



ARIZONA STATE UNIVERSITY  
PROPOSAL TO ESTABLISH A NEW GRADUATE DEGREE

This template is to be used only by programs that have received specific written approval from the Provost's office to proceed with internal proposal development and review. A separate proposal must be submitted for each individual new degree program.

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**DEGREE PROGRAM**

**College/School(s) offering this degree:** Graduate College/Biomedicine @ ASU

**Unit(s) within college/school responsible for program:** Department of Biomedical Informatics

**Proposed Degree Name:** Master of Advanced Study in Health Informatics

**Master's Degree Type:** Other

**Proposed title of major:** Health Informatics

(Note: originally, the proposed name for this major was Biomedical Informatics, However, the faculty of the program prefers this revised name, as it not only reflects the goals and objectives of the proposed degree much better, but also helps to differentiate the new program from the existing master's program in Biomedical Informatics. Therefore, we request that the degree be approved with this new name.)

**Is a program fee required?** Yes  No

**Requested effective term:** Summer 2011

(The first semester and year for which students may begin applying to the program.)

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**PROPOSAL CONTACT INFORMATION**

(Person to contact regarding this proposal)

**Name:** Carol Behl

**Title:** Associate Director

**Phone:** 602-827-2538

**email:** cbehl@asu.edu

**DEAN APPROVAL**

All necessary unit and College/School levels of review have approved this proposal, and the College/School(s) has the resources to offer this degree program. I recommend implementation of the proposed degree program. (Note: An electronic signature, an email from the dean or dean's designee, or a PDF of the signed signature page is acceptable.)

**College Dean Name:** Maria T. Allison

*(Dean's Designee Approval Submission – Please see attached Curriculum Planning Email)*

**8/17/10**

**College Dean Signature** \_\_\_\_\_ **Date:** \_\_\_\_\_

**College Dean name:**

(If more than one college involved)

**College Dean Signature** \_\_\_\_\_ **Date:** \_\_\_\_\_

**ARIZONA STATE UNIVERSITY  
PROPOSAL TO ESTABLISH A NEW GRADUATE DEGREE**

This proposal template should be completed in full and submitted to the University Provost's Academic Council [<mailto:curriculum@asu.edu>]. It must undergo all internal university review and approval steps including those at the unit, college, and university levels. A program **may not** be implemented until the Provost's Office notifies the academic unit that the program may be offered.

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**DEGREE PROGRAM INFORMATION**

**Master's: Other**

**If Degree Type is Other, provide proposed degree type: Master of Advanced Study  
and proposed abbreviation: MAS**

**Proposed title of major: Health Informatics**

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**1. PURPOSE AND NATURE OF PROGRAM**

- A. Brief program description** (This is a catalog type description of no more than 250 words. Include the distinctive features of the program that make it unique. Do not include program or admission requirements.)

The Master of Advanced Study (MAS) in Health Informatics (HI) is designed to offer professionals working in the field of health care in the United States an opportunity to earn a Master's level degree in applied health informatics and to facilitate the ability of experienced programmers and software engineers working in non-health fields to transition to careers in health informatics. This degree will differ from the current Master of Science (MS) in Biomedical Informatics degree in that it is targeted to working professionals needing to hone their skill sets in health information technology (IT), will be offered entirely through distance learning (online), and will permit the students to complete their training in a year and a half (including summer). It will prepare students for jobs in health with a focus on coursework that prepares students for jobs in public health and clinical care settings. Content will be tailored to meet the needs of individuals already in the workforce who need additional training and skills to permit them to advance in their current positions in health and to function effectively as health informatics professionals working in a variety of health settings.

**B. Total credit hours required for the program: 30**

**C. Are any concentrations to be established under this degree program?**  Yes  No

- 2. PROGRAM NEED.** Explain why the university needs to offer this program (include data and discussion of the target audience and market).

There is on-going need within and beyond Arizona for professionals trained in the development, implementation, and use of health IT and in the use of informatics tools and health information to support decision-making and the delivery of health care. The need for such trained professionals spans a wide range of health care settings including: hospitals, health centers, long-term care facilities, integrated delivery systems, regional extension centers, health information exchange organizations, state and local public health agencies, universities, government agencies, consulting firms, and Electronic Health Records vendor organizations. The need is especially acute for additional training of professionals who are already working in health settings and whose existing skill set does not permit them to function optimally in the rapidly changing world of health informatics. Distance (online) educational approaches are especially well suited to meet the educational needs of working professionals.

Several universities in the country have online programs in Health Informatics. But, most of these programs focus heavily on implementation of IT systems in clinical settings and in the business aspects of

the health IT environment. This program differs from those both in terms of breadth of topics covered and focus on clinical and public health applications as well as technology.

We have surveyed employees from the many of the major health care organizations in Phoenix, including Banner Health, Catholic Healthcare West, Phoenix Children's Hospital, Mayo Clinic, and Maricopa Integrated Healthcare Systems. We also solicited feedback from leadership at the American Medical Informatics Association (AMIA) and from ASU graduate students from various majors concerning the proposed and the applicability of the degree to their career progression, where applicable. Of the 32 people who responded to the survey, 94% said they would be interested in taking the proposed online program, with 42% stating that they would be willing to pay the proposed fee. Over 67% percent of the respondents said that their companies would pay some or most of the costs of the program.

By targeting working professionals, we believe the MAS in Health Informatics will increase the earning potential of graduates by preparing them for higher positions in their current organizations. Surveys completed by current employees in the field support this supposition.

The goal of the proposed program is to train 100 plus individuals per year who will receive a Master of Advanced Study degree by the end of the 18-month cycle.

**3. IMPACT ON OTHER PROGRAMS.** List other academic units that might be impacted by the proposed program and describe the potential impact (e.g., how the implementation of this program might affect student headcount/enrollment, student recruitment, faculty participation, course content, etc. in other programs). Attach letters of collaboration/support from potentially impacted programs.

Master of Healthcare Innovation and MS in Regulatory Science and Health Safety, College of Nursing and Health Innovation

MHSM in Health Sector Management/W.P. Carey School of Business

MS in Computer Science/School of Computing, Informatics and Decision Systems/Ira A. Fulton Schools of Engineering

MS in Biomedical Engineering/School of Biological and Health Systems Engineering/Ira A. Fulton Schools of Engineering

We do not anticipate a large impact because most of the candidates in these other ASU programs are not being specifically trained for jobs in applied informatics in health settings and because these programs do not generally target as learners people already employed in the health settings who seek to improve their skills in informatics.

**4. PROJECTED ENROLLMENT** How many new students do you anticipate enrolling in this program each year for the next five years? Please utilize the following tabular format.

5-YEAR PROJECTED ANNUAL ENROLLMENT					
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year (Yr 1 continuing + new entering)	3 <sup>rd</sup> Year (Yr 1 & 2 continuing + new entering)	4 <sup>th</sup> Year (Yrs 1, 2, 3 continuing + new entering)	5 <sup>th</sup> Year (Yrs 1, 2, 3, 4 continuing + new entering)
Number of Students Majoring (Headcount)	45	75	105	105	105

**5. STUDENT LEARNING OUTCOMES AND ASSESMENT**

**A. List the knowledge, competencies, and skills** students should have when they graduate from the proposed degree program. (You can find examples of program Learning Outcomes at <http://www.asu.edu/oue/assessment.html>).

Students graduating from this program will be able to:

Demonstrate the ability to acquire, represent, manipulate, view, export, and interpret health information

Design approaches to protect the security of health information and the privacy, and confidentiality of individuals whose health information is electronically collected and stored

Assess and evaluate technology designed to improve the quality and efficiency of health care

Analyze current and prospective clinical decision support and expert tools

Prepare a project plan for a health informatics project

Design a plan for leading and managing change in the health setting

Prepare written and oral communications about informatics technology and health information

Demonstrate the ability to work effectively as a member of a team

- B. Describe the plan and methods to assess** whether students have achieved the knowledge, competencies and skills identified in the Learning Outcomes. (You can find examples of assessment methods at (<http://www.asu.edu/oue/assessment.html>)).

Students will be assessed based on a combination of homework, tests, class participation, and projects in individual courses.

Students will be assessed on Capstone Project (BMI 609) completed as part of a required course and as a culmination of the degree.

- 6. ACCREDITATION OR LICENSING REQUIREMENTS (if applicable).** Provide the names of the external agencies for accreditation, professional licensing, etc. that guide your curriculum for this program, if any. Describe any requirements for accreditation or licensing.

NA

## **7. FACULTY, STAFF AND RESOURCE REQUIREMENTS**

### **A. Faculty**

- i. Current Faculty.** List the name, rank, highest degree, area of specialization/expertise and estimate of the level of involvement of all current faculty who will teach in the program.

Valentin Dinu, PhD Assistant Professor	25%
Graciela Gonzalez, PhD Assistant Professor	25%
Robert Greenes, MD PhD Full Professor	25%
William Johnson, PhD Full Professor	25%
Kanav Kahol, PhD Assistant Professor	25%
Diana Petitti, MD MPH Full Professor	25%
Howard Silverman, MD MS Clinical Professor	25%
Jianming Liang, PhD Associate Professor	25%
Matthew Scotch, PhD Assistant Professor	25%

- ii. New Faculty.** Describe the new faculty hiring needed during the next three years to sustain the program. List the anticipated hiring schedule and financial sources for supporting the addition of these faculty.

The Department of Biomedical Informatics at ASU is in the process of recruiting new full-time faculty. These new lines are in the current budget. It is anticipated that newly hired full-time faculty will play a role in education in the new program at a level of 10-25% depending on experience and interest. The department will also hire, as needed, adjunct faculty, who are health-care professionals currently working in the field of health informatics. These specialized faculty will have salaries covered through program fees.

- iii. **Administration of the program.** Explain how the program will be administered for the purposes of admissions, advising, course offerings, etc. Discuss the available staff support.

The program will hire a full-time program coordinator and advisor to ensure a seamless admissions and registration process as well as regular academic advising for each student in the program. These positions are outlined in the budget presented in the program fee request proposal.

- B. Resource requirements to launch and sustain the program.** Describe any new resources required for this program's success such as new staff, new facilities, new library resources, new technology resources, etc

The department will hire several faculty adjuncts and two new staff members to ensure the program's success. The unit will also hire the services of the IT professionals at ASU Online to design and host the courses. No new library resources or facilities are needed.

## 8. CURRICULAR STRUCTURE OF THE PROPOSED PROGRAM

- A. Admission Requirements:** The requirements listed below are Graduate College requirements. Please modify and/or expand if the proposed degree has additional admissions requirements.

- i. **Degree.** Minimum of a bachelor's degree (or equivalent) or a graduate degree from a regionally accredited College or University of recognized standing in a related field such as **Biology, Computer Science, Medicine, Nursing, Pharmacy, Public Health**

Modify or expand, if applicable:

- ii. **GPA.** Minimum of a 3.00 cumulative GPA (scale is 4.0=A) in the last 60 hours of a student's first bachelor's degree program Modify or expand, if applicable:
- iii. **Experience:** Since the program will need to accommodate individuals with either of two different backgrounds, health or information technology, the admissions committee will look for evidence of training and experience that suggest the ability of those from one background to quickly gain the fundamentals of the other area.

**Health Professional Background:** Combination of training and work experience as a health professional (e.g., physician, nurse, pharmacist, physician assistant, master of public health)

**Information Technology/Software Background:** Combination of training and information technology experience, preferably with health-related application focus.

- iv. **English Proficiency** Requirement for International Applicants. If applicable list any English proficiency requirements that are higher than and/or in addition to the Graduate College requirement. (See Graduate College policy and procedures [http://graduate.asu.edu/admissions/international/english\\_proficiency](http://graduate.asu.edu/admissions/international/english_proficiency) 90 (iBT score))

- v. **Required Admission Examinations.**

GRE     GMAT     Millers Analogies     None Required

- vi. **Application Review Terms.** Indicate all terms for which applications for admissions are accepted and the corresponding application deadline dates, if any:

Fall                      Deadline (month/year): February 1

Spring                      Deadline (month/year): September 2011

Summer                      Deadline (month/year): January 1, 2011

- B. Degree Requirements.** Below provide the curricular requirements for the proposed degree program.

**i. Total credit hours (cr hrs) required for the degree program: 30**

- ii. Core courses.** List all required core courses and total credit hours for the core (required courses other than internships, thesis, dissertation, capstone course, etc). Omnibus number courses cannot be used as core courses. Permanent numbers must be requested by submitting course proposal to ACRES for approval.

**Total cr hrs for required core courses: 17**

Course prefix & number	Course title	Credit hours	New course?
BMI 601	Fundamentals of Biomedical Informatics	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 602	Programming in a Biomedical Domain	3	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 603	Biomedical Informatics Database Modeling and Applications	3	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 604	Biomedical Information Literacy	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 605	Health Information Systems and Applications	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 606	Health Data Standards	1	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 607	Effective Professional Communication	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 608	Project Management for Interdisciplinary Teams	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>

(Please expand table as needed. Right click in white space of last cell. Select "Insert Rows Below")

**iii. Elective Courses**

**Total cr hrs for program electives: 10**

Provide a sample list of elective courses:

Course prefix & number	Course title	Credit hours	New course?
BMI 610	Clinical Culture and the Healthcare Environment	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 611	Biomedical Data Analysis	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 612	Applied Data Mining in Biomedicine	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 613	Workflow Analysis and Redesign in Health Systems	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 614	Biomedical Systems Engineering	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 615	Human Factors Engineering for Biomedical Applications	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 616	Clinical Decision Support	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 617	Principles of Evidence-based Medicine	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
BMI 618	Leadership and Change in Clinical Environments	2	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
	(See Attached for Complete List)		Y <input type="checkbox"/> N <input type="checkbox"/>

(Please expand table as needed. Right click in white space of last cell. Select "Insert Rows Below")

- iv. 400-Level Courses.** No more than 6 credit hours of 400-level coursework can be included on graduate student program of study.

1. Are 400-level ASU courses allowed on student program of study for this degree?  Yes  No

2. If yes, how many credit hours?

- v. Additional Requirements (if applicable).** Provide a brief description of any additional requirements (e.g. internships, clinicals, field study, etc.) N/A

**Total cr hrs for other required courses:**

List course info for any additional requirements (e.g. internships, clinicals, field study, etc.)

Course prefix & number	Course title	Credit hours	New course?
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<b>number</b>			
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>

(Please expand table as needed. Right click in white space of last cell. Select "Insert Rows Below")

vi. **Total cr hrs required for research and/or other elective courses per student's research area (if applicable):**

vii. **Culminating experience** for the proposed program (please check all that apply and provide requested information): 3

	Required ?	Brief description of the applied project or the capstone course, as applicable.	Course prefix and number	Credit hours
<b>Capstone course (master's only)</b>	<input checked="" type="checkbox"/>	Assists students in preparing their capstone project, which represents the culmination of their study for the MAS in Health Informatics	BMI 609	3

(Please expand table as needed. Right click in white space of last cell. Select "Insert Rows Below")

viii. **Master's program comprehensive exams, please check all that apply** (Please note: for doctoral programs, a written and an oral comprehensive exam are required.)

Written comprehensive exam required

Oral comprehensive exam required

No comprehensive exam required

ix. **Committee:** Required Number of Thesis or Dissertation Committee Members (must be at least 3 including chair or co-chairs): N/A

x. **Foreign Language Exam.**

Foreign Language Examination(s) required? Yes No

xi. **Course Prefix(es)** Provide the following information for the proposed graduate program.

a. Will a new course prefix(es) be required for this degree program?

Yes  No

b. If yes:

- Complete the New Prefix Request Form for each new prefix and submit with this proposal. This form can be located on the Office of the Executive Vice President and Provost of the University Curriculum Development website at <<http://provost.asu.edu/curriculum>>.

**New Courses Required for Proposed Degree Program.** Provide course prefix, number, title, and credit hours and description for any new courses required for this degree program.

**Required courses (must take all)**

**BMI 601: Fundamentals of Biomedical Informatics (2)**

This course offers an overview of the field of biomedical informatics. It combines perspectives from medicine and computer science for use of computers and information in health care and the biomedical sciences. The course covers specific applications and general methodology in Biomedical Informatics using current topics in the field.

**BMI 602: Programming in a Biomedical Domain (3)**

This course is an intensive introduction to object-oriented programming concepts focused on the unique challenges such as those related to data volume, complexity, and uncertainty inherent to applications in a biomedical domain. The class also covers the fundamentals of algorithm analysis and data structure design. A software engineering approach to abstraction for problem decomposition and solution formulation is stressed, with object-oriented and reusability concepts introduced early. The use of generic data structures and abstractions from template libraries is emphasized for reusability, as well as modular design. In addition, the class will also cover basic concepts of algorithms and data structures.

**BMI 603: Biomedical Informatics Database Modeling and Applications (3)**

This course will give students a thorough coverage of the foundations of Database Systems. Students will learn through hands-on experience with the modeling and implementation of biomedical databases using the relational approach. Topics include an overview of database models and architecture, database design, SQL, XML, and data warehousing. Students will be encouraged to explore database-related topics of their own choosing ones that are relevant to a public health or clinical domains.

**BMI 604: Biomedical Information Literacy (2)**

In this course, students learn to locate, retrieve and store information with an emphasis on electronic search, retrieval and storage. They will also learn to assess the validity and quality of information, improve the quality of information, protect information, and effectively communicate information.

**BMI 605: Health Information Systems and Applications (2)**

The purpose of this course is to explore the use of information systems in different healthcare settings, analyzing operational and strategic objectives for their deployment. Emphasis will be placed on the analysis of the different factors that influence decision-making during the process of design and deployment of systems including human factors, hardware, software, policy, communications, and the successful management of such systems. Guidelines for the design and successful deployment of systems to meet those objectives are also covered and will include discussion of architectures, components and models. Specific case studies of successfully and unsuccessfully-deployed systems will be analyzed.

**BMI 606: Health Data Standards (1)**

The cost-effective delivery of high quality, safe health care requires access to multiple data sources and systems and applications responsible for data acquisition and management, the ability to aggregate, integrate, and analyze data from multiple sources, and the ability to communicate the results of such analyses or the knowledge resulting from those analyses to users in a timely fashion at points where they are needed. A variety of standards are required, at the data and communication level. The course will review the state of these standards, and the multiple entities that have a stake in them, and enable the student to navigate this complex process in selecting, implementing, or extending health systems in a variety of settings.

**BMI 607: Effective Professional Communications (2)**

To be able to work in the field of biomedical informatics or health information technology requires an understanding of not only science and technology but also biomedicine and healthcare. This requires both familiarity with the basic concepts of these fields, as covered in other courses, as well as the ability to present ideas clearly in both written and oral communication. It also requires the ability to work effectively in groups, with shared understanding of group and individual roles, assignments, and responsibilities. The course will provide experience with oral, written, and group communication tasks, and use critique and feedback as a method for highlighting issues and areas for improvement.

**BMI 608: Project Management for Interdisciplinary Teams (2)**

This course introduces students to the healthcare team and explores tools and techniques for establishing effective interdisciplinary teams in a healthcare setting, emphasizing collaborative clinical



decision-making and patient management. By working in small teams, the course aims to put into practice these techniques, allowing students to collaborate with other health professionals to solve specific problems, provide services, or develop new understandings. This course also covers the concepts, skills, tools, and techniques involved in the management of information system projects, providing a broad introduction to the established discipline of project management, with a focus on information systems for a biomedical setting.

**BMI 609: Capstone (3)**

This course assists students in preparing their capstone project, which represents the culmination of their study for the MAS in Health Informatics degree program, focusing on development process, technical skills, and communication.

**Elective Courses (must select 5 of the 9)**

**BMI 610: Clinical Culture and the Healthcare Environment (2)**

This course is designed for medical informatics students who have no significant clinical experience in the US. The course will introduce medical terminology and review clinical environments in which healthcare providers create, manage, and use clinical information. Students will perform observations in a variety of clinical environments.

**BMI 611: Biomedical Data Analysis (2)**

Students will learn what statistical methods are used most widely in the analysis of data from studies of disease risk factors, health interventions and healthcare improvements and what statistical methods should be used to analyze data from various types of studies. They will learn how to estimate the number of subjects needed for studies of various designs. They will learn to conduct and interpret multiple linear, multiple logistic and multivariate lifetable analysis. Students will gain hands-on experience in the use of statistical software to conduct analysis of biomedical data.

**BMI 612: Applied Data Mining in Biomedicine (2)**

This course is a comprehensive introduction to data mining methods and algorithms used most often to analyze data collected in biomedical informatics studies, including genomics and proteomic disease association studies, clinical trials, and studies of the accuracy and performance of screening and diagnostic tests. Emphasis is placed on assessing data quality, understanding how to select an overall approach to analysis, and presenting and interpreting the results of data mining analysis. Students will learn to use Excel to effectively display data collected in biomedical research studies and Weka to analyze data using approaches that are used commonly in biomedical studies.

**BMI 613: Workflow Analysis and Redesign in Health Systems (2)**

This course will provide an overview of workflow analysis and process redesign and their use in quality improvement activities, including specification. Case examples will be used to highlight key concepts and measurement concepts and techniques will be covered.

**BMI 614: Biomedical Systems Engineering (2)**

This course focuses on the links of systems engineering to fundamentals of decision theory, statistics, and optimization, and includes discussion of current successful techniques for systems engineering. System Engineering seeks to enable the successful design, implementation, deployment, and maintenance of successful systems. It emphasizes gathering and analysis of customer needs for the specification and documentation of required functionality early in the system's lifecycle.

**BMI 615: Human Factors Engineering for Biomedical Applications (2)**

Students will have the opportunity to learn the fundamental principles of human-computer interaction and human factors and learn how to apply them to real world problems through class projects, homework and real-world design. The focus is on learning why user-friendly interfaces can greatly improve work productivity and enhance the quality of healthcare without radically changing the underlying technology.

**BMI 616: Clinical Decision Support (2)**

This course will focus on the major problems of human decision making in health care including causes of errors, decreased quality, and increased costs. It will also explore the role of information technology,

primarily through computer-based clinical decision support (CDS), to address these problems. The course will explore key methods used to provide CDS, the capabilities and limitations of current approaches, and the challenges for managing and updating the knowledge needed to deliver CDS in an enterprise setting.

**BMI 617: Principles of Evidence-based Medicine (2)**

In this course, students will learn the origins of evidence-based decision-making and policy formulation. They will learn how to use the tools and approaches that have been developed to support evidence-based decision making and policy formulation. Students will learn about the history and evolution of systematic review and meta-analysis as a tool to inform decisions and policies based on evidence. The students will gain hands-on experience by conducting a systematic review and a meta-analysis and using the results to draw conclusions and formulate health policy.

**BMI 618: Leadership and Change in Clinical Environments (2)**

This course will cover core concepts related to leadership and specific methodologies used by effective leaders including running meetings, negotiation and conflict management. The course will also review change management as a structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state. It will provide students exposure to various models and processes related to change management and the tradeoffs between these different approaches. Case examples related to health information will be used.

**Graduate College Approval – Proposal Submission (MAS in Biomedical Informatics)**  
**Renamed to MAS in Health Informatics**

**From:** Filiz Ozel  
**Sent:** Tuesday, August 17, 2010 12:42 PM  
**To:** curriculumplanning@asu.edu  
**Cc:** Maria Allison; Sethuraman Panchanathan; Robert Greenes; Andrew Webber; Carol Behl; Denise Campbell; Amanda Morales-Calderon  
**Subject:** FW: Proposal for Master of Advanced Study in Biomedical Informatics

On behalf of University Vice Provost and Graduate College Dean Maria Allison, I am forwarding the attached documents for the proposed MAS degree in Biomedical Informatics.

Thank you.

Filiz Ozel

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**Dr. Filiz Ozel**

*Associate Vice Provost and Professor  
Graduate College  
Arizona State University  
Tempe, AZ 85287-1003*

*480-965 5999*

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**From:** Carol Behl  
**Sent:** Monday, August 16, 2010 11:07 AM  
**To:** Filiz Ozel  
**Cc:** Robert Greenes; Sethuraman Panchanathan; Natalie Landman  
**Subject:** Proposal for Master of Advanced Study in Biomedical Informatics

Filiz,  
Attached is our proposal for the Master of Advanced Study in Biomedical Informatics. We have included three letters of support from outside units as well as a memo of support from our chair and our acting dean, Dr. Panchanathan. I attempted to add the letters of support into an appendix in the document but was unable to do so. I will begin entering the courses in ACRES next week. Please let me know if there is anything else you need from me.

Also, do you have any word on our accompanying request for special fees?

Carol Behl  
Associate Director, Academic Programs and Student Services  
Department of Biomedical Informatics  
602-827-2538

## MEMORANDUM

To: Robert Greenes, Ira Fulton Chair  
Department of Biomedical Informatics

From: Bernadette Melnyk, PhD, RN, CPNP/PMHNP, FNAP, FAAN  
Dean and Distinguished Foundation Professor in Nursing

Date: November 8, 2010

Re: Online Master of Advanced Study Program (MAS) in Health Informatics

The College of Nursing & Health Innovation strongly supports the proposed MAS program in Health Informatics. We view this program as different from our current offerings and do not anticipate that it will have any negative impact on our programs.

Please let me know should you require anything further.



To: Robert Greenes, MD, PhD  
Department of Biomedical Informatics  
Arizona State University

August 9, 2010

Dear Bob,

This letter is to confirm our correspondence regarding the proposed Master of Advanced Study in Biomedical Informatics. I confirm that there would be no overlap or duplication with this program and any of the existing programs or efforts in the School of Biological and Health Systems Engineering.

Sincerely,



William Ditto, PhD  
Director, School of Biological and Health Systems Engineering  
Olin Chair and Professor, Harrington Biomedical Engineering

To: Robert Greenes, Chair, Department of Biomedical Informatics  
From: Gerald Farin, PhD, Graduate Director, SCIDSE  
Date: November 1, 2010  
RE: Support of Online Master of Advanced Study Program (MAS) in Health Informatics

SCIDSE strongly supports the proposed MAS program in Health Informatics. We view this program as different from our current offerings and do not expect that it will have any negative impact on our programs, including our MS in Computer Science.

A handwritten signature in blue ink, appearing to read "Gerald Farin". The signature is fluid and cursive, with the first name "Gerald" written in a larger, more prominent script than the last name "Farin".

To: Robert Greenes, Chair  
Department of Biomedical Informatics

From: Amy Hillman, Executive Dean  
W. P. Carey School of Business

Date: October 29, 2010

RE: Support of Online Master of Advanced Study Program

The W. P. Carey School of Business supports the proposed MAS program in Health Informatics. We view this program as different from our current offerings and do not expect it to have any negative impact on our programs, including our Masters in Health Sector Management.