

# Course syllabus for Fall 2006

## PH 700C Exposure Assessment – Biological Monitoring

SDSU

Graduate School of Public Health

Division of Occupational and Environmental Health

Instructor: **Dr. PJE Quintana (Jenny)**

Contact Information:

Office: **Hepner Hall Annex 105 (Hepner Hall SE side, nearest Bookstore)**

Phone number: **619-594-1688**

Office hours: **Wed 10:00 – 11:30 pm (or by appt)**

e-mail address: (internet) **jquintan@mail.sdsu.edu**

*students are encouraged to communicate by e-mail*

**Course time and place:**

**Wednesday 1:00 - 3:40 pm in Hepner Hall 146**

**Course Objectives:** At the completion of this course the student will be able to

1. describe biological monitoring as it is used in the field of environmental health, and in exposure/ susceptibility assessment in molecular epidemiology, and in compliance/exposure monitoring for health promotion
2. explain basic biological and toxicological processes underlying presentation and choice of biomarkers
3. describe advantages and drawbacks of the use of various biological fluids or tissues commonly used in monitoring
4. perform information searching in environmental health biological monitoring, including of peer-reviewed literature, government publications, books, and Internet resources.
5. critically review current peer-reviewed journal articles and be able to present a concise summary to students and instructors
6. discuss major ethical issues in environmental health biological monitoring
7. present oral information at a level consistent with graduate knowledge and abilities

## **REQUIRED TEXT**

### **None – will access reading through Blackboard**

If there is reading to support a lecture, web links will be accessible through class web page, see below.

### **Course evaluation:**

**Class participation 50%, Bibliography for oral presentation 15%, Oral presentation 35%**

A few students in each class session will lead discussion of assigned reading, using template handed out in class. Assignments will be given at least 1 week prior to class. All students will be expected to do all assigned reading and answer questions directed to them regarding the reading (very important). There will be a list of questions posted a week before each class.

### **Blackboard Web site:**

There is a web site for this course . (<http://blackboard.sdsu.edu/>) see instructions at the end of the syllabus. You must be able to access this web site and to log in – please select the help button and follow directions if you have problems. Please contact me if this doesn't help. If you have an old system on your home computer then you may need to access Blackboard from on-campus computing labs.

Blackboard does not list any email addresses in the roster unless a student chooses to do so. To make email addresses visible to the rest of the class, students must go into the Personal Information area from either the Student Tools area of the course, or from the Tools box on the My SDSU page and click on Privacy Options. They can then choose what information to share with the rest of the class. If you want to share your email but do not wish to enter a work email address, you may obtain a student email account and use that.

DIGITAL DROP BOX may be used to upload student presentations etc., which can be downloaded in class for presentations.

### **Presentation:**

#### ***Important dates for presentation***

**Sept 27<sup>th</sup>      Topics due**

**Nov 2<sup>nd</sup>        Draft bibliographies due**

**Nov 22<sup>nd</sup>      Final bibliographies due (grade is based on this one)**

NOTE APA STYLE REQUIREMENT (- 1 letter grade if in incorrect format)

**Dec 6<sup>th</sup> – Presentations (maybe also Nov 29<sup>th</sup>)**

The student will pick a specific topic of biological monitoring in any area. The major source of information for this presentation should be peer-reviewed journal articles. Try to make the topic as specific as possible. Term paper topics are due Oct 4<sup>th</sup>

The instructor reserves the right of final approval of topics. It is OK to pick a topic in the student's MSc. thesis area or employment area.

**Bibliographies:**

DRAFT bibliographies for your presentation are due on **Nov 2<sup>nd</sup>** ; this is a reference list citing the sources you will use to write the term paper. You should have at least 8 journal articles in addition to other sources (usually — check with instructor if you have problems). The instructor will provide feedback on your draft to improve the final bibliography, due **Nov 22<sup>nd</sup>** .Your bibliography grade will be based on this bibliography. Use the GSPH thesis requirement format (APA) to cite references. You will probably find more references after you turn in your draft list, these are OK to add to your final reference list.

(Example of APA style from a student thesis:

Majumdar, S.K., Daly, E.P., Kleemeyer, K.M., Daehler, C.C., & Baker, M.A. (1991). Genotoxic effects of gossypol acetic acid on cultured murine erythroleukemia cells. *Environmental and Molecular Mutagenesis*, 18, 212-219.)

**Oral Presentations:**

Learning to present information is an important part of graduate student training. The oral presentations will consist of the student making a 20 minute presentation followed by 5 —10 minutes of questions. The level of the information presented should be targeted towards public health professionals who are in the field of environmental health but may have no familiarity with biological monitoring. The presentation will be graded 25% on clarity, 50% on technical content and 25% on preparedness. Presentations should be prepared in MSoffice Powerpoint (IBM format). Mac users can save their work to an IBM disk or email to me.

*note: description of oral presentation requirements may change due to size and make-up of class*

**NOTE: INFORMATION CONTAINED IN THIS SYLLABUS MAY BE CHANGED WITHOUT NOTICE**

(Topics will likely change after class meets, depending on who is enrolled (i.e. how many Toxicology vs EH etc)

**Course Outline: PH 700C**

<u>Date</u>	<u>Subject</u>
Aug 30	Introduction to Biological Monitoring
Sep 6	Flame retardant compounds – recent discovery of high body burdens in Americans -
Sep 13	Biological monitoring for Environmental Tobacco Smoke
<b>Sep 20</b>	<b>– NO CLASS – I am at ICEM meeting – please do library/reading assignment on Blackboard</b>
Sep 27	<b>TOPICS DUE</b> CDC 3 <sup>rd</sup> report and discussion/presentation of articles
Oct 4	Aflatoxins in developing countries
Oct 11	Biological monitoring in the workplace – Cadmium
Oct 18	Environmental genome project
Oct 25	Genetic susceptibility - GST mu, theta and pi polymorphisms and environmental exposures
Nov 1	<b><u>DRAFT BIBLIOGRAPHIES DUE</u></b> Teflon – related compounds – PFOA – the ‘new’ DDT?
Nov 8	Exposure of the fetus to environmental pollutants – adducts/ DNA polymorphisms
Nov 15	Ethical issues in biological monitoring
Nov 22	<b><u>FINAL BIBLIOGRAPHIES DUE</u></b> TBA
Nov 29	Exposure of the fetus to environmental pollutants Current issues –organochlorines - exposure to baby/fetus STUDENT PRESENTATIONS (if needed depending on class size)
Dec 6	STUDENT PRESENTATIONS – Last day of class