

# **Workforce Development**

## **An Education/Academic model**

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# Workforce Development

## An Education/Academic model

- **Master of Science**

  - Public Health Laboratory Sciences

- Southern Illinois University

  - Graduate School

  - College of Science

  - School of Medicine

- Illinois Department of Public Health

# Program Development

## The Process

- SIU Graduate School
  - Review/approve plan - modify present program
  - Micro, Biochem, Molec. Biology (MBMB)
    - 1996 – justified: job trends, technology, etc.
  - RME (Reasonable & Moderate Extension) provision
- IDPH Laboratories' division chief
  - “Micro, Molecular, Chem, Biochem is us”

# The Academics

- Admission – Science (undergrad) -  $\geq 3.0$  GPA
- MBMB Core Requirements (MS and PhD)
  - Biochemistry (2 semesters)
  - Microbial Genetics
  - Immunology
  - Microbiology/Clinical Microbiology
  - Seminar - every semester

# The Academics

## Additional - for public health focus

- MS – PHLS requirements
  - Introduction to Public Health *Public Health: What it is and how it works* (Turnock)
  - Environmental Chemistry
  - Public Health Laboratory Disciplines
    - Multi faculty: IDPH labs and programs
  - Public Health Laboratory Training (2 sem)
    - (Replaces basic, independent research requirement)

# The Training

- Year 1 – 1<sup>st</sup>
  - Core MBMB courses & Intro to PH
    - 15 hours/week in the PH laboratory sections
      - STD & Infectious Diseases/Rabies
      - HIV serology
      - Lead (blood and environmental)
      - Water/Food microbiology
      - Molecular
      - Bio- Chemterrorism Preparedness & Response

# The Training

- Year 1 – 2<sup>nd</sup>
  - Core MBMB courses
  - Environmental Chemistry
    - 15 hours/week in the PH laboratory sections
      - STD & Infectious Diseases/Rabies
      - HIV serology
      - Lead (blood and environmental)
      - Water/Food microbiology
      - Molecular
      - Bio- Chemterrorism Preparedness & Response

# The Training

- Summer (continue IDPH work for assistantship support; 30 hours/week)
  - Electives (6 credit hours)
- Chicago laboratory (3 -4 weeks)
  - Newborn Screening
  - TB
  - Virology

# The Training

- Year 2 – 1<sup>st</sup>
  - Public Health Laboratory Disciplines
  - Public Health Laboratory Training
    - 30 hours/week – as PH laboratory employee
    - Focus on laboratory section of interest for certification/accreditation:
      - CLIA Testing Personnel
      - USEPA Water Analyst
      - USFDA Milk/Dairy Analyst

# The Training

- Year 2 – 2<sup>nd</sup>
  - Clinical Microbiology
  - Public Health Laboratory Training
    - 30 hours/week – as PH laboratory employee
    - Focus on laboratory section of interest for certification/accreditation and comprehensive knowledge acquisition/training

# Issues/Challenges

- Assistantship \$ = IDPH “employee”  
(Student stipends = IDPH grant/contract)  
(No stipend = ?? Hours of lab training)
- As employee, lab surge needs to fulfill
- Teleconferencing courses
- Undergrad science courses/majors

# Accomplishments

- Capitalize on SIU/IDPH lab co-location
- Capitalize on SIU & IDPH resources
- Successfully RME the program
  
- Graduated first cohort class
  - IDPH labs employment
  - PhD program - Uniformed Services U. (EID)

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  - All IDPH laboratory section chiefs
- Southern Illinois University
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  - John Martinko – MBMB Director

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