**Incubator Program in Healthcare Information Systems**

**Extended Major - BS**

Note: Students must be clearly informed in all paperwork and advertising that this is an *incubator* through the Individualized Degree Program, not yet a permanent major or minor.

**Program Description**

The Healthcare Information Systems (HCI) field offers multiple avenues for employment for MSU Denver graduates in our rapidly growing health care community. MSU Denver is in the enviable position of being able to offer a degree program meeting the unique mix of skills needed for a successful career in HIS through existing course offerings from Health Care Management (“HCM”) and Computer Information Systems (“CIS”).

The HCI field is a rapidly growing career option for MSU Denver students. There are multiple reasons for this growth opportunity in the healthcare industry. Among them are:

- Continued expansion for the demand of Healthcare Services due to health reform increasing access to health insurance and payment resources for health care;
- Financial incentives provided by the federal government for healthcare service providers to adopt information technology solutions;
- Increasing financial constraints requiring improvements in operational efficiency by healthcare service providers – something expected to be fueled by wider adoption of information technology solutions;
- Expanding health insurance and benefit services that require computer system operators with a solid understanding of the healthcare system;
- Market and consumer demand for empirical evidence supporting provision of high quality medical care services.
- Support product vendors who develop healthcare related information systems.

**Faculty Liaison(s) from Key Departments:**

Dr. Jeff Helton, Health Care Management:
Dr. Janos Fustos, Computer Information Systems:
Dr. Kim VanHoosier-Carey, Individualized Degree Specialist:
RECOMMENDED GENERAL STUDIES COURSEWORK

All students must complete General Studies requirements for their catalog year. The General Studies courses below are recommended either because they meet prerequisites and/or are well-suited to the focus of the Health Information Systems program. Students should consult with the HCM or CIS advisor to identify the most appropriate courses if general studies are already met with other courses than those listed below.

Course prefix/number/title: Credit hours:
Composition/Written Communication (GT-CO, 6 credits required of all students):
  • ENG 1010 and 1020 Freshman Composition I & II
Math/Quantitative Literacy (GT-MA, 3 credits required of all students):
  • MTH 1210 Introduction to Statistics (4 credits)
Oral Communications (3 credits required of all students):
  • SPE 1010/CAS 1010 – Public Speaking
Historical (GT-HI, 3 credits required of all students):
  • HIS 1210 – American History to 1865 or HIS 1220 – American History since 1865
Arts & Letters/Humanities (GT-AH, 6 credits required of all students):
  • PHI 3360 – Business Ethics
  • No preference
Social Sciences or Social and Behavioral Sciences I & II (GT-SS, two courses required. Please consult your advisor regarding requirements for your catalog year, as these vary):
  • PSY 101 – Introductory Psychology
  • SOC 1010 - Introduction to Sociology
Natural & Physical Sciences (GT-SC, 6 credits required of all students):
  • No preference
Global Diversity (3 credits required for Fall 2012 and later)
    • One course in General Studies must meet the Global requirement.
Total of required credits for General Studies (please list total) 34

Degree/Graduation Requirements:
Multicultural Course: (3 credits required of all students)
  • HCM 3700 – Health Disparities in the U.S.
Senior Experience: (3 credits required of all students)
  • HCM 3980 – Internship in Health Care Management

RECOMMENDED COURSEWORK FOR THE INCUBATOR

Highly Recommended Core Courses: These courses are critical to the field of study and are likely to become required in an eventual curriculum proposal.
  • 24 credit hours from the existing healthcare management curriculum – (not including HCM senior experience requirement listed separately)
- HCM 3010 – Health Care Organization
- HCM 3020 – Management Principles in Health Care
- HCM 3030 – Health Care Jurisprudence
- HCM 3400 - Human Resources Management in Health Care
- HCM 3600 – Health Information Systems
- HCM 4030 – Financial Management in Health Care (requires ACC 2010)
- HCM 4300 – Strategic Management in Health Care
- HCM 390U – Independent Study in Health Care Management (CIS/HCM synthesis)

- 3 credit hours for ACC 2010 – prerequisite for HCM 4030
- 24 credit hours from the computer information systems curriculum –
  - CIS 2010 – Foundations of Information Systems (students may take a placement test or take CIS 1010 as a general elective in order to place into this course)
  - CIS 2110 - Structured Problem Solving in Information Systems
  - CIS 3030 - Business Web Page Development
  - CIS 3060 - Database Management Systems
  - CIS 3230 - Telecommunication Systems and Networking
  - CIS 3460 - Data Warehousing and Mining (prerequisite of CIS 3300 will be waived for students in the incubator as long as MTH 1210 is complete)
  - CIS 3500 - Information Systems Security
  - CIS 4030 - Web Site Administration

Total credit hours of core courses: 51 credit hours (not including the multicultural graduation requirement and the senior experience)

Complementary courses that could be chosen to complete the major (an extended major requires a minimum of 60 credits, with at least 27 of those being upper division):
- HCM 3500 – Health Care Research Methods (requires statistics)
- HCM 3800 – Long-Term Care: Management Continuum
- HCM 3550 – Leadership in Health Care
- HCM 390M - Managing Quality in Health Care
- CIS 3145 – Business Application Development
- CIS 3270 – Advanced Computer Applications for Business
- CIS 3300 - Managerial Statistics (requires MTH 1320 or 1410)
- CIS 3050 - Fundamentals of Systems Analysis and Design
- CIS 3320 - Management Science (requires CIS 3300)
- CIS 3280 – LAN & WAN Systems for Business

Total credit hours of elective/complementary courses required to complete degree: 29 Hours of electives to reach required 120 credits for a Bachelor’s Degree. At least 40 credits of the overall degree must be upper division.