

ENV H 596a/b
Nursing 580a/b

**Current Issues in Occupational and Environmental Medicine –
Work Related Musculoskeletal Disorders**

Spring Quarter 2013 – 2 credits

Thursdays 3:30-5:20 p.m. 4225 Roosevelt Way NE, Room 2228

Textbooks: Selected journal articles and class website

Course Website: <https://canvas.uw.edu/courses/815292>

Instructors:

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Email is the preferred method of communication. Readings will be distributed electronically, either via the course website or e-mail. Students are responsible for ensuring that their correct email address is on file, and for informing the instructor if they encounter difficulties using electronic media.

To request academic accommodations due to a disability, please contact Disabled Student Services, 448 Schmitz Hall, (206) 543-8924 (V/TTY). If you have a letter from Disabled Student Services indicating that you have a disability that requires academic accommodations, please present the letter to the instructor in order to discuss the accommodations you might need in this class.

Course Description:

ENV H 596 covers emerging issues in occupational and environmental medicine as well as implementation and administration of occupational and environmental health programs. It is designed to meet the needs of occupational medicine, industrial hygiene, industrial engineering, occupational health nursing, physical therapy and toxicology trainees (The course is open to other students with permission of the instructors). The format includes a combination of didactic presentations, case/situation-based discussions, literature reviews, and research reports (see below). Facilitated group discussions are an important aspect of the course, with an emphasis placed on issues that foster multi-disciplinary interaction between occupational and environmental health professionals.

Topics are selected and organized around a core curriculum that does not repeat over a two-year period, so students are encouraged to take the course multiple times (up to six). The course meets Autumn, Winter, and Spring quarters, and students may register for 1-6 quarters in any sequence, earning up to 12 credits total. Students may register for the course on a graded or credit/no-credit basis. OEMP fellows are expected to attend six quarters, and the course is designed to ensure that, upon completion of the OEMP training, fellows have received information regarding a wide variety of topics important to the practice of occupational and environmental medicine.

Every week, the OEM Program fellows and faculty meet to review interesting or illustrative cases seen in the practice setting. These sessions are held from 2:30-3:30, usually in the same room as this course. Please contact Dr. Spector if you would like to participate in these sessions.

The Spring Quarter series focuses on issues pertaining to work related musculoskeletal disorders (WMSDs). Through an array of invited speakers and student-led presentations, the course covers the current scientific knowledge pertaining to identification, treatment, and prevention of WMSDs and mitigation of

ergonomic hazards. The material will emphasize current issues and real world situations, and will include critical review of the literature.

Learning Objectives:

1. Summarize fundamental principles related to the onset, diagnosis and treatment of common WMSDs, including low back and upper extremity WMSDs.
2. Describe the roles and approaches of the various health professionals, including physicians, nurses, ergonomists, physical therapists, and psychologists in evaluating, treating and managing WMSDs and facilitating early, safe return to work.
3. Understand how physical, individual, organizational and psychosocial factors can contribute to the onset and development of WMSDs.
4. Critically review the scientific literature, using a structured approach, to address specific WMSD questions, determine the validity of the work, and describe how it might affect the practice of occupational health.
5. Describe how research is conducted to identify factors that play a critical role in the onset of WMSDs and the development of WMSD-related disability.
6. Describe the role of surveillance activities in the prevention of WMSDs.
7. Identify WMSD-related health services approaches, and describe how policies aimed at improving WMSD outcomes are developed.

Course format:

- The course consists of 10 sessions this quarter. Sessions will be in one of several formats:
- Didactic presentations. These will consist of a focused presentation on a particular subject of general interest in occupational and environmental health, followed by discussion. Some of these will be faculty-led (including guest faculty), and some will be led by students.
- Literature reviews. These will follow a format similar to a “journal club”. Articles may be selected based on a particular theme or to represent the most recent literature from selected journals.

Course Requirements:

1. Class presentations: Each student will play a principal role in class presentations once or twice per quarter. The type of presentation will depend on the subject matter, and the number of presentations depends on enrollment. Students may work in groups to prepare the presentations, depending on class size.
2. Class attendance and participation: Students should come to each session prepared to participate in the discussion. If readings are assigned for a session, these assignments should be read in advance and students should be familiar with the material.
3. Examination. There will be no examination.

Basis for Grading:

- 60% Class Presentations
Judged on quality of student preparation; presentation content and materials; presentation style; and evidence of professionalism and interdisciplinary cooperation.
- 20% Journal Article Review
Judged on quality of student preparation; presentation content; presentation style; quality of resource list or other handouts; and evidence of professionalism and interdisciplinary cooperation.
- 20% Class Participation
Judged on participation in class discussions.

This course is offered on both a graded (A section) and credit/no-credit (B section) basis. The expected student contribution to the course is identical, regardless of grading basis.

During the Spring quarter, students will learn first-hand about the career of a Health Professional involved in some aspect of the prevention and care of WMSDs. Working individually or in a small group, students will shadow a Health Professional during a typical work routine. The experience should include one to two sessions, 1 - 3 hours each. The Professional must work in a field other than the students' chosen discipline or normal scope of experience. For example:

Health Professional	Potential Topics	Student Groups
Occupational Medicine Physician	Diagnosis and treatment of WMSDs Return to work (RTW)	OHN,IH, PT, MPH, PhD students
Ergonomist	Approach to the identification and mitigation of workplace hazards associated with WMSDs	OEM, OHN,IH, MPH, PhD students
Neurologist or Psychiatrist	Nerve entrapment syndromes Electrodiagnostic tests	OEM, OHN,IH, PT, MPH, PhD students
Hand Specialist (orthopedist or neurosurgeon)	Upper extremity disorders Surgical treatment and outcomes	OEM, OHN, PT students
Spine Specialist (orthopedist or neurosurgeon)	Spine disorders Surgical treatment and outcomes	OEM, OHN, PT students
Physical Therapist	Approach to evaluation and treatment of various WMSDs	OEM, OHN,IH, MPH, PhD students
Massage Therapist	Approach to evaluation and treatment of various WMSDs	OEM, OHN,IH, MPH, PhD students

The course instructors can be used as a resource to find Health Professionals who are willing to work with students. It is up to the student to arrange and schedule the meetings. It is **strongly** recommend that these arrangements be made early in the first half of the course (by April 25th).

At the end of the quarter, students will give a 10 - 15 minute presentation. The first part of the presentation (~5 minutes) will be sharing what they learned during the Health Professional shadowing experience. The second part of the presentation (~10minutes) will include a concise assessment of the recent scientific literature on a specific, focused question/topic related to the shadowing experience (for example: What is the effectiveness of participatory ergonomic interventions in reducing WMSD symptoms in working populations?).

The selection of Health Professionals to shadow and the questions/topics of interest should be reviewed with the instructors prior to final selection to ensure appropriateness and prevent overlap with other presenters. Final presentations will provide an opportunity for students to practice their presentation skills, critically review the scientific literature, and disseminate information to public health peers who do not necessarily work in the same field. This will also promote inter-professional sensitivity and cross-fertilization of ideas.

Spring Course Schedule				
Week	Date	Topic	Speaker	Reading Assignment
				<ul style="list-style-type: none"> • Required reading ➤ <i>Journal Article Review (required)</i> - Recommended reading – optional
1	4/4	Introduction to Work-Related Musculoskeletal Disorders (WMSDs)	Pete Johnson, PhD Associate Professor June Spector MD, MPH Assistant Professor	<ul style="list-style-type: none"> • Exec Summ - MSDs and the Workplace • NIOSH Yellow Book Executive Summary - BLS Injury & Illness Reports - - Chapter 10 - MSDs and the Workplace
2	4/11	The pain psychologist's perspective; managing WMSD-related pain/psychological issues, including with activity coaching <i>Turner Journal Article Review</i>	Judith Turner, PhD Professor UW Psychiatry & Behavioral Sciences Rehabilitation Medicine	<ul style="list-style-type: none"> • Sullivan 2005 ➤ <i>Turner et al, 2008</i> - Slater 2009 - Franklin 2008
3	4/18	The physiatrist's perspective; approach to the clinical assessment of low back pain <i>Standaert Journal Article Review</i>	Chris Standaert, MD Clinical Assistant Professor UW Puget Sound Spine and Sports Physicians	<ul style="list-style-type: none"> • Fardon 2001 • Friedly 2009 ➤ <i>Standaert 2011</i> - Rubinstein, 2011 - Walker 2011 - Deyo 2009 - Frank 1996A
4	4/25	The ergonomist's perspective, with emphasis on hazard identification and mitigation <i>Silverstein 1986 Journal Article Review</i>	Deborah Read, PT	<ul style="list-style-type: none"> • McGill 1997 • Rempel 1998 ➤ <i>Silverstein 1986</i> - Hoe 2012 - Whysall 2004 - Palmer 2003 - Beevis 2003 - Szabo and King 2000
5	5/2	The physical therapist's perspective, approaches to treatment of WMSDs <i>Gellhorn 2012 Journal Article Review</i>	Janet Peterson, MS, DPT President, Washington Physical Therapy Assoc.	<ul style="list-style-type: none"> • Hanada 2003 • Childs 2008 ➤ <i>Gelhorn 2012</i>
6	5/9	Open Date	TBD	None
7	5/16	The occupational medicine physicians' perspective; impairment, vocational rehab, return to work <i>Li-Tsang Journal Article Review</i>	Michael Weiss, MD MPH St. Luke's Occupational Health UW Clinical Assistant Professor	<ul style="list-style-type: none"> • Pransky 2004 • Rondinelli 2009 ➤ <i>Li-Tsang 2009</i> - Carroll 2010 - LNI 2012 (Chapter 11 & sections on musculoskeletal impairment)
8	5/23	WMSD surveillance and reporting for public health research and prevention <i>Silverstein 2008 Journal Article Review</i>	Barbara Silverstein, PhD Director, WA Safety & Health Assessment & Research for Prevention (SHARP) program	<ul style="list-style-type: none"> • Utterback 2012 ➤ <i>Silverstein 2008</i> - Spector 2011 - Hales 1992

9	5/30	WMSD-related policies, health services perspective <i>Wickizer Journal Article Review</i>	Gary Franklin, MD MPH Research Professor UW DEOHS, Health Services Medical Director, WA L&I	<ul style="list-style-type: none"> • Turner 2010 ➤ Wickizer 2011
10	6/6	The neurologist's perspective, with emphasis on compressive neuropathies <i>Jarvik Journal Article Review</i>	Eric Kraus, MD Associate Professor UW Neurology	<ul style="list-style-type: none"> • Bayramoglu 2004 • Smith 2003 • LNI et al, 2011 ➤ Jarvik et al, 2009 - Domingo 2005 - Daniell 2009 - Trumble 2002
11	6/13	Student Presentations	Students	None

DISTANCE PARTICIPATION

Students and guests can participate via the webex platform in this class.

To join the online meeting (Requires the webex client)

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1. Go to <https://occenvmed.webex.com/>
 2. Click on this session name ("ENVH 597 & 596").
 3. Enter your name and email address.
 4. Enter the meeting password: oemcourses
 5. Click "Join".
 6. Follow the instructions that appear on your screen.

ADVICE FOR WEBINAR PARTICIPANTS:

1. Use a webcam in a well-lighted room. Try to position room lighting in front of your face / directed towards your face rather than behind you. Close blinds behind you if backlighting appears to be a problem.
2. Use a headset with microphone. If you do not have one of these, at least use headphones for audio output (instead of the computer speakers).
3. If your computer does not have a microphone and audio output for headphones, you can use a telephone to call in. This is not generally recommended, though, as the audio quality is poor.
4. Test your system here: <http://www.webex.com/test-meeting.html> BEFORE the class session to make sure your equipment will work.
5. Mute your microphone while you are not speaking.

Generally: Most laptops built within the last few years contain built-in webcams and microphones that should work. Be sure to use headphones rather than the laptop speakers, though, or we could end up with feedback / echo.

Those of you participating from a distance: Please make a point of contributing to each class session. It helps us (and the speakers) feel less disheartened about things to know that you are really out there and not just playing solitaire. If your microphone isn't working, you can text in a comment! If you lose audio or video, send us a message. And if you want us to notice you--"raise your hand"!