PREPARE: PREParation for Academic Research and Educator careers

Audience: senior graduate students and Post docs

Course to meet once a week each time for about 3 hrs, with a 15 minute break midway. Team taught with each module having more than one instructor.

S/U grade: to be determined by in class participation and assignment at the end of the course

Current time frame: starting June 5th to August 7th, 2015
Meeting 1-4:30 pm on Fridays. Unless Computer Lab (Rm G120) is noted, the rest of the classes will meet in Rm 1301.

Tools of the Trade Course –MODULES (10 in number)
Note: Some last minute changes in the schedule provided below are possible due to unforeseen circumstances.

June 5th
A. Being successful in an organization -
   1. What is your mission statement (Stanwood)
   2. Preparing your Individual Development Plan (myIDP)
   3. CV versus resume preparation
   4. Considerations for finding a postdoc position
   5. Expectations for postdocs versus PIs (Hurt)
   6. Writing evaluations and being evaluated (Hurt)
   7. Staying on track for tenure (Hurt)

June 12th
B. Working in a lab and designing a Research Plan -
   1. Handling animals, human subjects and biosafety requirements (Megraw)
   2. Elements of experimental Design – How to reduce our irreproducibility (Kato)
   3. Developing a research plan –can you put it in a figure? (Yanchang Wang)
   4. Clinical research – dry lab (Heather Flynn)

June 19th - Computer Lab (G120)
C. Bioinformatics I -
   1. Protein folding, structures (Blaber)
   2. Kinase sites/ homology searches (Rizkallah)
   3. Mass spectrometry databases (Mercer)
June 26th - Computer Lab (G120)

D. Bioinformatics II -
   1. Handling genomics /transcriptomics/ published datasets (Vera, Arbeitman)
   2. BLAST /Gene Ontology (Vera, Arbeitman)
   3. Searching databases/Programming in Python (Nowakowski)

July 2nd (Thurs)

E. Presenting your research and Moving up the ladder -
   1. Elements of effective science communication – lessons from Ted talks (Meckes)
   2. How to prepare and present an effective scientific poster (Meckes)
   3. How to prepare and present an effective seminar (Meckes)
   4. Interviewing skills (Tomko)
   5. How to prepare and present an effective chalk talk (grant ideas/long term views of your research) (Tomko)
   6. Looking for jobs inside and outside academia – most valued skills (Tomko)
   7. Negotiating salaries, startup packages, space etc. (Bhide/ Yuan Wang)
   8. Networking (Bhide/ Nowakowski)

July 10th

F. Collaborative research -
   1. Mentoring undergraduate research projects (Bienkiewicz)
   2. Collaborative Research – Are you ready to be a good team member (Lee, Pinto)
   3. Collaborative Research – Are you ready to be a team leader (Ren)
   4. Time management (Levenson)
   5. Clinical research – wet lab (Diaz)

July 17th

G. Funding your research -
   1. Basics of grant funding – Office of Research, funding agencies (intramural and extramural) and types of grants (Kaplan, Bhide)
   2. What are the key elements of a fundable grant? (Kaplan, Bhide)
   3. Writing specific aims (Nowakowski)
   4. Reviewing grants (Kabbaj)

July 24th - Computer Lab (G120)

H. Teaching (including FSU online)-
   1. Effective teaching tools (Foster, Overton, Delp)
   2. Undergrads, Grad. vs medical student teaching (Foster, Overton, Delp)
   3. Personnel management
   4. Preparing online courses / Blackboard / IT resources (Taite)
July 31st
   I. Commercializing your research -
      1. Patents (Edington/ Office of Research)
      2. Technology Transfer Offices
      3. Material Transfer Agreements
      4. Can you start your own company?
      5. Patents/ research devices academic perspective (Blaber/Branko, Kumar)

August 7th - Computer Lab (G120)
   J. Publishing your research -
      1. Basics of publishing – Open Access, Copyright, Impact Factors (Hashi Wijayatilake)
      2. What journal editors screen for in manuscripts
      3. Best strategies for your paper
      4. Reviewing manuscripts
      5. Responding to critiques of your paper
      6. Figures and illustrations for publishing (Slade)
      7. Scientific literature databases – How to search them? Building your reference library and lists – Endnote (Epstein)