

# Biomedical Informatics Special Topics Course: Interdisciplinary Fellowship Program

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## Abstract

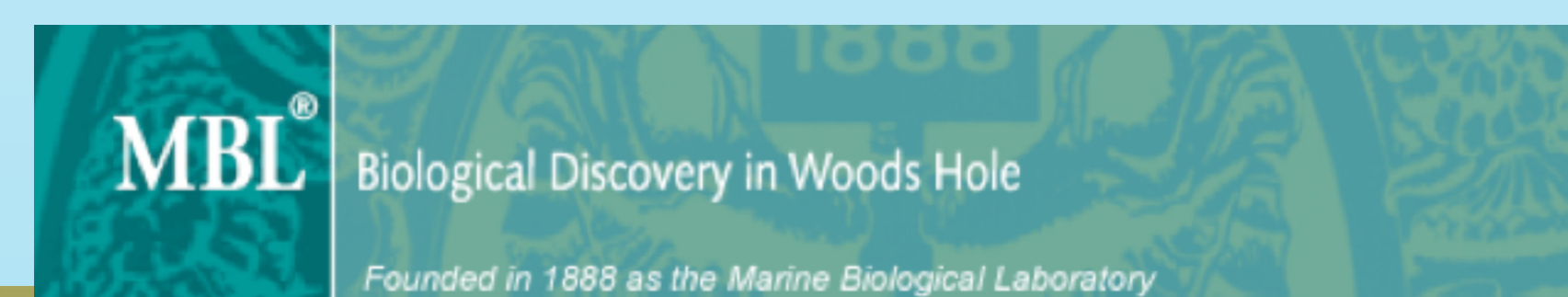
The Marine Biological Laboratory hosts a National Library of Medicine fellowship program, BioMedical Informatics, to train medical educators, medical librarians, medical administrators, and young faculty on the use of computer technologies and information science in biomedicine and the health sciences. The intensive course uses a combination of lectures, hands-on exercises and group projects to explain a broad array of topics from database design to medical decision analysis methods. An overview of the program and the outcomes resulting from the program by previous University of Michigan fellows are presented to encourage further participation by biomedical and clinical educators and information systems administrators.

## Background

The Marine Biological Laboratory and the National Library of Medicine host a week-long BioMedical Informatics course twice a year. The Marine Biological Laboratory (MBL) located in Woods Hole, Massachusetts has existed since 1888 and has had more than 50 scientists study there to go on to win the Nobel Prize.<sup>1</sup> The National Library of Medicine (NLM), a division of the National Institutes of Health in Bethesda, Maryland, was founded in 1836 and is the world's largest medical library.

First offered in 1992, the BioMedical Informatics course introduces students to the field of biomedical informatics through lectures, hands-on exercises, and peer networking. Individual lectures discussing topics ranging from database design to electronic medical health records are presented by prominent researchers in the field. To supplement lecture style learning, small group projects are also developed by course attendees.

Class cohorts are made up of a diverse group of individuals with differing areas of expertise such as information science, medicine, and information technology, providing a unique mix of perspectives. "Librarians learn alongside physicians, nurses, administrators, managers, and faculty from around the world. Fellowships are not based on prior knowledge of biomedical informatics, but rather on the potential of applicants to be agents of change within their own institutions".<sup>2</sup>



## Course Specific

### Sample Course Content:

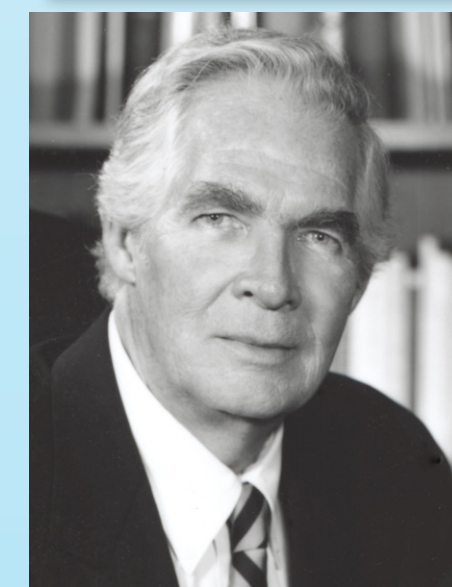
- What is Medical Informatics?
- Disaster Informatics
- Principles of Database Design
- Principles of Controlled Terminology
- Consumer Health Informatics
- PubMed and the NLM Gateway
- Web 2.0 and Social Networking
- Human-Computer Interface
- Evaluation
- Genetics, Genomics, and Why
- Meaningful Use of Electronic Health Records
- Computer-based Provider Order Entry
- Decision Support
- Clinical Research Informatics
- Health Information Exchanges
- Telemedicine
- History and Policy for Biomedical Informatics
- The Internet: Reflections on What's Coming
- Research Issues in Biomedical Informatics

## Key Lecturers:



**James Cimino**

National Institutes of Health - Course Director



**Donald Lindberg**

National Library of Medicine - Lecturer; NLM Director



**Joyce Mitchell**

University of Utah - Course Director



**Edward Shortliffe**

American Medical Informatics Association - Lecturer



**Cathy Norton**

The Marine Biological Laboratory Librarian - Course Principal Investigator

## Course Delivery Format:

- Lectures
- Exercises
- Group Projects
- Discussion

## Outcomes

- Opportunity to meet top people in the field
- Opportunity to network with people working in the area of biomedical informatics, but who may not be in the same immediate field
- Groundwork for being a change agent<sup>3</sup>

## Applications

To attend the BioMedical Informatics course, an application must be submitted along with a personal essay. If accepted, NLM pays for all expenses related to the course. Additional information about the course and the application process can be found at:

[http://www.mbl.edu/education/courses/special\\_topics/med.html](http://www.mbl.edu/education/courses/special_topics/med.html)

### University of Michigan Librarian Alumni Contacts:



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Marisa Conte



Mark MacEachern



Gurpreet Rana



Jean Song



Kristen Young

## References

1. Yamashita G., et al. 2010. A model for bioinformatics training: the marine biological laboratory. *Briefings in Bioinformatics* 2(6): 610-615.
2. Bennett-McNew C. and Ragon B. 2008. Inspiring vanguards. *Medical Reference Services Quarterly* 27(1): 105-110.
3. Patel VL., Branch T., Cimino A., Norton C., Cimino JJ. 2005. Participant Perceptions of the Influences of the NLM-sponsored Woods Hole Medical Informatics Course. *Journal of the American Medical Informatics Association* 12(3):256-62.

### Acknowledgements

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