U.S. Department of Veterans Affairs
Veterans Health Administration

AMIA 10x10™
Training Next-Generation Informatics Leaders

# Health Informatics Certificate Program (AMIA 10x10)

## Course Syllabus

**TERM**

Fall 2017

**COURSE DESCRIPTION**

Welcome to the VA Health Informatics Certificate Program (AMIA 10x10)

This certificate program provides VA staff with a broad survey of the field of Health Informatics. Content is delivered as a web-based course composed of taped lecture presentations supplemented by skill-building exercises in an online, faculty led learning environment. Students who successfully complete all requirements of the course will receive an American Medical Informatics Association (AMIA) 10 x 10 certificate.

**COURSE GOALS AND OBJECTIVES**

Course Goals

The Health Informatics Certificate Program is designed to increase the informatics literacy in the VA and to develop a cadre of VA informatics leaders who can accelerate, implement and support Health Information Technology innovations to improve health care delivery.

Course Objectives

- Explore how technology can be used to improve health care delivery in health care organizations and in public health.
- Acquire depth and breadth of knowledge of the principles of health informatics.
- Provide a conceptual and theoretical framework of the design, development, and implementation of health information systems.

**COURSE PREREQUISITES**

There are no prerequisites to this course. However, this course is presently open to VA employees only**.** There are no course fees and no tuition requirements for the Certificate Program.

The course is presented at a graduate school level and will require that level of attention.

## COURSE FORMAT

The course is divided into eight modules, each containing multiple lectures delivered in a distance learning format. The pre-recorded video presentations feature many nationally and internationally known informatics leaders addressing topics that provide the core didactic learning. These topics are based on the AMIA Board White Paper Core Content for the Subspecialty of Clinical Informatics. J Am Med Inform Assoc 2009;16(2):153-57

Lectures average one hour in length. Students will be expected to review each lecture and successfully complete the associated post-test and course evaluation.

The course is designed to encourage interaction and collaboration between participants and faculty, as well as ensure timely completion of all requirements within the appropriate timeframe.

Students will be required to complete homework assignments and projects relevant to the general content areas presented.

Assignments are broad ranging, including activities such as participation in discussion boards, conducting workflow analyses, developing evidence based decision support tools, writing papers and/or completing a health informatics project.

Some of the modules include assignments which will be completed through the collaborative learning process. Each student is assigned to a group that will remain consistent throughout the course.

Students will be required to complete a final project on a topic that is relevant to the VA as an organization. Contingent on conference attendance approval, as well as funding of travel by OIA, each student will present their final project at the AMIA Annual Symposium in November.

Students will receive guidance and feedback on assignments from faculty moderators. Total number of hours anticipated for students to complete the course is estimated at 120 - 150 hours.

The necessary materials for each of the eight modules will be available on the course website, including:

- Pre-Recorded Video Lectures (available on TMS)
- Required Readings and Learning Activities such as discussion boards and skill building assignments
- Faculty View Videos and documents - discussion of course content and its relevancy to the VA
- Occasional collaborative group work with fellow students
- Optional Readings and Resources

## COURSE DATES AND TIMEFRAMES

We recognize that students have many time pressures. However, in order to complete the course, participants must make every effort to stay on schedule. Students are expected to complete module assignments by the due date specified or the end date of the module. The course dates are listed in the table below. Extenuating circumstances should be discussed with the Course Director: Elizabeth.Chapman@va.gov

| Module | Topic | Weeks (27 Total) | Start Date | End Date | Other Important Dates |
|---|---|---|---|---|---|
| Introduction and Orientation | | 1 | April 3 | April 10 | |
| 1 | Fundamentals of Health Informatics | 2 | April 11 | April 24 | |
| 2 | Evidence-based Patient Care | 3 | April 25 | May 15 | |
| 3 | Clinical Workflow Analysis, Process Redesign, & Quality Improvement | 3 | May 16 | June 5 | |
| 4 | Human Factors Engineering | 2 | June 6 | June 19 | |
| | BREAK | 1 | June 20 | June 26 | |
| 5 | Data Standards | 2 | June 27 | July 10 | Project Topic Approval Due July 17th |
| 6 | Clinical Decision Support | 5 | July 11 | August 14 | |
| 7 | Information System Lifecycle | 4 | August 15 | September 11 | Project Reports Due September 11th |
| 8 | Leading and Managing Change | 4 | September 12 | October 13 | |
| AMIA Annual Symposium – In-Person Session, Washington, D.C. (contingent upon local funding) | | | Nov 4, 2017 - Nov 8, 2017<br>Travel dates vary from Nov 3 – Nov 9 | | |

## FINAL PROJECT AND PRESENTATION

Students must complete a final project and presentation to obtain the AMIA 10x10 Certificate. The goal of the final project is to identify an informatics problem in your local setting (e.g., where you practice or work) and propose a solution based on what is known from informatics research and best practice. The project is intended to encourage creative thinking and problem solving and does not require implementation of proposed software solutions or other major organizational changes.

If you do not have access to a health care setting, you can do a project based on an issue in another setting, such as a Program Office or VISN.

Jennifer Garvin, PhD, MBA, RHIA, CTR, CPHQ, CCS, FAHIMA serves as faculty advisor and is available to help identify a meaningful issue for your project and for consultation throughout the program.

- Students are required to submit a project proposal and obtain approval for the project topic and plan. This will be submitted to Dr. Garvin through Moodle.
- The final project should be documented in an Abstract and a succinct 2-3 page Executive Summary that describes the problem and proposed solutions, including references that justify the framing of the problem.

Each student will present his/her project to a small group of 8-10 students and faculty at the In-person session at the AMIA Annual Symposium, contingent on conference approval and OIA funding of travel. Alternate arrangements will be made for presentations if necessary.

## COURSE GRADING


There are a maximum of 350 points for the course. The course will be graded as Pass/Fail based on the number of points you earn for your work in each module, the final paper and presentation.

The minimum passing point value is 245 or 70%.

| Grade Item | Max Points |
|---|---|
| Module 1: Fundamentals | 20 |
| Module 2: Evidenced-Based Practice | 30 |
| Module 3: Clinical Workflow Analysis | 20 |
| Module 4: Human Factors | 20 |
| Module 5: Data Standards | 20 |
| Module 6: Clinical Decision Support | 60 |
| Module 7: Information Systems Lifecycle | 40 |
| Module 8: Leading and Managing Change Lectures | 40 |
| Module Subtotals | 250 |
| Final Project | 75 |
| Final Project Presentation | 25 |
| Course Total | 350 |

## PROGRAM STAFF & RESOURCES

### Course Director

Elizabeth Sears Chapman, MS: Ms. Chapman is the Competency Lead for the Workforce Development Group within the Health Informatics Division of the Office of Informatics and Analytics. She has a Masters in Health Policy and Management from Harvard School of Public Health and over 30 years of experience in the VA in various management and Informatics roles.

E-mail: Elizabeth.Chapman@va.gov Phone: 803-608-7012

### Faculty Advisor

Jennifer Garvin, PhD: Dr. Garvin is an Associate Professor in the University of Utah's Department of Biomedical Informatics, a Core Research Investigator at the SLCVAHCS Informatics Decision Enhancement and Surveillance (IDEAS) 2.0 Research Center and an affiliated faculty member of the VA Salt Lake City Health Care System (SLCVAHCS) Geriatric Research Education and Clinical Center. Dr. Garvin's research interests include structured and administrative data, healthcare standards, natural language processing, and developing informatics tools related to important cardiovascular use cases to improve the health of Veterans.

E-mail: Jennifer.Garvin@va.gov Phone: 801.582.1565 ext. 2419

### Faculty Moderators

Faculty Moderators will be available to facilitate discussions and answer questions for each module via Moodle discussion forums. Additionally, you can post content questions on Moodle to Faculty and Teaching Assistants.

### Teaching Assistants

Kathleen Brandt, MS, RN - BC, PMP
Jennifer Kalman, MBA, CPHIMS
Danielle E. Marano, MSN, RN

| Faculty Moderator | Module |
|---|---|
| Diane Montella, MD<br>David M. Douglas, MD | Module 1: Fundamentals of Health Informatics |
| Rose D. Lester, DNP, RN | Module 2: Evidence-based Patient Care |
| Peter Woodbridge, MD, MBA<br>Eric James | Module 3: Clinical Workflow Analysis, Process Redesign, & Quality |
| Ross Speir, PhD (ABD)<br>Scott Wood, Ph.D. | Module 4: Human Factors Engineering |
| Jennifer Garvin, PhD, MBA, RHIA, CPHQ, CCS, CTR, FAHIMA | Module 5: Data Standards |
| Patricia Akerly, MSHA, MSN, CRNP<br>Arthur Wallace, MD<br>Rob Silverman, PharmD | Module 6: Clinical Decision Support |
| Pawan Goyal, MD, MHA, FHIMSS, CPHIMS | Module 7: Information System Lifecycle |
| Laura Kroupa, MD<br>Gregory M. Smith, DDS | Module 8: Leading and Managing Change |

## EXPECTATIONS & TIME COMMITMENT

This course will require approximately twelve hours per week. Upon completion, 138 general education hours will be documented in TMS. Continuing Education Units (CEU) and Continuing Medical Education (CME) are available for the videotaped lectures completed in TMS. No academic credit hours are available.

You will need to budget time to:

- Complete the video lectures and take the post-test and evaluation
- Complete required readings
- Complete the Faculty View
- Complete required learning activities

You are expected to:

- Learn how to navigate the course website
- Learn how to navigate required VA systems
- Keep abreast of course announcements
- Use proper spelling and grammar in all assignments
- Complete reviews of materials by the due dates
- Ask questions if something is unclear
- Let the Faculty Moderator know if you are having difficulties with the material
- Let the Teaching Assistants know if you are having technical difficulties
- Be an active participant in discussion boards and other group activities
- Complete all homework assignments to the best of your ability and on time

Academic Integrity

The homework, knowledge checks, and applied project are for you to demonstrate that you have learned the course material. It is expected that you will properly cite any references or works that are not your own. You are expected to honor intellectual property rights such as copyrights and trademarks.

When citing the work of others, please use the Modified Vancouver Style. The National Library of Medicine offers an online book to help you choose the proper format for your citation: Patrias K. Citing medicine: the NLM style guide for authors, editors, and publishers [Internet]. 2nd ed. Wendling DL, technical editor. Bethesda (MD): National Library of Medicine (US); 2007 – [updated 2011 Sep 15; cited 2012 Nov 30]. Available from: http://www.nlm.nih.gov/citingmedicine

## COURSE REFERENCES

Shortliffe EH, Cimino JJ. Biomedical Informatics: Computer Applications in Health Care and Biomedicine, Fourth Edition. New York, New York: Springer Science +Business Media, LLC 2014.

## COURSE WEBSITE


This online course will be hosted on an internet site hosted by Moodle, a Learning Management System. As part of your course registration, you will be given access to the website and the course materials. To log into the course website:

- Go to the website: http://vatraining.remote-learner.net/
- Enter in the username and password provided by HI Admin
- In the My Courses box on the page that opens, click the link for: VA Health Informatics Certificate Program (AMIA 10x10)

For more information on Moodle, go to http://moodle.org/about/

## TECHNICAL SUPPORT


For technical issues such as problems with registration, access to course, or Moodle issues, please contact:

E-Mail: VHAhi2CertHelp@va.gov

Or Use the Technical Support Forum from within the course.

## RECOMMENDED SOFTWARE, BROWSERS & PLUG-INS

Computer and Web Browser

To participate in this course, you will need either a government or personal computer. The course is hosted on an internet site using a learning platform called Moodle. Moodle generally works well across a range of operating systems and browsers. Regardless of which browser you use, it is recommended that you disable the pop-up blocker for this site.

Supported Browsers:

Recommended minimum browser: Internet Explorer 8 (IE 10 required for drag and drop of files from outside the browser into Moodle), Google Chrome 11, Firefox 4, Safari 5.

Much of the content in this course is built into books or web pages. However, some resources in the course may require other software such as a PDF reader or Flash player. Supported versions are listed below:

- Java: Supported version is 1.6 and above
- Adobe Reader: Supported version is 9.0 and above
- Adobe Flash Player: Supported version is 9.0124 and above

These software programs are already installed on most computers. If they are not on your computer, you can download them here:

Download Adobe Reader: http://get.adobe.com/reader/

Download Adobe Flash Player: http://get.adobe.com/flashplayer/