

**Affordable Learning Georgia Textbook Transformation Grants**  
**Final Report**

**Date: May 18, 2018**

**Round: 5**

**Grant Number: 229**

**Institution Name(s): Kennesaw State University**

**Team Members:**

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**Project Lead: Chi Zhang**

**Course Name(s) and Course Numbers: IT 3503 and IT 6503 Foundations of Health Information Technology**

**Semester Project Began: Spring 2016**

**Semester(s) of Implementation: Fall 2016, Spring 2017, Summer 2017, Fall 2017** (the courses usually are not offered in the Spring semester)

**Average Number of Students in Each Class (Fall 2016 - Fall 2017):**

IT 3503 = 29; IT 6503 = 20

	Courses		Enrollment
	IT 3503	IT 6503	
Fall 2016	39	23	62
Spring 2017	16	Not offered	16
Summer 2017	20	10	30
Fall 2017	41	28	69
<b>Average:</b>	<b>29</b>	<b>20</b>	<b>Total: 177</b>

**Number of Courses Affected by Implementation: Both courses**

**Total Number of Students Affected by Implementation: 135**

## 1. Narrative

### A. Describe the key outcomes, whether positive, negative, or interesting, of your project.

We began the transformation project by facing out the required textbook by Garteer, Richard, Health Information Technology and Management, ISBN-13: 9780131592674. Our team started with the existing materials that the project lead had been developed covering the topics in the textbook and beyond. These materials were in the form of PowerPoint slide sets and online materials. They are converted into Word format and added the lecture learning objectives, and began of collecting additional topics and related content from a number of Health IT resources, including the major Health IT and health information management organizations <http://www.himss.org/>, <http://www.ahima.org/>, <https://www.ama-assn.org/>, federal and state health IT related agencies <https://www.hhs.gov/>, <https://www.healthit.gov/>, <http://ga-hitec.org>, and Health IT web portals, such as <http://www.himsswire.com/>, <http://www.healthit.gov/newsroom/news-releases>, <http://www.hitechanswers.net/>, <http://www.healthcareitnews.com/>, <http://www.healthcareupdatenewsservice.com/>, <http://www.govhealthit.com/>, and <http://www.healthdatamanagement.com/>.

Since the project lead is a Certified Professional in Healthcare Information and Management Systems <http://www.himss.org/health-it-certification/cphims> since 2013 and a Certified Health Data Analyst <http://www.ahima.org/certification/chda> since 2017, the content offered by the HIMSS and AHIMA continuing education virtual events <http://www.himss.org/health-it-education/learning-center> were also collected as the current issues to complement the course materials.

It is emphasized in the course materials and to the students that since IT is advancing fast and consequently the current issues of Health IT are changing, the materials provided in the class are the foundational concepts of Health IT (as reflected on the course title). A selection of the above web links provided to students is in Appendix. Students are asked to browse them on a regular basis to keep current in the field and share the current issues they think interesting with the class on the class discussion board. Some discussion assignments are designed for this purpose. The course materials of both IT 3503 and IT 6503 can be downloaded from <http://ksuweb.kennesaw.edu/~czhang4/>.

The textbook transformation experience provides us (course designers, developers, and instructors) an opportunity to thoroughly reevaluate our Health IT curriculum, examining the course learning outcomes, and how they map to the program outcomes. The process of evaluating the online materials makes us more aware of the recent trends and current issues in Health IT and also helps our ongoing continuous improvement of the courses.

Kennesaw State uses Digital Measures (DM) to evaluate teaching effectiveness. Students in the classes skipped the two questions about textbooks in DM. They might think this is a class without textbook and they did not have to answer the questions. We need to remind students in the future about leaving comments on the instructional materials.

## **2. Quotes**

Provide three quotes from students evaluating their experience with the no-cost learning materials.

*“This course provided meaningful state of the art material during the course. The instructor is very much on top of her subject matter. I walked away from this course with a*

*much greater exposure and understanding of HIT. I appreciate the instructor-compiled materials, up-to-date and free.”*

*“The course content had many different examples of health IT systems. The content was varied enough so that I could apply many of the topics in real world application. There were many opportunities to learn, and all topics included real world application. “*

*“The instructor provides many opportunities for me as a student to learn. I am new to the healthcare field and the topics that were covered in the course content reviewed many different types of HIT systems that may not be able to be covered in a single textbook.”*

**3. Quantitative and Qualitative Measures**

**3a. Overall Measurements**

**Student Opinion of Materials**

**Was the overall student opinion about the materials used in the course positive, neutral, or negative?**

Overall student opinion about the materials used in the course was positive. A few students commented that the course materials could be organized more coherently and the transition between the modules could be improved. After receiving the comments, we added the mapping between module objectives and course objectives to guide students through the modules.

Courses	Total number of Respondents	Opinion on the non-cost-material		
		Positive	Neutral	Negative
IT 3503 (HIT – undergraduate level)	12	7	2	1
IT 6503 (HIT – graduate level)	18	12	5	1

**Student Learning Outcomes and Grades**

**Was the overall comparative impact on student performance in terms of learning outcomes and grades in the semester(s) of implementation over previous semesters positive, neutral, or negative?**

The overall impact on student performance in terms of grades is neutral but students' perception of the rich and up-to-date learning materials is positive and encouraging. The materials make students well aware of the fast advancing landscape of the HIT field, from adoption of electronic health record systems since 2009 when HITECT Act was enacted to the current focus on health information security, interoperability, and using APIs to access health information. The learning materials also help students to have the ability to be life-long learner as IT professionals, which is one of the Program Educational Objectives of both the BSIT and MSIT programs.

Choose One: (Unknown at this time)

- Positive: Higher performance outcomes measured over previous semester(s) – *in terms of achieving learning outcomes*
- Neutral: Same performance outcomes over previous semester(s) – *in terms of grades*
- Negative: Lower performance outcomes over previous semester(s)

**Student Drop/Fail/Withdraw (DFW) Rates**

**Was the overall comparative impact on Drop/Fail/Withdraw (DFW) rates in the semester(s) of implementation over previous semesters positive, neutral, or negative?**

**Drop/Fail/Withdraw Rate:** (Unknown at this time).

\_\_\_\_\_ % of students, out of a total \_\_\_\_\_ students affected, dropped/failed/withdrew from the course in the final semester of implementation. *Unknown at this time.*

Choose One:

- Positive: This is a lower percentage of students with D/F/W than previous semester(s)

- x   Neutral: This is the same percentage of students with D/F/W than previous semester(s) – *the final grade worksheets are unavailable in the Banner system to the instructors at this time. But based on the grades of quizzes and assignments, there is not significant difference found in terms of the D/F/W rate.*
- Negative: This is a higher percentage of students with D/F/W than previous semester(s)

### **3b. Narrative**

We used both quantitative and qualitative methods to assess the effectiveness of the learning materials developed in Fall 2017 when both IT 3503 and IT 6503 are offered.

Performance data (success rate, grades DFW rate), end-of-semester student survey, and student feedback to the learning materials were utilized. The end-of-semester survey had open-ended questions for students to provide more input and elaborate their experience. The analysis of the comments shows that most students feel positive about the instructor-generated materials and appreciate the fact of no-cost for the ‘textbooks’.

### **4. Sustainability Plan**

Kennesaw State University and the Department of Information Technology encourage providing no-cost and low-cost courses for the students. The project team has been using these course materials – lecture notes, slides, assignments and assessments. The project lead has been highly involved in continuing education of her own, going to HIT-related conferences and workshops, taking online courses, and signing up for webinars, offered by HIMSS and AHIMA and other professional organizations. The continuing education is also the requirements for fulfilling her CPHIMSS and CHDA certification renewals. The project lead, also serving as the HIT course coordinator, has been continually updating and editing the course materials and plans to work on an open textbook in the near future.

## 5. Future Plans

This project has served to increase the project team’s awareness of free and open learning materials. It encourages both instructors and students to keep current with the topics of the subject. It enables students not only to learn the subject matter in the course but also aware of life-long learning expectation, one of the program educational outcomes. The project team is looking to apply the same successful experience to other HIT courses through future ALG grants.

## 6. Description of Photograph (attached below)



Left-right: Dr. Chi Zhang, project lead, and Dr. Bob Brown. In front of the Department office of Information Technology, College of Computing and Software Engineering, Kennesaw State University.

## Resources for Health Information Technology and Health Information Management

### 1. Health IT News (check frequently)

1. **Health IT News** (published in partnership with HIMSS)  
<http://www.healthcareitnews.com/>
2. **Health IT Buzz** (the latest on HIT from ONC) <https://www.healthit.gov/buzz-blog/>
3. **HIMSS' Health IT Pulse** <http://www.himss.org/news>
4. **Mobi Health News** (a publication of HIMSS media) <http://www.mobihealthnews.com/>
5. **HIMSS Webinars:** <http://www.himss.org/Events/index.aspx?EventType=1986&>

### 2. Health IT (HIT) and Health Information Management (HIM) organizations

1. **ONC** (The office of National Coordinator for Health Information Technology)  
[http://healthit.hhs.gov/portal/server.pt/community/healthit\\_hhs\\_gov\\_home/1204](http://healthit.hhs.gov/portal/server.pt/community/healthit_hhs_gov_home/1204)
2. **HIMSS** (Healthcare Information and Management Systems Society)  
<http://www.himss.org>
3. **mHIMSS** (Mobile HIMSS) <http://www.mhimss.org/>
4. **AHIMA** (American Health Information Management Association)  
<http://www.ahima.org/>
5. **AHRQ** (Agency for Healthcare Research and Quality), National Resource Center for Health Information Technology  
<http://healthit.ahrq.gov/>
6. **Health Information Privacy and Security Collaboration (HIPSC)**  
[http://healthit.ahrq.gov/portal/server.pt?open=512&objID=654&&PageID=13062&mode=2&in\\_hi\\_userid=3882&cached=true](http://healthit.ahrq.gov/portal/server.pt?open=512&objID=654&&PageID=13062&mode=2&in_hi_userid=3882&cached=true)
7. **DOQ-IT** (Doctors' Office Quality Information Technology)  
<https://www.qualitynet.org/>
8. **HIPAA for Professionals** <https://www.hhs.gov/hipaa>

### 3. Health IT related certifications

1. **CAHIMS/CPHIMS** from HIMSS
2. **CPHIT**: Certified Professional in Health Information Technology
3. **HCISSP**: HealthCare Information Security and Privacy Practitioner
4. **RHIA**: Registered Health Information Administrator
5. **RHIT**: Registered Health Information Technician

For the certification details, comparisons, job board search results for the certifications, please check out <http://www.tomsitpro.com/articles/healthcare-it-certifications,2-696.html>.