you are just listening. Instead, you should think of them as virtual classes where you are supposed to reflect, complete activities, and even get extra practice on your own time. The videos are a roadmap that will provide what you need to complete the activities on the student handout. Each module is followed by a 10-question quiz. It is important that you complete the lessons sequentially, as they build upon each other.  |
| EEG Analysis & Clinical Applications                        | Research Mentor | MSCR Director | BIOM 556                               | 2   | Learn to apply EEG skill cap to head and gather data<br>Learn how to import data into matlab<br>Learn how to preprocess data and basic plotting<br>Learn from neuromodulation group (training on the job)<br>Take online EEG workshop  |
| Measurement Clin Trans Res (Qualitative)                    | Research Mentor | Domain Leader | BIOM 557                               | 1-6 | Understanding the philosophical paradigms guiding qualitative research, study designs that include the use of qualitative data collection techniques, how qualitative measures are designed, and how qualitative data are coded, analyzed, and presented, including focus groups, interviews, observations, and discourse.<br>Design qualitative studies to answer research questions; develop research instruments to collect qualitative data; develop coding frameworks for qualitative data; describe analysis methods for qualitative data; write a methods section to describe the data collection and analysis activities of a qualitative study.<br>Design a qualitative study, including instruments, coding structures, data management and analysis plans.<br>Implement the study, collect, code, manage and analyze the data. Compose methods and results sections for a publishable manuscript. |
| Measurement Clin Trans Res (Quantitative)                   | Research Mentor | Domain Leader | BIOM 557                               | 1-7 | Understand how self-reported and other-reported measures are designed and how measure reliability and validity are assessed based on classical measurement theory. Understand basic information about devising and selecting items, scaling responses, deriving composite scales of items, measuring change, and administering surveys and instruments.<br>Design and construct surveys and self-reported instruments, including sampling, advanced question selection and design, and response format design; OR introduction to exploratory and confirmatory factor analysis as a basis for constructing and evaluating instruments, OR other topics as negotiated between student and instructor.<br>Apply classical measurement theory, generalizability theory, and/or item response theory as bases for advanced quantitative measurement modeling and evaluation of an instrument.                    |
| Study Impl Proj Mgt Clin Tra                                | Research Mentor | Domain Leader | BIOM 558                               | 1-6 | This course trains researchers in the management of clinical and translational research studies, including organizational processes to implement and conduct a funded research study, with financial, personnel, and business management and compliance issues.  |
| Biostatistics   | Research Mentor | Domain Leader | BIOM 559                               | 1-6 | Overview of the basic principles and methods of biostatistics designed specifically for clinical and translational research scientists. Computer software is used to analyze clinical and translational data sets.   |
| Patient Outcomes Clin Tran Res                              | Research Mentor | MSCR Director | BIOM 561                               | 1-6 | Overview health care economics and patient outcomes research, including public policy issues associated with the rising cost of health care, patient-reported outcomes, clinical outcomes, and economic outcomes, and evaluation of patient outcomes research.   |
| Epidemiology Clin Trans Res                                 | Research Mentor | Domain Leader | BIOM 562                               | 1-6 | Course introduces the student to Epidemiology, the study of causes, distribution and control of disease in populations. A methodology to identify risk factors for disease and to determine optimal treatment approaches.  |
| Conduct Clin Trans Hlthcr Sys                               | Research Mentor | Domain Leader | BIOM 563                               | 1-6 | This course will train aspiring Principal Investigators to develop and implement translational research studies involving health systems. General knowledge of Health Services Research will be gained along with more specific knowledge of the various stakeholders affected by the implementation of research in health systems. Learners should be able to assess the impact on health systems and patients in order to effectively design, implement and manage research.   |
| Biomed Inform Clin Trans Res                                | Research Mentor | Domain Leader | BIOM 564                               | 1-6 | Students taking this course will learn about the role of Information Technology [IT] tools and biomedical informatics strategies in optimizing the collection, storage, retrieval, and intra-/inter-institutional sharing of quantitative and qualitative data in support of clinical and translational research.  |
| Grantsmanship Level 2                                       | Research Mentor | Domain Leader | BIOM 566                               | 2   | To further develop the research grant proposal submitted during Grantsmanship 1<br>To write an IRB protocol for a human subjects research study<br>To attend an IRB 1010 Session and learn the process of submitting a human subjects research protocol to the IRB<br>To create a research budget<br>To submit a grant application for the CTSC Pilot Project Award  |

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| Biomed ETH Comp Clin Trans Res              | Research Mentor               | Domain Leader | BIOM 567             | 1-6    | <p>Discussion of various aspects of scientific integrity</p> <p>Investigation of history and development of biomedical ethics in theory and practice within the current healthcare environment</p> <p>Attention to tenets of autonomy, beneficence, non-maleficence and justice as they pertain to human clinical research and the development of health care public policy</p> <p>Critical evaluation of arguments concerning contemporary biomedical ethical issues</p> <p>Discussion of research issues that impact health care</p> <p>Construction and articulation of arguments on bioethical issues.</p>  |
| Scientific Writing                          | Research Mentor               | Domain Leader | BIOM 570             | 3      | <p>Complete draft of scientific manuscript</p> <p>Follow online course, "Writing in the Sciences", and apply knowledge to paper</p> <p>Follow "PRISMA" guidelines generated in BIOM 564</p>   |
| Health Policy/Social Equity CBPR for Health | Public Health Faculty         | MSCR Director | PH 554               | 3      | <p>This course provides students with an understanding of the social determinants of health equity including economic, political, material and cultural conditions that shape policy structures, health systems and population health. Standard methods for analyzing policies along with innovative health equity tools to examine: the political context, content/goals of policy, implementation processes, people and power. The course content includes an overview of the role of government in assuring the health of the nation and landmark legislation such as the Economic Opportunity Act, Public Health Service Act, Indian Health Care Improvement Act, Medicaid and Medicare and iterations of health care reforms from the Nixon/Kennedy debates to Clinton, Obama and Trump. Students will examine swirling health policy issues through the review of case examples.</p>  |
|   | Public Health Faculty         | MSCR Director | PH 556               | 2 or 3 | <p><a href="https://cpr.unm.edu/curricula--classes/index.html">https://cpr.unm.edu/curricula--classes/index.html</a></p>  |
| Health Economics in Clinical Research       | Instructor Assigned to course | MSCR Director | ECON 551 or BIOM 505 | 1      | <p>Introduction to Cost/Utility; QALY (Quality Adjusted Life Years) Developing modeling method for analysis economic part of ongoing research project (Un-Helmeted Motorcycle Crash Outcomes and the Economic Effects of not Wearing A Helmet in New Mexico) Statistical Methods in QALY Analysis. Analyze the data and Presenting of Outcome.</p> <p>Introduction to Cost/Utility; QALY (Quality Adjusted Life Years)</p> <p>Developing modeling method for analysis economic part of ongoing research project (Un-Helmeted Motorcycle Crash Outcomes and the Economic Effects of not Wearing A Helmet in New Mexico)</p> <p>Statistical Methods in QALY Analysis</p> <p>Analyze the data and Presenting of Outcome</p>  |
| Determinant                                 | Public Health Faculty         | MSCR Director | PH 501               |        | <p>Concepts of public health related to determinants of health; cultural, social and political concepts of disease; disease prevention; health promotion, including individual behavior change and community based intervention; health policy. "Determinants and Equity in Public Health" focuses on the public health concepts related to determinants of health status and health inequities, including genetic, behavioral, cultural, social, and political-economic, and structural theories of disease and health inequities. It includes historical, theoretical, skills-based, and practical approaches using case examples drawn from major health and health disparities problems in New Mexico and the United States.</p> <p>The purpose is to: (a) provide fundamental knowledge and understanding of public health and health inequities concepts, tools, skills, and approaches; (b) provide a critical examination of health and disease within social and health systems; and (c) to challenge students' existing beliefs, knowledge, discipline, and skills concerning the covered subjects.</p> |
| Population Council                          | Instructor Assigned to course | MSCR Director | BIOM 505             |        | <p>Gain a comprehensive perspective of the entire drug and medical device development process, from day one strategic planning through product commercialization. Understand the critical interplay between strategy and development—and how they affect each other. Learn frameworks for assessing both the benefits and the risks associated with developing a new product in the healthcare market. Gain clarity around the regulatory requirements in the U.S. market and the process for achieving approval.</p>   |
| Family Planning at Indian Health Services   | Family Planning Faculty       | MSCR Director | BIOM 505             | 2      | <p>Understand the challenges of delivering healthcare in a remote, low-resource setting. Assess for feasible, necessary, and sustainable interventions that can be implemented in a remote, low-resource setting. Begin implementing feasible and necessary interventions that are designed to improve healthcare delivery in a remote, low-resource setting. Demonstrates knowledge of the methods that can be used to influence national, state, and local policies, and federal government and private agencies with respect to issues of reproductive health.</p>   |
| Advanced Epidemiology                       | Instructor Assigned to course | Domain Leader | BIOM 572             | 3      | <p>An in-depth exploration of epidemiologic principles and methods, including advanced study design, clinical measures of association, and approaches to identify and minimize selection and measurement bias, as well as more sophisticated methods to address confounding.</p>  |

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| Drug Development Product Management | Research Mentor       | MSCR Director | Coursera - UC San Diego BIOM 505 | 3 | <p>To understand the Pharma and Biotechnology landscape.</p> <p>To understand the Proteomics, Genomics, Compound Selection &amp; Pre-clinical Studies related to Drug Discovery.</p> <p>To understand the challenges in fragment-based Drug Discovery for Protein Kinases and Key Concepts in Drug Delivery</p> <p>To review regulatory Considerations When Filing an Investigational New Drug Application</p> <p>To review Industry Considerations with Phase III Clinical Trials</p> <p>To understand the processes involved in New Drug Application, Filing, Product Labeling.</p> <p>To understand pharmacoeconomics in Drug Development</p> <p>To understand the concepts of intellectual property strategy &amp; Bio-Similars</p> <p>To understand the concepts of Marketing Pharmaceuticals &amp; Biotechnology Drugs</p> <p>To understand the concepts of managed markets and sales strategy</p> <p>To understand the concepts of Strategic Alliances in Academia, Pharma and Biotech</p> <p>To review the benefits of academic industry partnership</p>  |
| Health Care Quality Management      | UNM PADM Faculty      | MSCR Director | PADM 590                         | 3 | <p>This course is designed for future leaders of health care organizations. The course provides Students with the knowledge of how the best Health Care Organizations deliver high quality and cost-effective health care services.</p>   |
| Infectious Epidemiology             | Public Health Faculty | Domain Leader | PH 528                           | 2 | <p>Infectious Disease Epidemiology is a 2-credit course designed to introduce students to concepts, methods, and theories of infectious disease epidemiology. This is a graduate level course intended for Master of Public Health students and others who would like to learn about infectious diseases.</p>   |
| OSHA                                | Research Mentor       | MSCR Director | BIOM 505                         | 5 | <p>Actively participate in OOMN's enforcement support by working on one or more specific enforcement consultations.</p> <p>a. Participate in initial strategic planning of a case, including triage information acquisition and creation of Medical Access Orders.</p> <p>b. Work with a faculty preceptor to analyze the case, develop answers to the field office's questions, and write a report. Residents will present their progress at daily informal and weekly formal rounds to the OOMN staff. Use data to formulate or analyze a policy, or respond to a query from an external source. Queries typically come from health care professionals, workers, and other members of the public via letters or electronic correspondence. Produce a formal end-of-rotation work product. The resident will create a structured summary of one topic explored during the rotation. Depending on the preferences of the preceptor and resident, this end-of-rotation product may take the form of a 20-minute presentation, a poster for presentation at a conference, or a manuscript for submission to a peer-reviewed journal.</p> <p>Become familiar with occupational safety and health hazards and abatement options in one industry, ideally by participating in a field inspection and/or working with OOMN staff on an enforcement consultation. Make recommendations for the employer by using a set of tools to assess hazards, disease risks, and control strategies. Receive formal orientations from multiple OSHA Directorates and Offices, to acquire insight into their functions and roles in OSHA activities.</p> <p>Meet with staff from OSHA's Technical Data Center (TDC) to learn how data sets are stored and retrieved from domestic and international sources and how these resources allow the TDC to support the OSHA Docket process. Participate in multi-disciplinary OSHA teams or meetings to develop safety and health standards, bulletins, web pages, and/or other documents that advance OSHA's initiatives. This activity may involve meeting or communicating with individuals from other government agencies, industry, academia and/or the public. It may also involve attending hearings.</p> <p>Provide updates at OOMN staff meetings and resident rounds.</p> <p>Receive regular didactic instruction from OOMN preceptors about pertinent occupational medicine and nursing topics.</p> |
| IRB Membership                      | Research Mentor       | MSCR Director | BIOM 505                         | 1 | <p>Biomedical Responsible Conduct of Research (RCR)</p> <p>CITI Training IRB Reviewer Training: Financial Conflicts of Interest (FCOI) Course HSC 104-002 ERA (COI) Course – HSC 001 Huron IRB System Training (ONLINE COURSE HSC 115-001)</p> <p>Biomedical researcher investigator HRRC</p> <p>IRB Self Guided Training/HRRC New Member Orientation: Members and Staff training</p> <p>HRRC Review Membership: Conducting assigned reviews monthly Participating in once a month HRRC2 meetings</p>   |

| Domain                                      | Domain Leader                    |
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| Research Design                             | Shiraz Mishra                    |
| Measurement; Quantitative                   | Kimberly Page                    |
| Measurement; Qualitative                    | Andrew Sussman                   |
| Biostatistics                               | Huining Kang &<br>Shane Pankratz |
| Epidemiology                                | Deirdre Hill                     |
| Biomedical Informatics                      | Jon Eldredge                     |
| Cultural Competence                         | Brenda Pereda                    |
| Grantsmanship                               | Kimberly Page                    |
| Biomedical Ethics and Regulatory Compliance | Thomas Byrd                      |
| Scientific Writing                          | Annette Crisanti                 |