

**CALIFORNIA STATE UNIVERSITY SAN MARCOS
NEW PROGRAM PROPOSAL - Form P**

For Academic Programs Office Use Only
R.E. _____ Catalog _____ File _____

COLLEGE CHABSS CoBA CoEHHS CSM

TITLE OF PROGRAM Master of Science in Health Information Management Discipline Mgmt Information Systems

This form is the signature sheet for new programs and new options/concentrations/emphases/tracks within existing programs. For all changes to existing programs (other than addition of new options/concentrations/emphases/tracks), use the Form P-2.

Check one: New Undergraduate Major or New Graduate Degree } Attach a completed New Program Template
 New Option/Concentration/Emphasis/Track } Attach a completed New Option/Concentration/
 New Minor } Special Emphasis, Teaching Credential and Minor
 New Teaching Credential }
 New Certificate } Attach a completed New Certificate Template

Does this proposal impact other disciplines? Yes No If yes, obtain signature(s).
 Any objections or concerns should be stated in writing and attached to this form. Please check the box to indicate whether a memo has been attached.

| | |
|---|--------------------------|
| _____ Support _____ Oppose Discipline #1 | <input type="checkbox"/> |
| _____ Signature | _____ Date |
| _____ Support _____ Oppose Discipline #2 | <input type="checkbox"/> |
| _____ Signature | _____ Date |
| _____ Support _____ Oppose Discipline #3 | <input type="checkbox"/> |
| _____ Signature | _____ Date |

| | | | |
|--|---------------------------|--|------------------------|
| 1. <u>Jack Leu</u> Originator (Please Print) | <u>06-16-2014</u> Date | 2. <u>[Signature]</u> Program/Department - Director/Chair | <u>6/23/14</u> Date |
| REVIEW PROCESS | | | |
| 3a. <u>[Signature]</u> Dean of Library | <u>7-10-14</u> Date | 3b. <u>[Signature]</u> Dean of Information and Instructional Technology Services* | <u>6/23/14</u> Date |
| 3c. <u>[Signature]</u> Vice President for Student Affairs* | <u>7/18/14</u> Date | 3d. _____ Director of Planning, Design and Construction (if applicable)* | _____ Date |
| COLLEGE-LEVEL APPROVAL PROCESS | | | |
| 4. <u>[Signature]</u> College Curriculum Committee^ | <u>10-6-14</u> Date | 5. <u>[Signature]</u> College Dean* | <u>10/7/14</u> Date |
| UNIVERSITY-LEVEL APPROVAL PROCESS (May not begin until all Review and College-Level Approval signatures have been obtained.) | | | |
| 6a. _____ University Curriculum Committee^ | _____ Date | 6b. _____ Budget and Long-Range Planning Committee^ | _____ Date |
| 7. _____ Academic Senate | _____ Date | 8. _____ Provost | _____ Date |
| 9. _____ President | _____ Date | 10. _____ Date to Chancellor's Office | |

* Attach a memo on program impact on the unit and the ability of the unit to support it.
 ^ Attach a memo summarizing the curricular and/or resource deliberations.



CSU San Marcos Degree Program Proposal Template¹

1. Program Type (Please specify any from the list below that apply—delete the others)

√ Self-Support

2. Program Identification

- a. Campus: **San Marcos**
- b. Full and exact degree designation and title: **Master of Science in Health Information Management**
- c. Date the Board of Trustees approved adding this program projection to the campus Academic Plan: **November 6, 2013.**²
- d. Term and academic year of intended implementation: **Summer 2015**
- e. Name of the department(s), division, or other unit of the campus that would offer the proposed degree major program: **College of Business Administration**
- f. Name, title, and rank of the individual(s) primarily responsible for drafting the proposed degree major program: **Jack Leu, Professor, College of Business Administration, Department of Management Information Systems**
- g. Statement from the appropriate campus administrative authority that the addition of this program supports the campus mission and will not impede the successful operation and growth of existing academic programs. **(CPEC “Appropriateness to Institutional and Segmental Mission”)**³
- h. Any other campus approval documents that may apply (e.g. curriculum committee approvals).⁴
- i. Subject to WASC Substantive Change review: **No**⁵

¹ When beginning to fill out this form, contact Academic Programs for general guidance and for samples of recent program proposals. It is recommended that program proposers start to fill out the template with the catalog description and the student learning outcomes in Section 3.b and 4.a.

² The “campus Academic Plan” is called the University Academic Master Plan (UAMP) at CSU San Marcos. Contact Academic Programs for this date.

³ Proposers do not need to supply this item. As the proposal goes through the approval process, memos from campus administrators are obtained. These will be collected and added to the proposal by the Curriculum and Scheduling Office as a response for this item.

⁴ Proposers do not need to supply this item. As the proposal goes through the approval process, memos from curriculum committees are obtained. These will be collected and added to the proposal by the Curriculum and Scheduling Office as a response for this item.

⁵ Generally this refers to a degree offered at a new level (e.g., a doctorate). To be certain that a WASC Substantive Change review is not necessary, contact the Associate Vice President for Planning and Accreditation.

3. Program Overview and Rationale

Rationale, including a brief description of the program, its purpose and strengths, fit with institutional mission, and a justification for offering the program at this time. The rationale may explain the relationship among the program philosophy, design, target population, and any distinctive pedagogical methods. (CPEC “Appropriateness to Institutional and Segmental Mission”)

This 30-unit Master’s of Science (MS) in Health Information Management to be offered by the College of Business Administration is comprised of a 4-unit practicum and two stackable certificates: the existing 12-unit certificate in Healthcare Information Technology (HIT) and a new 14-unit certificate in Healthcare Information Management (HIM).

The objective of the master’s program is to develop healthcare leaders who excel at using data to transform healthcare outcomes. The program emphasizes (1) best practices in and theoretical underpinnings of data analytics, (2) genomic modeling and prevention, (3) risk adjustment for measuring healthcare outcomes, (4) information systems needed for big data, (5) project management, and (6) strategic thinking and leadership. With the wide adoption of electronic health record systems, the healthcare industry will be entering a new era in which disease prevention, diagnosis, and management are based on predictive analyses of health and genomic data. This program will equip students with the knowledge needed to meet the challenges of this new healthcare era.

Developed and taught by faculty and industry experts, the existing 12-unit HIT certificate program provides participants with a broad introduction and overview of healthcare structure and process, as well as impactful healthcare technologies. This is followed by discussions in the *management* of HIT, healthcare data analytics, process re-engineering, and management of change. The goal is to shape the vision of the future of healthcare and provide the knowledge needed to encourage healthcare evolution. The program prepares students to become agents of change, innovators, leaders, and entrepreneurs in healthcare.

The new 14-unit HIM certificate will take an in-depth approach to preparing students as domain specialists in data analytics, an area that will fundamentally alter the landscape of the healthcare industry and provide promising career opportunities for students. This certificate will address the needs of the “big data” era and will focus on “transforming and mining” data for healthcare innovation and process improvement. This certificate will reinforce the HIT certificate in developing each student’s strategic thinking and leadership ability in adopting and integrating new emerging technologies into the existing healthcare system. In addition, the HIM certificate will prepare students for the practicum requirement, where all participants will complete a one-semester project for a health organization. A faculty member and an industry mentor will supervise the project. The project deliverables will include a report and a presentation that meet the CSU’s master’s degree project requirement.

A goal of the MS program is to establish CSUSM and the College of Business Administration (CoBA) as an important educational resource for the needs of HIT/HIM

professionals in the region and state. The curriculum is designed to provide graduates who will be able to make significant contributions to the region's intellectual, social and economic development.

In addition, the master's program is closely aligned with the University's Mission of offering "rigorous undergraduate and graduate programs distinguished by exemplary teaching, innovative curricula, and the application of new technologies," as well as its Vision of delivering "a growing array of specialized programs responsive to state and regional needs." The program embodies the College of Business Administration's CoBA's commitment to providing "rigorous and relevant educational programs that reflect a balance of theoretical and applied learning" and to making "a significant contribution to the region's intellectual, social and economic development."

Proposed catalog description, including program description, degree requirements, and admission requirements. For master's degrees, please also include catalog copy describing the culminating experience requirement(s).⁶

Catalog Description: Master of Science in Healthcare Information Management

Description of the Program

The MS in HIM is designed to prepare students for careers that will contribute to reform of the U.S. healthcare system, improving its quality while substantially reducing historical rates of cost increases. The program focus is on understanding, designing, developing, and implementing information technologies, which are an essential ingredient of reform. Unlike "technician-level" programs, the MS-HIM emphasizes application of analytical techniques and systems management, including the critical "human element".

The program is a combination of two certificate programs taken in sequence—called "stacked certificates"—combined with a culminating practicum that result in the Master's degree.

The program does not require students to have prior experience in information technologies or healthcare systems. Courses included in the Healthcare Information Technology Certificate provide basics of today's healthcare system including its deficiencies and many challenges it presents. Additional courses introduce healthcare information technologies, such as electronic medical records, methods of data analysis, digital networks, and requirements and techniques to ensure privacy and security, including HIPPA. The HIT certificate concludes with courses in two important areas of management: process improvement/re-engineering and behavioral aspects of management of change.

Courses included in the Healthcare Information Management Certificate develop students' ability to employ statistical and analytical methods for better healthcare outcomes. Students will understand how to deploy technology solutions for managing and analyzing "big data" including genomic and patient data. This certificate will also

⁶ Use the format found in the most recent General Catalog.

emphasize strategic thinking ability and leadership skills needed to manage analytical projects for healthcare organizations.

Following completion of the HIM Certificate, students pursuing the MS-HIM degree engage in a “practicum” experience. The practicum involves a project for a healthcare organization (provider, insurer, purchaser, research organization, etc.). The project must represent a substantial study/need/requirement of the organization. Project proposals are typically developed based on requests from external organizations that are “affiliated” with CSUSM HIT/HIM programs. Students employed with healthcare organizations are encouraged to work with their employer to develop proposals. The project must demonstrate successful application of course content and additional, independent knowledge acquisition by the student. Projects must require application of analytical techniques, database and/or project management tools and techniques, and/or provisions to ensure privacy and security. The deliverable must also demonstrate professional levels of writing and verbal presentation skills.

Program Delivery

The program includes conventional lecture-discussion sessions with an emphasis on interactive discussions, delivered by both university faculty and practicing health-care professionals. The HIT certificate begins and ends each term with a day of presentations by health-care experts using a conference-style format. The HIM will have presentations during the lunch hour. This master’s program emphasizes team-based exercises and projects; student presentations; and on-site visits and training sessions.

Program Schedule

The primary program audience is working professionals. The HIT certificate has two semesters, and each semester has two Friday sessions and 12 Saturday sessions. The HIM certificate will have three terms and all classes will be on Saturdays.

Students complete each certificate of the program in a lock-step, cohort format. Although it is not necessary that Certificate II (HIM) be taken immediately following completion of the first certificate, the master’s degree must be completed within 5 years of the beginning date of Certificate I. The practicum will be conducted in the last semester of the HIM certificate and includes approximately 15 hours of meetings with the faculty practicum advisor, generally on Saturdays. In most cases, additional time will be required at the healthcare facility site that supports the practicum.

The entire degree can be completed in 24 months.

Admission Requirements

Certificate I, Healthcare Information Technology:

1. A Bachelor’s degree in any field from an accredited institution;
OR
Senior-level status in information systems or healthcare related major and expected completion of the bachelor degree within one year. Students must request concurrent graduate credits. HIT credits cannot be counted toward the bachelor’s degree.
2. Proficient at a minimum level of college algebra.

Certificate II, Healthcare Information Management:

1. A Bachelor's degree from an accredited institution;
2. Completion of the HIT Certificate with overall minimum GPA of 3.0 and no course grade below C.

Graduation Requirements

1. Completion of all program courses with overall minimum GPA of 3.0 and no course grade below C.
2. Successful completion of the HIM Practicum.

4. Curriculum

- a. *Goals for the (1) program and (2) student learning outcomes. Program goals are very broad statements about what the program is intended to achieve, including what kinds of graduates will be produced. Student learning outcomes are more specific statements that are related to the program goals but that more narrowly identify what students will know and be able to do upon successful completion of the program.⁷*

(1) Program Goals

- To prepare students for careers that will contribute to substantial reform of the U.S. healthcare system, improving its quality while substantially reducing historical rates of cost increases.
- To provide an innovative curriculum co-developed and taught by faculty and healthcare practitioners.
- To emphasize application of analytical techniques and systems management, including the critical “human element”.
- To provide an education environment where students can engage healthcare experts for developing cost-effective solutions to improve healthcare outcomes and skills to manage technological and human resources.

(2) Student Learning Outcomes

Students who successfully complete all requirements for the degree will have skills and ability with respect to health care information technologies and management to:

- Recognize needs and opportunities for improving healthcare system delivery and performance.
- Understand alternative technologies and methods for system improvements.

⁷ Complete the Student Learning Outcomes Table. The template for this table may be downloaded from (Cannot find: http://www.csusm.edu/academic_programs/Curriculum_Forms/New_Forms/Table_II_for_New_Programs.xls). Provide an initial assessment plan for the program. This plan will be the basis for the annual assessment reports that will begin upon implementation of the program. The data collected via these assessments will be the basis of the first program review (generally scheduled five years after program implementation). Contact Academic Programs for sample tables from other program proposals.

- Analyze healthcare data to determine the most cost-effective approaches.
 - Manage technical and human resources in the design, development, and implementation of change.
 - Advocate and provide leadership for healthcare system reform.
- b. *Plans for assessing program goals and student learning outcomes. Some planners find it helpful to develop matrices in which student learning outcomes and required courses are mapped, indicating where content related to the learning outcomes is introduced, reinforced, and practiced at an advanced level in required courses.*
(CPEC “Maintenance and Improvement of Quality”)
- Please refer to Attachment 1 for the assessment matrix, in which student learning outcomes and required courses are mapped. Upon program completion of each MS cohort, anonymous student and sponsoring organization surveys will be conducted to assess the attainment of learning outcomes and identify opportunity to improve program performance.
- c. *Total number of units required for the major: 30*
- d. *Include a justification for any baccalaureate program that requires more than 120-semester units or 180-quarter units: N/A*
- e. No options, concentrations, or special emphases available.
- f. *A list of all courses required for the major, specifying catalog number, title, units of credit, and prerequisites or co-requisites (ensuring that there are no “hidden” prerequisites that would drive the total units required to graduate beyond the total reported in 4c above).*

Courses in HIT Certificate*

HIT 500 Healthcare Systems: Structure and Process (2 units)
 HIT 510 Data Management for Healthcare Decision Support (2 units)
 HIT 520 Electronic Health Records (2 units)
 HIT 530 Data Communications and Security for Healthcare (2 units)
 HIT 540 Managing Healthcare System Change (2 units)
 HIT 550 Project Management and Process Improvement for Healthcare (2 units)

Courses in HIM Certificate*

HIM 610 Genomic Medicine and Health Informatics (1 unit)
 HIM 620 Analytics for Healthcare Outcome Improvement I (2 units)
 HIM 621 Analytics for Healthcare Outcome Improvement II (2 units)
 HIM 630 Healthcare Project and Information Management (3 units)
 HIM 640 Patient Risk Assessment (1 unit)
 HIM 650 Seminar in eHealth (1 unit)
 HIM 660 Strategic Leadership in Healthcare (2 units)
 HIM 670 Seminar in Healthcare Information Management (1 unit)
 HIM 680 Developments in Healthcare Information Management (1 unit)
 HIM 691 Independent Study in HIM I (1-4)
 HIM 692 Independent Study in HIM II (1-4)

Practicum*

HIM 690 Healthcare Information Management Practicum (4 units)

* This program is offered in a lock-step, cohort format. The program schedule automatically reinforces prerequisite requirements.

- g. *List of elective courses that can be used to satisfy requirements for the major, specifying catalog number, title, units of credit, and prerequisites or co-requisites. Include proposed catalog descriptions of all new courses. For graduate program proposals, identify whether each course is a graduate or undergraduate offering:*

N/A

- h. *List of any new courses that are: (1) needed to initiate the program and (2) needed during the first two years after implementation. Only include proposed catalog descriptions for new courses. For graduate program proposals, identify whether each course is a graduate-level or undergraduate-level offering.*

All courses in the HIM Certificate are new courses and must be developed and available during the first two years after initiation of the program.

- i. *Attach a proposed course-offering plan for the first three years of program implementation, indicating, where possible, likely faculty teaching assignments.*

HIT Certificate

Year 1: Fall Semester

HIT 500 Healthcare Systems: Structure and Process (2 units)

HIT 510 Data Management for Healthcare Decision Support (2 units)

HIT 530 Data Communications and Security for Healthcare (2 units)

Year 1: Spring Semester

HIT 520 Electronic Health Records (2 units)

HIT 540 Managing Healthcare System Change (2 units)

HIT 550 Project Management and Process Improvement for Healthcare (2 units)

HIM Certificate

Year 2: Summer

HIM 610 Genomic Medicine and Health Informatics (1 unit)

HIM 620 Analytics for Healthcare Outcome Improvement I (2 units)

HIM 650 Seminar in eHealth (1 unit)

Year 2: Fall Semester

HIM 621 Analytics for Healthcare Outcome Improvement II (2 units)

HIM 640 Patient Risk Assessment (1 unit)

HIM 630 Healthcare Project and Information Management (3 units)

HIM 670 Seminar in Healthcare Information Management (1 unit)

Year 2: Spring Semester

HIM 660 Strategic Leadership in Healthcare (2 units)

HIM 680 Developments in Healthcare Information Management (1 unit)

Practicum

Year 2: Spring Semester

HIM 690 Healthcare Information Management Practicum (4 units)

- j. *For master's degree proposals, include evidence that program requirements conform to the minimum requirements for the culminating experience, as specified in Section 40510 of Title 5 of the California Code of Regulations.*⁸

Students can be admitted to the HIM certificate program only after (1) successfully completing the HIT certificate with an overall minimum GPA of 3.0 and no course grade below C; and (2) obtaining a bachelor's degree. HIM certificate students will advance to Master's degree candidacy in the second semester of the program after completing all previous coursework with no course grade less than C. Successful completion of the Master's degree requires meeting the practicum requirement and maintaining an overall B average.

Students who do not meet the course grade and the GPA requirements can repeat courses with a subsequent cohort as necessary to correct their deficiencies.

- k. *Admission criteria, including prerequisite coursework.*⁹ **See Section 3.**
- l. *Criteria for student continuation in the program.*¹⁰

Maintain minimum 3.0 GPA with no course grade below C (2.0).

- m. *For undergraduate programs, planned provisions for articulation of the proposed major with community college programs:* N/A
- n. *If there is a Lower-Division Transfer Pattern (LDTP) for this major, indicate the relationship between the LDTP and the requirements presented in this proposal. Information on LDTP is available at: <http://www.calstate.edu/AcadAff/ldtp.shtml>¹¹: N/A*
- o. *Advising "roadmaps" that have been developed for the major.*¹² **N/A**
- p. *Provision for meeting accreditation requirements, if applicable, and anticipated date of accreditation request (including the WASC Substantive Change process):* N/A

⁸ Contact Graduate Studies for assistance in making certain that the program conforms to CSU requirements for a master's program.

⁹ This item generally applies to graduate programs and self-support programs. For assistance, contact Graduate Studies for the first situation, and Extended Learning for the second. For an undergraduate, state-support program for which admission criteria are desired, contact Academic Programs to discuss this matter.

¹⁰ This item generally only applies to programs with admission criteria (item 4k). For undergraduate programs, the criteria should be that the student remain on good academic standing (i.e., not be subject to Academic Disqualification). For assistance with this item, contact Graduate Studies, Extended Learning or Academic Programs as in item 4k.

¹¹ Contact Enrollment Management Services for assistance in completing this section.

¹² Contact the Office of First Year Programs for assistance in developing detailed graduation road maps for the first two years of study.

**5. Need for the Proposed Degree Major Program
(CPEC “Societal Need,” “Number of Existing Programs in the Field,” and
“Advancement of the Field”)**

- a. *List of other California State University campuses currently offering or projecting the proposed degree major program; list of neighboring institutions, public and private, currently offering the proposed degree major program.*¹³

No other CSU campus offers a comparable degree program. San Diego State University offers a Professional Science Master’s program in Bioinformatics and Medical Informatics, which is geared toward students with backgrounds in science and engineering. Both CSU Fullerton Extended Education and CSU Long Beach College of Continuing and Professional Education offer a non-credit certificate in Healthcare Information Technology.

The University of San Diego’s Hahn School of Nursing and Health Sciences offers a Certificate in Health Care Informatics through the Division of Professional and Continuing Education, and a Master’s of Science in Health Care Informatics. UC San Diego Extension offers an HIT certificate, and the UCSD School of Medicine offers a Master’s and Ph.D. in Biomedical Informatics. National University offers a Graduate Certificate in Clinical Informatics and a Master’s degree in Health Informatics.

- b. *Differences between the proposed program and programs listed in Section 5a above.*

CSU Fullerton’s non-credit certificate offers a basic introduction to healthcare IT issues, with no opportunity for further study. CSU Long Beach program is geared toward preparing students to sit for HIT-Pro certification exams for Technical/Software Support Staff, Practice Workflow and Information Management Redesign Specialists, and Implementation Support Specialists. UCSD’s HIT program is similarly geared towards professionals with a background in Healthcare, Information Technology and/or Project Management, but courses in the program are fully online as opposed to face-to-face and are not offered for academic credit.

Both SDSU’s Professional Science Master’s and the programs through the UCSD School of Medicine have a very different target audience, as each is geared toward students with backgrounds in science, medicine, and engineering.

Programs at National University and USD, in addition to charging a significantly higher per-unit rate, lack the proposed program’s predictive analytics, big data infrastructure, and eHealth.

- c. *List of other curricula currently offered by the campus that are closely related to the proposed program.*

There is currently no curriculum on campus that is similar to the proposed program. Due to the lack of any HIT-relevant curriculum at CSUSM coupled with evidence of needs and opportunities for HIT programs, CoBA faculty and Extended Learning proposed the HIT Certificate in 2011. Success of that program encouraged

¹³ Contact Academic Programs for a list of other CSU campuses offering related programs.

development of the HIM Certificate and the “stacked” Master’s degree in HIM. Proposals for development support for both certificates were submitted to the CSU Commission on the Extended University, which provided a grant for each of the two programs.

- d. *Community participation, if any, in the planning process. This may include prospective employers of graduates.*

HIT Advisory Board members include representatives from Sharp Health, Kaiser Permanente, Tri-City Medical Center, Palomar Health, Glenner Memory Care, SuperSmartHealth, and Anvita Health. All of these organizations have provided at least one guest speaker for the program.

Additional guest speakers have included representatives from Anthem Blue Cross, Blue Shield, United Health, CalPERS, Golden Hour, and National Coalition on Health Care.

Advisory Board members are actively recruiting local organizations to sponsor the HIM practicum.

- e. *Applicable workforce demand projections and other relevant data.*

Healthcare information management is a rapidly expanding field. The Office of the National Coordinator for Health Information Technology anticipates a shortage of about 50,000 qualified HIT workers between 2010 and 2015.¹⁴ Bureau of Labor Statistics projections anticipate the number of jobs for health information technicians and health information managers to increase by more than 20 percent through 2018¹⁵, although a recent report on the health informatics industry from Jobs for the Future suggests that the BLS category includes only about 60 percent of jobs involved in the total health information management sector. Within this more broadly conceived sector—which encompasses health information supervisors and managers, auditors and compliance review staff, and clinical documentation and improvement specialists—job postings increased 36 percent between 2007 and 2011, a far higher rate than for healthcare occupations as a whole, and that trend is expected to continue in the coming years.¹⁶

Ongoing needs in the healthcare industry, including implementation of aspects of the Health Information Technology for Economic and Clinical Health (HITECH) of 2009, as well as the increasing need for healthcare data analytics and expertise in mobile and web programming, will drive new staffing needs regionally and nationally in the coming decade.¹⁷ In addition, the upskilling of jobs in traditional medical records and coding and the growth of higher-skilled health information analyst and management positions are creating career advancement opportunities for

¹⁴ Office of the National Coordinator for Health Information Technology, U.S. Department of Health and Human Services <<http://www.healthit.gov>>

¹⁵ U.S. Bureau of Labor Statistics. Occupational Outlook Handbook, 2010-2011 Edition. “Medical Records and Health Information Technicians”

¹⁶ Jobs for the Future, “A Growing Job Sector: Health Informatics” June 2012.

¹⁷ Health Research Institute, “Solving the talent equation for health IT” March 2013

entry- and mid-level workers. Appropriate training, education, and credentialing programs are essential for creating these career advancement pathways.¹⁸

A 2012 survey by the College of Health Information Management Executives (CHIME) reports that 59 percent of healthcare providers say staffing challenges will negatively impact their chances to receive incentives and increase risk of penalties (starting in 2015) from the government's three-stage "meaningful use" program for Electronic Health Record implementation and adoption.¹⁹ Similarly, a March 2013 Health Research Institute study found 75 percent of health providers and 71 percent of insurers report that they plan to hire new employees to support their IT priorities.²⁰

San Diego County has clear potential to become an important hub in the healthcare information management field, according to a 2011 report from the San Diego Workforce Partnership:

[San Diego] is a leader in healthcare delivery, with 33 hospitals including representation from the military and veterans affairs, and extensive experience in managed care; ranked third in the United States in terms of concentration of life science companies; a center for over 50 research institutions; and home to an exceptionally capable technology community already leading the way in the convergence of wireless communications, commercial software solutions, and medical devices. San Diego is also the fourth largest county in the state in Information Technology employment and home to wireless giant Qualcomm.²¹

As the SDWP report notes, the sustainable growth of the local HIT industry will largely depend on the availability of well-trained personnel, and the creation of education and developing programs to support that need is a key recommendation of the study. Current local talent needs and job opportunities in this field fall into four functional categories: digitization, integration, analytics, and business support. Job titles in these categories include health information management specialists, health information privacy and security specialists, exchange system implementation and operations managers, and data mining specialists, nearly all of which require a specialist level of education.²²

Of the more than 50 local healthcare organizations surveyed in the SD Workforce study, 62 percent report they currently use HIT systems, and an additional 12 percent expect to have HIT systems online within the next few years. Regional healthcare employers report that HIT occupations most in demand are likely to be information workflow and management specialists, health IT support specialists, and technical support staff, with additional demand likely for analysts, project managers, and clinical workflow specialists.²³

¹⁸ Jobs for the Future, "A Growing Job Sector: Health Informatics" June 2012.

¹⁹ College of Health Information Management Executives 2012 CIO Survey < http://www.cio-chime.org/chime/press/surveys/pdf/CHIME_Workforce%20survey_report.pdf>

²⁰ Health Research Institute, "Solving the talent equation for health IT" March 2013

²¹ San Diego Workforce Partnership, "Healthcare IT Research Report 2011" <http://workforce.org/sites/default/files/pdfs/reports/industry/healthcare_it_research_report_dec_2011.pdf>

²² San Diego Workforce Partnership, "Healthcare IT Research Report 2011"

²³ San Diego Workforce Partnership, "Healthcare IT Research Report 2011"

Of the estimated 3,955 IT firms in San Diego County, 448 are involved in the development, deployment, sale, installation, or maintenance of HIT systems in the county. Another 195 firms are considering entering the HIT market in the near term. Local HIT-focused technology firms estimate growth in technical, administrative, and business development positions in the near term.²⁴

All employers in the study agreed that there is an acute local need for trained workers who can bridge the gap between the IT and healthcare worlds and navigate both comfortably, making the creation of educational programs that can provide this training and development an integral part of the growth of HIT in San Diego County.

- f. *If the program was proposed to meet society's need for the advancement of knowledge, please specify the need and explain how the program meets that need.*¹⁵

N/A

6. Student Demand (CPEC “Student Demand”)

- a. *Compelling evidence of student interest in enrolling in the proposed program. Types of evidence vary and may include national, statewide, and professional employment forecasts and surveys; petitions; lists of related associate degree programs at feeder community colleges; reports from community college transfer centers; and enrollments from feeder baccalaureate programs, for example.*²⁵

Student interest in and demand for the first phase of this program, the Health Information Technology certificate, has been strong. In Fall 2012, 31 students were admitted to the program, and 21 joined the inaugural cohort. In Fall 2013, 36 students were admitted and 22 enrolled in the program. Past and present HIT certificate students have indicated through evaluations and other channels that they would be interested in furthering their studies if a second certificate program were approved. In addition, many prospective students have indicated that they would be more interested in pursuing studies leading to a master’s degree than a stand-alone certificate.

- b. *Issues of access considered when planning this program.*

Schedule: The program is designed for the working professional. About 90% of class sessions are on Saturdays, with the balance on Fridays. Sessions last approximately seven hours. The HIT Certificate—the first 12 units of the program—has graduated two cohorts of students. Based on experience and feedback, minor adjustments were made in the schedule to better address student needs and concerns. The primary change was lengthening terms by several weeks to provide students with a Saturday

²⁴ San Diego Workforce Partnership, “Healthcare IT Research Report 2011”

²⁵ Contact Enrollment Management Services to obtain numbers of students with declared majors, options/concentrations/emphases/tracks/etc., and minors. Contact Academic Programs to obtain enrollment histories in specific courses. Surveys of potential employers might show the need for the proposed program. Please explain if there are discrepancies between national/statewide/professional manpower surveys and local findings. Contact the Career Center for assistance in completing this section.

“off” every fourth Saturdays. This schedule seems to “work”; the same structure will be implemented for balance of the program (the HIM Certificate).

Affordability/Financial Aid. Program costs are consistent with the \$500-650 cost per unit of typical master’s programs. Including fees, the total cost will be about \$18,000. There are several possible sources for financial aid and grants including the San Diego Workforce Reinvestment fund, military, employers, and federal financial aids and loans. We intend to apply for federal student grants and for sponsorships from healthcare organization foundations.

c. *For master’s degree proposals, the number of declared undergraduate majors and the degree production over the preceding three years for the corresponding baccalaureate program, if there is one.*²⁶ N/A

d. *Professional uses of the proposed degree program.*

The program was co-developed by CSUSM faculty and an HIT Advisory Board consisting of healthcare experts and top administrators of local healthcare organizations to address the needs of the healthcare industry. An executive committee consisting of four external board members and three faculty members was formed specifically for developing the HIM certificate. The executive committee combed through all job announcements in the HIT/HIM area to derive the learning outcomes for the program. Therefore, the program is designed with student careers and employment in mind. The HIM certificate will be customized to serve as an MBA specialization. This will also allow HIT/HIM students to reduce the number of courses required to obtain an MBA degree. While not within the scope of this proposal, the collaboration will broaden the opportunities for professional employment of HIT/HIM and MBA students.

e. *The expected number of majors in the year of initiation and three years and five years thereafter. The expected number of graduates in the year of initiation, and three and five years thereafter.*

Many HIT certificate graduates are expected to continue with the second certificate and the master’s program. We expect an enrollment of about 25 for the first year of the program, on the order of half of the students who will have completed the HIT certificate. The program will admit at most one cohort per academic year. We believe that the first five years of the program are critical to achieve a reputation of providing high quality education and graduates. Therefore, enrollment will be capped at 25-30 and more-or-less constant during these early years.

7. Existing Support Resources for the Proposed Degree Major Program (CPEC “Total Costs of the Program”)

Note: *Sections 7 and 8 should be prepared in consultation with the campus administrators responsible for faculty staffing and instructional facilities allocation and planning. A statement from the responsible administrator(s) should be attached to the proposal assuring that such consultation has taken place.*

²⁶ Contact Enrollment Management Services for these data.

- a. *Faculty who would teach in the program, indicating rank, appointment status, highest degree earned, date and field of highest degree, professional experience, and affiliations with other campus programs. For master's degrees, include faculty publications or curriculum vitae.*

| Faculty | Rank | Degree Earned | Year Hired at CSUSM | Expertise | Years of Experience |
|----------------------|---------------------|----------------------|----------------------------|--|----------------------------|
| George Diehr | Professor | PhD | 1990 | Management Science, Database | 35 |
| Fang Fang | Associate Professor | PhD | 2005 | Management Information Systems | 9 |
| Pam Kohlbry | Associate Professor | PhD | 2007 | Nursing | 30 |
| Chet Kumar | Associate Professor | PhD | 2005 | Management Information Systems | 9 |
| Jack Leu | Professor | PhD | 1991 | Management Science, Management Information Systems | 23 |
| Teresa Mecklin | Adjunct Faculty | MS, JD | 1991 | Computer Science, Law | 23 |
| Dick Montanari | Professor Emeritus | PhD | 1990 | Strategy | 30 |
| Mohammad Oskoorouchi | Professor | PhD | 2002 | Management Science | 12 |
| Camille Shuster | Professor | PhD | 2005 | Marketing | 30 |
| Kathleen Watson | Professor | PhD | 1992 | Management, Leadership | 30 |
| Yi Sun | Associate Professor | PhD | 2003 | Management Information Systems | 16 |

Note: For all proposed graduate degree programs, a minimum of five full-time faculty members with the appropriate terminal degree should be on the program staff.

(Code Memo EP&R 85-20)

- b. *Space and facilities that would be used in support of the proposed program.*

The HIT certificate has been using classrooms and computer labs in Markstein Hall and ACD 205. The same facilities will be used for this program. HIM classes are scheduled only on Saturdays when demand for these rooms is very low.

- c. *A report provided by the campus Library, detailing resources available to support the program (discussion of subject areas, volume counts, periodical holdings, etc. are appropriate).*²⁷

See Attachment 2.

- d. *Existing academic technology, equipment, and other specialized materials currently available.*²⁸

With the support of institutions like Kaiser Permanente, Sharp Health, and Golden Hour for training in Electronic Medical Record Systems, our existing academic information technology at CSUSM exceeds requirements for the HIT certificate. The HIM certificate will use existing CSUSM software packages for statistical analysis, Oracle and PeopleSoft for database, open source software such as R for analytics, and Hadoop for large datasets. We are in negotiations with a company specializing in healthcare data analysis for the donation of software to complement open source software. In addition, Teradata University, a Web-based portal providing teaching and learning tools, has rich healthcare educational resources available at no cost. Most of these resources can be deployed within the existing CSUSM IT infrastructure. The only exception is Hadoop, which requires a cluster of distributed servers to store unstructured data. This need was discussed with IITS, which assured us that it is within their capability to support Hadoop.

8. Additional Support Resources Required (CPEC “Total Costs of the Program”)

Note: If additional support resources will be needed to implement and maintain the program, a statement by the responsible administrator(s) should be attached to the proposal assuring that such resources will be provided.

- a. *Any special characteristics of the additional faculty or staff support positions needed to implement the proposed program.*²⁹

HIT/HIM faculty members must have a solid understanding of the healthcare industry. Our approach to faculty development includes the following:

- (I) For the HIT certificate, each semester starts and ends with a conference. Speakers for these conferences are all healthcare experts representing providers, payers, patients, technology managers, and entrepreneurs. In the first two years of the HIT programs, more than 60 sessions were delivered by outside speakers.

²⁷ Contact the Library for this report.

²⁸ Contact Instructional and Information Technology Services (IITS) for a report addressing information technology and academic computing resources available to support the program. Programs currently possessing additional equipment and specialized material not addressed in the IITS report should include these here.

²⁹ Include additional faculty lines needed to support the course offerings indicated in 4.i and 4.o. indicate whether any external funds are expected to support faculty lines.

This format allows our faculty to become conversant in healthcare and develop course materials rich in the context of the healthcare system, its challenges, and opportunities

- (II) In addition to the grant for HIT program development, we have received a second grant from the Commission on CSU Extended University to develop the HIM certificate and master's program. The grant will support faculty course development efforts as well as their own professional development in HIT/HIM, including costs for resources such as various media and materials; membership in professional organization; expenses to attend conferences and visits to other institutions offering HIT/HIM programs.

The Extended Learning and the College of Business Administration have provided valuable staff support for the HIT certificate program, including marketing, promotions, student evaluations and admissions, conference logistics, course scheduling, space requests, contracting, and so forth. The same level of support will be sufficient for the new program.

- b. *The amount of additional lecture and/or laboratory space required to initiate and to sustain the program over the next five years. Indicate any additional special facilities that will be required. If the space is under construction, what is the projected occupancy date? If the space is planned, indicate campus-wide priority of the facility, capital outlay program priority, and projected date of occupancy.*³⁰

As discussed in 7b, we do not expect any additional lecture/laboratory space beyond CSUSM's existing infrastructure to support the program content and weekend-only scheduling.

- c. *A report written in consultation with the campus librarian, indicating any additional library resources needed. Indicate the commitment of the campus either to purchase or borrow through interlibrary loan these additional resources.*³¹

Please refer to the report in Attachment 2, which evaluates the needed library resources and indicates the awareness of and the commitment of the campus to support the HIT/HIM programs.

- d. *Additional academic technology, equipment, or specialized materials that will be (1) needed to implement the program and (2) needed during the first two years after initiation. Indicate the source of funds and priority to secure these resource needs.*³²

As noted in 7d, the existing academic technology and equipment are sufficient to support the program implementation. The only exception is resources to support Hadoop, which entails a cluster of distributed servers; however, these do not need to be dedicated servers, and IITS has indicated that it stands ready to support this need.

³⁰ Contact Planning, Design and Construction for assistance in answering questions about space that is under construction or being planned. Indicate whether any external funds are expected to support construction of facilities.

³¹ This should follow directly from the Library report in 7.c.

³² Information technology and academic computing needs should follow directly from the IITS report in 7.d. Additional specialized equipment and materials that will be needed should be addressed here.

Our excellent computing infrastructure is sufficient to support the program initiation. Since we expect to cap enrollment at 30 or less we do not anticipate any IT support problems in the future. Please refer to Attachment 3 for the report from the IITS.

9. Additional CSUSM New Program Requirements

- a. Summarize the responses in items 8a-8d by completing the spreadsheet in Table III. The template for this table may be downloaded from http://www.csusm.edu/academic_programs/Curriculum_Forms.

No forms found.

- b. List all pre-requisites and/or required preparatory courses for the major, and in what year of a four-year sequence they would be taken. Indicate which courses are outside of the department proposing the major.³³

For the HIT Certificate

| Course Title | Units of Credit | Year Taken | Outside major dept? |
|-----------------|-----------------|--------------------|---------------------|
| College Algebra | 3-4 | Prior to Admission | Yes |

For the HIM Certificate

| Course Title | Units of Credit | Year Taken | Outside major dept? |
|---|-----------------|------------|---------------------|
| HIT 500 Healthcare Systems: Structure and Process | 2 | 1 | No |
| HIT 510 Data Management for Healthcare Decision Support | 2 | 1 | No |
| HIT 520 Electronic Health Records | 2 | 1 | No |
| HIT 530 Data Communications and Security for Healthcare | 2 | 1 | No |
| HIT 540 Managing Healthcare System Change | 2 | 1 | No |
| HIT 530 Data Communications and Security for Healthcare | 2 | 1 | No |

³³ See section 4f

c. Referring to the proposed course-offering plan you completed in section 4i, list required and elective³⁴ courses, and the semester and year in the sequence.³⁵ Identify any courses in the major department for which course-based fees might be appropriate (e.g., expendable supplies).

| Semester | Year | Course Title | # of Units | Elective or Required? | Course Based Fee? |
|----------|------|---|------------|-----------------------|-------------------|
| Summer | 2 | Genomic Medicine and Health Informatics | 1 | Required | N/A |
| Summer | 2 | Analytics for Healthcare Outcome Improvement I | 2 | Required | N/A |
| Summer | 2 | Seminar in eHealth | 1 | Required | N/A |
| Fall | 2 | Analytics for Healthcare Outcome Improvement II | 2 | Required | N/A |
| Fall | 2 | Patient Risk Assessment | 1 | Required | N/A |
| Fall | 2 | Healthcare Project and Information Management | 3 | Required | N/A |
| Fall | 2 | Seminar in Healthcare Information Management | 1 | Required | N/A |
| Spring | 2 | Strategic Leadership in Healthcare | 2 | Required | N/A |
| Spring | 2 | Developments in Healthcare Information Management | 1 | Required | N/A |
| Spring | 2 | Healthcare Information Management Practicum | 4 | Required | N/A |

³⁴ If the choice among electives is extensive, list a generic "Elective" under Course Title.

³⁵ In addition to section 4i, refer to sections 4f and 4g.

Attachement 1: Program Assessment Matrix

| | | Master's in Health Information Management | | | | | | | | | | | | | | | | | | |
|---|--|---|---------|---------|---------|---------|---------|-----|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|---|
| | | HT Certificate | | | | | | | HIM Certificate | | | | | | | | | | Practicum | |
| | | HIT 500 | HIT 510 | HIT 520 | HIT 530 | HIT 540 | HIT 550 | HIT | HIM 610 | HIM 620 | HIM 621 | HIM 630 | HIM 640 | HIM 650 | HIM 660 | HIM 670 | HIM 671 | HIM 680 | HIM 690 | |
| <i>1. Recognize needs and opportunities for improving healthcare system delivery and performance</i> | | I | | I | I | | | R | I | I | R | I | | | | | | I | | P |
| <i>2. Understand alternative technologies and methods for system improvements</i> | | I | | I | I | | | R | I | I | R | I | | | | | | I | | P |
| <i>3. Analyze healthcare data to determine the most cost-effective approaches</i> | | | | | | | | | | | | | | | | | | | | |
| <i>4. Manage technical and human resources in the design, development, and implementation of change</i> | | | | | | | | R | I | R | | | | | | | | | | P |
| <i>5. Advocate and provide leadership for healthcare system reform</i> | | | | | | | | R | I | I | R | | | | | | | | | P |

Key:

I: Introduced

R: Reinforced

P: Practiced

Subject: Confirming Appointment Regarding Master's in Healthcare Information Management

Date: Tuesday, September 2, 2014 at 12:08:00 PM Pacific Daylight Time

From: Jack Leu

To: Jack Leu

Priority: High

For MHIM P-form Attachment 2

From: Jacqueline Borin <jborin@csusm.edu>

Date: Thursday, July 10, 2014 at 8:53 AM

To: Jack Leu <leu@csusm.edu>

Subject: Re: Confirming Appointment Regarding Master's in Healthcare Information Management

Hi Jack - Here is the information we would like to submit from the Library for 7c in the proposal.

The library has available materials and databases in the areas of healthcare company and industry research including forecast and trends (examples include Mergent Online or the paper version of Standard and Poor's). If specialized IT or healthcare industry reports are required, such as those available in Frost and Sullivan, this would be an additional cost. In regards to the marketing course general trends in health care needs are available through the library currently. Euromonitor Passport will be funded for 14-15 (but its prohibitive cost will be under scrutiny in the following years) and is a core resources for marketing courses. There may be additional information required related to insurance reports and materials, the business librarian can work with faculty to locate needed materials. Librarian time will be needed to teach these returning professionals to academia what research materials are available and how to effectively articulate an information need, research and extract the appropriate information for their particular needs.

Thanks.

Jackie

Jacqueline Borin
Interim Library Dean
CSU San Marcos
760 750-4336
jborin@csusm.edu



MEMORANDUM

DATE: July 11, 2014

To: Budget and Long Range Planning Committee

From: Bill Ward
Interim Dean, Instructional Information Technology Services and Chief Information Officer

Subject: IITS Comments for the Masters of Science in Health Information Management

Thank you for the opportunity to provide additional comments for the program proposal for the CSUSM Masters of Science in Health Information Management. As this description is written, this program states that there are no additional on-campus support requests from IITS. On page 14, section 7D (Existing Support Resources for the Proposed Major Program)) you state that software not available to the campus will be donated. In addition, this document states several times that classes will be held on weekends and at night. IITS has the capacity to support adding software to the Markstein labs without requiring additional resources. However, IITS does not have the capacity to provide support on weekends or evenings.

To effectively support any proposal that includes new courses and new faculty we have the following guidelines.

- It has been our experience that new courses with typical technology resources take 3 to 5 hours of instructional developer support and more technology-intensive courses (especially fully online courses) may take 20 hours or more of support.
- Any new course must comply with the CSU Accessibility Technology Initiative (ATI) guidelines for instructional materials: "New courses and new course content, including instructional materials and instructional websites, will be designed and authored in a manner that incorporates accessibility." An instructional developer will meet with the faculty member designing the new course to review specific accessibility guidelines and ensure that the course content is in compliance with the ATI. Typical issues include captioning multimedia, adding image tags to PowerPoint, using styles in Word, and naming links appropriately in the LMS or website. Analyzing the instructional materials and training how to make these items accessible could take a minimum of 3 hours of instructional development time.
- New faculty members are usually not familiar with our Learning Management System (LMS) or the multimedia options we offer. Therefore, they are highly encourage to attend workshops or request an orientation by contacting ids@csusm.edu to become familiar with all of the options that Academic Technology Services has available to support their teaching. This training can

range from 1 hour to 20 plus hours depending on the interactive content, media integration and whether the course is flipped, hybrid, or fully online.

- It is understood that these courses are live lecture based but if in the future Online courses are planned it should be noted that they are labor-intensive to develop. The Instructional Developer team provides one-on-one and professional development opportunities to prepare faculty to develop quality online courses. It is suggested that faculty teaching online meet with the IDS team one semester in advance of teaching the course.
- Multimedia resources including video studios, Mediasite studio, and videoconferencing rooms are supported Monday through Friday, 8 am to 5 pm. Funds need to be identified for additional support for programs with support needs outside of this schedule.

cc: Jack Leu, Professor of Information Systems, COBA

MEMORANDUM

Date: September 11, 2014

To: Glen Brodowsky, Chair, Graduate Committee, CoBA;
Mohammad Oskoorouchi, Acting Dean, Associate Dean, Graduate
Program director, CoBA;
CoBA Graduate Committee

From: Jack Leu

Re: MHIM Proposal

With the assistance from the Health Information Technology (HIT) Executive Committee, we have developed a new program proposal for Master in Health Information Management (HIM). The program is comprised of the existing 12-unit HIT certificate, a new 14-unit certificate, and a 4-unit practicum. The practicum will serve as the culminating experience required for a master's program. A cougar course, <http://community.csusm.edu/course/view.php?id=1155#section-1>, has been created to house the proposal and all relevant documents.

The proposal has been reviewed by IITS, Library, and Student Affairs. Revisions have been made to incorporate suggestions from these reviews. In the first two years of the HIT program, a few qualified CSUSM undergraduate students were accepted into the program. It turns out that this practice was against a CSUSM internal policy, which explicitly requires undergraduate students to request concurrent graduate credits. Since the HIM Master program did not exist at that time, all their HIT credits were counted toward these students' undergraduate degrees. The campus will grant a one-time waiver of the policy for these students, and two independent study courses (HIM 691 and HIM692) have been added to the curriculum proposal so that these students can transfer their HIT credits to the master's program. Since the sole purpose for these two courses is to serve as a remedy of the problem, they will be removed from the program in the near future.

The target implementation date of the Master program is Summer 2015. Therefore, an expedited review by the graduate committee is greatly appreciated. Please feel free to contact me if there are any questions. I am also available for Q&A at the graduate committee meeting.