COVER SHEET

NEW DEGREE PROGRAM PLANNING NOTIFICATION OF INTENT

(PLANNING NOI)

Program Information

Program Name: Health Informatics and Health Information Management

Institution Name: University of Washington, Seattle

Degree Granting Unit: Department of Health Services (School of Public Health)
(e.g. College of Arts & Sciences)

Degree: Master of Health Informatics & Health Information Management *(e.g. B.S. Chemistry)* Level: Graduate *(e.g. Bachelor)* Type: _____ *(e.g. Science)*

Major: Health Informatics & Health Information Management *(e.g. Chemistry)* CIP Code: 51.0701

Minor: N/A *(if required for major)*

Concentration(s): N/A *(if applicable)*

Proposed Start Date: Autumn 2012

Projected Enrollment (FTE) in Year One: 22.5 *(#FTE)* At Full Enrollment by Year: 2017 ; 40 *(# FTE)*

Proposed New Funding: Fee-based ($388,125)

Funding Source: ☐ State FTE ☒ Self Support ☐ Other

Mode of Delivery / Locations

☒ Campus Delivery Seattle, WA (Administrative services) *(enter locations)*

☒ Off-site Bellevue, WA *(enter location(s))*

☒ Distance Learning E-mail, Webcasts, Bulletin Boards, and other educational technology tools *(enter formats)*

Substantive Statement of Need

Attach sheet

Contact Information (Academic Department Representative)

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10/26/2010

Endorsement by Chief Academic Officer Date

Notice of Intent

Master of Health Informatics and Health Information Management

I Degree Program Description and Rationale

The *Master of Health Informatics and Health Information Management* degree will prepare individuals to be transformational leaders in health informatics and health information management practice. The title differentiates between the University of Washington Biomedical and Health Informatics Program and Clinical Informatics for Patient Centered Technology Programs currently in existence to emphasize an alternative aspect of health informatics and thereby complement these programs. The focus is the aspect of health informatics that includes the management and technology combination required in the health information management field with a specific emphasis on the current business processes used managing health information and electronic health records unlike the CIPCT program which approaches the broad area from the clinical and change management and clinical informatics perspective and unlike the MS/PhD program which approaches this area from the foundational and applied scientific base of biomedical and health informatics more broadly. The proposed degree will be a hybrid delivery program offered by the University Of Washington Department Of Health Services and administered by UW Educational Outreach. Students will be working professionals employed in health care settings in positions associated with health data and information management. This degree will be offered by the Health Informatics and Health Information Management Program and accredited by the Commission on Accreditation of Health Informatics and Information Management Education (CAHIIM). Collaboration in required course offerings will be provided by the UW Master in Health Administration (MHA) Program and elective course offerings by the Management of Information Systems Program in the Information School.

The Master of Health Informatics and Health Information Management Program aims to prepare individuals who will play strategic leadership roles involving health information management systems with emphasis on legal and evidentiary electronic health records, health information management and electronic health record business processes including systems integration and health information exchange. Using high level management skills, graduates will be prepared to oversee organizational processes in accreditation, regulatory and compliance requirements related to HIHIM professional practice such as privacy, security, healthcare terminologies and code systems. These individuals will support the design and development of healthcare management information systems that integrate business and operational management information, clinical health systems management information, and electronic health record information. The growth of the health informatics and health information management body of knowledge has boosted demand for advance degrees. These individuals will join colleagues in leadership and practice teams who plan, implement, evaluate health information systems.

Program graduates will provide leadership within a complex, dynamic and rapidly evolving health service delivery environment through strategic and change management initiatives. Graduates will integrate competencies of applied health information management with transformational organizational leadership and change management competencies to enable full benefit-realization of health information systems.

Course content will be covered via a hybrid, non-traditional model with three (3) days of concentrated classes held three (3) times per quarter integrated with on-line discussion tools. This hybrid model is designed for working professionals. The program requires completion of 55-57 graduate credits over a two (2) year period. The program will also offer stand-alone graduate certificates for those students who do not wish to pursue a master's degree.

II Relationship Institutional and Unit Priorities

The mission of the School of Public Health is to promote population health, prevent illness, disability, and injury, and to ensure efficient, effective, and equitable health care system through education, research, and service. The Master of Health Informatics and Health Information Management supports this mission with a focus on training individuals in the management of health systems and the health information needed to collect, monitor, analyze and evaluate health data to meet the health information needs of individuals, organizations and communities.

The mission of a master degree curriculum in Health Informatics and Health Information Management is to prepare confident, innovative and contributing professionals who can identify and use a variety of information resources and technologies to accomplish the information management objectives of diverse practice environments using team models. The proposed program will further develop leadership and management skills and aptitudes coupled with critical thinking skills in information and systems analysis areas necessary to adapt to the changing healthcare environment. Based on the Commission on Accreditation of Health Informatics and Information Management Education (CAHIIM) national curriculum model, this degree is designed to meet recognized workforce needs that extend beyond Washington State to national and potentially international markets.

III Demand

Health Information is the essential foundation of clinical care, health services and the health of the population, and is needed for the provision, financing and evaluation of healthcare services as well as for future health services research. The health informatics and health information management profession is based on the healthcare industry's need to manage such information more effectively and efficiently. The profession encompasses a continuum of practice concerned with the collection, storage, retrieval, analysis, and dissemination of health information for a variety of purposes serving providers, patients and the community-at-large. The main focus of the profession is on managing health information and collaborating with others who coordinate information technology resources within an organization. Information is managed to support individual and organizational access and to participate in strategic guidance of information-related decisions that can impact and improve care. Supporting functions in the HIHIM profession include managing appropriate disclosures while preserving privacy and security of information, developing and maintaining retention and destruction programs and ensuring data integrity through industry-accepted data standards. 1

A. Student Demand

The Health Informatics and Health Information Management faculty and students have sought a master degree program in the HIM field for many years. Graduate surveys report a continuing interest, and faculty members have served on national educational committees charged with strategic planning for professional education. From a healthcare industry perspective, advances in information technology, and strategic legislative shifts occurring in the healthcare environment are expanding the demand for healthcare information both within and beyond static institutional boundaries. Samples of current and projected environmental trends contributing to this growing industry need include:

- National legislative focus on using technology as a tool in improving patient safety;
- Development and proliferation of electronic health record systems across the health care delivery spectrum;
- Growth of integrated delivery system requiring shared health information databases (e.g., health information exchanges);
- Increased emphasis on cost reductions through downsizing, rightsizing, process reengineering methods (e.g., LEAN, Six Sigma);
- Increased demand for critical pathways and practice guidelines;
- Implementation of managed care systems and community networks;
- Increased emphasis on outcomes research with efficacy justification;
- Growth and expansion of information technology through telecommunications and the Internet;
- Increased concern regarding the legal and social concerns related to privacy, security and technology issues;
- Continuing and increasing initiatives to apply comprehensive clinical terminologies within electronic health information systems;
- Increased emphasis on patient access to their individual health information using Internet technologies ;
- Initiatives to create a national health information network.

In addition, the growth of data warehouses, clinical data repositories and other large databases at the institutional, local, state, regional and national levels require professionals who are capable of understanding, retrieving, analyzing and managing information. The HIM professional acquires these capabilities at both a conceptual and application level through the existing baccalaureate degree and post-baccalaureate certificate programs. However, the above presents both challenges and opportunities for enhancing the depth and breadth of these capabilities through advanced academic

preparation at the master degree level. The emphasis of the recommended master degree curriculum is on the customer/consumer (whether healthcare provider, patient, researcher, etc.) and the tasks necessary to fulfill the customer's or consumer's health information needs.

University of Washington Educational Outreach Marketing Research conducted a market survey of health informatics and health information management professionals and UW alumni with undergraduate and graduate degrees in health informatics, business administration, public health and business computing information systems in Summer 2009. The purpose of the survey was to assess interest in a Master's degree in Health Informatics and Health Information Management. A 26 question survey was emailed to 1286 AHIMA members in Washington, Oregon, Alaska, Montana, Idaho and California, 500 Health Information and Management Systems Society's Washington membership, and 872 UW alumni who graduated within the last five years from select majors, as noted prior. The survey received a 26.2% average response rate among the lists and 39.3% of those indicated a preference to pursue a master's degree in the next two years. Of those interested in pursuing a master's, 76.1% were very or somewhat interested in pursuing a master's degree in this field. Additionally, 39.6% preferred a hybrid delivery format and 18.4% an executive format. Reasons indicated by those surveyed for pursuing included improving depth of knowledge (14.9%), achieving greater recognition in the field (13.9%), and broadening skill base (14.1%). The survey results indicate a strong interest in the proposed degree program from professionals and graduates currently working in the health information management field or other related business fields. This data reflects a strong potential candidate pool within the Pacific Northwest.

B. Workforce Demand

According to the U.S Department of Labor, health information management and health information technology jobs are expected to grow **by 47% through 2012**.

In a 2006 report, "Building the Work Force for Health Information Transformation, February, 2006, the American Health Information Management Association (AHIMA) and the American Medical Informatics Association (AMIA)", authors noted that the growing role of information technology within healthcare delivery organizations has created the need to **deepen and widen the pool of workers** who can help organizations optimize the on-going effectiveness of information technology as well as its impact on equity,, safety, patient-centeredness, timeliness, effectiveness and efficiency of care. To meet this need, it is important to provide health informatics educational opportunities across all health professions.

The results of the market survey confirm the interest and energy around meeting future workforce demands for individuals trained in this field.

1. Demand for the proposed HIHIM Master's degree is high, especially among HIM professionals. Given the high level of interest in obtaining a Master's in this area of study, this program could fill a gap that is not currently provided. Knowledge of current UW HIHIM offerings is limited, suggesting a short term opportunity to increase awareness and marketing around what is already offered.
2. The program would likely have a regional and national draw, as many (40%) of those interested in the proposed Master's degree obtained their highest degree from schools and institutions outside WA/OR.
3. Improving depth of knowledge in their field is motivating professionals towards obtaining a Master's Degree. Increasing salary and remaining competitive are also key motivators. Marketing aimed at this group should include those as compelling reasons for obtaining a Master's in HIHIM.

C. Community Demand

Within healthcare organizations and national and regional health information networks, program graduates will support achievement of community and organizational objectives designed to assure properly authorized availability of health information services as well as cost-effective utilization of clinical health and business information to assure efficiency, effectiveness and operability across the health care delivery system. The national emphasis on advancing health information technology included in the American Recovery and Reinvestment Act (ARRA) underscores the need and

anticipated increased role the graduates of the Health Informatics and Health Information Management Program will play in advancing regional and eventually a national integrated health information system.

IV. Relationship to Other Institutions

This proposed degree complements existing graduate programs housed within the Department of Health Services and the Schools of Medicine and Nursing at the University of Washington. The proposed curriculum draws on existing graduate courses as well as adds new courses. The curriculum content focuses on the health informaticist's role in the development and oversight of strategic organizational and community impacts of patient health data ranging from individual records to large aggregate data sets maintained within health information systems or repositories and electronic health record systems. It would also involve development of the management knowledge of all legal and regulatory concerns related to health information within the framework of continuously expanding health information systems. This degree addresses the quality, accuracy, privacy, and confidentiality of the health information within business systems; how to implement and use health information technology; the workflow within and across healthcare settings; and the regulatory and legal environments surrounding EHRs. 2

On a national level, there are no graduate programs in Health Informatics and Health Information Management within this region. There are ten Universities that offer graduate or certificate programs or specific tracks for health informatics and health information management across other regional areas of the country (see table below). The programs at Oregon Health Science University and University of Pittsburgh have specific tracks within their overall offerings for health information management. See italics.

1	Claremont Graduate University (CA)	Master in Health Information Management	CAHIIM Accredited
2	College of St. Scholastica (MN)	Master in Health Information Management	CAHIIM Accredited
3	Oregon Health & Science University (OR)	Graduate Certificate Program in Biomedical and Health Informatics – *Health Information Management Track*	CAHIIM Accredited
4	University of Illinois in Chicago (IL)	Master of Science in Health Informatics	CAHIIM Accredited
5	University of Pittsburgh (PA)	Master of Science in Health and Rehabilitation Sciences with *concentration in Health Information Systems*	CAHIIM Accredited
6	University of Tennessee Health Sciences (TN)	Master of Health Informatics and Information Management	CAHIIM Accredited
7	Stephens College (MO)	Master in Management of Health Information	
8	Louisiana Tech University (LA)	Master of Health Information Management	
9	Temple University (PA)	Master of Science in Health Informatics	
10	Ohio State University (OH)	Master of Science with Concentration in Health Informatics	

V Relationship to Higher Education Coordinating Board (HECB) Master Plan; State and Regional Needs Assessment

Goals of the HECB Master Plan are to: 1) create more opportunities for bachelor, professional and graduate degrees, 2) promote economic growth and innovation and 3) create a system of incentives and accountability that rewards higher education. This master degree aligns with all three HECB goals as follows:

Create More Opportunities for Bachelor, Professional and Graduate Degrees

The proposed Master of Health Informatics and Health Information Management creates more opportunities for graduate degrees that meet a major initiative in health care today. New roles for graduates in this field with a master degree include, but are not limited to the following:

New Roles for Graduates with a Master Degree

Executive Health information Manager or Corporate Health Information Officer – coordinates all information management functions across the health care enterprise encompassing the quality, integrity, appropriateness, retrievability, usage, analysis, and confidential and secure maintenance of patient-related and other enterprise

level health care data.
Medical Language and Classification Expert – employs skills in the design and use of national medical vocabularies and classification systems; defines/categorizes data for access and use from computer-based patient health record systems using vocabularies and classification systems.
Personal Health Record Consumer Advocate – works with organizations and individual patients in the community in support of **maintaining** individual personal health records that are linked to health care providers or other independent third-parties.
Health Informaticist – works to solve electronic health information problems; designs and optimizes methods access and management of patient health records; develops telemedicine networks; or aids with patient billing and claims processing Addresses emerging technology issues related to electronic data retention. Archival and destruction.
Information Privacy/Security Officer - designs, implements and/or maintains an information privacy and/or security institutional program that balances requirements of privacy, integrity and availability of data while conforming to national and state laws and standards.
Data Analyst/Research Specialist - employs skills in data retrieval, data mining, and data modeling using statistical tools for analysis of healthcare data.
Information Systems User Liaison - understands clinical vocabulary of the healthcare professional, serves as the "translator" or "interpreter" between the healthcare professional and information systems professional serving as the "go-between" regarding clinical and technical jargon/language to ensure a user-friendly systems environment,
Applied Health Informatics Researcher - works in academic institutions or research settings to study the impact of applied health informatics on the healthcare industry whether it's the patient, the provider, the payer, other third-parties or the community.
Public Health Information Officer – establish and manage institution-wide systems to coordinate information flow, data quality and reporting to mandated public health systems or other required bio-terrorism data collection.
Project Manager – manages the implementation of systems necessary to support electronic health record and other information systems-related projects.

Promote Economic Growth and Innovation for Washington State and Beyond.

Washington State and, specifically, the greater Seattle area is a high tech community. Microsoft has initiated its interest in health information systems through an Internet-based personal health record product. In 2009, Washington State has initiated innovative work in piloting Health Record Banks to advance the technology and interoperability of health information. Providers, vendors and other interested parties in the Inland Empire, Wenatchee, and Bellingham areas are working on interoperability demonstration projects which will contribute to a national health information network. In tandem with Washington State initiatives, the American Recovery and Reinvestment Act (ARRA) is offering financial incentives to advance the development of electronic health record systems for health care providers. Regional initiatives are already underway to address workforce needs from the community college levels to graduate certificate levels. Through training individuals to lead and participate in advancing electronic health records and health information technology, this program will significantly contribute to the promotion of economic growth and innovation in healthcare as the industry continues to create and advance initiatives in this area.

Create a System of Incentives and Accountability that Rewards Higher Education

This master's proposal meets the policy established by the HECB to meet the stated goals to "**Expand investment in high-demand programs of study and grow the pipeline of interested and prepared students in these fields".**

By offering an opportunity to acquire a master degree in this innovative hybrid program, working professionals can advance their professional knowledge and skills as well as their professional employment opportunities. This program prepares them to participate as unique members in the interdisciplinary healthcare teams needed to conceive, design and implement cost-effective health information technology solutions. It offers opportunities for working healthcare professionals to advance their existing skills and other non-healthcare workers seeking reentry into the healthcare industry.

State and Regional Needs Assessment

The analysis and recommendations of the State and Regional Needs Assessment address expanding educational opportunities at all levels of higher education and in several key areas. This proposal specifically aligns with Recommendations #2 and #3 as follows:

Recommendation #2. "The higher education system must increase the number of graduates ….prepared to fill positions in the high-demand areas of computer science, engineering, software engineering and architecture, and health care occupations. Institutions in the state need to increase the number of students enrolled in graduate and professional programs to meet employer needs."

Recommendation #3. "Expansion of existing strategies in health care and the development of new programs and/or delivery mechanisms are recommended to meet employer and student demand. The health care industry faces critical shortages of qualified workers in a number of occupational areas."

The proposed master degree focuses on the anticipated acceleration in the growth of information requirements for both individual and population health care needs and the rapidly changing health information technology demands. It will afford greater opportunities for present and future workers to acquire the skills needed for a highly dynamic healthcare industry where collaborative, team-oriented information assessments and implementation and on-going management of information technologies is greatly needed. Graduates will be prepared to lead and participate in multi-level business partnerships and oversee the dramatic changes of health information systems and electronic health records across the delivery system spectrum. Assuring compliance with regulatory and enterprise-level accreditation requirements, monitoring for data quality and integrity, managing retention and destruction programs, protecting the privacy and security of individually-identifiable health information, and developing and maintaining policies and procedures for effective hybrid and fully electronic health record systems will be some of the key professional duties of and challenges for our graduates. Our established curriculum will ensure that our graduates will competently serve the health care industry in Washington State and well beyond to meet both present and future employer workforce needs.

1. *Dixon Lee, Claire, PhD, RHIA, FAHIMA et al, "Graduate Education Bridges the Gap Between the Electronic Health Record and Clinical Need, Journal of Healthcare Information Management, Volume 18, Number 3*
2. *Gina Rollins*, *Mastering HIM, An Expanding Field Sparks Interest in Graduate Degrees, Journal of AHIMA,*
3. *Volume 79, Number 9.*

VI Curriculum

The curriculum consists of 55-57 required graduate credits over 2 years. Students may take electives offered through the MHA program and the Information School. Applications will be evaluated for relevant background education and/or experience in health information management and related areas. There are no specific prerequisites required for the program. The program will also offer stand alone certificates through the University of Washington Educational Outreach Program for those students who do not wish to pursue the master's degree. The University of Washington Graduate School admissions process will apply. The degree requirements will draw on selected University of Washington existing graduate courses; and will add 12 new courses in Health Informatics and Health Information Management. (See page 8)

VII Faculty Profile

The faculty will be drawn from the existing Health Informatics and Health Information Management program, the Master's in Health Administration Program and adjunct appointed faculty.

7.1 Draft Curriculum for a Master of Health Informatics and Health Information Management MHIHIM

Year 1	Autumn Quarter	Cr	Winter Quarter	Cr	Spring Quarter	Cr	Summer Quarter	Cr	
	HSERV 511 Introduction to Health Services and Public Health	3	HSMGMT 510 Organizational Behavior and Human Resource Management	3	HSMGMT 570 Quantitative methods	3	HSMGMT 501 Epidemiology/Critical Evidence Appraisal	3	
	HSMGMT 505 Managing Health Care Organizations Org Behavior and HR Mgmt	3	HSMGMT 523 Introduction to Health Informatics*	3	HIHIM 525 Databases in Health Information and Information	3	HSMGMT 567 Clinical Systems Management	3	
	HIHIM 510 # Enterprise Systems and Electronic Health Records	3	HIHIM 520 # Law, Policy and Ethics in Health Information and Healthcare	3	HIHIM 530 # Confidentiality, Privacy and Security in the Electronic	3	HIHIM 535 Clinical Vocabularies, Terminologies, Classifications and	3	
Total		**9**		**9**		**9**		**9**	**36**
Year 2	**Autumn Quarter**		**Winter Quarter**		**Spring Quarter**		**Summer Quarter**		
	HSMGMT 562 Strategic Management of Health Care Orgs	2	HIHIM 550 Health Care Data Mgmt - Health Record	2	HIHIM 555 Environment of Care	*2*	HIHIM 570 Capstone Project	3	
	HSMGMT 574 Financial Management	3	HIHIM 556 EHR/HI Systems Operations and	2	HIHIM 560 Special Topics in Health Informatics*	2			
	HIHIM 540 # Community Health Informatics and Information Exchange	2	IMT Elective Options (To be Determined)	4	HIHIM 600 Independent Study & Leadership Seminar	1-3			
Total		**7**		**4 *or* *8***		**5-7**		**3**	**19 or 21**

Italics are required courses (or areas) for a master's degree in the School of Public Health (Biostatistics, Environmental, Epidemiology, Health Services Administration, Social & Behavioral Sciences) # content for MSIM certificate

9 MHA courses, 12 HIHIM courses, MISM course(s) – 4 credits

Total Credits: 55-57 (electives not included