BYM 513
Research Methods in Medical Informatics

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Course Resources

- All relevant class information is presented on the BYM 513 web site.

  http://ninova.itu.edu.tr

- Check the web site at least once every three days for updates.

What will I learn in BYM 513?

Course Description

- This class will meet weekly for 3 hours to review and assess a selection of theories and research/evaluation methods used in other disciplines that hold promise for medical informatics.

- Each student will be responsible for selecting one theory or method as a paper and presentation topic.

- Each student will be responsible for writing an academic paper for international conference so select your paper subject as soon as possible.

Syllabus

- Week 1: Introduction to Research Methods (Ch1 and 2)
- Week 2: Data, Information and Knowledge (Review and article)
- Week 3: Getting Ideas for Research (Develop a research question / Finding a research question) (Ch 3)
  - Conduct a literature review,
  - Prepare a research proposal
- Week 4: Research Paradigms and impact on design/analysis.
- Week 5: Choosing a Research design / evaluation. (Ch 4)
  - Making Systematic Observation(Ch 5)
- Week 6: Choosing and Using Research Subjects (Ch 6)
  - Presentations on reviewed articles
- Week 7, 8: Data Collection Mechanisms
  - Using Nonexperimental Ressearch (Ch 8)
  - Using Survey Research (Ch 9)
  - Using Between Subjects abd Within Subjects Experimental Designs (Ch 10)
  - Using Specialized Research Design (Ch 11)
  - Using Single Subject Design (Ch 12)
- Week 9: Midterm
- Week 10: Data Analysis: Qualitative
  - Case Study
  - Action Research
- Week 11: Data Analysis: Quantitative
  - Descibing Data (Ch 13)
  - Using Inferential Statistics (Ch 14)
  - Using Multivariate Design and Analysis (Ch 15)
- Week 12: Dissemination methods/ Present research findings (Ch 16)
- Week 13: Research Ethics
- Week 14: Final Paper

What will I be doing in BYM 513?

- Attend lectures as much as you can.
- Read at least 70 pages per week.
- Write an academic paper for international conference
- Take one midterm exam.
- Study the lecture notes and selected papers.
- Examine the class web-page at least once every three days.
- And to top it all off...... Take the final exam.

If you do not agree with one of the rules post here, please drop course…

COURSE INFORMATION

Attendence Policy

70% attendence is compulsory.

Grading

%20   Lecture Presentation(2 presentation, each of them 10 points)

%10   Paper presentation

%30   Midterm Exam (Case Study)

%40   Final Exam

Late submission of assignments/homework

– Not accepted one week after the due date.

Teach or Learn

Resources 1: Online resources

1. AHRQ National Resource Center for Health IT

http://healthit.ahrq.gov/

2. National Coordinator for Health Information Technology

http://healthit.hhs.gov/

3. Health IT Stimulus News

http://www.ihealthbeat.org/

4. OpenClinical

http://www.openclinical.org/

5. CPOE.org

http://www.cpoe.org/

6. Certification Commission for Health Information Technology (CCHIT)

http://www.cchit.org/

Resources 2: Major professional organizations

1. American Medical Informatics Association (AMIA)

http://www.amia.org/

2. Health Information and Management System Society (HIMSS)

http://www.himss.org/

3. International Medical Informatics Association (IMIA)

http://www.imia.org/

4. Certication Commission for Healthcare Information Technology (CCHIT)

http://www.cchit.org/

5. Health Level 7 (HL7)

http://www.hl7.org/

Resources 3: Academic journals

1. Journal of the American Medical Informatics Association (JAMIA)

http://www.jamia.org/

2. Journal of Medical Internet Research (JMIR)

http://www.jmir.org/

3. Journal of Biomedical Science (JBS)

http://www.springerlink.com/content/112912/

4. International Journal of Medical Informatics (IJMI)

http://www.intl.elsevierhealth.com/journals/ijmi/

5. Methods of Information in Medicine (MIM)

https://www.schattauer.de/index.php?id=704