First Year Seminar
GNED 1300-19; Spring 2008
The Role of Science in the Mystery Novel
Dr. Frank Walmsley

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Office Hours: Mon., Tues 1:00 – 4:00 pm; others by appointment
(I teach a chemistry lab on Wednesday afternoons)

Peer Tutor: Maddie Griffin
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Office Hours in Witt Center: Sunday 7 – 9 pm

Books, with themes, to be read in full
1. *Dreaming of the Bones* by Deborah Crombie (poetry)
2. *The Oxford Murders* by Gillermo Martinez (mathematics)
3. *The Carbon Murders* by Camille Minichino (chemistry)
4. *Dead Dry* by Sarah Andrews (geology)
5. *Dead As A Dodo* by Jane Langton (natural history)
6. *Amazon Gold* by Dirk Wyle (pharmacology)

The purposes of First Year Seminar are:

- To improve communication, both written and verbal
- To develop critical thinking skills
- To learn research skills
- To evaluate materials
- To be respectful of divergent opinions

This class will fulfill these purposes through three types of written papers, discussion of the materials read in the assigned books and in the research papers. The science in the mystery novels will be evaluated as to correctness and relevance to the story. The personalities of the characters in the books will be discussed including their relevance to the story.

Grading

Class participation: 35%. First paper: 20%. Second paper: 15%. Third paper: 30%. Attendance at all class sessions is mandatory.

Class Participation. Students are expected to come to each class prepared having read the material carefully, fully, and with thought. Questions raised during the reading should be researched. This will enable everyone to participate in the discussion of the topics for the day. Since class participation is a significant part of the course grade, each student is expected to participate in the discussion by raising questions and by

responding to issues. If a topic is controversial, listen carefully, respond politely and recognize that the others may have valid points embedded in their opinions and recognize that maybe you have some invalid points in yours. We are learning together. The nature of the class requires all of this. Accordingly, each unexcused absence beyond two (that is, the equivalent of one full week) will result in the lowering of the course grade by one unit (e.g., from A- to B+). Dr. Walmsley will decide whether an absence is excused or not.

Papers. All papers must be written in grammatically correct English. The writing must be clearly understood. For help with these points, consult Dr. Walmsley, Maddie (the Peer Tutor), a writing style guide, or the Writing Center in the library. Where appropriate, references must be cited completely. References are where specific information is obtained. General bibliographic listings are not appropriate in this course because they are too vague. Correct use of superscripts, subscripts, special symbols, etc. is required. The format for references is a part of this syllabus. All papers must be your own original work. Know what plagiarism and theft of intellectual property are and review Trinity University's rules on academic integrity. All students fall under the University Honor Code and are required to pledge all written work submitted for a grade: "On my honor, I have neither given nor received any unauthorized assistance on this work." and their signature. The pledge may be abbreviated "pledged" with a signature. There is no group work in this class.

Written Papers

All papers will be typed, double spaced, with 1" margins on all sides in either Times New Roman or Arial font at 10 or 12 point. These are to turned in via email to both Dr. Walmsley and to Maddie in either MSWord or Adobe Acrobat format. Drafts of papers in advance of the due date are strongly encouraged. Papers two and three may be turned in via Blackboard's Digital Drop Box.

First Paper: This will be a research paper on a science topic taken from a mystery novel. The topic will be assigned during the first week of class. It is to be 3 to 5 pages long. The final paper is due by noon one week before the topic is to be discussed in class. The paper should be appropriately referenced. The writing style should be that of a science report. These papers will be distributed to the entire class by way of Blackboard in advance of the discussion and the student writing the paper will lead the discussion. The actual use of the topic in a novel will not be revealed until after the science has been discussed. Choices will need to be made concerning content which is made more difficult since the application of the topic is unknown other than it applies to a mystery novel. (That might or might not give you some clues.) For each topic, the student will lead a 10 minute discussion about the science. Then 5 minutes will be taken to reveal the use in a novel followed by a 10 minute discussion about the science in the novel.

Second Paper: This will be a critical review of the book "The Carbon Murders" and is to be 3 to 5 pages long. The audience for the review is to be one of the following (your choice): (1) Trinity University students such as might be published in *The Trinitonian*; (2) The general public such as would be published in the local newspaper; (3) Members of a scientific society such as might be published in their newsletter; (4) Sophomores in

high school. A different audience may be used with Dr. Walmsley's permission. The final paper is due as given on the schedule. The writing style should that of a book review and be appropriate for the audience. This paper probably will need no references. Be sure to identify your audience when the paper is turned in. Reviews of books, if you want to see some examples, can be found at www.reviewsofbooks.com .

Third Paper: A short mystery novel using science as a theme or as a significant part. It is to be at least 15 pages long. An outline is due as given on the schedule and the final paper is due the last class of the semester. Writing styles for mystery novels can vary depending on the story and on the author – choose what fits best. This paper may or may not need references.

Syllabus

Date	**Topic**	**Date**	**Topic**
R 1/17	Introductions	T 3/11	Carbon Murders (cont)
T 1/22	Intro to Mystery Novels	R 3/13	#15, #16, #17
R 1/24	Miss Marple	T, R 3/18,20	Spring Break
T 1/29	Miss Marple (cont)	T 3/25	Dead Dry
R 1/31	Library Instruction	R 3/27	Dead Dry (cont)
T 2/5	Dreaming of the Bones	T 4/1	Monk
R 2/7	Dreaming (cont)	R 4/3	Dead As A Dodo
T 2/12	Why?	T 4/8	Second paper due
R 2/14	#1, #2	R 4/10	Dead As A Dodo (cont)
T 2/19	#3, #4, #5	T 4/15	Sherlock Holmes
R 2/21	#6, #7, #8	R 4/17	Amazon Gold Novel outline due
T 2/26	Oxford Murders	T 4/22	Amazon Gold (cont)
R 2/28	#9, #10, #11	R 4/24	Amazon Gold (cont)
T 3/4	#12, #13, #14	T 4/29	Summary
R 3/6	Carbon Murders	R 5/1	Third paper due Course Evaluation

Due Dates for First Paper

Assignment No.	Due Date
1, 2	Feb. 7
3, 4, 5	Feb. 12
6, 7, 8	Feb. 14
9, 10, 11	Feb. 21
12, 13, 14	Feb. 26
15, 16, 17	Mar. 6

Individual Science Episodes in Mystery Novels: Search Assignments

Look up information about the topic assigned to you. Since you do not know how the topic is to be applied in a mystery, be reasonably complete. Wikipedia may be used but not as a sole source. At least one references must be from a non-web source. Write the results of your searches (3 to 5 pages) with references; these will be distributed to the class. WWW references should be evaluated as to their reliability.

1. How poisonous is arsenic? What are the detection methods used (previously and now) to detect arsenic poisoning?

2. How do anesthetics work? Would cyclopropane be a good anesthetic?

3. How is wine made? How does wine degrade?

4. What is a bleach? What is "chlorine bleach"? How does it compare to sodium chlorate?

5. How are diamonds formed and where are they found? What differences are there in diamonds from differents regions?

6. What are chlorocarbons (not fluorochlorocarbons)? How are they made, what are their properties, what are their uses? Are they toxic?

7. Nut allergies are common. Peanuts (not a nut) is the most common of these allergies. What, specifically, are these allergies?

8. What is a Foucault's Pendulum? What is required to build one?

9. Rapidly developing storms are common on Lake St. Clair and Lake Erie. How do they form? Why are they more common there than on the other Great Lakes?

10. What are the characteristics (physical and chemical) of organ pipes?

11. What effect does acid have on human flesh? on human bones? How quickly would the effect take place? Will a body dissolve in acid?

12. What is the composition of Soda Glass? How is it used in glassblowing? How is color added? For color, are gold and iron pyrite usable and interchangeable?

13. How does ice form on lakes and rivers? How thick is such ice relative to the climate and the type of body of water?

14. What does one need to do in order to win a Nobel prize in science? How are the winners chosen?

15. What are diatoms? What are they used for? What happens if a person swallows some?

16. What was the Superconducting Super Collider? What was its purpose? Could that purpose have been achieved with something less expensive?

17. Indigo was the dye of kings (and queens). What is indigo, where did it come from, how is it now made? What is so important about it?

Reference Format
American Chemical Society Style

Journal Article
Walmsley, F. Synthesis of a Heteropolytungstate and its Use in Outer-Sphere Redox Kinetics, *J. Chem. Educ.* **1992**, *69*, 936.

Journal Article Without Title
Walmsley, F. *J. Chem. Educ.* **1992**, *69*, 936.

Journal Article with Multiple Authors
Grinonneau, W.C.; Chapman, P.L.; Menke, A.G.; Walmsley, F. Transition Metal Coordination Polymers of Phenylphosphonic Acid, *J. Inorg. Nucl. Chem.* **1971**, *33*, 3011.

Journal Article with Multiple Authors Without Title
Grinonneau, W.C.; Chapman, P.L.; Menke, A.G.; Walmsley, F. *J. Inorg. Nucl. Chem.* **1971**, *33*, 3011.

Book
Henold, K.H.; Walmsley, F. *Chemical Principles, Properties, and Reactions*, Addison-Wesley: Reading, MA, 1984.

Presentation
Walmsley, F., How Can There Be Green M&Ms Without Green Dye?. Presented at 63rd Southwest Regional Meeting of the ACS, Lubbock, TX, November 2007.

Web Sites
http://www.trinity.edu/fwalmsle (accessed 8/29/2007).
If the site has author(s) and title, include them at the beginning in the same manner as journal article with title.

Within the paper, indicate a reference with a superscript numeral. The reference list at the end of the paper will have the references in numerical order. If a reference is cited more than once, do not give it a second number; use the original number. Thus the superscripts in the paper will be in numerical order except for those cited again.