Health Informatics Certificate Program

(AMIA 10x10)

Course Syllabus

TERM

COURSE DESCRIPTION

Fall 2021, April 12 – October 22, 2021

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 and no course fees or 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. We encourage students to advocate with local leadership for participant to attend one face to face meeting in November at the AMIA Annual Symposium.

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

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| **Module** | **Topic** | **Weeks****(27 Total)** | **Start Date** | **End Date** | **Other Important Dates** |
| **Introduction and Orientation** | **1** |  **April 12** |  **April 19** |  |
| **1** | **Fundamentals of****Health****Informatics** | **2** |  **April 20** |  **May 3** |
| **2** | **Evidence-based****Patient Care** | **3** |  **May 4** |  **May 24** |
| **3** | **Clinical Workflow****Analysis, Process Redesign, & Quality Improvement** | **3** |  **May 25** |   **June 14** |
| **4** | **Human Factors****Engineering** | **2** |  **June 15** |  **June 28** |
| **BREAK** | **1** |  **June 28** |  **July 5** |  |
| **5** | **Data Standards** | **2** |  **July 6** |  **July 19** | **Project Topic Approval Due June 7th**  |
| **6** | **Clinical Decision****Support** | **5** |  **July 20** |  **August 23** |
| **7** | **Information****System Lifecycle** | **4** |  **August 24** |  **September 20** | **Project Reports Due** **Sept. 20th**  |
| **8** | **Leading and****Managing Change** | **4** |  **September 21** |  **October 22** |
| **AMIA Annual Symposium – In-Person****Session, San Diego, CA** **(Contingent on external conference approval in accordance with requirements and availability of travel funding from local facility.)** | **Oct 30, 2021 - Nov 3, 2021****Travel dates vary from Oct 29 – Nov 4** |

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.

Samantha B. Miles, MSN, RN-BC 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 Ms. Miles 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 funding from local facility. 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

Course Director: Elizabeth Sears Chapman, MS, CPHIMS: 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 35 years of experience in the VA in various management and Informatics roles.

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

Faculty Advisor: Samantha B. Miles MSN, RN-BC is a 1994 graduate of the University of Georgia with a BA in Anthropology. She graduated from the University of Memphis with a BSN in Nursing in 2000 and obtained an MSN in Nursing Informatics from Middle Tennessee University in 2008. Ms. Miles is also board certified in Nursing Informatics. She completed the AMIA 10x10 course, served as a VHA Field Health Informatics Mentor and was also a member of VHA CHIO competency development team project. Currently, Ms. Miles is the Informatics and Education RN for Care in the Community (CITC) at the Memphis VAMC.

E-mail: Samantha.Miles@va.gov Phone: 901-523-8990 ext. 6023

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. Please refer to the table for the corresponding Faculty Moderator for each Module.

Teaching Assistants

Kathleen Brandt, MS, RN - BC, PMP Jennifer Kalman, MBA, CPHIMS, FAMIA

Danielle E. Marano, MSN, RN-BC, FAMIA

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| **Faculty Moderator** | **Module** |
| Diane Montella, MD  | Module 1: Fundamentals of HealthInformatics |
| Rose D. Dooley-Stancil, DNP, RN | Module 2: Evidence-Based Patient Care |
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| Kay Calloway, MS, BSN, RN, CHPN  |

 | Module 3: Clinical Workflow Analysis,Process Redesign, & Quality |
| Ross Speir, PhD (ABD) Scott Wood, PhD | Module 4: Human Factors Engineering |
| Sarah A. Maulden, MD, MSSarita Keni, MD, MAJohn Kilbourne, MD | Module 5: Data Standards |
| Jonathan Bagby, MSN, MBA, RN-BCArthur Wallace, MDRob Silverman, PharmD | Module 6: Clinical Decision Support |
| Pawan Goyal, MD, MHA, FHIMSS, CPHIMS | Module 7: Information System Lifecycle |
| Laura Kroupa, MD | Module 8: Leading and Managing Change |

EXPECTATIONS & TIME COMMITMENT



COURSE REFERENCES

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>

Wager KA, Lee FW, Glaser JP. Health Care Information Systems: A Practical Approach for Health Care Management. San Francisco, California: Jossey-Bass 2009.

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: <https://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



RECOMMENDED SOFTWARE, BROWSERS & PLUG-INS

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.

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 11, Google Chrome 30, Firefox 25, Safari 6.

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 10.0 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/>