

**CHL 5902F ADVANCED OCCUPATIONAL HYGIENE
FALL 2012**

INSTRUCTORS: Lissa Ceolin MHSc.
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LOCATION: Fitzgerald Building, Room 77

TIME: Thursdays 1:30-4:00 pm

PREREQUISITES: Occupational & Environmental Hygiene I - CHL 5910F
Occupational & Environmental Hygiene II - CHL 5901S
Occupational Hygiene Control Methodology -CHL 5915S

PURPOSE & OBJECTIVES

This course serves as a post practicum capstone seminar that focuses on the development of competencies (skills and approaches) that are fundamental to the practice of occupational hygiene and occupational health and safety management.

At the end of this course, students will be expected to be able to approach occupational health problems via all of its technical and non-technical elements, and will acquire the knowledge and further develop the skills necessary to effectively develop strategies to manage any of the elements. By applying previously taught practice-based knowledge and principles and through insights provided on leadership, ethics, risk communication, critical evaluation and research, the student is expected to use the best available knowledge and sound science to evaluate existing and emerging issues in Occupational Hygiene. For the seminar portion of the course the students will be expected to critically evaluate literature, conduct further review of existing research on the topic to provide broader context and background on the issue and communicate and discuss these in-depth.

ASSESSMENT

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| Student Seminar Presentation | 25% | 30 minute presentation, 30 minute discussion |
| Final Paper on Topic | 25% | Due: December 15, 2011 |
| Seminar Paper Critique | 40% | (8X5%) |
| Participation | 10% | |

REQUIRED READING

Ogden, T., and Lavouè, J., (2012) Testing Compliance with Occupational Exposure Limits: Development of the British-Dutch Standard. Recipient of the William P. Yant Award. *J. Occ. And Env. Hygiene* 9:D63-D70

- All assigned articles.

Rengasamy, S., King, W.P., et al (2008) Filtration Performance of NIOSH- Approved N95 and P100 Filtering Facepiece Respirators against 4 to 30 Nanometer-size Nanoparticles *J. Occ. Env. & Hyg.* 5:9; 556-564. <http://dx.doi.org/10.1080/15459620802275387>

Garshick, E., Laden, F., Hart, J.E. et al (2012) Lung Cancer and Elemental Carbon Exposure in Trucking Industry Workers. *Env. Hlth. Persp.* <http://dx.doi.org/10.1289/ehp.1204989>

Havas, M. and Olstad, A., (2008) Power Quality affects teacher well-being and student behaviour in three Minnesota Schools. *Science of the Total Environment* 402: 157-162

Lindsley, W.G., Pearce, T.A., Hudnall, J.B., et al, (2012) Quantity and Size Distribution of Cough-Generated Aerosol Particles Produced by Influenza Patients During and After Illness. *J. Occ. & Env. Hyg.* 9:7, 443-449 <http://dx.doi.org/10.1080/15459624.2012.684582>

Bell, N., Vaughan, N.P., Morris, L., and P. Griffin (2012) An Assessment of Workplace Programmes Designed to Control Inhalation Risks Using Respiratory Protective Equipment. *Ann. Occup. Hyg.* 56(3):350-361

Rousseau, M.-C., Parent, M.-E., Nadon, L., Latreille, B., and J. Siemiatycki (2007) Occupational Exposure to Lead Compounds and Risk of Cancer Among Men: A Population-based Case Control Study. *Am. J. of Epidemiol.* 166:1005-1014

Shenel, B.V., Radonovich, L.J., Cheng, J., et al. (2012) Discomfort and Exertion Associated with Prolonged Wear of Respiratory Protection in Health Care Setting. *J. Occ. & Env. Hyg.* 9:59-64.

Laborde-Castérot, H., et al, (2012) Occupational rhinitis and asthma due to EDTA-containing detergents or disinfectants. *Am. J. of Ind. Med.* 55(8): p677–682.

Curran, C.P., Park, R.M., Shuk-mei Ho and E.N. Haynes (2009) Incorporating Genetics and Genomics in Risk Assessment for Inhaled Manganese. From Data to Policy. *Neurotoxicology* 30:754-760

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| Sept. 13 | OHS Research and Resources – Strategies for Researching (<i>ad hoc</i>) Topics in Occupational Hygiene | James Scott |
| Sept. 20 | Occupational Medicine and the role of Clinical Industrial Hygiene is Management of Disease | Aaron Thompson |
| Sept. 27 | Ethics in the Professional Practice of Occupational Hygiene | Nancy Wilk–Golder and Assoc. Margaret Fung–Humber Coll. |
| Oct. 4 | EH&S Leadership- Leadership, models in the workplace, Team building, facilitation | Anna Bortolus |
| Oct. 11 | Nanoparticles – Seminar 1 - Rengasamy, S., King, W.P., et al (2008) Filtration Performance of NIOSH- Appr ved N95 and P100 Filtering Facepiece Respirators against 4 to 30 Nanometer-size Nanoparticles <i>J. Occ. Env. Hyg.</i> 5:9; 556-564. http://dx.doi.org/10.1080/15459620802275387 | Roland Hosein – GE Canada |
| Oct. 18 | Risk Communication Seminar 2 - Havas, M. and Olstad, A., (2008) Power Quality affects teacher well-being and student behaviour in three Minnesota Schools. <i>Science of the Total Environment</i> 402: 157-162 | Ray Copes – OAHHP |
| Oct. 25 | No Class – OHAO Symposium | |
| Nov. 1 | TLV Development Seminar 3 - Curran, C.P., Park, R.M., Shuk-mei Ho and E.N. Haynes (2009) Incorporating Genetics and Genomics in Risk Assessment for Inhaled Manganese. From Data to Policy. <i>Neurotoxicology</i> 30:754-760 | Phil Bigelow University of Waterloo, IWH |
| Nov. 8 | Required Reading: Ogden, T., and Lavouè, J., (2012) Testing Compliance with Occupational Exposure Limits: Development of the British-Dutch Standard. Recipient of the William P. Yant Award. J. Occ. And Env. Hygiene 9:D63-D70 Seminar 4 - Hervé Laborde-Castérot <i>et al</i> , (2012) Occupational rhinitis and asthma due to EDTA-containing detergents or disinfectants. <i>Am. J. of Ind. Med.</i> 55(8): p677–682. | Jerome Lavouè Université de Montréal |
| Nov. 15 | Mature Hygiene Program Seminar 5 Lindsley, W.G., Pearce, T.A., Hudnall, J.B., et al, (2012) Quantity and Size Distribution of Cough-Generated Aerosol Particles Produced by Influenza Patients During and After Illness. <i>J. Occ. And Env. Hyg.</i> 9:7, 443-449 http://dx.doi.org/10.1080/15459624.2012.684582 | Jason Hoffman – Hydro One |
| Nov. 19 Monday | Qualitative Research Methods in Occupational Health Seminar 6 | Joan Saary |

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| 1:00-3:00 BA B026 | Bell, N., Vaughan, N.P., Morris, L., and P. Griffin (2012) An Assessment of Workplace Programmes Designed to Control Inhalation Risks Using Respiratory Protective Equipment. <i>Ann. Occup. Hyg.</i> 56(3):350-361 | |
| Nov. 29 | Seminar 7 Construction Hygiene Rousseau, M.-C., Parent, M.-E., Nadon, L., Latreille, B., and J. Siemiatycki (2007) Occupational Exposure to Lead Compounds and Risk of Cancer Among Men: A Population-based Case Control Study. <i>Am. J. of Epidemiol.</i> 166:1005-1014 | Mike Russo – Infrastructure Health and Safety Association |
| Dec. 5 | Seminar 8&9 - Garshick, E., Laden, F., Hart, J.E. et al (2012) Lung Cancer and Elemental Carbon Exposure in Trucking Industry Workers. <i>Env. Hlth. Persp.</i> http://dx.doi.org/10.1289/ehp.1204989 Seminar 9 Shenel, B.V., Radonovich, L.J., Cheng.J., et al. (2012) Discomfort and Exertion Associated with Prolonged Wear of Respiratory Protection in Health Care Setting. <i>J.Occ. & Env.Hyg.</i> 9:59-64. | |

SEMINARS – STUDENT-LED

Each student will be assigned a journal article on a topical or emerging issue in Occupational Hygiene and Health. For the seminar portion of the class the student will be expected to critically evaluate literature and conduct further review of existing research on the topic. The purpose is to summarize paper and its topic, and to provide broader context and background on the issue and discuss these in-depth. In the critical evaluation students should consider the strengths and any shortcoming in the study design, hypothesis and methods of the assigned paper. Discuss any ways in which the study could be improved as well as ideas for further study. This will be shared with the class in a half hour presentation, followed by the student led class discussion on the article. The rest of the class participants are expected to critically evaluate and assess the article in advance of class, handing in a one-page summary of their critique of the article at the beginning of class and participate in the discussion.

Students Paper

A 10-12 (double spaced) page essay summarizing your insights on the assigned topic with consideration of the critical analysis, gaps, outstanding questions and future research needs. Review the body of research on the topic and assess how strong the authors conclusions are, and assert whether or not they are justified. The essay is due at the end of term and should expand upon ideas that arose during the class discussion.

Plagiarism (the presentation or paraphrasing of the work of another author as if it was one's own) is a form of academic fraud with potentially serious consequences. All university policies regarding plagiarism will be upheld in this course. The instructor reserves the right to submit student papers to Turnitin.com, a computer-based service which checks for originality in submitted papers.

Accessibility: students with unique learning needs or requiring specific accommodations are encouraged to make these known to the instructor early in the course so that they can be proactively addressed.