**CONNECTIONS II**

**IST 220 CRN 3712**

**COURSE OUTLINE**

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| Course Title/Number  Section | IST 220  Connections II  201 |
| Semester/Year  Credit hours | Spring 2015 3 |
| Days/Time | MWF 2pm-2:50 pm |
| Location | ML Commons |
| Instructor  Textbooks | Menashi Cohenford, BSc., MT, Ph.D.  1. Bleed, Blister and Purge: A history of medicine on the American Frontier. Mountain Press Publishing Co. 2005 (Missoula, MT) ISBN-13: 978-0-87842-505-1  Author: Volney Steele  2. The Medical Book: From witch doctors to robot surgeons, 250 milestones in the history of medicine. Sterling. 2012 (New York, NY) ISBN-978-1-4027-8585-6  Author: Clifford A. Pickover  3. Introduction to Bioethics (optional reading material)  Publisher: Wiley & Sons Inc. 2005 ( Hoboken, NJ) ISBN:978-0-470-02198-9    Authors: John Bryant, Linda Bagott la Velle, John Searle  It is required that students keep current on events related to the course using new sources, particularly, news papers. |
| Prerequisites | IST 120 or Instructor’s Permission |
| Office | BBSC Room 241 H |
| Phone& E-mail | 304-696-2697  [cohenford@marshall.edu](mailto:cohenford@marshall.edu) |
| Office/Hours | Tues-Thursday 3:00pm-5:00pm and Friday 3:00pm-5:00pm  Or by appointment |
| University Policies | By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs) and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to <http://www.marshall.edu/academic-affairs/?page_id=802> Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment. |

*‘Medicine cultivates a perpetual state of wonder about the limits of biology and the workings of tissues and cells-and provides hope that most of the horrific health ravages of humankind will one day be a thing of the past’*

*--- Clifford A. Pickover*

**Course Description**

The topics and the lectures in this course focus on the history of medicine to examine the impact and the connection between science, technology and society.

**Course Philosophy & Summary**

With the ongoing advancements in medicine, man has been empowered with a greater control over a multitude of life threatening diseases, misfortunes, and adversities. While most of the medical breakthroughs have been welcomed with enthusiasm by the society, some have generated deep concerns. For example:

* Should we use genetic engineering to confer new characteristics to humans?
* Should we use bionics to overcome human limitations?
* Should we sanction the application of human cloning for therapeutic purposes?

This course will introduce you to the connections between medicine, science, technology and society and will deepen your understanding of the evolution of medicine and medical practices throughout the millennia.

**Course Objectives**

By the end of this course you should be able to:

* Find and evaluate sources from the library, internet, and contemporary news reports;
* Read, interpret, and discuss analytically and critically major issues related to the course theme;
* Work with others to present an effective oral evaluation using visual aids and multimedia;
* Engage in informative class discussions;
* Understand the connections between modern medicine and medical practices of the past.

**Class Participation**

Participation in class activities and discussion is central to this course. To get full credit for class participation (20 points) you must do more than just show up in class. You must demonstrate that you have read the assignments for the week, and be ready to talk about the coursework in an intelligent manner. Student’s participation in class will be tracked throughout the semester.

Participation includes: Asking questions, discussing issues raised by the instructor and classmates, being attentive and taking part in individual/ group activities.

**Individual Weekly Assignments**

You will be responsible for completing 1-2 page papers each week that argue a position relating to specific topics in medicine. These papers will ***not***be accepted lateand ***must*** be submitted by their due date on Web CT, **only**. No assignments will be graded if they are emailed or directly handed to the instructor. Each short assignment is worth total of10 points.

Evaluation of these shorter assignments will be based on three factors:

1) Does the paper address the topic of the assignment and integrate reading, lecture, and classroom discussions?

2) Does the paper clearly articulate your position on the topic?

3) Is the paper well organized with a clear thesis, and is easy to read without mistakes in language or format?

In total, there will be 11 of these short essays. The worst score on these papers will be dropped.

**Final Paper Assignment:** At the end of the semester, each student must write and submit a 9-10 page paper. This paper can either focus on one of the topics of your weekly essays, or on an issue of ethical and moral concern that impacted the quality of health care on the American frontier. If you choose the latter theme, the weekly reading assignments in Bleed, Blister and Purge: A history of medicine on the American Frontier (Volney Steele) should serve as your primary source.

Each paper must include:

* A summary of the situation - well supported with a variety of sources.
* A brief background to put the issue of your research in perspective.
* A conclusion explaining why the topic is controversial and how it relates to science, medicine and society
* A citation/bibliography section

For the bibliography and reference section, use in-text citation, and choose among MLA, APA, or CBE standards.

This assignment is due on **April 26th;** however,based on your instructor’s discretion this date may be moved forward**.** The final essay will be worth 90 points.

**Group Presentations:** The class will be separated into different groups with each group consisting of at least two students. During the semester, each group will select at least two topics to present in PowerPoint format. All topics for these presentations must be derived from the students’ weekly reading assignments, and must be introduced to the class on the day they are scheduled.

Any circumstance preventing you from delivering your presentation on time must be discussed with and approved by your instructor. To be approved, a student ***must*** have a valid university excused absence.

**Evaluation of Group Presentations**:

All group presentations will be evaluated using a three part approach:

*Content*: What you say in your oral presentation (topic, focus, supporting materials, language and audience adaptation);

*Organization*: How you arrange your oral presentation (arrangement main points, introduction, conclusion, transitions);

*Delivery*: How you present your information (verbal and nonverbal components).

A total of 20 points will be assigned to the group presentations.

**Final Paper:**

The final paper will be an expansion of one of the shorter papers into a full exploration of the particular issue. This paper will require significant outside research and documentation.

**Student Portfolios:**

Each student should submit a final portfolio that includes:

i) Copies of one’s weekly short papers.

ii) The final paper

iii) Print out copy of your Team’s Presentation

**Attendance:** Full attendance credit (15 pts) will be given to students who miss no more than two total class periods (lectures or discussion sections). No attendance points will be awarded to any student who misses more than three total class periods. Allowances may be made for students with extenuating circumstances who have a valid university approved excuse. If you miss a class, it is your responsibility to notify the instructor and to find out what was missed. Punctual attendance to lectures is mandatory.

**Grades**

Student **grades** will be calculated as follows: **Points**

\*Individual Weekly Assignments (1-2 pages typed) 100

Group Presentation 20

Class Participation 20

Attendance 15 Final Paper 90

Final Portfolio 5

**Total Points** 250

\*Denotes the overall possible score from 10 short assignments, with the worst score from 1 of 11 papers dropped.

**Final Grade Scale:** The following is presented as a guide only and may be subject to change at the instructor’s discretion.

A: 250-225 Represents excellent work

B: 224-200 Represents good work

C: 199-175 Represents average work

D: 174-150 Represents below average work

F: 149 or less Represents unacceptable performance failing to meet the minimum standards for the course

**Policies on Late Work**

Papers are due in class on the assigned day. Lack of time to prepare or computer failure is not an acceptable excuse for submitting late assignments. If you miss a class, you should submit the paper before class. The lowest grade on the short assignments will be disregarded; a situation that allows for both planned absences and unavoidable emergencies.

**Students Requiring Special Needs**

Students with disabilities who require special accommodations should refer to this link <http://www.marshall.edu/disabled> which provides information for the educational and physical accessibility support at the university.

**Other Policies:**

The use of cell phones is prohibited in class. Any student using a cell phone will be asked to leave the lecture room.

**Statement on Plagiarism:**

All assignments, whether written or oral, must be the student’s own work. This means the ideas and the words of other students, instructors and sources, whether published or unpublished must be properly acknowledged. Submitting an assignment which is not the student’s original and independent work is known as *plagiarism* and will result in either a reduced or a failing grade (recorded as a zero). Plagiarism may result in more serious sanctions, up to and including failure for the course, and expulsion from Marshall. Plagiarism will be taken very seriously as knowing how to use sources appropriately is essential for a passing the course.

If you are ever unsure about how to credit a source, or whether something constitutes plagiarism, you should consult with your instructor *before* the assignment is graded.

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| **Course Student Learning Outcomes** | **How Practiced in this Course** | **How Assessed in this Course** |
| Students will gain an understanding of:   * The past and new developments in medicine; * History of drug development; * Major developments in surgery; * The history of medical Instrumentation, medical imaging and immunology; * The ethical and moral issues regarding the human genome project and molecular testing; * The role of the environment and genes in the development of cancer; * History of the circulatory system, prosthetics, cervical cancer and gene therapy; * The Hippocratic Oath and its implications with regards to physicians’’ code of conduct and other issues such as the acquisition of informed consent, and patients’ rights. * Challenges facing today’s healthcare system. | In-class examples, discussions, videos, reading materials, and essays | Your ability to grasp the connections between medicine, technology and society will be assessed by a number of factors as follows:   1. Extent participation in class; 2. Your critical thinking skills as judged by the quality of your weekly essays and final essay; 3. Your ability to analyze and systematically evaluate controversial issues; 4. Your organization skills in writing and presenting information; 5. Your use of language, mechanics and delivery; 6. The overall quality of your class presentations; 7. Your use of language, mechanics and delivery; 8. Your ability to search information and use supporting material; 9. Your recognition and understanding of limitations and implications of new and emerging ethical and moral issues in medicine. |

**Dates: \*Lectures and Reading Assignments**

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| Jan 12th-16th  Week 1 | **Topic of the Week:**  A brief Introduction to the History of Medicine  **Reading Assignments**:  The chapters titled: ‘The Past Enlightens the Future (pages:xvii-xix)’, and ‘Milestones of Medical Progress (pages xxi -xxiii) in Bleed, Blister, and Purge by Volney Steele.  The chapters titled: 'Leech Therapy (page 162)'', ' Blood Letting (page 32) ', 'Zoo Within Us (page 104),  'Germ Theory of Disease (page 206)', and 'Antiseptics (page 212)', in The Medical Book by Clifford Pickover.  **Homework:**  Select, from the time line presented in class, a particular discovery that, to you, reflects the greatest impact on medicine. Write a two page essay describing why you chose the discovery that you did.  **Due date of 1st Paper: Jan** 18th |
| Jan 19th | **Martin Luther King, Jr. Holiday University closed** |
| Jan 19th-Jan 23rd  Week 2 | **Topic of the Week**:  History of Drug Development  **Reading Assignments**:  Chapter 1 *in Bleed, Blister, and Purge* (Volney Steele) titled 'The Metamorphosis of American Medicine in the Nineteenth Century' pages: 1-16.  The chapters In The Medical Book (Clifford Pickover) titled: ‘Digitalis (page 136)', 'Alternative Medicine (pages 142)', and ‘Placebo effect (page 404)’.  Web CT sites titled ‘How homeopathy differs from conventional medicine?’, ‘Homeopathy FACS’, and ‘Herbal Supplements: What to know before you buy?’  **Team 1**:  From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must be in PowerPoint format and be limited to15 minutes only.  **Homework:**  Write a two page essay describing: 1) Alternative medicine, 2) Differences between homeopathic medicine and conventional medicine, and 3) why herbal supplements are not regulated by the FDA, as drugs?  **Due date of 2nd Paper: Jan** 25th |
| Jan 26th-Jan 30th  Week 3 | **Topic of the Week**:  A Brief Introduction to the History of Surgery  **Reading Assignments:**  The chapter titled 'Indian Medicine: Native American Health Before and After the White Man'; (pages 19-43) InBleed, Blister,and Purge by Volney Steele.  The chapters titled: 'Witch Doctor (page 16)', 'Trepanation (page 18)', ‘'Penicillin (page 341)'and 'Smallpox Vaccination (page 146)' In the Medical Book by Clifford Pickover.  Web CT site titled ‘Native American Legends: Native American Medicine’  **Team 2**:  From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and be limited to15 minutes only.  **Homework:**  Write a two page essay describing how medicine was practiced by the Native Indians, and of the role of the Medicine Man (Woman) in the Native Indian society.  **Due date of 3rd Paper:** Feb 1st |
| Feb 2nd-Feb 6th  Week 4 | **Topic of the Week**:  History of Medical Instrumentation  **Reading Assignments:**  The chapter titled ‘Lewis and Clark: Keelboat Physicians”; (pages 45-62).In Bleed, Blister, and Purge by Volney Steele.  The chapters titled: 'Ayurvedic Medicine (page 28)' and 'Modern Midwifery (pages 328)' In the Medical Book by Clifford Pickover.  **Team 3**: From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and be limited to15 minutes only.  **Homework:**  Write a two page essay about two discoveries that greatly impacted the practice of surgery. State why you chose these discoveries, and why without them, the performance of surgery would have been archaic.  **Due date of 4th Paper:** Feb 8th |
| Feb 9th-Feb 13th  Week 5 | **Topic of the Week**:  History of Medical Imaging  **Reading Assignments:**  The chapter titled ‘Mountain Men; Hunting Knife Surgeons (pages 63-71)’ In Bleed, Blister, and Purge by Volney Steele.  The chapters titled ‘Opthalmoscope (page 188)’, ‘Sphygmomanometer (page 224)’, and “Endoscope (page 398)’ In the Medical Book by Clifford Pickover .  WebCT site entitled ‘Toward Immortality: The Social Burden of Longer Lives’   |  | | --- | |  |   **Team 4:**  From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and be limited to15 minutes only.  **Homework**  With the advancements in medicine, there has been a continued increase in the average longevity of human life. Write a1-2 page essay as to the impact of this phenomenon on the society, and its effects on the practice of medicine, in general.  **Due date of 5th Paper: Feb 15th** |
| Feb 16th –Feb 20  Week 6 | **Topic of the Week:** A Brief Introduction to the History of Immunology-Part I  **Reading Assignments:** The chapter titled 'Health on the Western Trails: Hope and Suffering (pages 73-86)  In Bleed, Blister, and Purge by Volney Steele.  The chapters titled: 'Lymphatic System (page 94)', 'Women Medical Students (pages 154)’ 'Hippocratic Oath (page 40)', and ‘Informed Consent (page 370)’’ In the Medical Book by Clifford Pickover.  WebCT site titled: Physician Patient Relationship  **Team 5:** From the above reading assignments, each team member must select one topic that to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and be limited to15 minutes only.  **Homework:** Write a two page essay as to whether or not a physician should follow certain codes of conduct? If so, what are these codes and where do you find them? Based on these codes, do you believe Jenner acted responsibly as a physician when he inoculated eight year old James Phiipps with pus taken from a cowpox pustule?  **Due date of 6th Paper:** Feb 22nd |

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| Feb 23rd -Feb 27th  Week 7 | **Topic of the Week**:  A Brief Introduction to the History of Immunology-Part II  **Reading Assignments:**  The chapter titled 'Gold Camp Sawbones: Life and Death in the Western Mining Districts (pages 87-106)’ .In Bleed, Blister, and Purge by Volney Steele.  The chapters titled 'The Structure of Antibodies (page 430)', and ‘Thymus (page 436)', In the Medical Book by Clifford Pickover.  Web CT site titled ‘To vaccinate or not to vaccinate : That is the Ethical Question’  **Team 6:**  From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and be limited to15 minutes only.  **Homework**  The debate over mandatory vaccinations has gained substantial attention lately. Yet, an ethical dilemma arises in the balance of personal autonomy and choice versus the protection of the entire protection at risk. Write a two page essay expressing your views about this issue.  **Due date of 7th Paper:** Mar 1st |

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| Mar 2nd-Mar 6th  Week 8 | **Topic of the Week**:  An Introduction to Molecular Diagnostics  **Reading Assignments:** The chapter titled 'Unsung Heroes: Army Surgeons on the Frontier (pages 107-130)’In Bleed, Blister, and Purge by Volney Steele.  The chapters titled: 'DNA Structure (page 394), 'Human Genome Project (page 508)', and 'Amniocentesis (page 390)' In the Medical Book by Clifford Pickover.  WebCT site titled: ‘Ethical Issue In Genetic Testing ‘.  **Team 7:** From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and be limited to15 minutes only.  **Homework:** The growth in molecular and genetic diagnostic tests have opened the lid on a Pandora ’s Box with regards to many complex ethical issues. Write a two page essay summarizing some of these issues.  **Due date of 8th Paper:** March 8th |
| March 9th- March 13th  Week 9 | **Topic of the Week**:  A Brief Introduction to the History of the Circulatory System  **Reading Assignments:**  The chapter titled 'Granny Remedies; Pioneer Women and Folk Medicine (pages 131-147)’ In Bleed, Blister, and Purge by Volney Steele.  The chapters titled: 'Nursing (page 196)', 'Circulatory Sytem (page 90)', and 'Patent Medicines (page 294)'.In the Medical Book by Clifford Pickover.  **Team 8:**  From the above reading assignments, each team member must select one topic that he or she will present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and be limited to15 minutes only.  **Homework:**  None |
| March16th –March 20th  Week 10 | **Spring Vacation** |
| March 23rd –March 27th  Week 11 | **Topic of the Week**: History of Prosthetics  **Reading Assignment:** The chapter titled 'Miracle Cures; Quackery, Fraud, and Faith (pages 149-166)’ In Bleed, Blister, and Purge by Volney Steele.  The chapters titled: 'Artificial Pace Maker for the Heart (page 420)', and 'Glass eye (page 24)' In the Medical Book by Clifford Pickover:  **Team 9:** From the above reading assignments, each team member must select one topic that he or she will present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and limited to15minutes only.  **Homework:**  There have been some controversies about the participation of amputees with modern prosthetic limbs in the Olympic games lately. Write a two page essay if these controversies are justified, and if you believe that some of these new and modern prosthetic devices can augment mans’ characteristics.  If you agree with the aforementioned statement, discuss what some of these devices do, and if you would advocate their use by the public, in general.  **Due date of the 9th paper:** Mar 29th. |
| March 30th –April 3rd  Week 12 | **Topic of the Week**:  History of Gene Therapy  **Reading Assignment:**  The chapter titled 'Homestead Doctors: House Calls on the Great Plains (pages 167-200)’ In Bleed, Blister, and Purge by Volney Steele.  The  chapters titled  'Cause of Sickle -Cell Anemia (page 380)', 'Epigenetics (pages 488), and 'Gene therapy (page 498)' In the Medical Book by Clifford Pickover.  WebCT sites titled: 'Moral and ethical issues in gene therapy', 'What are the ethical issues surrounding gene therapy', and 'What is the concern over germ line therapy?'  **Team 10:**  From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and limited to15minutes only.  **Homework:**  Because gene therapy involves making changes to the body’s basic set of instructions, its application raises several ethical concerns. Write a two page essay about some of the ethical issues surrounding gene therapy, and the genetic modification of ones cells at the germline level.  **Due date of the 10th Paper:** Apr 5th |
| April 6th –April 10th  Week 13 | **Topic of the Week:** Cancer a Brief Introduction  **Reading Assignments:** The chapter titled 'No Prejudice Against Women (pages 201-211)’ In Bleed, Blister, and Purge by  Volney Steele..  The chapters titled 'Causes of Cancer (page 122)',' Mammography (page 382)', and 'RNA Interference (pages 502)' In the Medical Book by Clifford Pickover..  WebCT sites titled “Pros and Cons of Universal Health Care in the US, and ‘Socialized Medicine Pros and Cons’  **Team 11**:From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and limited to15 min only.  **Homework:** Write a two page essay describing the advantages and disadvantages of socialized medicine  **Due date of the 11th Paper:** Apr 12th |
| April 13th –April 17th  Week 14 | **Topic of the Week**: Cervical Cancer and HPV  **Reading Assignments**  The chapter entitled 'Early Western Hospitals (pages 215-238)’ In Bleed, Blister, and Purge by Volney Steele.  The chapters titled 'Hospice (page 462)','Chemotherapy (pages 366), 'X-Rays (page 254)', and ' Tobacco Smoking and Cancer (page 388)'.In the Medical Book by Clifford Pickover.  **Team 12**:  From the above reading assignments, each team member must select one topic to present to the class. The selected topic must be researched thoroughly and the presentation must include information from sources other than just the reading assignments. All presentations must in PowerPoint format and limited to15min only.  **Homework:**  Work on final paper |
| April 20th –April 24th  Week 15 | **Topic of the Week**: Abortion  **Topic of Class Discussion:**  Is abortion morally wrong?  Should it be should be illegal?  **Homework**  Submit Final Paper:    **Due date April 26th** |
| April 27th –May 1st (last class day)  Week 16  **‘Dead Week’** | **Topic of the Week**: John Q  **Class Activity:** Watch DVD film entitled John Q  **Topic of Class Discussion:**  Should medical services be denied when you do not have health insurance? |

\* Denotes that this syllabus is presented as a guide only and may be subject to change at the instructor’s discretion.