

Medical Sciences (MSCI)

MSCI 1990. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

MSCI 2990. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

MSCI 3990. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions.

MSCI 4990. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

MSCI 5001. Human Factors and Situational Awareness. (3 Hours)

Investigates the human factors and stressors that may be encountered by professionals engaged in expedition medicine and clinical practice. Explores several core concepts including collaboration and lateral thinking, time-pressured tasks, incentivizing, sleep deprivation, and debriefing. Offers team-based activities that utilize didactics, group work, and gaming to accomplish an array of tasks.

MSCI 5002. Crisis Resource Management and Case Studies. (3 Hours)

Investigates the history of crisis resource management and reviews the characteristics of high-performance teams. Explores expectation violation; surprise; cognitive bias; cognitive unloading; clinical decision making; and methods for debriefing, mitigation, and planning.

MSCI 5003. Humanitarian Aid Practice and Principles. (3 Hours)

Explores the principles and concepts of the provision of humanitarian aid. Reviews the context of humanitarian crises, using a case-based approach. Covers international organizational structures and NGOs, as well as methods of deployment, communication, and longitudinal follow-through. Explores safety issues and the ethics of humanitarian and disaster response.

MSCI 5004. Humanitarian and Disaster Response Ethics. (3 Hours)

Explores the principles that govern disaster and humanitarian response. Examines the basic tenets of ethics, as well as overarching theories and principles. Utilizes a case-based approach to build on ethical issues that have emerged in humanitarian and disaster response, including medical tourism, lack of longitudinal care, and human trafficking.

MSCI 5005. Care During Conflict. (3 Hours)

Investigates the role of medical and humanitarian aid providers in zones of conflict. Addresses issues specific to working in conflict zones, including safety, working with the military, and international laws on war zones and conflict. Covers special circumstances including human trafficking, children in conflict, and trauma-informed care. Emphasizes moral distress and psychological issues.

MSCI 5400. Experiential Reflections: Bridging Theory and Experience. (1-4 Hours)

Delves into contemporary training in austere medicine to explore its fundamental principles. Investigates the latest evidence-based practices and supports self-reflection on prior or current practical experiences in extreme conditions. Suggested for individuals currently enrolled in or who have successfully finished an extreme medicine experience.

MSCI 5401. Human Factors and Situational Awareness Experience. (2 Hours)

Offers students an experiential opportunity to apply and investigate foundational knowledge and skills regarding human factors and stressors that may be encountered by professionals engaged in expedition medicine and clinical practice. Explores core concepts including collaboration and lateral thinking, time-pressured tasks, incentivizing, sleep deprivation, and debriefing. Offers team-based activities that utilize didactics, group work, and gaming to accomplish an array of tasks.

MSCI 5402. Expedition and Cold Weather Medicine Experience. (2 Hours)

Provides experiential opportunities led by a multidisciplinary team. Explores the intersection of medicine, cold weather, and wilderness environments to enhance clinical skills and highlight the role of an extreme healthcare provider. Offers students an opportunity to obtain thorough preparation for practicing medicine in extreme situations—whether in support of local adventures or for long-term treks—through group activities and simulations. Participants must be medical or allied health professionals or in their last two years of study in a medical or allied health professional program.

MSCI 5403. Expedition and Wilderness Medicine Experience. (2 Hours)

Provides a comprehensive, experiential opportunity led by a multidisciplinary team. Employs hands-on practical skills training essential to all medical or allied health professionals. Covers dentistry (the first aid management of dental abscess and fractured, intruded, or avulsed teeth in the austere or wilderness environment), tropical medicine, environmental heat and cold exposure, mental health, and expedition planning.

MSCI 5404. Tactical Medicine Practicum. (2 Hours)

Provides experiential opportunities led by an expert team of tactical medics with experience in special weapons and tactics, emergency medical service, and law enforcement. Offers participants an opportunity to learn how to respond to high-risk major incidents through a case-based approach, multiple skills stations, and simulation scenarios. Participants must be certified as an EMT, paramedic, or a state-certified law enforcement officer.

MSCI 5405. Humanitarian Medicine Experience. (2 Hours)

Provides a comprehensive and impactful introduction to the broad sector of humanitarian medicine including theory, essential skills, and key medical aspects of health intervention. Offers students an opportunity to enhance skills to adapt a professional practice to a new setting and provide real-world impact on human welfare locally and globally. Participants must be medical or allied health professionals or in their last two years of study in a medical or allied health professional program.

MSCI 5973. Special Topic in Medical Sciences. (1-4 Hours)

Presents an advanced-level study from a variety of perspectives of contemporary issues in medical science. Offers students an opportunity to expand their breadth of knowledge and to facilitate their understanding of various themes grounded in a particular area of medical science. Course topics vary each semester and are determined by significant events and changes in the field. May be taken more than once, as long as topics are different, and may be repeated up to four times for a maximum of 9 semester hours.

MSCI 6001. Principles of Healthcare Advocacy. (3 Hours)

Seeks to prepare healthcare leaders in legislative advocacy and self-advocacy. Legislative advocacy examines relevant health policy research and analysis. Explores self-advocacy aspects within an organization, including communication, interpersonal relationships, and project leadership. Offers students an opportunity to successfully engage in political discussion and advocate for ideas as leaders.

MSCI 6002. Workforce Metrics: Measuring, Comparing, and Privileging the Interprofessional Healthcare Team. (3 Hours)

Introduces fundamentals of metrics and analysis surrounding productivity, outcomes, competencies, and retention in a healthcare workforce. Emphasizes applied methodology. Examines dashboard anatomy, metric categories, dashboard analysis, the clinical competency-dashboard relationship, and special considerations for healthcare metric tracking.

MSCI 6003. Healthcare Leadership Seminar. (3 Hours)

Surveys general leadership theory, knowledge, and skills to gain insight into differing leadership theories. Emphasizes knowledge and skill in essential healthcare leadership practices such as vision, planning, decision making, communication, interpersonal skills, conflict resolution, motivating and developing others, mentorship, ethical practice, and culture change.

MSCI 6900. Research Methods and Design. (3 Hours)

Surveys the principles essential to conduct ethical research in medical sciences. Explores and critically evaluates the concepts, methods, and applications of research and research methods. Offers students an opportunity to propose and develop a research project to inform an important healthcare issue influencing the practice, administration, or policies of healthcare.

MSCI 6901. Doctoral Writing Seminar. (3 Hours)

Offers the opportunity to develop and initiate the introduction and background sections of the Doctor of Medical Science thesis. The thesis project focuses on healthcare-related leadership challenges or other approved topics. Designed to support the thesis writing process.

Prerequisite(s): MSCI 6900 with a minimum grade of B-

MSCI 6962. Elective. (1-4 Hours)

Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

MSCI 7976. Directed Study. (1-4 Hours)

Offers independent work under the direction of members of the department on a chosen topic. Course content depends on instructor. May be repeated.

MSCI 7990. Thesis. (3 Hours)

Offers students an opportunity to develop and complete the Doctor of Medical Science thesis. The thesis project focuses on healthcare-related leadership issues or other approved topics.

Prerequisite(s): MSCI 6901 with a minimum grade of B-

MSCI 7996. Thesis Continuation - Half-Time. (0 Hours)

Offers continuing thesis supervision by members of the department.

Prerequisite(s): MSCI 7990 with a minimum grade of IP