

“Science in Medicine” FY108

Colorado College Course Proposal

8th Block, 2007

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Mayo Clinic College of Medicine, Class of 2007

Colorado College, BA in biochemistry, Class of 2003

*The greatest mistake in the treatment of diseases
is that there are physicians for the body and physicians for the soul,
although the two cannot be separated. ~Plato*

The field of medicine is an exhilarating intersection of science and mankind. It is often easy to lose sight of the human side of medicine amidst the rigors of premedical coursework. This course is aimed at emphasizing the importance of both scientific medicine and the people behind the illnesses. The course will provide a platform for discussion about what it is like to work towards becoming a medical professional in this day and age, as well as allowing for research and exploration of some of the basic scientific aspects of illness and disability. Through class discussion, daily readings, written assignments, an overnight hospital simulation and the final exam, students will have the opportunity to explore their own interests in medicine and to expand their understanding of the biopsychosocial impact of disease.

COURSE TEXTS

Complications: A Surgeon's Notes on an Imperfect Science by Atul Gawande, M.D. (New York: Picador, 2002).

On Doctoring: Stories, Poems and Essays by Richard Reynolds, M.D. and John Stone, M.D. (New York: Simon & Schuster, 2001).

ASSIGNMENTS

Written Assignments

***DUE 1st Friday – 3-5 pg discussion paper**

Discuss why you are interested in the field of medicine? Are you hoping to make a career of it? Have you had a significant medical life experience that shaped the way you see the world? Are you simply curious? Explore in 3-5 pages what motivated you to enroll in a class entitled “Science in Medicine” and what you hope to gain from these 3 ½ weeks. Feel free to draw on personal experience as well as any outside resources.

***DUE 2nd Friday – 5-7 pg research-based paper**

Choose a medical illness/disability of your choice (possible suggestions are listed in your syllabus – obtain instructor approval if desiring to research a topic not listed). Highlight the biological mechanism(s) of disease, signs/symptoms, method(s) of diagnosis, possible treatment options, prognosis and, most importantly, psychosocial impact the illness may have on an individual. Use and cite at least 3 different resources (at least one current research paper and at least one medical text addressing the specific illness).

Class Presentation

***DUE 3rd Friday – 10 minute presentation**

Put together a 10-minute presentation about the disease you researched. Cover whatever aspect of the illness interests you most. Employ the use of some form of audio or visual aid (powerpoint, transparencies, poster, skit, video, etc). Inform instructor by 3rd Wednesday if audiovisual equipment will be necessary (projector, laptop, TV, VCR, DVD, etc).

Hospital Simulation

***3rd Tuesday Morning to Wednesday Afternoon – Overnight Cabin Trip**

There are a number of different roles in medicine. Patients, nursing staff and physicians each have their own duties and challenges during a routine night in the hospital. At the CC cabin, we will conduct a simulation of a “typical night in the hospital”.

During the afternoon on Wednesday at the cabin, we will discuss the different roles healthcare workers and patients play in a medical setting and will watch a related movie. Students will also learn how to take routine vital signs (heart rate, blood pressure, respiration rate and temperature). After dinner, we will begin the simulation. The class will be divided into thirds and each assigned a role.

1/3 of the class will be patients, each with an assigned illness and associated limitations (i.e. a patient suffering from a stroke cannot move the right side of his/her body). 1/3 of the class will make up the nursing staff with assigned duties (i.e. walking all “patients” from their beds to the restroom, cutting up food, bringing water, cleaning up simulated messes, obtaining routine vital signs). 1/3 of the class will be physicians with crucial time-dependent decisions to make using medical resources brought up to the cabin (i.e. deciding how the “stroke patient” with a severe headache should be treated within 10 minutes of learning of the symptoms and figuring out how to document such decision-making through hospital note-writing).

Each student will have the opportunity to play all 3 roles, as we will switch twice throughout the course of the night as follows:

First Shift: 8PM-midnight

Second Shift: midnight-4AM

Third Shift: 4AM-8AM

Patients are the only role allowed to sleep during their shift, and even they will be woken-up on a regular basis for the nursing staff to take routine vital signs. Nurses and doctors will have an assigned work area and will be required to provide written documentation for all of the work they perform during their shift. Part of the value of this experience is learning how to think effectively while fatigued: a challenge facing most medical professionals, especially medical students and residents, on a daily basis.

The entire group will have time to nap from 8AM to 11AM, followed by an hour-long debriefing lunch session covering what was learned during the simulation (What challenges did they encounter? How did it feel in the various roles? Was one role easier than the others? Was one role more empowering than the others? How did it feel to be making decisions when tired? How might this compare to an actual night in the hospital?). Adults who are NOT sleep-deprived will be assigned to drive back to campus from the cabin so as to eliminate any dangerous driving.

Final Exam

***Last Wednesday of 8th Block**

Demonstrate knowledge of medical illnesses and social issues in medicine today.

Multiple choice and short essay questions will cover material from class discussions, assigned readings and student presentations.

GRADING

25% Class Participation

40% Written Assignments (20% for each of the 2 papers)

20% Class Presentation

15% Final Exam

FY180 Science in Medicine Syllabus

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Office Hours: Barnes 317

Tuesdays 1pm-3pm

Thursdays 1pm-3pm

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WEEK 1

M April 23

- Introductions
- Review syllabus
- Write for 5 mins what you hope to get out of this block
- Intro to Personal Statement

HW: Write the first draft of your personal statement for tomorrow (4/24)

T24

-DUE: First Draft of Personal Statement

- Personal Statement Q & A
- Intro to Human Error in Medicine & Large Group Discussion
- Introduce Complications

*HW: *Complications pp.1-74*

**Discussion Questions #1*

**Work on 2nd Draft of Personal Statement for Friday 4/27*

W25

- Complications Discussion #1
- Intro to Health Care Disparities & Large Group Discussion
- Introduce On Doctoring

*HW: *Complications pp.75-106*

**On Doctoring pp.19-21*

**Discussion ?s #2*

Th26

- Complications/On Doctoring Discussion #2
- Intro to The United States Meth Crisis & Large Group Discussion
- Intro to Journal Article Assignment & Groups

*HW: *Complications pp.107-145*

**Discussion ?s #3*

**Finish 2nd Draft of Personal Statement*

F27

-DUE: 2nd Draft of Personal Statement

-Complications Discussion #3

-Intro to Obesity & Large Group Discussion

-Journal Article Groups Prepare for Presentations Next Week

HW: **Complete Journal Article Presentations in small groups*

**Complications pp.146-2*

**On Doctoring pp.32-35*

**Discussion ?s #4*

WEEK 2

M30

-Complications/On Doctoring Discussion #4

-Journal Article Presentations Groups 1 & 2

-Intro to Euthanasia & Large Group Discussion

HW: **Complications pp.208-252 (FINISH BOOK)*

**On Doctoring pp.62-73*

**Discussion ?s #5*

**Work on Final Draft of Personal Statement for Wednesday 5/2*

T May 1

-Complications/On Doctoring Discussion #5

-Journal Article Presentation Groups 3, 4 & 5

-Introduce On Call

HW: **On Call pp.1-49*

**On Doctoring pp.166-172*

**Discussion ?s #6*

**Finish Final Draft of Personal Statement for tomorrow*

W2

-DUE: Final Draft of Personal Statement

-On Call/On Doctoring Discussion #6

-Intro to Naturopathic Medicine & Large Group Discussion

-Introduce Med Topic Paper due Monday 5/7

HW: **Brainstorm ideas for Med Topic Paper*

Th3

-Tour/Talk @ University of Colorado Health Science Center w/Dr. Tim Byers?

HW: **On Call pp.50-109*

**On Doctoring pp.373-376*

**Discussion ?s #7*

**Work on Med Topic Paper*

F4

- On Call/On Doctoring Discussion #7
- Intro to Small Group Presentations for the CC Cabin on Wednesday 5/9
- Intro to Pharmacogenomics & Large Group Discussion
- HW:** **Finish Med Topic Paper*

WEEK 3

M7

- DUE: Med Topic Paper**
- Intro to Eating Disorders & Large Group Discussion
- Small Groups Work on Presentations for 5/9
- HW:** **On Call pp.109-156*
**On Doctoring pp.119-120*
**Discussion ?s #8*

T8

- On Call/On Doctoring Discussion #8
- Intro to Fad Diets & Large Group Discussion
- Small Groups Work on Presentations for 5/9
- HW:** **On Call pp.156-201*
**On Doctoring pp.325-336*
**Discussion ?s #9*
**Finish Small Group Presentations for tomorrow*

W9

to

Th10

CC CABIN!!

- Leave for CC Cabin @1pm
- On Call/On Doctoring Discussion #9
- Intro to Wilderness Medicine & Large Group Discussion
- Small Group Presentations 1 & 2**
- Dinner
- Small Group Presentations 3, 4 & 5**
- ~~XXXXXXXXXXXXXXXXXXXX~~
- Breakfast
- Leave for campus @ 9am
- No HW!!!**

*Added Hospital Simulation
described in proposal
after beginning class
& meeting her students*

F11

- Intro to the Medical School Application
- Intro to Defining an Epidemic & Large Group Discussion
- HW:** **On Call pp.201-233 (FINISH BOOK)*
- **On Doctoring p.285*
- **Discussion ?s #10*

WEEK 4

M14

- On Call Discussion #10
- Intro to The Biology of Stress
- Stress Management Exercise
- HW:** None

T15 (Optional)

- Intro to Taking A Medical History
- Intro to the Basic Physical Exam
- HW:** Review notes & handouts from class

W16

- FINAL EXAM @ 9AM**
- Complete Course Critique

REQUIRED TEXTS:

Gawande, Atul. *Complications: A Surgeon's Notes on an Imperfect Science*.
New York: Picador, 2002.

Reynolds, Richard and John Stone. *On Doctoring: Stories, Poems, Essays*.
Third Edition. New York: Simon & Schuster, 2001.

Transue, Emily R. *On Call: A Doctor's Days And Nights In Residency*.
New York: St. Martin's Griffin, 2004.

GRADING

30% Class Participation

includes: Attendance

Completion of Discussion Question Worksheets

Active participation in large group discussions

Active role in group presentations

15% Personal Statement

15% Journal Article Small Group Presentation

15% Med Topic Paper

15% Cabin Small Group Presentation

10% Final Exam

All assignments must be turned in on-time to receive credit.

(unless special arrangements have been agreed upon with me PRIOR to the due date)

Attendance is mandatory.

(notify me via email BEFORE CLASS if you have to miss a day due to illness)

Relax.

Learn Cool Stuff About Medicine.

Read 3 Great Books.

Have Fun.

Contact Me With ANY Questions.

And Most Of All: Enjoy 8th Block!