




BYM 513

Research Methods in Medical Informatics

2014-2015

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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 Research (Ch 8)
 - Using Survey Research (Ch 9)
 - Using Between Subjects and 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
 - Describing 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

Attendance Policy

70% attendance 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. Certification 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>

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**Questions
and
Answers?**