Develop an Undergraduate Major Committee (DUMC)

Fall 2018 Faculty Retreat Report and Discussion Plan 15 August 2018

UPDATE (30 minute)

1. Explain DUMC progress (10 minutes)

- **a.** Meet the committee
  - **i.** Last year: Cris (fall semester), Janet, Tamla, Kirk (fall and spring), Andrew, Frank, Franck, Todd
  - **ii.** Jane started in May, Andrew resigned in August, Paul and Vamsi joined in August
  - **iii.** Current committee: Janet, Tamla, Frank, Franck, Todd, Jane, Vamsi, Paul, and me
- **b.** Timeline (handout)
- **c.** Approach – Backward design
  - i. Start with the end in mind
- **d.** DUMC retreat May 24, 2018
- **e.** Foundations of the Undergraduate Major

  Mission of the Major (Introduce this; will return to it in later discussion)
  To understand the biology and ecology of pests and beneficial species

  Desired Features of the Major (Introduce this; will return to it in later discussion
  Students want flexibility and to keep their options open
  - Minimum credits to allow students to pursue additional interests and not close doors by choosing this major
  - Self-designed concentration to allow flexibility

  Underlying Assumptions about the Major (Introduce this; will return to it in later discussion
  - The major will train students broadly, not in specific areas such as entomology, plant pathology, or weed science.
  - This broad training will provide the foundation for graduate or workplace training.
  - Methods taught and information conveyed will be up-to-date and cutting edge

  *Diverse groups and audiences include, but are not limited to, persons of different ages, educational, cultural, and experiential backgrounds, races, ethnicities, and sexual orientations.
  ** Sustainable means considering social, economic and biophysical aspects

- **f.** Implementing the backward design approach, we developed Student Learning Outcomes in a couple meetings and a half-day retreat.

2. Explain student learning outcomes (10 min)

- **a.** Five areas based on College of Ag Sciences Strategic Plan
- **b.** SLOs detailed in handout as follows:
- **c.** Don't go through these in detail here; save it for the introduction to the discussion

Technical Competencies (TC)

Detailed SLOs

Students will:

- Be able to identify key pests and beneficial species in agricultural, horticultural, and natural systems through laboratory and field methods
- Explain the biology and ecology of pests and beneficial species
- Explain the benefits and risks of management practices in agricultural, horticultural, and natural systems
- Implement cost effective, socially acceptable, and environmentally sound pest management solutions

Single SLO

Integrate skills and knowledge to solve problems related **to pests and beneficial organisms in agricultural, horticultural, and natural system**

Agricultural Literacy (AL)

Detailed SLOs

- Explain and assess pest management policy, including regulatory frameworks
- Demonstrate knowledge of the important participants in agriculture and natural resource management
- Describe the similarities and differences among management of biological problems in agricultural, horticultural, and rangeland settings
- Develop coherent, objective, balanced arguments regarding contemporary problems in agricultural, horticultural, and natural systems

Single SLO

Formulate coherent, objective, balanced arguments regarding management of biological problems in agricultural, horticultural, and natural systems

Critical Thinking (CT)

Detailed SLOs

- Demonstrate ability to acquire knowledge about agricultural, horticultural, and natural systems and identify gaps and critical problems
- Integrate knowledge from across the curriculum
- Analyze qualitative and quantitative information and derive conclusions
- Synthesize knowledge to create novel ideas and solutions to complex problems

Single SLO

Describe, assess, analyze, and synthesize knowledge from across the curriculum to create solutions for pests and beneficial species in agricultural, horticultural, and natural systems.

Leadership (L)

Detailed SLOs

- Function effectively within diverse teams to solve complex problems and achieve desired management outcomes in agricultural, horticultural, and natural systems
- Work to create and facilitate inclusive and diverse teams
- Promote and practice inclusion everywhere

Single SLO

Promote and practice inclusion to form effective teams that solve complex problems in agricultural, horticultural, and natural systems

Communication (C)

Detailed SLOs

- Effectively communicate with broad and diverse* audiences including peers, stakeholders, and the public.
- Demonstrate the ability to effectively engage stakeholders to identify management needs
- Provide information related to sustainable** management in agricultural, horticultural and natural systems
- Excel in written and verbal communication of scientific results and analyses to diverse audiences*

Single SLO

Communicate effectively with broad and diverse audiences regarding sustainable management in agricultural, horticultural and natural systems

3. Explain curricular process (5 min)

a. Currently working on draft curriculum. First draft was assembled by Tamla and DUMC is modifying that. Shout out to Tamla!

i. At most, freshman, sophomore, junior year 1-2 credit courses to build skills, knowledge, cohort cohesion; senior capstone (3-4 credits)

ii. With the information we gather here today, DUMC will

1. Identify specific knowledge, skills, and abilities needed to achieve each SLO.

2. Match courses in the revised draft curriculum to identify which courses address which SLOs, and where gaps exist.

3. Next we will identify what minor or major changes can be made to existing courses and what new courses are needed to fill these gaps.

iii. We will need instructors of courses to help us identify which SLOs their courses address and what changes to courses might be made to help fill gaps

4. Questions (5 min)

UNDERGRADUATE MAJOR DISCUSSION (90 min)

Discussion #1 (Bloom's Taxonomy, extra handouts with notes to hand back at end of discussion**) (30 min)**

1. Breakout groups (diverse, at least 1 DUMC member in each group) to discuss what faculty like about mission, assumptions, features and suggestions for improvement
    a. Intro - 5 min
        i. Make a list of what you like about each (mission, assumptions, features)
        ii. Make a list of what could be improved
    b. Discussion (15 min)
    c. Report back (10 min)

Discussion #2 (Bloom's Taxonomy, extra handouts with SLOs) **(60 min)**

2. Breakout groups (diverse, at least 1 DUMC member in each group) to discuss how SLOs can be improved and examples of problems students should be ready to tackle when they complete the program (5 min/SLO, 25 min total)
    a. Introduction – 3 min
        i. Write answers on handouts and turn in to me later
    b. Each group discuss all five SLOs categories and identify suggestions for improving them. Also come up with an example of the kind of situation or problem students should be equipped to deal with when they have completed the program (30 min)
        i. Make a list of how each SLO can be improved.
        ii. Write out example situation or problem
    c. Report back to group (15 min)

Discussion #3 (10 min)

At this point, what are your concerns about the undergraduate major?