Program Review

Master of Science in Health Informatics

College of Health Professions

November 2015

MARSHALL UNIVERSITY
Program Review

Marshall University

Date: 11/1/2015

Program: Master of Science in Health Informatics

Date of Last Review: Not Applicable – First Program Review

Recommendation:
Marshall University is obligated to recommend continuance or discontinuance of a program and to provide a brief rationale for the recommendation.

1. Continuation of the program at the current level of activity; or

2. Continuation of the program at a reduced level of activity or with corrective action: Corrective action will apply to programs that have deficiencies that the program itself can address and correct. Progress report due by November 1 next academic year; or

3. Continuation of the program with identification of the program for resource development: Resource development will apply to already viable programs that require additional resources from the Administration to help achieve their full potential. This designation is considered an investment in a viable program as opposed to addressing issues of a weak program. Progress report due by November 1 next academic year; or

4. Development of a cooperative program with another institution, or sharing of courses, facilities, faculty, and the like; or

5. Discontinuation of the program

Rationale for Recommendation: (Deans, please submit the rationale as a separate document. Beyond the College level, any office that disagrees with the previous recommendation must submit a separate rationale and append it to this document with appropriate signature.)

Recommendation: Dr. Girmay Berhe
Signature of person preparing the report:

Recommendation: Signature of Program Chair:

Recommendation: Signature of Academic Dean:

Recommendation: Signature of Chair, Academic Planning Committee: (Baccalaureate pgms only)

Recommendation: Signature of Chair, Faculty Senate/Chair, Graduate Council:

Recommendation: Signature of the Provost and Senior Vice President for Academic Affairs:

Recommendation: Signature of the President:

Recommendation: Signature of Chair, Board of Governors:

Date:

Date:

Date:

Date:

Date:

Date:
College/School Dean’s Recommendation

Deans, please indicate your recommendation and submit the rationale.

**Recommendation:** Continuation of the program with identification of the program for resource development:

**Rationale:**
(If you recommend a program for resource development identify all areas for specific development)

The M.S. program in Health Informatics fulfills the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) competencies and is one of the first three accredited Master’s degrees in the U.S. within its first two years of operation. In the recent publication entitled “Top 25 Master’s in Healthcare Informatics Degrees ranked by Affordability in 2014”, Marshall’s HI program was ranked number one. The program is unique in that three colleges provide the coursework for the major, the College of Health Professions (COHP), College of Business (COS), and College of Information, Technology, and Engineering (CITE). There are five full time faculty members associated with the Health Informatics Curriculum (Dr. Girmay Berhie, Dr. Shane Tomblin, Dr. Alberto Coustasse-Hencke, Dr. Eldon Larsen, and Mr. John Biros). The Health Informatics department employs five part-time positions including hired help and two graduate assistants, who assist in the daily tasks of running the health informatics department.

Marshall’s Health Informatics advisory committee is comprised of 37 CEO, CIO, Directors, DBAs, and other executive and leaders of major health care facilities and programs in the surrounding area of Marshall University. These influential and knowledgeable individuals in the field of Health Informatics help guide the program in making curriculum and progress decisions that keep Marshall’s HI program on the cutting edge and help meet workforce demand. This advisory committee also works as a networking tool to open up opportunities for student internships and future employment.

In order to expand enrollment, an additional faculty (field coordinator) and space for a computer lab are required. The program doesn’t have a certified electronic health record (HER) simulation available to HI students. They are currently reading about it, viewing screenshots, or small demos by guest lecturers. As evident in the graduate surveys and from talking to students, this is major lacking of the program. Thus, HI students do not get to work with this technology, which is foundational to the field until they are in a professional work environment. In preparation of the AY17 budget, funds for one faculty and support for the computer lab will be included.

I recommend continuation of the HI program with identification of the program for resource development.

Michael Prewitt

11/4/15

Signature of the Dean

Date
Marshall University

Program Review
For purposes of program review, the academic year will begin in summer 2010 and end in spring 2015.

Program: **Master of Science in Health Informatics**

College: **Health Professions**

Date of Last Review: *This is the Program's First Review*

I. Consistency with the University Mission

**Health Informatics Mission:** The mission of the Health Informatics program is to prepare students with the knowledge and skills in health information technology that will enable them to enhance the healthcare delivery system, thereby increasing the quality and affordability of healthcare.

Therefore, the Health Informatics Department will:
- Teach students in the three principal areas: Information Systems, Information Technology, and Health Informatics
- Create a culture of collaboration in research, education, and innovation of ideas and solutions.
- Establish relationships with health care related organizations to provide learning experiences and potential job placement.

The Health Informatics mission is consistent with the mission of the College of Health Professions in its commitment to offering quality undergraduate and graduate education in the health professions. The Health Informatics mission reaches out to local and non-local health care related organizations and is by definition responding to the future needs of society in health care by enhancing the technology and improving the quality of the entire health care system. The health informatics program is creating health care professionals who will elevate the level of technology implemented in the health care system, which makes reaching rural and underserved areas a more feasible endeavor.

The Health Informatics mission is additionally consistent with Marshall University’s mission in that it provides an affordable, high quality graduate education that contributes to the development of society and individuals though health information technology. The health informatics department provides services and resources to promote student learning, enhances the quality of health care in the region, creates economic development through research, collaboration, and technological innovations, critically examines issues facing society, and promotes students using their knowledge, creativity, and critical thinking skills to make their communities better places.
II. Accreditation Information

Name of Accrediting Organization:
Commission on Accreditation for Health Informatics and Information Management Education

Date of Most Recent Self-Study and Accreditation Visit:
Self-Study: October 25th, 2011
Accreditation Visit: January 17th, 2013

Accreditation Status:
Accredited as of April 9, 2013 for ten years with an annual report due each year.

Accrediting Organization’s Report:
This was the report following the application and since then, there have been changes instituted to address issues under “Suggestions for Improvement”. For example, an independent study course was added to assist in on time graduation. Unfortunately, not all of these can be addressed with the current resources (For example, program director burnout). See the section of the program review entitled “V. Resource Development” for more information on needed resources.

Site Visit Report Prepared by:
Sue Feldman, Review Panel/Site Visit Team Leader
Lawrence Pawola, Review Panel/Site Visit Member
Linde Tesch, Review Panel/Site Visit Member

Program Strengths (Site Visitor’s Report)
- The practicum is unique and puts classroom learning into practice.
- Interdisciplinary of the program - three different departments
- Diversity of the student population
- Program director passion and desire to see the program succeed (Internal champion)
- Students feel that program director is approachable and responsive to their needs
- The students feel that they are well prepared for the work force and are optimistic about their futures.
- A strong and diverse advisory board – that are actively engaged the program.
- Strong collaboration across colleges – dean and faculty.
- Collaboration from colleges to the student level – students are aware of the value of collaboration.
- Potential to link the HI program to other disciplines such as nursing and Pharmacy.

Suggestions for Improvement (Site Visitor’s Report)
There are a couple of curricular areas for improvement:
- Research methods and data analytics – mixed methods research class (this has been added)
- Ethics for informatics (this has been added)
• Course sequencing – attention to ensuring that courses are offered without any gaps in coursework – some students mentioned that they have to delay graduation because a course is not offered – this would be a good place to offer a special topics course or independent study (this has been addressed)

• Enrollment is a driver to program growth and sustainability. As such, there are a couple of areas related to enrollment:
  o Consider using the undergrad programs (example the BS in Health Sciences and Public Health) as feeders for the Health Informatics programs, for instance a 3+2 or 4+1 model (this has been addressed)
  o Consider capitalizing on being an innovative first mover in the state by developing employer community relationships to feed enrollment. These relationships will also enable the program to have access to "early information" regarding health informatics changes in policies and best practices. (this has been addressed)

There is a concern that Dr. Berhie is just one person and seems to be the driving force behind the health informatics program and without someone to share the operational load. What happens to the program if something happens to him? (This concern is the root of the first request for additional resources as seen in section V)

Lastly, consider supporting the faculty in keeping current with health informatics trends and issues and in broadening the areas in which they teach, relative to health informatics. A couple of viable options in this area might be to encourage them to join AMIA and HIMSS. Students are also encouraged to join these organizations and to begin submitting poster presentations. (The COHP is now providing HIMSS membership fees for the COB and CITE HI faculty)

III. Adequacy of the Program

1. Curriculum:
The Health Informatics (HI) program was developed to meet the increasing demand for health care professionals possessing the skills in technology and health care to join the health care workforce in the great task of meeting the meaningful use requirements to improve patient care. Upon creation of the program, the core competency set out by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) were considered as the foundation for the program. Based on workforce needs, CAHIIM outlined 21 competencies in information systems, 12 in informatics, and 12 in information technology. The HI program looked at the different colleges and courses already being offered that closely filled those 46 competencies. Some of these competencies were already being taught in a combination of courses from the College of Health Professions (COHP), College of Business (COS), and College of Information, Technology, and Engineering (CITE). Therefore, the Health Informatics program began a new and unique model by combining the resources of those three colleges. The M.S. program in Health Informatics requires 39 credit hours to complete the degree. It fulfills the CAHIIM competencies and became one of the first three accredited Master’s degrees in the U.S. within its first two years of operation. In the recent publication entitled “Top 25 Master’s in Healthcare Informatics Degrees ranked by Affordability in 2014”, Marshall’s HI
program was ranked number one. MBA Healthcare Management included programs of high overall quality as determined by a variety of holding elements such as being CAHIIM accredited. Thus, Marshall’s Health Informatics program has introduced minimal costs by utilizing the three colleges’ existing faculty and resources, but yet has produced an outstanding educational program in terms of quality and meeting student needs.

Another distinctive innovation of the Health Informatics Curriculum is the Health Informatics program’s 400-hour practicum. This intense student focused learning tool requires HI students to be exposed to all of the core CAHIIM competencies in a professional work environment in order to ensure they have acquired the necessary skills to be successful professionals in the Health Care Arena. Additionally, this practical educationally directed work experience offers a multitude of networking opportunities, thereby potentially opening doors for job placement. During the accreditation review in 2012, the CAHIIM accreditation team expressed that this was the only HI program to offer such as valuable and rigorous learning experience.

A listing of courses offered in the graduate program is provided in Appendix VIII.

2. Faculty:
There are five full time faculty members teaching the Health Informatics Curriculum (Dr. Girmay Berhie, Dr. Shane Tomblin, Dr. Alberto Coustasse-Hencke, Dr. Eldon Larsen, and Mr. John Biros) and all hold tenured status. The summary of faculty information and achievements for each faculty will be listed below. In the last year of the review (summer 2014 to spring 2015), the Health Informatics department employed five part-time positions including hired help and two graduate assistants, who assisted in the daily tasks of running the health informatics department.

Appendix I contains detailed Faculty Data Sheets for each member of the graduate faculty.

**Girmay Berhie, PhD, MSW, MSIS**

**Positions**
2015-2018 **Co-PI**, The Marshall University Joan C. Edwards School of Medicine (MUSOM) and School of Pharmacy (MUSOP) is requesting $476,726 to support the continued progress of the Health Care Pipeline Initiative (HCPI).

2014-Present **Consultant**, University of Cincinnati for programs such as the NIH Bridges to Bachelor’s Research Education program (R25) $2.5 million

2014-Present **Director Marshall University Director of Louis Stokes Alliance for Minority Participation (LSAMP) Initiative** Marshall University is a member of the KY-WV LSAMP Alliance ($2,500,000)

2013-2015 **Project Independent Evaluator Prester**, SAMSHA grant initiative Substance Abuse and Mental Health Services Administration to Expand Care Coordination through the Use of Technology-Assisted Care in Targeted Areas of Need ($840,000)
2004-Present  **Co-Director of Health Science and Technology Academy (HSTA).**  
Explore the tendency of pre-hypertension and diabetic among high-school students who attended the Health Science and Technology Academy (HSTA) during the week of July 11-16, 2010 at Marshall University.

**Advisory and Editorial Board Member**  
2012-Present  **Associate Editor.** Marshal Journal of Medicine (MJM) at Marshall University.  
2014-Present.  **Editor.** Health Informatics for the Curious: Why Study Health Informatics?  
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- Vice-President of the West Virginia Health Information Management Association, 2015  
- Member of the Health Informatics, 2010-Present  
- Member of the American Public Health Association, December 1994-Present  
- Member of Health Service Research, 1994-Present  
- Member of American Health Information Management Association (AHIMA), 2010-Present  
- Member of American Medical Informatics Association (AMIA), 2012-Present  
- Member of Health Information Management Systems Society (HIMSS), 2012-Present

**Recent Publications**  


**Technical Reports**  
- Health Informatics Program Self-Study (2010 – 2013)  

**Current Research Support**  
1. Health Informatics: The Development and Implementation of a Unique Model for a Collegiate Program  
2. The development of the West Virginia Health Innovation Center: The Center of Excellence in Health Informatics
4. The development of apps in mobile e-Health intervention in obesity in rural areas.
5. The development of a program to enhance sustainable self-management of health in congestive heart failure patients through e-Health.

**Graduate Health Informatics Courses Taught/Co-taught**
1. The Role of EHR and Development of Apps for Telemedicine (HP 605)
2. Quality and Performance Improvement in Health Care (HP 615)
3. Legal and Regulatory Environment for Health Care and Informatics (HP 620)
4. Research Methods and Data Analytics for Health Informatics (HP 630)
5. Health Informatics Practicum (HP 650)
6. Independent Study (HP 685-688)

**New Health Informatics Course Development**

Upon seeking the Health Informatics program accreditation from CAHIIM in the spring of 2012, as chair of the Health Informatics program, Dr. Berhie received feedback from CAHIIM stating deficits in the program that it needed to address in order to become accredited. Therefore, with faculty input, Dr. Berhie proposed HP 620, HP 630, and HP 685, changing it from a 33 hour program to a 39 credit hour program in the Fall 2012 term.
Shane Tomblin, PhD

**Positions**
2008-Present  **Associate Professor of MIS**, Marshall University

**Professional Activities**

**Editorial Review Boards**
Interdisciplinary Journal of Information, Knowledge, and Management 2006 - 2008

**External Reviewer**
European Journal of Information Systems 2007 - 2008
Hawaii International Conference for Systems Science 2006
Information Systems Management 2008
9th International Business Information Management Association Conference Marrakech, Morocco 2006
The Learning Organization 2005 – Present

**Recent Publications**

**Presentations**
“Implications of XBRL for Accounting Reporting,” International Seminar on Organizational Effectiveness Through IT Enabled Strategies, January 6, 2004, New Delhi, India. (Co-authored with Suneel Maheshwari, PhD and Purnendu Mandal, PhD)

**Graduate Health Informatics Courses Taught/Co-taught**
Management Information Systems (MIS 678)

**New Health Informatics Course Development**
Healthcare Telecommunications and Telematics (MIS 680 | 2010)

Alberto Coustasse-Hencke, PhD, MPH, MD, MBA

**Positions**
2008-Present   Associate Professor of Management, Marshall University

**Honors and Memberships**
- Best Paper award Global Health care, 2013 Business and Health Administration Conference/MBAA, Scholarship/Research, February 28, 2013
- Best Paper in the Changes in the Health Informatics and Technology Track, Business and Health Administration Conference/MBAA, Scholarship/Research, February 28, 2013
- Best Paper in the Finance Issues in Healthcare Track, Business and Health Administration Association/MBAA, Scholarship/Research, February 28, 2013
- Best Paper Award Health Informatics and Technology Track, Business and Health Administration Association, Scholarship/Research, March 30, 2012
- Member, Business and Health Administration Association, 2008-Present
- Member, Health Information Systems Committee, 2008-Present

**Professional Activities**

**External Reviewer**
Disability and Health Journal 2013 – Present
Permanente Journal 2012 – Present
Pediatrics Journal 2012 – Present
Health Service Research 2011 – Present

**Recent Publications**
RFID AND ITS IMPACTS TO THE HOSPITAL SUPPLY CHAIN, Perspectives in Health Information Management, Published, Coustasse-Hencke, A. M., Tomblin, M. S., September 30, 2013
EXPANDING TECHNOLOGY IN THE ICU: A CASE FOR THE UTILIZATION OF TELEMEDICINE, Telemedicine and e-Health, Accepted, Coustasse-Hencke, A. M., August 2013
Adoption Of The ICD-10 Standard In The United States: The Time Is Now, The Health Care Manager, Published, Coustasse-Hencke, A. M., August 1, 2013, 32
Telepsychiatry in the 21st Century: Transforming Healthcare with Technology, Perspectives in Health Information Management, Published, Coustasse-Hencke, A. M., Tomblin, M. S., August 1, 2013

Presentations

Graduate Health Informatics Courses Taught/Co-taught
1. The Health Care System (HCA 600)
2. Management of Medical Technology (HCA 656)

Eldon Larsen, PhD

Positions
2003-Present Professor of Engineering, Marshall University
1999-2003 Associate Professor of Engineering, Marshall University
1997-1999 Adjunct Faculty Member in Engineering Management, Marshall University

Honors and Memberships
• Coordinator of the Master of Science in Engineering degree program - 2003-present
• Chair of the Marshall University Graduate Council from 2001 to present
• Coordinator of the Engineering Management Program - 1999-2003
• John Deaver Drinko Distinguished Fellow Award, awarded by Marshall University for 2009-2010.
• Marshall University Distinguished Artist and Scholar Award, senior division, 4/2009.
• Named a Fellow, in the American Institute of Chemical Engineers, 2/2009.
• Distinguished Service Award, for service as national Chair of the Management Division, American Institute of Chemical Engineers (AIChE), 11/2006.
• Distinguished Service Award, Charleston Section, AIChE, 5/2006.
• Certified as a Project Management Professional, Project Management Institute, 9/22/2005.
• Ashland Outstanding Graduate Advisor of the Year Award, Marshall University, 5/2004.

Professional Activities
• Served two years as President & CEO of the West Virginia/Ohio Valley Chapter of the Project Management Institute (PMI), 2006-2007.
• Served two years as President/CEO-Elect of the PMI West Virginia/Ohio Valley Chapter, 2004-2006.
• Served one year as Director at Large of the PMI West Virginia/Ohio Valley Chapter, 2003.
• Currently serving as a Director in the national Management Division of the American Institute of Chemical Engineers (AIChE), 2009-2011.

Recent Publications

Presentations
Ethical Project Management, at the 2011 AIChE Annual Meeting, Minneapolis, MN, October 17, 2011.
Tools and Techniques for Managing Innovation from Beginning to End, at the 2011 AIChE Annual Meeting, Minneapolis, MN, October 18, 2011.
Leading, Managing, and Becoming a Team, at the 2011 AIChE Annual Meeting, Minneapolis, MN, October 17, 2011.

Graduate Health Informatics Courses Taught/Co-taught
Project Management (EM 660)
John Biros, MS

Positions
1997-Present  Associate Professor of Information Systems, Marshall

Graduate Health Informatics Courses Taught/Co-taught
Database Management (IS 623)
Health Informatics Application (IS 665)

Further evidence of faculty achievements can be found in Appendix II Faculty Data.

3. Students:

Entrance Standards:
To be admitted to the M.S. program in Health Informatics, students must have an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale for all previously completed undergraduate university work, and submit GRE scores from a GRE test taken within the past five years.

The Health Informatics program may admit applicants conditionally, for one term, pending receipt of GRE scores.

The Health Informatics program may admit applicants provisionally, on a limited basis, at the discretion of the program director.

Entrance and Exit Abilities of past five years of graduates:

Appendix II shows that our last three years of graduate students entered the program with undergraduate GPAs that ranged from yearly means of 2.01 to 3.48. The yearly mean GRE Verbal scores ranged from 305 to 320, and the yearly mean GRE Quantitative scores ranged from 385 to 580, and the mean GRE Writing scores ranged from 2.0 to 3.5. Appendix III shows that these graduates compiled respectable GPAs during their graduate program, with yearly means ranging from 3.61 to 3.82.

4. Assessment Information:

a. Please refer to Appendix IV for a summary of our program’s assessment of student learning.

b. Other Learning and Service Activities:
Health Informatics does not offer other learning and service activities.
c. Plans for Program Improvement:

<table>
<thead>
<tr>
<th>#</th>
<th>Strategy for Improvement</th>
<th>Resources Needed</th>
<th>Goal for Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Educational Version of EHR:</strong> The Health Informatics Department has already received a quote from Cerner for implementation.</td>
<td>Initial Fee Yearly Fee</td>
<td>&lt; 1 Year</td>
</tr>
<tr>
<td>2</td>
<td><strong>Practicum Field Practicum Coordinator:</strong> Faculty Member: This individual will be a graduate from a CAHIMM accredited Health Informatics Program.</td>
<td>$50,000-$60,000 (9 month salary)</td>
<td>&lt; 1 Year</td>
</tr>
<tr>
<td>3</td>
<td><strong>Equitable Director Salary:</strong> Director Salary will be made consistent with peer institutions and at the level originally stated in the Intent to Plan.</td>
<td>As stated in the Intent to Plan.</td>
<td>&lt; 1 Year</td>
</tr>
<tr>
<td>4</td>
<td><strong>Program Promotion:</strong> The Health Informatics field and program is not widely recognized. It needs promotion, marketing, and student recruitment efforts.</td>
<td>Dedicated Graduate Assistant.</td>
<td>&lt; 1 Year</td>
</tr>
<tr>
<td>5</td>
<td><strong>Professional Development:</strong> The Health Informatics faculty need to attend conferences, publish papers, continue learning in the field, etc.</td>
<td>Additional Funds.</td>
<td>&lt; 2 Years</td>
</tr>
<tr>
<td>6</td>
<td><strong>Accelerated Master's Degrees (AMDs):</strong> With Health Informatics being student-focused program, an AMD with the College of Science has already been implemented. These advantageous arrangements for promising students will be sought after in other undergraduate programs such as management information systems or digital forensics.</td>
<td>N/A</td>
<td>&lt; 3 Years</td>
</tr>
<tr>
<td>7</td>
<td><strong>Guest Speakers:</strong> The Health Informatics has always incorporated guest speakers from the field and this has always been a greatly appreciated component of the courses by the students. The Health Informatics department will strive to keep providing this learning aspect, and would like to provide guest lectures an incentive for coming. (To this point, the guest lecturers have generously donated their time.)</td>
<td>Incentive Funds (or other non-monetary incentives)</td>
<td>&lt; 2 Years</td>
</tr>
<tr>
<td>8</td>
<td><strong>Training in Data Analytic Software:</strong> It is becoming increasingly evident through feedback from the advisory committee, individuals in the field, and student's practicum experiences that students need to be trained in various data analytics software such as SAS, SPSS, and related data analytics techniques such as data representation.</td>
<td>Funding for a computer lab and teaching resources.</td>
<td>&lt; 2 Years</td>
</tr>
<tr>
<td>9</td>
<td><strong>Increased Collaboration with the School of Medicine and the College of Science:</strong> Health Informatics is a highly collaborative degree and field. Its course work is already a joint venture of three colleges. To acquire the best educational experience and develop the needed skillset for job placement, Health Informatics students need to be utilizing the best resources Marshall University has to offer.</td>
<td>Collaboration.</td>
<td>&lt; 3 Years</td>
</tr>
<tr>
<td></td>
<td><strong>Marshall Journal of Medicine Participation:</strong> The Health Informatics Office will strongly encourage students to apply for their research to be published in the Marshall Journal of Medicine.</td>
<td>N/A</td>
<td>&lt; 1 Year</td>
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<td></td>
<td><strong>Offering Courses Online:</strong> In efforts to stay on the cutting edge, the Health Informatics program is going to explore possibilities of online offering or other options such as using blackboard collaborate for remote class attendance.</td>
<td>Program Support</td>
<td>&lt; 2 Years</td>
</tr>
<tr>
<td></td>
<td><strong>Expanding to the D.C. Area:</strong> The Health Informatics program would like to explore the option of opening an office in D.C. to increase program awareness and student enrollment.</td>
<td>Necessary Funding and program support</td>
<td>&lt; 3 Years</td>
</tr>
<tr>
<td></td>
<td><strong>Network Nationally and Globally:</strong> To stay current, Marshall’s Health Informatics program needs to network with other institutions of health informatics nationally and globally to learn and share best practices moving forward in this evolving field. This will enable Marshall’s Health Informatics program to be on the cutting edge and continue to bring prestige to Marshall University.</td>
<td>Travel, Innovation, Networking Funding.</td>
<td>&lt; 5 Years</td>
</tr>
<tr>
<td></td>
<td><strong>Post-Graduate Certificates:</strong> The Health Informatics program would like to offer a post-graduate certificate for Health Care Professionals, who are currently in the field, but need supplemental education in Health Informatics to effectively operate in their position. Examples: Nurse-Informatics Certificate, Clinical-Informatics Certificate, etc.</td>
<td>Necessary Funding and Teaching Resources</td>
<td>&lt; 5 Years</td>
</tr>
<tr>
<td></td>
<td><strong>PhD in Health Informatics:</strong> Explore the possibility of offering a PhD for the tri-state area.</td>
<td>Program Support and Resources</td>
<td>&lt; 5 Years</td>
</tr>
</tbody>
</table>
Graduate Satisfaction:
The Health Informatics program has sent surveys to all 12 graduates twice and has acquired four responses. This survey has five quantitative questions on a Likert scale from 0 to 4. These questions were themed in area of “Helped Acquire Needed Knowledge”, “Prepared Sound Judgment”, “Think Critically”, “Communicated Effectively”, and “Ethical Professional”, Overall “Experience”. All four respondents strongly agreed the program helped them in those areas, except for one respondent who generally agreed that the program prepared them to communicate effectively. This is further illustrated on the following graph.

The survey also contained three qualitative questions. The first question requested two suggestions for strengthening the program. The responses varied but included the following:

- exposure to current commercial EHR products,
- provide students with informatics-based research internships,
- exposure to more real job scenarios,
- admission of students should be diverse to students of various educational backgrounds and job experience, and
- exposure to organizations that deal with insurance claims in healthcare.

The second question was what knowledge or skills were expected upon employment not included in the program. The responses varied and included:

- leadership and management,
- knowledge of Uniform Data System (UDS),
- ability to use research software suite for survey creation,
- implementation and analysis, knowledge of clinical workflows in community healthcare, and
- further technical skills, oracle databases and data analysis.
The third question requested suggestions to help better prepare future graduates. The responses included:

- students acquiring as much IT and database knowledge as possible,
- statistics and research methodology coursework,
- students should get as much out of the Project Management class they can,
- the Internship is a good stepping stone in getting ready for career advancement with all the student tracking components, and
- students should take time and learn the skills especially SQL Queries and scripts.

Following is assessment data results on MSHI.

**Answer progress in program.**

<table>
<thead>
<tr>
<th>Answer</th>
<th>2014 Response</th>
<th>2014%</th>
<th>2015 Response</th>
<th>2015%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-15</td>
<td>3</td>
<td>75%</td>
<td>2</td>
<td>29%</td>
</tr>
<tr>
<td>16 - 30</td>
<td>1</td>
<td>25%</td>
<td>3</td>
<td>43%</td>
</tr>
<tr>
<td>31-45</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>29%</td>
</tr>
<tr>
<td>46+</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>100%</td>
<td>7</td>
<td>100%</td>
</tr>
</tbody>
</table>

**MSHI helped students:**

<table>
<thead>
<tr>
<th>Question</th>
<th>2014 Mean</th>
<th>2015 Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop the ability to write effectively.</td>
<td>4</td>
<td>4.2</td>
</tr>
<tr>
<td>Develop the ability to use mathematics in everyday life.</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Find scholarly information, to evaluate it critically and to use it</td>
<td>4.33</td>
<td>4.2</td>
</tr>
<tr>
<td>effectively.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop the ability to express myself effectively through speaking.</td>
<td>3.75</td>
<td>4.1</td>
</tr>
<tr>
<td>Develop multicultural and global perspectives.</td>
<td>4.5</td>
<td>4.2</td>
</tr>
<tr>
<td>Analyze and evaluate issues and solve real-world problems in a</td>
<td>4.25</td>
<td>4.3</td>
</tr>
<tr>
<td>manner that is ethical and supportive of our civic well-being.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broaden my appreciation of the arts.</td>
<td>3</td>
<td>3.56</td>
</tr>
<tr>
<td>Examine issues from multiple perspectives.</td>
<td>4.25</td>
<td>4.4</td>
</tr>
<tr>
<td>Use what I know to solve novel problems.</td>
<td>4.25</td>
<td>4.1</td>
</tr>
</tbody>
</table>
Assess my own values and examine other viewpoints and credible evidence.  | 4.25 | 4.1
---|---|---
Determine how to improve my own learning and to engage in lifelong learning.  | 4.25 | 4.3
Gain experience in the use of technology important in my major field.  | 4.0 | 4.1
Use knowledge from more than one area of study to explore issues or solve problems.  | 4.25 | 4.4

The following chart was produced from the assessment data questions:

**Service's Quality**

**Satisfaction Measures**

<table>
<thead>
<tr>
<th>Category</th>
<th>2015 Mean</th>
<th>2014 Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom/Lab Facilities</td>
<td>3.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Academic Support Services</td>
<td>4.0</td>
<td>3.75</td>
</tr>
<tr>
<td>Advising</td>
<td>4.2</td>
<td>4.0</td>
</tr>
<tr>
<td>Teaching</td>
<td>4.1</td>
<td>4.0</td>
</tr>
</tbody>
</table>

1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

Examples of Deep Learning

In 2014, there were three responses. Two stated that the legal and ethical class was instructed with an individual with years of experience and used real life examples to apply information in the class, too. The next one stated the use of an educational EHR and addressing real world scenarios resulted in deep learning.

In 2015, three of the four responses suggested bringing in guest speakers with real work experience, intensive discussion on real practices, and ability to see passion for the HI profession. The other response said that the expectation to write on multiple subjects resulted in deep learning and therefore they developed writing skills and searched various sources for information.
Suggestions for Improvement

From the Assessment survey data, in 2014 there was only one suggestion for improvement from the four participants. That comment suggested offering classes online or later in the evening to accommodate work schedules due to it being difficult to get to Marshall by 4pm on a typical work schedule.

In 2015, two of the suggestions expressed a need for hands on experience or exposure to electronic health record systems and other related technology such as statistical software packages. One suggested having more instructors with real world experience. Lastly, one suggestion was to shift the research focus to data analytics rather than stressing research methodology (though it is important part of the curriculum, but not as important as data analytics).

e. Please refer to Appendix VII for letters from the Office of Assessment providing feedback regarding the program’s assessment of student learning.

5. Previous Reviews:

This program was initiated in June 2010; therefore this is the program’s first review.

6. Identify weaknesses and deficiencies
N/A – This is the first program review for the Health Informatics Department.

7. Current Strengths/Weaknesses:

Strengths

Health Informatics uses a unique model of academic collaboration by the College of Business, College of Health Professions, and College of Information Technology and Engineering; use of this model enabled Dr. Berhie to map (and add) the core competencies to numerous existing courses, quickly filling CAHIIM accreditation requirements, and becoming accredited within the first two and half years of operation. The accreditation team reported that Marshall Faculty cooperation was outstanding and not found on other campuses. Through this streamlined model of academic collaboration, Marshall University became one of the first three colleges to become CAHIIM accredited in a Master’s of Health Informatics. This also meant that Dr. Berhie was able to create HI teaching faculty out of existing faculty from the three colleges, significantly reducing program startup and operating costs, contributing to Marshall University’s Masters in Healthcare Informatics degrees being ranked #1 in affordability in the United States out of 25 programs that met high standards of overall quality by MBA Healthcare Management in 2014.

Marshall’s Health Informatics program has an excellent advisory committee that, as of October 2014, is comprised of 37 CEOs, CIOs, Directors, DBAs, and other executives and leaders of major health care facilities and programs in the surrounding area of Marshall University. These influential and knowledgeable individuals in the field of Health Informatics help guide the program in making curriculum and progress decisions that keep Marshall’s HI program on the cutting edge and help meet workforce demand. This advisory committee also works as a networking tool to open up opportunities for student internships and future employment.
An intense focus on student needs and success is what drives Dr. Berhie in leading the Health Informatics program. This emphasis on students led him to include an intense, educationally directed, student focused HI practicum as a program requirement. This practicum requires students to attain 400 hours of Health Informatics experience in the field. It includes an initial expectation paper, a weekly log of learning, a midterm evaluation and final evaluation meeting between Dr. Berhie, the student, and the student’s field supervisor. Most importantly, it includes a checklist of the 46 CAHIIM competencies in information systems, health informatics, and information management; thus, for a student to complete the practicum, it must be evident that he/she is attaining experience in all areas that CAHIIM has deemed important based on workforce demand. The CAHIIM accreditation team stated that they had not seen such an extensive application of Health Informatics within an academic curriculum. This learning tool ensures that students are competent HI professionals, as they are exposed to the core competencies not only in the course material, but in a professional work environment as well. The practicum also serves as a networking tool for the students. Most students have been hired at the practicum location before or after their practicum is over; and if not, have attained invaluable experience and contacts in health care facilities that led to subsequent employment at another location.

Dr. Berhie spends a great deal of his time as the HI director networking with health care facilities and organizations to find opportunities for his students. He strives to provide his students with the knowledge and skills they need for employment based on Health Informatics forums and organizations, employer feedback, student feedback, and the HI advisory committee recommendations. He invites guest lecturers into his classes who are highly experienced in the health informatics field, and strongly recommends the students take additional undergraduate courses in areas of health informatics that they are not strong in. For example, students with a background in nursing or health care are advised to take additional database management courses and students with an information technology background are advised to take medical terminology courses. Thus, Dr. Berhie is focused on the individual success for each student, which contributes to the overall success of the program. Another aspect that the accreditation team was impressed with was the diversity of students in the program.

The most recent addition to this program was the Accelerated Master’s Degree through the Department of Integrated Science and Technology (IST) under the College of Science. This advantageous arrangement allows promising IST students with an undergraduate major in Computer Information and Technology and a GPA of 3.0 or higher to substitute twelve graduate hours with twelve undergraduate hours with permission of both program directors. This allows for reduced time to graduate from the Health Informatics program, and attracts promising undergraduates to the program.

Another strength of the program is the strong collaboration of the five faculty members who share Dr. Berhie’s desire for student success. For example, Dr. Coustasse has enabled three students of the HI program to publish their work, resulting in three articles on Health Informatics topics such as personal health records and use of smartphones in hospitals. See Appendix X for full references.

As a result of all the above strengths, the Health Informatics program has had 18 graduates who have all obtained employment in a health Informatics-related field excepting one student who went on to pursue a doctorate. These students have obtained respectable salaries in the $50,000 to $125,000 range.
Weaknesses (Challenges)

The challenges of the program are intuitive for a program that is a partnership of three colleges. That is confusion on which college owns the courses, colleges not receiving a monetary reimbursement for offering Health Informatics courses, and aligning course offering for Health Informatics students. Another issue was multiple colleges teaching similar content; therefore, it is sometimes unclear what is the best course in terms of what Health Informatics professionals need to learn. In fact, Dr. Berhie would like to include courses from even more colleges and in the future expand the Health Informatics to include varying areas of emphasis to acquire the best learning experience Marshall can provide to the Health Informatics students.

Health Informatics being an ever-evolving field with multiple career pathways, staying on the cutting edge of new definitions, emerging technology, changing job opportunities can be difficult. This is especially true as Marshall’s Health Informatics department has only one full-time faculty member who is strictly for Health Informatics, Dr. Berhie. He and part-time graduate assistants and part-time hired help keep up with the daily administrative tasks, and Dr. Berhie teaches several courses each semester. The part-time assistants do help tremendously, but they leave when they have completed their degree; therefore, new graduate assistants must be trained and familiarized with the process every year. This model of utilizing resources across three colleges means it does not require hiring new faculty to teach on the multiple subjects. Yet, for sustainability and growth, this program needs full-time staff to assist in the administration and growth of the Health Informatics program in meeting the needs of the students and staying current - that is publishing new research, attending conferences, promoting the program, teaching the courses, advising students, and everything else the Director does on a weekly basis. Another related issue is that the Director’s salary is inconsistent with peer institutions for all of the discussed responsibilities and not at the level originally stated in the Intent to Plan.

Additionally, there is currently not a certified EHR simulation available to HI students. They are currently reading about it, viewing screenshots, or small demos by guest lecturers. As evident in the graduate surveys and from talking to students, this is a major issue for the program. Thus, HI students do not get to work with this technology, which is foundational to the field, until they are in a professional work environment.

Lastly, Health Informatics is a new field and is not well known in the U.S or on Marshall’s campus. This means not only do potential students not know that it exists; they sometimes have no understanding of what a program entitled “Health Informatics” may entail. This program is outstanding among Marshall’s Master’s Degrees as the job demand is high, the program is accredited, it has 100% job placement, and is a unique model that provides the students the skills they need while minimizing the costs. Therefore, it needs to be widely promoted on campus and by Marshall to recruit more students to Marshall’s Campus.

IV. Viability of the Program

1. Articulation Agreements:
Health Informatics does not have any articulation agreements with any other institutions.

2. Off-Campus Classes:
Health Informatics does not have any off-campus graduate courses.
3. Online Courses:
Health Informatics does not have any on-line graduate courses.

4. Service Courses:
Health Informatics does not provide departmental courses that are required for students in other majors. Some students of the College of Health Professions use Health Informatics courses to fulfill degree elective requirements.

5. Program Course Enrollment:
Due to the interdisciplinary nature of the MS in Health Informatics, students are required to complete courses from three Colleges; Health Professions, Business, and Information Technology and Engineering. In other words, Health Informatics does not have courses devoted solely to the program; therefore program course enrollments are not included in this review.

6. Program Enrollment:
Over the last five years, there were 15 health informatics majors enrolled in the 2011-2012 year, 20 enrolled in the 2012-2013 year 20 enrolled in the 2013-2014 year, and 22 enrolled in the 2014-2015 year. There were no graduates in the 2011-2012 year (first year of operation), 4 graduates in the 2012-2013 year, 8 graduates in the 2013-2014 year, and 5 graduates in the 2014-2015 year. Detailed in Appendix V and Figure 1.

7. Enrollment Projections:
As detailed in Appendix VI and Figure 1, the enrollment has been trending up. This trend will likely continue upward for the next five years. The U.S. Bureau of Labor Statistics projects that Health Information Management and Health Informatics employment will grow nearly 18% by 2016; in 2012, they had projected a need of more than 6,000 new professionals each year through 2014 alone. Health Informatics job demand is high and growing. Marshall University’s Health Informatics program is one of four in the United States accredited by CAHIIM. In September 2014, MBA HealthCare Management ranked Marshall’s Health Informatics program number one in affordability of schools that met high standards of overall quality.

V. Necessity of the Program

1. Advisory Committee:
Marshall’s Health Informatics program has an excellent advisory committee that, as of October 2014, is comprised of 37 CEOs, CIOs, Directors, DBAs, and other executives and leaders of major health care facilities and programs in the surrounding area of Marshall University. These influential and knowledgeable individuals in the field of Health Informatics help guide the program in making curriculum and progress decisions that keep Marshall’s HI program on the cutting edge and meeting workforce demands. This advisory committee also works as networking to open up opportunities for student internships and future employment opportunities.
2. Graduates:

The job placement for the 18 graduates is 100% and the salary range was $50,000-$125,000. There have been some students who have been hired prior to graduation due to their practicum introducing them to an organization and that facility hiring them after a few months based on skills and performance shown during their practicum. The job titles range from Chief Information Officer, Data Analyst, and Health Informatics Specialist to Professor of Health Informatics. There is one student who is pursuing a doctorate in information systems.

This information is included in Appendix VI.

3. Job Placement:

As seen above, the job placement is at the optimum level of 100%. This is partially accomplished through the students’ practicum as a networking tool and through Dr. Berhie’s vigilance in networking through the advisory committee and bringing guest lecturers from the field.

V. Resource Development (If applicable)

Health Informatics Mission
The mission of the Health Informatics program is to prepare students with the knowledge and skills in health information technology that will enable them to enhance the healthcare delivery system, thereby increasing the quality and affordability of healthcare.

Therefore, the Health Informatics Department will:

1. Teach students in the three principal areas: Information Systems, Information Technology, and Health Informatics
2. Create a culture of collaboration in research, education, and innovation of ideas and solutions.
3. Establish relationships with healthcare related organizations to provide learning experiences and potential job placement.

Health Informatics Vision
The vision of the Health Informatics program is to empower students with the abilities in information systems, information technology, and health informatics to mold a future healthcare delivery system of high value to society.

Specification of Resources

1. Faculty Member: Field Practicum Coordinator
Foremost, the Health Informatics program is requesting the resources for a Field Practicum Coordinator to be hired as a full-time faculty member in the salary range of $50,000 to $60,000 (9 month). In order to ensure that this faculty member has the necessary skills, competencies, and ability to closely work with the program director towards the goals of the
Health Informatics Department, this individual needs to be a graduate from a CAHIMM accredited Health Informatics degree.

This faculty member’s primary role will be directing the Health Informatics 400 hour practicum (HP 650); however, this does not simply entail the running of a course. This faculty member will facilitate practicum opportunities through networking with healthcare providers, advocate for the HI students to obtain a paid internship, structure the practicum as an educational experience with the health care providers, and meet with each student’s supervisor three times (initial, midterm evaluation, & final evaluation) to ensure that each student receives an educationally driven learning experience and has practiced or is exposed to all of the 46 core competencies of Health Informatics. This faculty member will also share the teaching responsibility of the six Health Informatics courses that are offered through the College of Health Professions which are currently the sole responsibility of the Director.

Although directing the practicum will be this faculty member’s primary responsibility, this individual will also assist in the administrative responsibilities of the Health Informatics office. This includes, but is not limited to: accreditation activities, student advising, student recruitment, program promotion, online degree development & implementation, and grant involvement.

Rationale for the Field Practicum Coordinator

The Health Informatics (HI) department is currently one of the only departments on Marshall’s Campus that accomplishes all departmental administrative duties and the teaching of six graduate level courses with only one full-time staff. There are four other Marshall faculty members who instruct classes required for the Health Informatics Master’s degree; however, these individuals are all dedicated faculty members within their own respective departments. Although they offer immensely valuable experience, expertise, and support to the Health Informatics program, their primary responsibilities are teaching College of Business and College of Information Technology and Engineering courses that are inclusive in the Health Informatics Master’s degree.

Additionally, having more than one full-time HI dedicated faculty member is important for the Health Informatics program’s sustainability and growth. Even though the Commission on Accreditation of Health Information and Information Management (CAHIIM) review team was highly impressed with multiple facets of Marshall’s Health Informatics team, they deemed the program only partially compliant in the assessment of the program director. The following is what the CAHIIM self-assessment report said and their guidelines for full compliance.

“The lack of operational support for the director does not give him the necessary time to stay current on emerging and evolving trends within health informatics policy and practice in addition to his program administrative responsibilities. This situation could limit program currency, growth, and sustainability. Additionally, it could lead to "burn out" if this program is not supported (human or fiscally) equally to other University programs.”

Guidelines for Compliance:

Compliance can be achieved with the addition of financial and faculty support. .... The addition of an assistant director or dedicated full time faculty member with operational, research, and teaching capabilities (or the capacity to do so) to support the director and the program is requested to comply with this Standard.”
Marshall’s Health Informatics program must become fully compliant with CAHIIM’s standards in order to provide the necessary credentials for its students to be competitive and obtain gainful employment within the healthcare industry.

2. Upgrade Director’s Salary
Upon starting the venture into leading Marshall’s Health Informatics program, raising Dr. Berhie’s salary to be in line with the responsibilities of a Director of a Master’s program and consistent with peer institutions was discussed and written into the Intent to Plan.

Rationale for Upgrading the Director’s Salary
Upon taking this position five years ago, the Director’s salary was expected to be consistent with peer institutions and the responsibilities he was undertaking, and therefore, stated in the Intent to Plan. Unfortunately, it was not. Nevertheless, Dr. Berhie has led Health Informatics to several successes as detailed in the program strengths section of the program review; he is well deserving of his salary being in line with peer institutions and with what was discussed in the intent to plan. These successes are succinctly stated and not limited to:

- CAHIIM accreditation on April 9, 2013, becoming:
  - CAHIIM accredited within the first two years of operation
  - One of the first three CAHIIM accredited Health Informatics Master’s degrees in the U.S.
  - The first CAHIIM accredited HI Master’s Degree in West Virginia
- Ranked #1 in “Top 25 Master’s in Healthcare Informatics Degrees ranked by Affordability in 2014” - MBA Healthcare Management
- Unique model of academic collaboration among three colleges
  - Created a program of least cost by using existing resources
  - Produced a quality curriculum
  - Facilitated fast program implementation
- Incorporation of a 400-hour educationally directed and paid Health Informatics practicum (student focused)
- Active advisory committee comprised of 37 members - CEOs, CIOs, Directors, DBAs, etc.
- Accelerated Master’s Degree with the College of Science – Department of Integrated Science and Technology
- 18 graduates: 100% employment | $50,000-$125,000 salary range

3. Health Informatics Computer Lab
In order to properly provide Health Informatics students with hands-on experience in the core competencies, which include several aspects of information technology, the Health Informatics department needs a computer lab. Primarily, the Health Informatics office is interested in providing the students with:

- Hands-on practical experience with an educational version of an EHR system such as Cerner, and subsequently querying data obtained through an EHR. Cerner is interested in providing the educational version for an initial installation fee and then a yearly subscription fee.
• Improving real-world data analysis skills and knowledge generation through application training in analytics software such as business statistical packages and business intelligence tools, and
• Cultivating familiarity with applied elements of collecting and maintaining the security of research data such as implementing electronic data capture (I.E. Red Cap).

Rationale for Health Informatics Computer Lab

Two of the required Health Informatics (HI) courses are HP 605: The Role of EHR and PHR and HP 630: Research Methods and Data Analytics for Health Informatics. Currently, these are taught through a purely academic and theoretical method. Several previous HI graduates have expressed the need for the HI program to offer more hands-on experience with electronic health record (EHR) systems and data analytics software in order to have a comprehensive HI foundation prior to the practicum experience. The HP 605 and HP 630 classes would be an ideal venue in which to gain this familiarity.

As part of the HP 605 course, the Health Informatics department needs a computer lab that will allow them to provide the students practical applied experiences with an EHR system, which will include familiarization with EHR applications, comparison and analysis of different systems, EHR vendor and application workflow process set-up and re-engineering, and integration of PHR within an EHR system.

As part of the HP 630 class, the Health Informatics department needs a computer lab to assist in learning the practical application of in depth research, following standard research design practices which integrating data capture and analysis using secure electronic applications and technologies. Specifically, this class needs project-based experience utilizing statistical software packages, implementing electronic data capture, and statistically interpreting data results within practical business intelligence applications, with subsequent data representation in appropriate formats within a publishable research paper.

Additionally, included in the 46 competencies taught by this program are the following: Health Information Exchange (HIE), Electronic Health Records (EHR) and Personal Health Records (PHR), biomedical simulations, human-computer interface, artificial intelligence, programming languages, software applications design, development, use, systems testing and evaluation, electronic data exchange, principles of data representation, Health Information systems architecture, database design, data warehousing, IT system documentation, and computer science theory and methods. All of these competencies require access to a computer in order to fully teach and learn them; therefore, this computer lab will provide an abundance of instructional opportunities that the health informatics department is currently not capable of providing to students. There are several instances where the instruction of HP classes has been difficult due to students not having their own computer and/or laptop; having a designated HI computer lab would alleviate this concern, enabling students to have all of the technological resources necessary within the classroom for an all-inclusive Health Informatics foundation.

4. Additional Funds:
Additional Funds are being requested for:
• Support Staff: Graduate Assistants and Hired Help
• Professional Development for Faculty
• Part Time Teaching Faculty
Following are the detailed description and rationale for each of the above uses of the requested additional funds.
**Additional Funds for Graduate Assistant’s (GAs) and Extra Hired Help**

The Health Informatics department would like the additional funds available such that extra hired help and graduate assistants can be hired each semester (summer, fall, & spring) to support Dr. Berhie in:

- General Educational and Administration Duties,
- Conducting and Supporting HI Research,
- Assisting with Health Informatics department Grant Proposal Search, Writing, Submission, and Evaluation,
- Assisting in the advertisement and promotion of the program,
- Assisting with the preparation and delivery of courses/lectures,
- Offering editorial assistance with all HI professional publication(s) and communication, data analysis,
- Assisting in Meeting the HI program’s development needs, including current department needs and future departmental plans.

**Rationale for GA’s and Extra Hired Help**

A common method for departments to obtain the above listed assistance is through a department secretary. Even through that is an acceptable way, the Health Informatics Program prefers a way more in line with the HI and University’s mission – that is through GA’s and Extra Hired Help. This method benefits the program more than a single individual ever could by combining the expertise from multiple individuals encompassing a wide variety of skills, background, experience and knowledge that one person simply could not bring to the program.

This is also a factor in why the Health Informatics is a program of least cost, and achieved its high level of success. If Marshall University paid a full salary for the expertise and outcomes gained by combination of this support staff, Marshall would have to hire multiple full time individuals, or a couple of individuals of remarkable experience and highly disciplined and therefore would require a higher salary level. Robust graduate programs with quality graduate students enhance the prestige of a department, college, and the university as a whole, and contribute to the academic, research, and engagement mission of the university. Graduate assistantships and paid work assist to attract and enroll high quality graduate students into the program. Thus, the Health Informatics program is acquiring work from some of the future leaders of Health Informatics field.

Equally as important, this form of assistance furthers the educational and career paths of the program’s students. This enables the HI graduate students and extra hired help (generally a student with no tuition benefit) to benefit from the experience gained in working across a multitude of different health informatics-based projects as they pursue their master’s degree, aiding them in determining their HI career interests. This form of student employment also fosters student success through increased contact and discussion with Health Informatics faculty.

**Additional Funds for Faculty Professional Development**

The Health Informatics program is requesting the resources for HI Faculty Professional Development. This money will be used for professors who instruct classes included in the Health Informatics Curriculum to do the following:

- Attend Health Informatics Conferences
- Physically or virtually attend Training/Development/Certification opportunities specific to Health Informatics.
- Assist in conducting and presenting Health Informatics Research
Rationale for Faculty Professional Development Funds

Departmental excellence requires not only adept leadership, but high-quality faculty. Although the Health Informatics department currently has outstanding professors instructing the HI curriculum, we must maintain their skills through professional development opportunities, increasing their knowledge about how their classes apply within the overarching and constantly evolving field of health informatics. High-quality faculty professional development for every HI instructor is an urgent need and is essential to the program’s capacity to compete for students and thrive as a cutting edge Health Informatics Program.

Additionally, having teaching faculty members staying current is also important to the CAHIIM accreditation. In fact, they deemed the program only partially compliant in the professional development criteria. The following is what the CAHIIM self-assessment report said and their guidelines for full compliance.

“The school does not provide sufficient opportunities for faculty who are teaching in this program to stay current with evolving and emerging issues and practices in health informatics.”

Guidelines for Compliance:

“Within the limitations of the WV State University System, compliance must be achieved through health informatics specific continuing education, national memberships (i.e. AMIA and HIMSS), and publication contributions. A plan to address this has been provided. Follow-up documentation showing implementation of the plan is requested.”

This opportunity for professional development has the capacity not only to improve the education that the Health Informatics department can offer to students, but it is also an investment in Marshall’s instructors’ knowledge and skills. Through increasing professional development, HI faculty will have more direct knowledge and opportunity for professional networking and partnership, enabling them to increase the amount of HI research and subsequent scholarship, which reflects on the success of Marshall as an academic institution.

Additional Funds for Part-Time Teaching Faculty

The Health Informatics program is requesting the resources to employ Part-Time Teaching Faculty to instruct and/or co-teach specific Health Informatics classes. The courses that would benefit the most from being taught by part-time teaching faculty are: HP 620 – Legal and Regulatory Environment for Health Care and Informatics, and Health Quality and Safety.

Rationale for Part-Time Teaching Faculty Funds

Part-time faculty, actively recruited from the best available candidates working in the field of Health Informatics, will bring into the program tremendous expertise beyond that which the current HI faculty possesses. Because these Health Informatics professionals are actively working in the HI field, they are already cognizant of the swiftly changing environment in the field of Health Informatics, and have adapted to these new circumstances within their HI industry application. This enables them to have a unique real-world expertise and skill-set which has the potential to directly benefit both the HI program, and its students. Both the previously mentioned courses are areas in which the primary faculty member teaching them, Dr. Berhie, is not as focused on. He has been able to adequately bring the needed information forward to the
students, but it is a well-known fact that someone is who is active and passionate in a subject area can bring the subject to life and provide a deeper educational experience within the classroom.
Appendix I: Health Informatics Faculty Data Sheets

From Digital Measures

Faculty Data Sheet (Girmay Berhie)
May 15, 2010 - May 15, 2015

Name: Girmay Berhie  Rank: Professor

Start Date at Marshall as a Faculty Member: August 19, 1991

Status: Tenured

Highest Degree Earned:

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<tr>
<th>Highest Degree Earned:</th>
<th>PhD</th>
<th>Date Degree Received:</th>
<th>1984</th>
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Conferring Institution:

<table>
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Area of Degree Specialization:

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<th>Area of Degree Specialization:</th>
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</table>

Professional Registration/Licensure:

<table>
<thead>
<tr>
<th>Field of Registration /Licensure:</th>
<th></th>
</tr>
</thead>
</table>

Agency:  

Date Obtained, Expiration Date:

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment.  *(Expand the table as necessary)*

<table>
<thead>
<tr>
<th>Term/Year</th>
<th>Course</th>
<th>Title</th>
<th>Enrolled</th>
<th>% Respon</th>
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<tr>
<td>Spring 2015</td>
<td>HP 650</td>
<td>Health Inform Practicum</td>
<td>4</td>
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</tr>
<tr>
<td>Spring 2015</td>
<td>PH 686</td>
<td>Health Information Technology</td>
<td>11</td>
<td>100%</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>HP 615</td>
<td>Health Quality and Safety</td>
<td>18</td>
<td>100%</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>HP 686</td>
<td>Independent Study</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>HP 630</td>
<td>Research Methods and Data</td>
<td>15</td>
<td>100%</td>
</tr>
<tr>
<td>Fall 2014</td>
<td>HP 650</td>
<td>Health Inform Practicum</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Term</td>
<td>Course Code</td>
<td>Course Title</td>
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<td>Grade</td>
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</tr>
<tr>
<td>Fall 2014</td>
<td>HP 685</td>
<td>Independent Study</td>
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<td>100%</td>
</tr>
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**NOTE:** Part-time adjunct faculty do not need to fill in the remainder of this document.
1) Scholarship/Research

Contracts, Grants and Sponsored Research


Berhie, G. (Co-Principal), Grant, "The Louis Stokes Alliance for Minority Participation", Marshall Univesity, Federal, $2,500,000.00, Funded. (September 1, 2014 - Present).


Intellectual Contributions


Presentations


Research Currently in Progress


Berhie, Girmay, "Follow-up Study of The Impact of Welfare Reform on Families and Children, Wayne County, West Virginia", On-Going, Scholarly.

Berhie, Girmay, "Historical Development of West Virginia Statistical Analysis Center.", On-Going, Scholarly.


Berhie, Girmay, "Living Conditions of Ethiopian Semi-Skilled Workers and Their", On-Going, Scholarly.


Berhie, Girmay, "Nutritional Level of Ethiopian Semi-Skilled and Unskilled Worker", On-Going, Scholarly.

Berhie, Girmay, "Technology Assisted Care in Mental Health", On-Going, Non-Scholarly.

Berhie, Girmay, "The Impact of Welfare Reform on Wayne County, West", On-Going, Scholarly.

Berhie, Girmay, "The Impact of Welfare Reform on West Virginia Business, Wayne County.", On-Going, Scholarly.


Berhie, Girmay, "Violence Against Women in West Virginia: A Rural Perspective.", On-Going, Scholarly.

Berhie, Girmay, "West Virginia Health Innovation Center", On-Going, Scholarly.

**Directed Student Learning and Research**

Wilton, J., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", In-Process. (January 12, 2015 - Present).

Brown, J., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", In-Process. (January 12, 2015 - Present).

Schussler, M., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", In-Process. (January 12, 2015 - Present).

Kassice, M., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", In-Process. (January 12, 2015 - Present).

Datla, S., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", In-Process. (August 25, 2014 - Present).

Schafer, C., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", In-Process. (January 13, 2014 - Present).

Phan, N., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", In-Process. (January 13, 2014 - Present).

Smith, F., Research, Dissertation Committee Member, Adult & Technical Education Department, 12 credit hours, "Impact of HSTA", In-Process. (January 1, 2009 - Present).


Althomairy, N., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", Completed. (May 19, 2014 - August 8, 2014).
Asalamah, S., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", Completed. (May 19, 2014 - August 8, 2014).

Walther, K., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", Completed. (January 13, 2014 - May 9, 2014).

Booten, M., Learning, Internship Advisor, Health Professions Department, HP, 650, 3 credit hours, "Health Informatics Projects", Completed. (January 13, 2014 - May 9, 2014).

Jones, M., Learning, Internship Advisor, Other (Within Marshall University) Department, HP, 650, 3 credit hours, "WV Health Care Authority 400 hour internship", Completed. (June 2013 - August 2013).

Masarogullari, N., Research, Master's Thesis Committee Member, Sociology & Anthropology Department, ANT, 492, 3 credit hours, "Nationalism in Cyprus", Completed. (January 1, 2010 - December 1, 2011).

Department

Health Informatics Faculty Committee, Committee Chair, (January 1, 2010 - Present).

College

International Committee, Committee Chair (November 1, 2011 - Present).

Research and Grants Committee, Committee Member (October 1, 2011 - Present).

Chair Selection/Role Ad Hoc Committee, Committee Member (January 1, 2011 - Present).

Promotion and Tenure, Committee Member (January 1, 2010 - Present).

University

Health Informatics Advisory Committee, Committee Chair (January 1, 2010 - Present).

Faculty Diversity Committee, Committee Member (January 1, 2009 - Present).

Health Science Technology Academy Summer Camp, Co-Director of HSTA (January 1, 2005 - Present).

Community

Hovah Hall Underwood Advisory Council, Board Member, Ona, WV, United States (January 1, 2009 - Present).

Health Science Technology Academy, Board Member, Huntington, WV, United States (January 1, 2007 - Present).

2) Service

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

American Medical Informatics Association, AMIA, Member. AMIA is the professional home of leading informaticians: clinicians, scientists, researchers, educators, students, and other informatics professionals who rely on data to connect people, information, and technology.
AMIA (the American Medical Informatics Association) is the center of action for more than 4,000 healthcare professionals, informatics researchers, and thought-leaders in biomedicine, health care and science. AMIA is an unbiased, authoritative source within the informatics community and the health care industry. AMIA and its members are transforming healthcare through trusted science, education, and practice in biomedical and health informatics. (January 2013 - Present).

Health Information Management Systems Society, HIMSS, Member, HIMSS is a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology.

HIMSS is a cause-based, global enterprise producing health IT thought leadership, education, events, market research and media services around the world. Founded in 1961, HIMSS encompasses more than 52,000 individuals, of which more than two-thirds work in healthcare provider, governmental and not-for-profit organizations across the globe, plus over 600 corporations and 250 not-for-profit partner organizations, that share this cause. HIMSS, headquartered in Chicago, serves the global health IT community with additional offices in the United States, Europe, and Asia. (January 2013 - Present).

American Health Information Management Association, AHIMA, AHIMA (American Health Information Management Association) is a health information management (HIM) professional association over 64,000 members strong. Since its founding in 1928, AHIMA has remained committed to quality healthcare through quality information. (January 1, 2010 - February 6, 2012).

Council on Social Work, CSWE, The Council on Social Work Education (CSWE) is a nonprofit national association representing more than 2,500 individual members, as well as graduate and undergraduate programs of professional social work education. Founded in 1952, this partnership of educational and professional institutions, social welfare agencies, and private citizens is recognized by the Council for Higher Education Accreditation as the sole accrediting agency for social work education in this country. (January 1, 1991 - February 6, 2012).

American Public Health Association, APHA, The American Public Health Association is the oldest and most diverse organization of public health professionals in the world and has been working to improve public health since 1872. The Association aims to protect all Americans, their families and their communities from preventable, serious health threats and strives to assure community-based health promotion and disease prevention activities and preventive health services are universally accessible in the United States. APHA represents a broad array of health professionals and others who care about their own health and the health of their communities. (January 1, 1994 - January 1, 2011).

**Faculty Development Activities Attended**

Exploring Partnership, "Travel to Ethiopia including lecture on Health Informatics", Marshall University/International Program, Mekelle, Tigrai, Ethiopia, 0 credit hours. (December 5, 2011 - January 5, 2012).

Conference Attendance, "AHIMA Convention and Exhibit", AHIMA, Salt Lake City, Utah, United States, 24 credit hours. (October 1, 2011 - October 6, 2011).

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Faculty Data Sheet (John Biros)
May 15, 2010 - May 15, 2015

Name: Professor John Biros

Rank: Associate Professor

Start Date at Marshall as a Faculty Member: August 16, 1997

Status: Tenured

Highest Degree Earned:
- MS

Date Degree Received: 1997

Conferring Institution:
West Virginia Graduate College, Charleston, WV

Area of Degree Specialization:
Information Systems

Professional Registration/Licensure:

Field of Registration/Licensure:

Agency:

Date Obtained, Expiration Date

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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### Directed Student Learning and Research

1. **Scholarship/Research**

   - **Gebrehiwot, H.**, Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, Completed. (December 2014).
   - **Fortner, T.**, Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, Completed. (December 2014).
   - **Hori, E.**, Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, Completed. (May 2014).
   - **Blevins, J.**, Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, Completed. (May 2014).
   - S. a. R. f. 1. o. C. P., Research, Master's Thesis Committee Member, Other (Within Marshall University) Department, TE, 699, 3 credit hours. (January 1, 2013 - December 31, 2013).
   - **Scott, C.**, Research, Master's Thesis Committee Chair, Computer & Information Science Department, TE, 699, 3 credit hours, "Data Warehouse & Reporting Project for Southern WV Community & Technical College", Completed. (December 6, 2013).
   - **Alshamrani, R.**, Research, Master's Thesis Committee Chair, Computer & Information Science Department, TE, 699, 3 credit hours, "Sport Section System -- Scheduling for Recreation Center in Saudi Arabia", Completed. (December 4, 2013).
   - **Kommi, S.**, Research, Master's Thesis Committee Chair, Computer & Information Science Department, TE, 699, 3 credit hours, "Weight in Motion Permit -- Overweight Truck Data Analysis", Completed. (May 13, 2013).
   - **Darst, K.**, Research, Master's Thesis Committee Chair, Computer & Information Science Department, TE, 699, 3 credit hours, "AAC Mobile App, Developing an Augmentative & Alternative Communication (AAC) Mobile Application for the iPad", Completed. (May 6, 2013).
   - **Spencer, J.**, Research, Master's Thesis Committee Chair, Computer & Information Science Department, TE, 699, 3 credit hours, "Mobile Application for Kanawha Valley Community & Technical College", Completed. (April 18, 2013).
   - **Hughes, J.**, Research, Master's Thesis Committee Chair, Computer & Information Science Department, TE, 699, 3 credit hours, "Brown's Excavating & Demolition Record Management System", Completed. (April 15, 2013).
Served as Reviewer for 25 additional Comprehensive Projects, Research, Served as reviewer for 25 additional Comprehensive Project Committees. (January 1, 2012 - December 31, 2012).

Beaufort, D., Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Ruminski Public Library System", Completed. (April 25, 2012).

Pande, P., Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "ITS Video Manager", Completed. (April 25, 2012).

Gray, J., Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Casework Management System", Completed. (April 24, 2012).

Marks, M., Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Alcon Requirements Gathering System", Completed. (April 24, 2012).

Yang, Y., Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Chinese Restaurant Operating System", Completed. (April 24, 2012).

Dunn, R., Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Oil Rig Inspection & Reporting Process Analysis & Software Design", Completed. (April 18, 2012).

Weaver, T., Research, Master's Thesis Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Developing a System for a Food Bank", Completed. (April 18, 2012).

Served as reviewer on 18 Comprehensive Project Committees, Research, Comprehensive Project. (January 1, 2011 - December 31, 2011).

Sundarababu, G., Research, Comprehensive Project Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "HCUP Database Reporting Services & Analysis", Completed. (August 2011).

Nichols, B., Research, Comprehensive Project Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Proof of Concept -- Data Warehouse", Completed. (April 29, 2011).

Martin, C., Research, Comprehensive Project Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Top Dog Bank -- Retail & Direct Pay Card System", Completed. (April 29, 2011).

Imes, J., Research, Comprehensive Project Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "The Mine -- Production Reporting System", Completed. (April 29, 2011).

Zeng, R., Research, Comprehensive Project Committee Chair, Information Systems Department, TE, 699, 3 credit hours, "Storm Early Warning System", Completed. (April 29, 2011).

2) Service

Department

Information System Advisory Committee, Committee Chair.

College

CITE Promotion & Tenure Committee, Member (January 2011 - Present).

University
Health Informatics Master's Degree Formation Committee, CITE Faculty Representative.

Faculty Senate Executive Committee, Committee Member (September 1, 2012 - Present).

Faculty Senate, Member (September 2011 - Present).

Search Committee for Faculty Member of the Graduate Program in Reading, Member (May 2012).

Community

Byzantine Catholic Seminary -- Alumni Committee, Member, Pittsburgh, PA, USA.

Carpatho-Rusin Society -- Education Committee, Committee Member, Pittsburgh, PA, USA.

Carpatho-Rusyn Society, Member, Pittsburgh, PA, USA.

City of Charleston Sister City Committee with Banska Bystricia in Slovakia, Member, Charleston, WV, USA.

Mount Hope State Penitentiary Computer Science Advisory Board, Member, Mount Hope, West Virginia, USA.

Sacred Heart’s Catholic Business Network, Member, Charleston, WV, USA.

Student Foreign Exchange Program, Charleston, WV, USA.

West Virginia State University Computer Science Advisory Committee, Member.

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

Association of Information Technology Professionals--Greater Wheeling Chapter, AITP, Member, AITP is the leading worldwide society of professionals in information technology.

For over six decades, AITP has championed the human element of the Information Technology profession and remains focused on providing a community of knowledge, education and resources that will empower its members to reach their true potential as an IT business professional.

Healthcare Information and Management Systems, HIMSS, HIMSS is a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology.

HIMSS is a cause-based, global enterprise producing health IT thought leadership, education, events, market research and media services around the world. Founded in 1961, HIMSS encompasses more than 52,000 individuals, of which more than two-thirds work in healthcare provider, governmental and not-for-profit organizations across the globe, plus over 600 corporations and 250 not-for-profit partner organizations, that share this cause. HIMSS, headquartered in Chicago, serves the global health IT community with additional offices in the United States, Europe, and Asia. (June 1, 2014 - Present).

Healthcare Financial Management Association, HFMA, Member, HFMA is the nation's leading membership organization for healthcare financial management executives and leaders. More than 39,000 members-ranging from CFOs to controllers to accountants-consider HFMA a respected thought leader on top trends and issues facing the healthcare industry. HFMA members can be found in all areas of the healthcare system, including hospitals, managed care organizations, physician practices, accounting firms, and insurance companies. (June 2011 - Present).
Faculty Development Activities Attended

Webinar, "MOOC's Designing, Developing & Delivering Them on Campus", Canvas Network. (December 11, 2013).


Conference Attendance, "HACK3rCOM Conference", HACK3rCom, Charleston, WV, USA. (October 18, 2013 - October 20, 2013).

Webinar, "What are Customers Saying About You? Harness #SocialMedia to #FindOut", EIM. (July 23, 2013).


Workshop, "SQLite Lecture", Dr. Richard Hipp -- Creator of SQLite. (March 7, 2013).

Webinar, "HL7 Meaningful Use Stage 2", HL7 Organization. (February 20, 2013).


Tour, "Tour of Marathon Oil", Marathon Oil, Ashland, Kentucky, USA. (October 24, 2012).


Workshop, "Blackboard", Marshall University. (February 27, 2012).


Workshop, "Turning Point", Marshall University. (February 16, 2012).


Workshop, "HCL", Marshall University. (February 1, 2012).


Webinar, "SMB Value - Journey to the Cloud", Microsoft, South Charleston, WV, USA. (November 8, 2011).

Seminar, "Big Data and Big Data Analytics David Barnes and Rod Smith", IBM Emerging Internet Technologies, Huntington, WV, USA. (October 27, 2011).


Seminar, "Advanced Networks and the Health Sciences Symposium", Marshall University, Huntington, WV, USA. (September 15, 2011).

Webinar, "Text is Dead: How Requirements Visualization is Changing the Game at HealthMEDX", Modern Analyst. (June 1, 2011).


AITP Greater Wheeling Chapter Meeting, "Chapter Meeting", Greater Wheeling Chapter of AITP, Wheeling, WV, USA. (April 13, 2011).


4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Faculty Data Sheet (Aberto Coutasse-Hencke)
May 15, 2010 - May 15, 2015

Name: Alberto Marcel Coutasse-Hencke  Rank: Associate Professor

Start Date at Marshall as a Faculty Member: August 17, 2008

Status: Tenured

Highest Degree Earned: PhD  Date Degree Received: 2004

Conferring Institution: University of North Texas Health Science Center, Fort Worth, TX

Area of Degree Specialization: Public Health

Professional Registration/Licensure:

Field of Registration/Licensure:

Agency:

Date Obtained, Expiration Date:

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) Scholarship/Research

**Intellectual Contributions**


Coustasse-Hencke, A. M. Smartphones, PDS and Medical Education. *Permanente Journal.*


Coustasse-Hencke, A. M., Tomblin, M. S. (2013). RFID AND ITS IMPACTS TO THE HOSPITAL SUPPLY CHAIN. *Perspectives in Health Information Management, 10.*


**Presentations**


Coustasse-Hencke, A. M., Paper, 41st Annual Northeast Business & Economics Conference, Montmouth University, West Long Branch, New Jersey, "Managed Care and Accountable Care Organizations"


Coustasse-Hencke, A. M. (Author Only), Oral Presentation, Southern Management Association 2013 Meeting, Management Association, New Orleans, "HOW COULD, SHOULD, AND WOULD


Coustasse-Hencke, A. M., Poster, 8th Annual Scientific Assembly Poster Competition, West Virginia Geriatric Society, charleston, "West Virginia nursing homes: are they up to the standard?", Conference, Academic, State, peer-reviewed/refereed, published in proceedings, Accepted. (September 21, 2012).


Research Currently in Progress

Coustasse-Hencke, Alberto M, Tomblin, Michael S, "Kawasaki Disease in the USA:", Writing Results, Scholarly.


Sikula, Andrew, Coustasse-Hencke, Alberto M, Lee, Doohee, Muslin, Ivan S, Dodds, Alissa, Keener, Raymond, "Various research projects", On-Going, Scholarly.

2) Service

Department

HCA Coordinator, program coordinator, (August 1, 2011 - Present).

Learn to Learn Subcommittee, Committee Chair, (October 22, 2013 - December 31, 2013).

Division MMM Chair election committee, Committee Member, (August 21, 2013 - September 25, 2013).

Search committee for Healthcare Administration Faculty, Committee Chair, (November 2011 - May 2012).

Search committee for MIS, Committee Member, (May 1, 2010 - May 29, 2010).

College

Assessment of Learning (AOL), Committee Member (September 1, 2008 - Present).
Innovative Graduate Programs & Curricula Committee, Committee Member (November 3, 2014 - December 31, 2014).

Lumina, Committee Member (September 1, 2012 - September 1, 2013).

Strategic Planning Committee, Committee Member (August 28, 2012 - December 31, 2012).

University

Health Information Systems Committee (September 1, 2010 - Present).

Professional

The Austrian Science Fund, Reviewer, Grant Proposal, Vienna, Austria (April 21, 2015 - Present).

Marshall HCA Alumni LinkedIn, Coordinator and Founder, Charleston, West Virginia, United States (October 4, 2013 - Present).

Disability and Health Journal, Reviewer, Journal Article (September 1, 2009 - Present).

Business and Health Administration Association, Member, CHICAGO, IL, USA (March 21, 2008 - Present).

International Journal of Health Policy and Management, Reviewer, Journal Article, USA (February 16, 2015).


Chile Global, the Chilean Diaspora in North America, Committee Member, NEW YORK, NY, USA (June 25, 2005 - December 2010).

Community

The VA hospital Health Information Technology and Management Internship, Internship coordinator, HUNTINGTON, WV, United States (September 1, 2014 - Present).

Cabell Hospital Health Information Technology and Management Internship, Internship coordinator, Huntington, WV, USA (August 1, 2010 - Present).

Holz Elementary School, Charleston, West Virginia., Guest Speaker (September 1, 2009 - September 1, 2010).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

Awards and Honors

Quinlan Award, Marshall University, (October 29, 2014).

Best Paper Award in Healthcare Economics Track, Business and Health Administration Conference, (March 2014).


Best Paper in Healthcare Marketing Track, Business and Health Administration Conference/MBAA, (March 2014).

Best Paper in Nursing Track, 2014 Business and Health Administration Conference/MBAA, (March 2014).


Best Paper in the Changes in the Health Informatics and Technology Track, Business and Health Administration Conference/MBAA, (February 28, 2013).


Best Paper Award Health Informatics and Technology Track, Business and Health Administration Association, (March 30, 2012)
**Faculty Data Sheet (Eldon Larsen)**  
May 15, 2010 - May 15, 2015

Name: Dr. Eldon Ronald Larsen  
Rank: Professor

Start Date at Marshall as a Faculty Member:  
August 17, 1999

Status: Tenured

Highest Degree Earned:  
PhD  
Date Degree Received:  
1983

Conferring Institution:  
University of California at Berkeley, Berkeley, California

Area of Degree Specialization:  
Chemical Engineering

Professional Registration/Licensure:  
Certified Project Management Professional

Field of Registration/Licensure:  
Certified project management professionals must meet educational and practice experience requirements, as well as pass the PMP certification exam.

Agency: Project Management Institute

Date Obtained, Expiration Date:  

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. *(Expand the table as necessary)*

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**NOTE:** Part-time adjunct faculty do not need to fill in the remainder of this document.

1) Scholarship/Research

**Contracts, Grants and Sponsored Research**


Larsen, E. R., Grant, "Quinlan Grant", Quinlan Endowment, Marshall University, $500.00. (November 7, 2010 - November 12, 2010).

**Intellectual Contributions**


**Presentations**


Research Currently in Progress

Larsen, Eldon R, "Writing textbook on applied project management fundamentals", On-Going, Scholarly.

Directed Student Learning and Research

Morgan, G., Research, Comprehensive Project Assessment Committee, Engineering Department, TE, 699, 3 credit hours, Completed. (August 2014 - December 2014).


Purkey, L., Research, Comprehensive Project Assessment Committee, Technology Management Department, TM, 699, 3 credit hours, "Development of a Feasibility Study for Do-It Yourself Online University", Completed. (August 2014 - December 2014).


Walters, A., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Reworking


Pham, L., Research, Comprehensive Project Assessment Committee, Technology Management Department, TM, 699, 3 credit hours, "Creating a GIS Web Application for Huntington Area Development Council Technology", Completed. (January 2014 - May 2014).

Shi, T., Research, Comprehensive Project Assessment Committee, Technology Management Department, TM, 699, 3 credit hours, Completed. (January 2014 - May 2014).


Ball, B., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Improved Management of Aging Local Protection Projects where River Bank Erosion is Outside of the Maintenance Zone", Completed. (January 2014 - May 2014).


Sizemore, J., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Mobile Digital Sensing as a Highway and Asset Management Tool", Completed. (January 2014 - May 2014).

Lambert, J., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Prerequisites for Successful Company Orientation and Mentoring Programs: Identification and Improvement of Company Culture and Structure", Completed. (January 2014 - May 2014).


Welch, M., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Civil Engineering Design Estimation", Completed. (January 2014 - May 2014).
Moore, N., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Line Balancing and Standardized Work", Completed. (January 2014 - May 2014).

Akkad, N., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Guide to Design Build Procurement", Completed. (January 2014 - May 2014).


Rose, V., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "High Homogenization Project", Completed. (January 2014 - May 2014).

Campbell, Z., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Lessons Learned at the Next Level--Implementing a Project Management Protocol", Completed. (January 2014 - May 2014).

Cyr, I., Research, Comprehensive Project Committee Member, Technology Management Department, TM, 699, 3 credit hours, "Comprehensive Project", Completed. (August 2013 - December 2013).


Bessler, D., Research, Comprehensive Project Committee Member, Technology Management Department, TM, 699, 3 credit hours, "Comprehensive Project", Completed. (January 2013 - May 2013).

James, W., Research, Comprehensive Project Committee Member, Technology Management Department, TM, 699, 3 credit hours, "Comprehensive Project", Completed. (January 2013 - May 2013).

Dial, M., Research, Supervised Research, Engineering Department, TE, 699, 3 credit hours, "Comprehensive Project--Precision Survey Solutions", Completed. (January 2013 - May 2013).

Chappell, D., Research, Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, "Comprehensive Project", Completed. (August 2012 - May 2013).

El Mir, M., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, Completed. (August 2012 - December 2012).

Stuart, R., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, Completed. (August 2012 - December 2012).

Chamil, W., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, Completed. (August 2012 - December 2012).

Amara, W., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, Completed. (August 2012 - December 2012).

Al Jumaili, A., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (January 1, 2012 - December 14, 2012).
Compston, R., Research, Comprehensive Project Committee member, Engineering Department, TE, 699, 3 credit hours, Completed. (May 2012 - August 2012).

Lipscomb, J., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, "Disaster Recovery Planning for the West Virginia State Tax Department Gentax Processing System -", Completed. (January 2012 - May 2012).

Ume, N., Research, Comprehensive Project Committee member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 2012 - May 2012).

Nguyen, T., Research, Comprehensive Project Committee member, Technology Management Department, TM, 699, 3 credit hours, "Research and Analysis of Technology Based Tools for Smoking Cessation: A Survey of Phone and Internet Based Resources", Completed. (January 2012 - May 2012).


Kheetan, S., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, "Forecasting Grain Barge Demand", Completed. (January 1, 2012 - May 10, 2012).


Gray, J., Research, Comprehensive Project Committee member, Information Systems Department, TE, 699, 3 credit hours, "Casework Management System", Completed. (January 1, 2012 - May 10, 2012).

Angel, J., Research, Comprehensive Project Committee Member, Technology Management Department, TM, 699, 3 credit hours, "Can Tablets Replace Laptops in the Office Environment?", Completed. (January 1, 2012 - May 10, 2012).

Grose, M., Research, Comprehensive Project Committee member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 1, 2012 - May 10, 2012).

Murphy, M., Research, Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 1, 2012 - May 10, 2012).

Rose, S., Research, Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, Completed. (January 1, 2012 - May 10, 2012).


Pham, H., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, "Business plan of the finishing and insulation material manufacture company", Completed. (January 2011 - May 2011).


Nguyen, T., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (January 2011 - May 2011).
McCallister, J., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Raleigh County Solid Waste Authority: Landfill Design, Construction and Operation", Completed. (January 2011 - May 2011).

Herholdt, K., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Ensuring Data Encryption for Portable Devices at Marshall University", Completed. (May 6, 2011).

Dokouzov, P., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Server Virtualization Impact on Database Servers", Completed. (May 6, 2011).

Adkins, R., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Comparison of the Advantages and Disadvantages of E-Prescribing in the Future of Pharmacy", Completed. (May 4, 2011).

Hatten, S., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Developing a Security Policy for Huntington Area Habitat for Humanity", Completed. (May 4, 2011).

Carpenter, A., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Raleigh County Solid Waste Authority: Landfill Design, Construction and Operation", Completed. (May 2, 2011).

Hilger, L., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Utilization of Technology Among Three Retail Pharmacy Chains: A Comparison", Completed. (April 27, 2011).

Slate, N., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, "Worship in the Clurd: Determining the Feasibility of Implementing Web 2.0 Applications for a Community Church", Completed. (April 27, 2011).

Selbe, E., Learning, Master's Comprehensive Project Committee Member, Technology Management Department, TE, 699, 3 credit hours, Completed. (April 18, 2011).

Leung, T., Learning, Master's Comprehensive Project Committee Member, Engineering Department, TE, 699, 3 credit hours, "Air Quality Regulations A Look at Air Quality Concerns and Controls on a Global Scale", Completed. (January 18, 2011).

Collins, C., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (August 2010 - December 2010).

Ferrell, S., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (August 2010 - December 2010).

Cao, V., Research, Directed Individual/Independent Study, Engineering Department, TE, 699, 3 credit hours, Completed. (August 2010 - December 2010).

2) Service

Department

Program Coordinator for the Master of Science in Engineering Degree Program (MSE), Program Coordinator, (January 2005 - Present).
College

CITE Personnel Committee, Committee Member (October 2014 - Present).
COEPD Promotion and Tenure Committee, Committee Member (June 2013 - Present).
CITE Personnel Committee, Committee Chair (August 2006 - August 2014).
CITE Curriculum Committee, Committee Member (August 2007 - August 2013).
GSEPD Promotion and Tenure Committee, Committee Member (June 2010 - June 2013).

University

Academic Planning, Policies, and Standards Committee of the Graduate Council, Committee Chair (August 2014 - Present).
Graduate Planning Committee for Engineering, Chairperson (January 2014 - Present).
COEPD Promotion and Tenure Committee, Committee Member (June 2013 - Present).
Faculty Salary Adjustment Team, Chairperson (October 2012 - Present).
Marshall University Budget Work Group, Committee Member (August 2012 - Present).
Marshall University Graduate Council, Committee Member (August 2012 - Present).
Academic Planning, Policies, and Standards Committee of the Graduate Council, Committee Member (August 2013 - August 2014).
Faculty Senate Executive Committee, Chairperson (August 2012 - August 2014).
Marshall University Faculty Senate, Chairperson (August 2012 - August 2014).
Strategic Enrollment Planning Committee, Committee Member (August 2012 - August 2014).
Program Review and Assessment Committee of the Graduate Council, Committee Member (August 2012 - August 2013).
GSEPD Promotion and Tenure Committee, Committee Member (October 2010 - June 2013).
Marshall University Faculty Senate, Committee Member (January 1, 2011 - December 31, 2011).
M.U. Faculty Senate Executive Committee, Committee Member (August 2001 - August 2010).
M.U. Graduate Council, Chairperson (August 2001 - August 2010).

Professional

Management Division of the American Institute of Chemical Engineers, Director, New York, New York, USA (January 2009 - February 2015).
Management Division of the American Institute of Chemical Engineers, Charleston, West Virginia, USA (January 2009 - December 2011).

Community
Charleston 1st Ward, The Church of Jesus Christ of Latter-day Saints, Bishop, South Charleston, West Virginia, USA (August 2008 - September 2014).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

**Professional Memberships**

Project Management Institute, PMI, Project managers and associates worldwide. (January 2004 - Present).

West Virginia/Ohio Valley chapter of Project Management Institute, WV/OV PMI Chapter, Ex-Officio Board Member; I am a former President & CEO of the WV/OH Valley Chapter, Project managers and associates. (January 2004 - Present).

American Institute of Chemical Engineers, AIChE, Fellow; Director of the Management Division; Former Chair; Vice Chair, The Management Division is one of the major divisions of the American Institute of Chemical Engineers, and is open to members worldwide. (January 1975 - Present).

**Faculty Development Activities Attended**


Conference Attendance, "2013 Annual Meeting of the American Institute of Chemical Engineers", American Institute of Chemical Engineers, San Francisco, California, USA. (November 2, 2013 - November 6, 2013).


4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.

**Awards and Honors**

John and Frances Rucker Outstanding Graduate Advisor Award, Marshall University Graduate College and Graduate Council, (April 29, 2014).
Faculty Data Sheet (Shane Tomblin)
May 15, 2010 - May 15, 2015

Name: Mr. Michael Shane Tomblin  Rank: Associate Professor

Start Date at Marshall as a Faculty Member: August 26, 1991

Status: Tenured

Highest Degree Earned: Ph D  Date Degree Received: 2005

Conferring Institution: University of Kentucky, Lexington, Kentucky

Area of Degree Specialization: Business Administration

Professional Registration/Licensure: HCUP Data Use Agreement Course

Field of Registration/Licensure: Certification in the use of NIS hospital stay, charge, and discharge database data used for healthcare research and data analysis.

Agency: HCUP: Healthcare Cost and Utilization Project

Date Obtained, Expiration Date: Obtained: February 21, 2010

List courses you taught during the final two years of this review. If you participated in a team-taught course, indicate each of them and what percentage of the course you taught. For each course include the year and semester taught (summer through spring), course number, course title and enrollment. (Expand the table as necessary)

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<td>MIS 678</td>
<td>Management Info Systems</td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>

NOTE: Part-time adjunct faculty do not need to fill in the remainder of this document.

1) Scholarship/Research

**Intellectual Contributions**

Tomblin, M. S. *Associate Editor* Interdisciplinary Journal of Information, Knowledge, and Management.

---

69
Coustasse-Hencke, A. M., Tomblin, M. S. (2013). RFID AND ITS IMPACTS TO THE HOSPITAL SUPPLY CHAIN. *Perspectives in Health Information Management, 10*.


Tomblin, M. S. MIS 412: Enterprise Systems [Course Material].

Tomblin, M. S. MIS 415: Emerging Information and Communication Technologies [Course Material].


**Presentations**


**Research Currently in Progress**

Coustasse-Hencke, Alberto M, Tomblin, Michael S, "Kawasaki Disease in the USA:“, Writing Results, Scholarly.


Tomblin, Michael S, "Promoting Collective Learning: TEP Units and Transactive Memory Support (working title).“, On-Going, Scholarly.

Michael Jones, "Virtual Reality and Avatar-Based Interventions for Tele-psychiatric Practice (working title).“, On-Going, Scholarly.

**Directed Student Learning and Research**


2) Service

**Department**

MIS Program, I am the MIS program coordinator.

MIS Program, I am the MIS program coordinator., (January 1, 2010 - Present).

Promotion and Tenure Committee (Mgt/Mkt/MIS), Committee Member, (January 2011 - December 2011).

**College**

AOL Task Force, Committee Member (November 2010 - August 2011).
LCOB Undergraduate Curriculum Committee, Committee Chair (January 2007 - May 2010).

University

PR/Marketing/Web Working Group: 20/20 subcommittee, Committee Member (January 1, 2015 - Present).

Budget Working Group, University Senate Service (March 2013 - Present).

Healthcare Informatics Program Committee, Committee Member (January 2011 - Present).

Faculty Senate, Committee Member (August 2010 - Present).

Budget and Academic Policy Committee, Committee Member (August 2010 - December 2013).

Budget and Academic Policy Committee, Committee Member (January 2011 - December 2011).

Faculty Senate, Committee Member (January 2011 - December 2011).

Healthcare Informatics Program Committee, Committee Chair (January 2008 - May 2010).

Professional

Interdisciplinary Journal of Information, Knowledge, and Management, Editor, Associate Editor, Australia (February 2013 - Present).

3) Professional development activities, including professional organizations to which you belong and state, regional, national, and international conferences attended. List any panels on which you chaired or participated. List any offices you hold in professional organizations.

Professional Memberships

Health Information Management and Systems Society, HIMSS, None, From www.himss.org:

"HIMSS is a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology.". (August 2014 - Present).

Faculty Development Activities Attended

Workshop, "Advanced Service Learning Workshop", Marshall University Office of Service Learning, Huntington, WV, US. (October 2010).

4) Awards/honors (including invitations to speak in your area of expertise) or special recognition.
Appendix II: Students’ Entrance Abilities for Past Five Years of Graduates: MS in Health Informatics

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Mean Undergraduate GPA</th>
<th>Mean GRE Verbal</th>
<th>Mean GRE Quantitative</th>
<th>Mean GRE Analytical Writing</th>
<th>GMAT Verbal Verbal</th>
<th>GMAT Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-2011</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>2011-2012</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>2012-2013</td>
<td>4</td>
<td>3.19</td>
<td>305 (n = 2)</td>
<td>580 (n = 2)</td>
<td>2.00 (n = 2)</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>2013-2014</td>
<td>8</td>
<td>3.48</td>
<td>320 (n = 2)</td>
<td>385 (n = 2)</td>
<td>3.50 (n = 2)</td>
<td>21.00 (n = 1)</td>
<td>43.00 (n = 1)</td>
</tr>
<tr>
<td>2014-2015</td>
<td>5</td>
<td>2.01</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>
### Appendix III: Exit Abilities for Past Five Years of Graduates: MS in Health Informatics

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Mean GPA</th>
<th>Licensure Exam Results</th>
<th>Certification Test Results</th>
<th>Other Standardized Exam Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-2011</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>2011-2012</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>2012-2013</td>
<td>4</td>
<td>3.61</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>2013-2014</td>
<td>8</td>
<td>3.82</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>2014-2015</td>
<td>5</td>
<td>3.74</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>
## Appendix IV: Assessment Summary

### Component Area/Program/Discipline: Master of Science in Health Informatics

<table>
<thead>
<tr>
<th>Program’s Student Learning Outcomes</th>
<th>Assessment Measures (Tools)</th>
<th>Standards/Benchmark</th>
<th>Results/Analysis</th>
<th>Action Taken to improve the program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will identify, analyze, re-design, implement, manage and lead models of information systems to improve the effectiveness and efficacy of health care organizations.</td>
<td><strong>Assessment Point 1:</strong> HP 605, 615, 650, 620, 630, MIS 678, HCA 656, 600, MIS 680, IS 623, TM 664, IS 665: Study cases, research projects, article critiques</td>
<td>Capstone</td>
<td>Students met the learning outcome.</td>
<td>No action required; however, due to the constant evolution of the field of health informatics, every year the material and assignments are updated to meet current standards (Examples of new topics: Big Data, Stronger Data Analytics Emphasis, mobile application development, etc)</td>
</tr>
<tr>
<td></td>
<td><strong>Assessment Point 2:</strong> EM 660: Study cases, research projects, article critiques</td>
<td>Advanced</td>
<td>Students met the learning outcome.</td>
<td></td>
</tr>
<tr>
<td>Students will identify, analyze, and evaluate structure, function and transfer of information including socio-technical aspects of health computing, and human-computer interaction.</td>
<td><strong>Assessment Point 1:</strong> HP 605, 615, 650, 620, 630, MIS 678, HCA 656, 600, MIS 680, IS 623, EM 660, TM 664, IS 665: Study cases, research papers, article critiques</td>
<td>Capstone</td>
<td>Students met the learning outcome.</td>
<td>No action required; however, due to the constant evolution of the field of health informatics, every year the material and assignments are updated to</td>
</tr>
</tbody>
</table>
Students will analyze and evaluate computer networks, database and systems administration, security and programming.

<table>
<thead>
<tr>
<th>Assessment Point 2:</th>
<th>Advanced</th>
<th>Students met the learning outcome.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBD: Study cases, research papers, article critiques</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Assessment Point 1:**
HP 650, 630, 620, MIS 678, 680, IS 623, TM 664, IS 665: Study cases, research projects, article critiques, software applications

<table>
<thead>
<tr>
<th>Advanced</th>
<th>Capstone</th>
<th>Students met the learning outcome.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**No action required; however, due to the constant evolution of the field of health informatics, every year the material and assignments are updated to meet current standards. (Examples of new topics: Big Data, Stronger Data Analytics Emphasis, mobile application development, etc)**
**Program Learning Outcome 1**: Students will identify, analyze, re-design, implement, manage and lead models of information systems to improve the effectiveness and efficacy of health care organizations.

<table>
<thead>
<tr>
<th>Traits</th>
<th>Performance Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introductory</td>
</tr>
<tr>
<td>Health IT standards &amp; Information systems in health care facilities</td>
<td>The student identifies and describes the characteristics, vocabularies, strengths, limitations, assessment methods and tools of information systems in healthcare facilities.</td>
</tr>
<tr>
<td></td>
<td>Milestone</td>
</tr>
<tr>
<td></td>
<td>The student articulates health IT standards and information systems with Health care facilities management model.</td>
</tr>
<tr>
<td></td>
<td>Capstone</td>
</tr>
<tr>
<td></td>
<td>The student fully develops design or re-design models of information systems.</td>
</tr>
<tr>
<td></td>
<td>Advanced</td>
</tr>
<tr>
<td></td>
<td>The student implements, manages and leads new solutions of information systems.</td>
</tr>
<tr>
<td>EHR Safety patient Security in EHR</td>
<td>The student identifies methods and concepts about electronic and personal health records and security practices.</td>
</tr>
<tr>
<td></td>
<td>The student articulates health IT standards and information systems with Healthcare facilities management model.</td>
</tr>
<tr>
<td></td>
<td>The student fully develops design or re-design models of information systems.</td>
</tr>
<tr>
<td></td>
<td>The student implements, manages and leads new solutions of information systems.</td>
</tr>
</tbody>
</table>
**Program Learning Outcome 2:** Students will identify, analyze, and evaluate structure, function and transfer of information including socio-technical aspects of health computing, and human-computer interaction.

<table>
<thead>
<tr>
<th>Traits</th>
<th>Performance Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introductory</strong></td>
<td><strong>Milestone</strong></td>
</tr>
<tr>
<td><strong>Health Informatics History</strong></td>
<td>The student identifies the principal events and fact about history of health informatics and health informatics literature. The student identifies methods and concepts about electronic and personal health records and security practices.</td>
</tr>
<tr>
<td><strong>Socio-technical aspects in HI and Medical Decisions</strong></td>
<td>The student recognizes the importance and implications of socio-technical aspects of health computing, and human-computer interaction and articulate methods of medical decisions to apply in one investigative work that shows how this aspect’s influence on health informatics process.</td>
</tr>
<tr>
<td><strong>Human-Computer Interaction</strong></td>
<td>The student identifies the principal Health IT interfaces and their interaction with human behavior.</td>
</tr>
</tbody>
</table>
**Program Learning Outcome 3:** Students will analyze and evaluate computer networks, database and systems administration, security and programming.

<table>
<thead>
<tr>
<th>Traits</th>
<th>Performance Levels</th>
<th>Introductory</th>
<th>Milestone</th>
<th>Capstone</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Networks and software (databases security, programming)</td>
<td>Recognize and identify the principal theories and methods of computer science. Identify principal tools of programming language and software applications</td>
<td>Recognize the principles, methods and design of health information systems architecture, database design, data ware housing, IT systems documentation, networks, data representations and electronic data. Identify, analyze and evaluate security methods, business continuity and disaster recovery techniques. Applies the principal tools of programming language and software applications</td>
<td>Apply in a practice or research project information technologies articulating business principles, electronic tools and architecture systems.</td>
<td>The student can reformulate or project ideas, methods or techniques to manage information based in electronic data analysis, testing systems and representation data</td>
<td></td>
</tr>
<tr>
<td>Administration systems</td>
<td>Identify administration systems</td>
<td>The student develops a critical position identifying strengths and weaknesses of administration systems.</td>
<td>Apply in a practice or research project information technologies articulating business principles, electronic tools and architecture systems.</td>
<td>Create, design and implement a performance or project to improve and manage information systems in health care facilities using programming languages, network and architecture systems.</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix V: Program Enrollment: MS in Health Informatics

<table>
<thead>
<tr>
<th>Students</th>
<th>Year 1 2010-2011</th>
<th>Year 2 2011-2012</th>
<th>Year 3 2012-2013</th>
<th>Year 4 2013-2014</th>
<th>Year 5 2014-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Majors Enrolled: No Area of Emphasis</td>
<td>---</td>
<td>14</td>
<td>19</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>Second Majors Enrolled*</td>
<td>----</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Grand Total of Students Enrolled in the Program</td>
<td>----</td>
<td>15</td>
<td>20</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>Graduates of the program</td>
<td>----</td>
<td>0</td>
<td>4</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>
Figure 1. Trend Line for Total Enrollment and Program Graduates: MS in Health Informatics
Appendix VI: Job and Graduate School Placement Rates: MS in Health Informatics

<table>
<thead>
<tr>
<th>Year</th>
<th># of graduates employed in major field</th>
<th># of graduates employed in related fields</th>
<th># of graduates employed outside field</th>
<th># of graduates accepted to Graduate Programs</th>
<th># of graduates not accounted for</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-2010</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>2010-2011</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2011-2012</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2012-2013</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2013-2014</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Five –Year Total</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Appendix VII: Letters from the Assessment Office: MS in Health Informatics

Office of Assessment & Program Review

April 28, 2015

Dr. Girmay Berhe, Program Director
Health Informatics
College of Health Professions

Dear Girmay:

The University Assessment Committee reviewer and I have completed our evaluations of the MS in Health Informatics’ assessment of student learning for academic year 2013 – 2014. This letter will provide general comments and suggestions for improvement. Please refer to the attached assessment rubric for additional comments from your reviewer.

You have developed a nice assessment plan. Your learning outcomes challenge your students to high levels of performance. You have identified what appear to be appropriate authentic assessments and have completed analytic assessment rubrics. My only concern is that your outcomes may be asking students to do too much (e.g. identify, analyze, redesign, implement, manage, and lead) and it may be difficult to collect data from all of the assessments you have listed. I note that you did not report results for academic year 2013 – 2014. I look forward to reading a more complete report for academic year 2014 – 2015. As you know, assessment is a continuous process and it is always acceptable to change parts of the assessment plan as informed by data.

Reports for academic year 2014 – 2015 are officially due on May 15. If you need additional time to complete data analysis, please let me know and I ask that your final report be submitted no later than September 15.

Sincerely,

Mary E. Reynolds

Mary E. Reynolds, Associate Vice President for Assessment and Quality Initiatives

C: Dr. Mike Prewitt, Dean, COHP
August 5, 2013

Dr. Girmay Berhie, Program Director
Health Informatics - MS
College of Health Professions

Dear Girmay:

The Graduate Council reviewers and I have completed our evaluations of the MS in Health Informatics' assessment of student learning for academic year 2012 – 2013, as submitted in the Open Pathways Project report last updated in May 2013. This letter will provide general comments and suggestions for improvement. Please refer to the attached assessment rubric for additional comments from reviewers. Please note that the reviewers' comments are based on the reports you submitted in February 2013, so may not be appropriate for your final report.

Your program's learning outcomes are appropriate to your field of study and address higher levels of thinking/learning. Your assessment plan shows that you use multiple assessment measures which are integrated throughout your curriculum. I wonder, though, if you are using measures embedded into too many courses. Can you reasonably collect and analyze data from this many projects? Your rubrics are very well developed! You reported results for all of your outcomes, but I did not understand how your analysis and planned actions related to the results reported. It appears you have a significant number of students scoring at the introductory levels of your rubric and this is a graduate program. That suggests that either your rubrics need to be revisited (which I don't think is the case) or something needs to happen to improve student performance.

During the academic year 2013 – 2014, programs will continue to report assessment results and plan actions using the online reporting form used last year. These reports will be due at the end of the academic year. If you have questions or concerns, please let me know.

Sincerely,

Mary E. Reynolds

Mary F. Reynolds, Associate Vice President
Assessment and Quality Initiatives

C: Dr. Mike Prewitt, Dean, COHP
Appendix VIII: Required/Elective Course Work in the Program

Degree Program: **MS Health Informatics**  
Person responsible for the report: **Girmay Berhie**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Total Required Hours</strong></td>
<td>30</td>
</tr>
<tr>
<td></td>
<td><strong>College of Health Professions</strong></td>
<td></td>
</tr>
<tr>
<td>HP 605</td>
<td>The Role of EHR and PHR</td>
<td>3</td>
</tr>
<tr>
<td>HP 615</td>
<td>Health Quality and Safety</td>
<td>3</td>
</tr>
<tr>
<td>HP 650</td>
<td>Health Informatics Practicum</td>
<td>3</td>
</tr>
<tr>
<td>HP 620</td>
<td>Legal and Regulatory Environment for Health Care and Informatics</td>
<td>3</td>
</tr>
<tr>
<td>HP 630</td>
<td>Research Methods and Data Analytics for Health Informatics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>College of Business</strong></td>
<td></td>
</tr>
<tr>
<td>MIS 678</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>HCA 600</td>
<td>Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>HCA 656</td>
<td>Management of Health Care Technology and Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MIS 680</td>
<td>Health Care Communications Technology and Telematics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>College of Information Technology and Engineering</strong></td>
<td></td>
</tr>
<tr>
<td>EM 660</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>IS 665</td>
<td>Health Informatics Application: or elective</td>
<td>3</td>
</tr>
<tr>
<td>TM 664</td>
<td>Health Informatics</td>
<td>3</td>
</tr>
<tr>
<td>IS 623</td>
<td>Database Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Credit Required by the Major**  
(By Course Number and Title) – Health Informatics does not require Elective Credit

**Related Fields Courses Required**  
Health Informatics does not require Related Fields Courses
Appendix IX: CAHIIM Accreditation Board Report/Letter
Board Report

Site Visit Dates

<table>
<thead>
<tr>
<th>Site Visit Start Date</th>
<th>01/16/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Visit End Date</td>
<td>01/17/2013</td>
</tr>
</tbody>
</table>

Site Visit Report prepared by

<table>
<thead>
<tr>
<th>Sue Feldman</th>
<th>Review Panel/Site Visit Team Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawrence Pawola</td>
<td>Review Panel/Site Visit Member</td>
</tr>
<tr>
<td>Linde Tesch</td>
<td>Review Panel/Site Visit Member</td>
</tr>
</tbody>
</table>

Program Strengths

The practicum is unique and puts classroom learning into practice.

Interdisciplinarity of the program - three different departments

Diversity of the student population

Program director passion and desire to see the program succeed Internal champion Students feel that he is approachable and responsive to their needs

The students feel that they are well prepared for the work force and are optimistic about their futures.

A strong and diverse advisory board – that are actively engaged the program.

Strong collaboration across colleges – dean and faculty.

Collaboration from colleges to the student level – students are aware of the value of collaboration.

Potential to link the HI program to other disciplines such as nursing and Pharmacy.

Suggestions for Improvement

There are a couple of curricular areas for improvement:

- Research methods and data analytics – mixed methods research class
- Ethics for informatics
- Course sequencing – attention to ensuring that courses are offered without any gaps in coursework
– some students mentioned that they have to delay graduation because a course is not offered – this would be a good place to offer a special topics course or independent study

Enrollment is a driver to program growth and sustainability. As such, there are a couple of areas related to enrollment:

- Consider using the undergrad programs (example the BS in Health Sciences and Public Health) as feeders for the Health Informatics programs, for instance a 3+2 or 4+1 model

- Consider capitalizing on being an innovative first mover in the state by developing employer community relationships to feed enrollment. These relationships will also enable the program to have access to "early information" regarding health informatics changes in policies and best practices.

There is a concern that Dr. Berhie is just one person and seems to be the driving force behind the health informatics program and without someone to share the operational load. What happens to the program if something happens to him?

Lastly, consider supporting the faculty in keeping current with health informatics trends and issues and in broadening the areas in which they teach, relative to health informatics. A couple of viable options in this area might be to encourage to join AMIA and HIMSS. Students are also encouraged to join these organizations and to begin submitting poster presentations.
CAHIM

The Commission on Accreditation for Health Informatics and Information Management Education verifies that the

Marshall University
Huntington, WV

Masters Degree Program

met the Educational Standards for a Health Informatics Program and is awarded accreditation effective

April 19, 2013

Steven J. Steindel, PhD, FACMI
Chair, CAHIIM Board of Commissioners

Claire Dixon-Lee, PhD, RHIA, FAHIMA, CPH
CAHIIM Executive Director
July 2, 2015

Dear Program Director:

This letter serves as confirmation by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) that the program website issue(s) have been addressed in your response, as required by the CAHIIM Accreditation Standards.

The Commission recognizes you and your colleagues for your commitment to continuous quality improvement in higher education, as demonstrated by your participation in program accreditation.

Sincere appreciation,

Claire Dixon-Lee, PhD, RHIA, CPH, FAHIMA
Executive Director, CAHIIM

cc: Jaclyn Lucas, RHIA, CAHIIM Education Quality Officer
May 9, 2013

Stephen Kopp, PhD, President
Marshall University
1 John Marshall Drive
Huntington, W.VA. 25755

Dear Dr. Kopp:

The Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) is pleased to inform you of its vote on April 19, 2013 to award Initial Accreditation to the Health Informatics Master’s Degree Program at Marshall University.

The peer review conducted by the Panel of Accreditation Reviewers and the CAHIIM Commissioners recognizes the program’s substantial compliance with the nationally established CAHIIM Accreditation Standards. The program will now participate and submit annually, outcomes information using the CAHIIM Annual Program Assessment Report (APAR) process and be invoiced for the annual accreditation fee in November/December of each year.

The attached Board Report reflects the Partially Met or Not Met Standard citations that merit your institution’s attention and provides guidelines for resolution in order to strengthen the program’s compliance. The following Standards are Partially Met: #4, 9,10,12,13, and 14.

CAHIIM requests that a Progress Report be completed by November 9, 2013, indicating the manner in which these citations have been resolved and include evidence of implementation. The program director has access to the web-based Progress Report within the CAHIIM Accreditation System. Failure to respond satisfactorily to these citations may result in a change of the Accreditation Status.

The Commission recognizes you and your colleagues for your commitment to continuous quality improvement in higher education, as demonstrated by your participation in program accreditation.

Sincerely,

[Signature]

Steven J. Steindel, PhD, FACMI, Chair, CAHIIM Commission

Cc: Gimray Berhie, PhD, MSW, MSIS, Health Informatics Program Director
Michael Previtt, PhD, FCCP, Dean
Benjamin Reed, CAHIIM Accreditation Business Manager
Appendix X: Student Publications


Personal Health Records: Beneficial or Burdensome for Patients and Health Care Providers?, Perspectives in Health Information Management, Published, Boateng, S., lester, M., Studeny, J., Coustasse-Hencke, A. M., March 1, 2016, JUL

Use of Smartphones in Hospitals: Is It Working for Physicians, The Health Care Manager, Published, Al Thomairy, N., Mummaneni, M., Alsalamah, S., Coustasse-Hencke, A. M., November 1, 2015, 34
Health Informatics is the use of information technology in health care to improve quality and reduce costs.

Successes/Outcomes

- CAHIIM accreditation on April 9, 2013, becoming:
  - CAHIIM accredited within the first two years of operation
  - One of the first three CAHIIM accredited Health Informatics Master’s degrees in the U.S.
  - The first CAHIIM accredited HI Master’s Degree in West Virginia
- Ranked #1 in “Top 25 Master’s in Healthcare Informatics Degrees ranked by Affordability in 2014” - MBA Healthcare Management
- Unique model of academic collaboration among three colleges*
  - Created a program of least cost by using existing resources
  - Produced quality curriculum
  - Facilitated fast program implementation
- Intense focus on student needs and success:
  - Incorporation of 400-hour educationally directed and paid Health Informatics practicum
- Active advisory committee comprised of 37 members - CEOs, CIOs, Directors, DBAs, etc.
- Accelerated Master’s Degree with the College of Science – Department of Integrated Science and Technology
- 18 graduates: 100% employment | $50,000-$125,000 salary range

Challenges/Needs

- Health Informatics is not widely recognized. (Needs promotion)
- Director’s salary is inconsistent with peer institutions and not at the level originally written in the Intent to Plan.
- No certified EHR simulation currently available to HI students
- Staying on the cutting edge (Professional Development)
- Limited number of faculty/staff dedicated to Heath Informatics operational and administrative duties

Proposed Solutions

1. Upgrade Director’s Salary to the level written in the Intent to Plan
2. Faculty Member: Field Practicum Coordinator ($60,000 to $70,000 – 9 month)
   - Primary Role: Facilitating Practicum Opportunities
   - Additionally, share other course and administrative responsibilities such as program promotion and student advising/recruitment.
3. Health Informatics Computer Lab
   - Use: Educational version of an EHR system such as Cerner or EPIC, and hands-on teaching of research and data analysis.
   - Rationale: Two courses need hands-on projects with EHR and Data analytics software:
     - HP 605: The Role of EHR and PHR
     - HP 630: Research Methods and Data Analytics
4. Offer the Masters in Health Informatics Degree Online
   - Wider Program Reach
   - Greater Student Recruitment
5. Offer Post Graduate Certificates, such as,
   - Nursing Informatics
   - Data Analytics/Biostatistics
   - Biomedical Informatics
6. Office Located in Washington, D.C.
   - Wider Program Reach
   - Greater Student Recruitment
   - Offer Online/In-Person Classes

* College of Health Professions, College of Business, and College of Information Technology and Engineering.
Girmay Berhie, Ph.D., Professor/Director of Health Informatics
2015 Program Review

Master of Science
Health Informatics

Girmay Berhie, Ph.D.
Professor/Director

Marshall University
CAHIIM Accreditation – April 9, 2013

- Within the first two years of operation.
- One of the first three HI Master’s degrees in the U.S.
- First HI Master’s Degree accredited in West Virginia.
Ranked #1 – “Top 25 Master’s in Healthcare Informatics Degree ranked by Affordability in 2014”
The Health Informatics Program founded using a unique model of academic collaboration of three colleges.

- Program of Least Cost
- Produced Quality Curriculum
- Facilitated Fast Program Implementation
Unique 400 Hour Health Informatics Practicum

- Student Expectation Paper
- Faculty Advisor Meets with Student’s Field Preceptor three times:
  - Initial Expectations
  - Midterm Evaluation
  - Final Evaluation
- Weekly Meetings with Faculty Advisor
- Paid Internship
- Leads to student job placement before graduation
Active Advisory Committee

• 37 members
  • CEO’s, CIO’s, Directors, DBAs, Health Informatics Officers, etc.
• Help guide the program to stay on the cutting edge and meet workforce demand
18 Graduates

• Graduates in High Demand!
• 100% Post-Graduation Employment
• Post-Graduation Salary Range: $50,000 - $125,000
What is Health Informatics?

Health Informatics is the use of information technology in health care to improve quality and reduce costs.

Value = \frac{\text{Increase in Quality}}{\text{Reduce Costs}}
Challenges

Health Informatics is not widely recognized.
Challenges

Director’s salary is inconsistent with peer institutions and not at the level originally written in the Intent to Plan.
Limited number of faculty dedicated to Health Informatics operational and administrative duties
Challenges

No certified EHR simulation currently available to HI students
Challenges

Staying on the cutting edge of Health Informatics
Proposed Solution

1. Faculty Member: Field Practicum Coordinator
2. Upgrade Director’s Salary
3. Health Informatics Computer Lab
4. Provide the Master’s of Health Informatics Online
5. Offer Post Graduate Certificates, such as,
   • Nursing Informatics
   • Data Analytics
   • Health Informatics
6. Office Located in Washington D.C.
Requested Resources
Faculty Member: Field Practicum Coordinator
$60,000 - $70,000 (9 month)

Primary Role:
• Facilitating practicum opportunities
• Structure this educationally driven experience
• Meet with student’s field supervisors
• Meet with the students weekly

Additional Roles:
• Share administrative responsibilities
• Share 6 HP courses teaching responsibilities
• Certificate/Online Program Development
Requested Resources
Upgrade Director’s Salary
$95,000-$120,000 (9-month)

During Dr. Berhie's leadership, the Health Informatics program:
• Became CAHIIM accredited within 2.5 years of operation
  • 1 of 4 in the USA.
• Was ranked #1 in Master’s in Healthcare degrees in 2014 in the United States ranked by affordability that met high standards of overall quality (by MBA HealthCare Management).
• Has 100% job placement, salary range from $50,000 to $125,000.
• Instituted a unique, low cost, and high quality interdisciplinary model that utilizes existing resources across three colleges.

Dr. Berhie was just recently named on the top 20 Health Informatics researcher in the nation. (PokiDot)
The average salary for this position is $95,000 to $120,000 and with his contributions it would be on the higher end. (Higheredjobs.com)
Requested Resources
Additional Funds

Support Staff: Three GAs and Three Extra Help
  • Assist in Administrative Duties

Professional Development for Faculty
  • Attending HI Conferences, Training, Development
  • Assist in conducting/presenting HI Research

Part Time Teaching Faculty
  • Teach HP 620 and HP 615
  • Individuals cognizant of swiftly changing work environment
  • Unique real world expertise and skill set
Requested Resources
Health Informatics Computer Lab

Educational version of an EHR system (Cerner or EPIC)
Hands-on teaching of research and data analysis.

Needed For:
• HP 605: The Role of EHR and PHR
• HP 630: Research Methods and Data Analytics