Faculty Innovation on a New Campus

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- Established in 2006
  - RHEDC
- Focus on health sciences and biotechnology
- Programs
  - B.S. in Health Sciences (BSHS, Fall 09)
  - B.S. in Health Professions (BSHP, Fall 11)
  - M.S. and Ph.D. graduate programs in Biomedical Informatics and Computational Biology (BICB, Fall 08)
    - (Partnership programs)
- Center for Learning Innovation
  - Academic unit for faculty teaching in the BSHS
Curricular and Co-curricular Integration

- Academic Program
  - UMR has no departments: the Center for Learning Innovation (CLI) is the single academic unit to deliver the B.S. in Health Sciences academic curriculum
    - Vision: The CLI promotes a learner-centered, technology-enhanced, concept-driven, and community-integrated learning environment. Through ongoing assessment of student achievement, the CLI aspires to personalize learning, establish data-driven research on learning, and continuously improve the curriculum.

- Capstone
- Study Away from Rochester
- Student Development
  - Student Success Coaches
  - Student Life
UMR Model of Education

- Faculty from across disciplines deliver a cohesive and integrated curriculum, the B.S. in Health Sciences, to prepare students for a wide variety of careers in the health sector
- Different roles for faculty and staff in delivery teams
  - Design faculty (T/TT) design, implement, and deliver the curriculum and have a mandate to engage in research on learning
  - Student-based faculty (instructors) implement and deliver the curriculum and serve as tutors
  - IT staff to facilitate technology integration
- Emphasis on translational pedagogical research and comprehensive assessment
- Common lower division curriculum to better prepare students and to respond to new fiscal realities
Learner-centered and Personalized

• Lower division
  – Common curriculum
  – Integrated liberal education and writing
  – 1st semester designed to enable success and to de-emphasize differences in preparation
    • Organic chemistry, Philosophy, Statistics, Sociology, Writing Studio
  – Collaboration
    • Group work
    • “Don’t Lecture Me” (American RadioWorks)
  – Communication
  – Career exploration without change of major

Upper Division

CHOICE

Lower Division
Learner-centered and Personalized

- Upper division
  - Targeted courses
  - Capstone (senior year)
    - Planning starts in sophomore year
      - Curriculum with a purpose
    - Personalized program to meet career aspirations
      - Research experience
      - Internship
      - Study Abroad
      - Course work
  - Communication
  - Career preparation
Community-integrated

• Over 120 community members participated in the curriculum in AY 2012-13

• Arc of community engagement
  – Work study and volunteering in the community
  – Community Collaboratory (Junior year)

• Professional Panels

• Industry Engagement Network

• Capstones
  – Research
  – Internships
  – Certificate programs
  – ...
Student Capstone Portfolios

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Capstone Portfolio Examples

The Arts and Humanities of Empathetic Medicine: Fostering Empathy, Compassion, and Cultural Sensitivity by Integrating Arts and Humanities Courses and Cultural Experiences into a Pre-Medical Education by Jessica Gascoigne

Understanding how Culture, Education, and Research Impact Healthcare by Hannah Salk

The Building Blocks of a Competitive Physician's Assistant Applicant by Ellie Linscheid

Nutrition and Physical Activity in Under served Communities by Samantha Calvin

Collaboration in Research Experience and Management Preparation by Lisa Zerby

She Shoots, She Scores: A Portfolio for My Professional Career and Educational Excellence by Madeleine Hammerlund

Improving Health Access, Awareness, and Policy on Local and Global Levels by Evan Doyle

Where Experience and Education go Hand-in-Hand by Caitlyn Bower

Final Capstone Presentation Videos

Discovering the Purpose of Healthcare by Zach Domeier

Rural Medicine: A Deeper Diagnosis by MiKayla Valvick

The Nature of Knowledge by Josh Clancy
IT as an Academic Unit: Enhancing the Student Experience

• IT reports to Academic Affairs
• IT is not just a commodity
  – From mainframe computers to social media, OpenContent, and mobile devices
• Classroom beyond brick and mortar
  – Access anywhere, anytime
  – Global classroom
• Close interactions between faculty and IT result in products that are used

http://www.issis.org/History_ISSiS_6.htm
Technology-enhanced

• Classrooms are technology-rich and facilitate collaboration
  – 8 Learn Labs with 24-80 seats
• Laptop program allows students instant access to information and online tools
• iSEAL delivers the curriculum and provides access to the entire curriculum at all times
  – Curriculum development tool
  – Assessment tool
  – Real-time data collection
Restructuring Research Software into an Innovative Curriculum Management System

Traditional Campus Course Management System

- Software design limits teaching
- Courses separated into distinct sites; do not share curricular materials
- Disciplinary areas separated by department/college
- Off-the-shelf software

UMR Center for Learning Innovation iSEAL Curriculum Management System

- Teaching informs software design
- Disciplinarians integrate curriculum within one department
- Material for entire curriculum is stored in iSEAL. Modules and learning objects from different disciplinary areas can be used in course websites.
- Custom programming to implement CLI vision

Collaborations
- UMR Center for Learning Innovation
- UMR IT/ITV/Classroom Support Services
- UMR Vice Chancellor for Academic Affairs
- UMTC Academic Support Resources
- UMTC Computer Science & Engineering
- UMTC OIT Collaborative for Academic Technology Innovation
- UMTC OIT Enterprise Application Development
- UMTC OIT Virtual Hosting Service

Tools
- CollabNet Subversion
- Hibernate
- ITV
- JUnit
- Request Tracker
- Spring
- UMWiki

Outcomes
- Increasing faculty ownership and engagement
- Increasing U of M awareness of academic analytics
- Currently supporting an enrollment of approximately 150
- 7,000 weekly page views
- 6-minute average visit length
- Will support over 1,000 students by 2017

Support for the iSEAL project has been provided by the Howard Hughes Medical Institute, the McKnight Foundation, and the University of Minnesota Rochester.