

Preliminary Report and Recommendations of the UF Health Graduate Education Committee

Committee Membership: Henry Baker, COM (chair), Mark Atkinson (COM), Ashley Brown (COM), Bob Burne (COD), Pat Concannon (UFGI), Yahia Daaka (COM), Todd Golde (COM), Maureen Keller-Wood (COP), Jeff Martens (COM), Lauren McIntyre (COM), Duane Mitchell (COM), Laura Ranum (COM), Dietmar Siemann (COM), Charlie Wood (COM), Ammon Peck (CVM), Wayne McCormack (COM), Mike Clare-Salzer (COM), Rob McKenna (COM), Phillip Doerfler (COM), Justin Kaspar (COM), and Kim Hawkins (COM).

Committee Charged by: David Guzick and Tom Pearson.

Committee Charge: To identify a path to enhance the bench-top graduate programs at the University of Florida Health Science Center Colleges with the goals of attracting and matriculating a world-class student body and giving them a world-class graduate education preparing them to meet societal needs now and into the future. The focus of this effort is graduate education in biomedical sciences. A separate committee will be charged with respect to graduate education in clinical as well as population research.

Meeting Dates: April 3, 2015, April 15, 2015, May 27, 2015, June 10, 2015, June 24, 2015, July 8, 2015, July 22, 2015, August 19, 2015, September 2, 2015, September 16, 2015, September 23, 2015, October 14, 2014, October 28, 2015, December 2, 2015, January 6, 2016, January 17, 2016, Retreat - February 11, 2016, February 17, 2016, March 9, 2016, and April 19, 2016.

Recommendations of the Committee

1) Structure of graduate research and graduate education in the basic biological sciences at the University of Florida Health Science Center (HSC)

The committee recommends adoption of a plan that will capitalize on areas of strength in biomedical research within the HSC and allow greater opportunities for interaction among graduate students. We believe this plan will also attract the highest quality students to the biomedical graduate programs and research teams in the HSC.

This organizational plan should take into account the following principles:

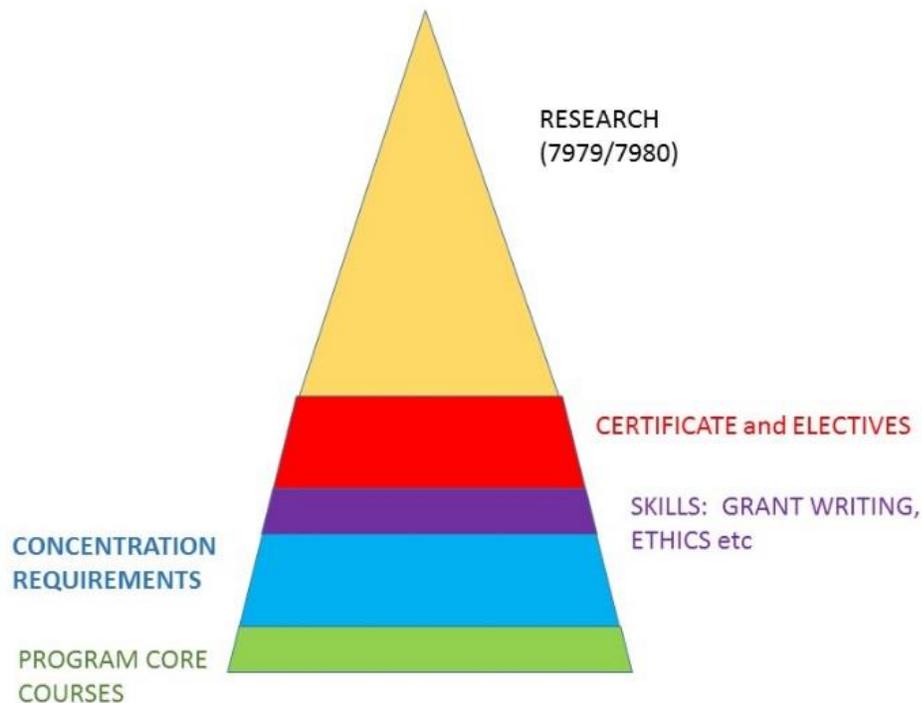
- Each College has a unique identity that draws on distinct populations of students. Basic coursework (program core courses) should be developed in each College that serves as foundational coursework for their *graduate programs* (i.e., medical, pharmaceutical, veterinary science).
- Faculty in each academic *discipline/concentration* within each program must provide high quality foundational coursework specific to that discipline (e.g., physiology, biochemistry, pharmacology, medicinal chemistry etc) to assure that the students have a depth of knowledge in science. Some of these concentration requirements may be shared across disciplines within or across colleges.
- There are fundamental *skills* that all HSC graduate students should acquire during the progress of their graduate studies. These include grant writing, scientific ethics, professionalism, and career development skills. Coursework focusing on these skills should be designed across the HSC colleges and allow students across programs to interact in acquiring these skills.
- Membership of student's *graduate supervisory committees* should include faculty that represent the interdisciplinary research interests of the student.

- Faculty in thematic areas of research should develop *Graduate Certificate Programs*. There are numerous advantages of Graduate Certificate Programs including:
 - Highlighting our educational and research strengths
 - They are recognized by the Graduate School and may be used to facilitate multi-disciplinary and cross college training programs
 - They promote multidisciplinary team based learning in areas of research excellence.
 - Highlighting areas of Research Excellence across the Health System which can be used to market the program to its full potential
 - Providing a platform for training grants where expertise coalesces around a research strength
 - Preserves discipline-based training which is critical for long-term gainful employment
 - Allows individual college programs to continue and build their unique strengths
 - Certificate programs are nimble. They can be quickly developed to respond to emerging research areas as new faculty are recruited and easily eliminated when there is no longer strength due to a research area waning or faculty attrition.
 - Gives students more choices and more options for additional specialized training which increases their ownership of their individual development plan allowing them to tailor their training, not just at the level of choosing a mentor but also education opportunities in areas of research excellence.
 - Gives faculty diverse options to create novel curriculum
- Suggested areas for development of Graduate Certificate Programs include diabetes, bioinformatics, and cancer; many others are possible and may be advanced by faculty in research centers, areas of pre-eminence, existing T32 programs (e.g., cardiorenal medicine) or emerging areas of research focus. These should be developed by faculty across disciplines and include faculty from multiple colleges. The coursework should include rigorous science and develop team science skills in the graduate students. T32s should then be developed in each of these research areas.

Proposal to Develop Certificate Programs in Areas of Strength in the Health Science Center which Are Available to All

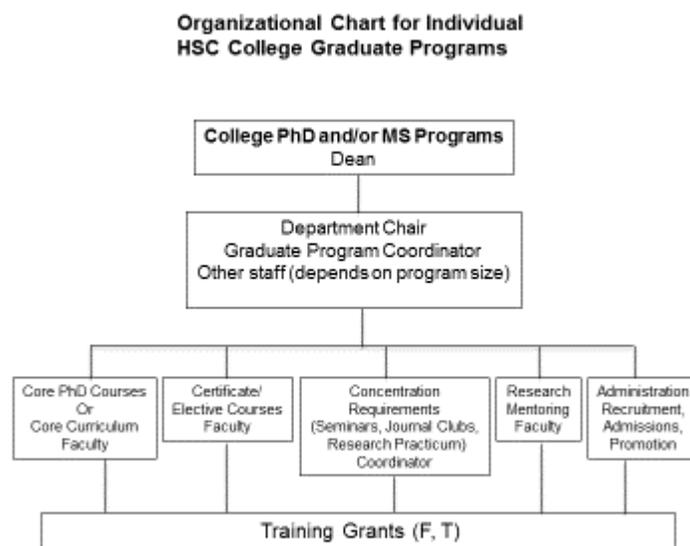


Schematic of graduate education in HSC to conceptualize the committee's view of the principles of graduate education



- Recommendation of courses that could be rapidly developed/implemented as cross- program skills courses:
 - RCR
 - Grant Writing
 - Principles of Teaching
 - Professional Skills
 - Career Development
- Other coursework which should be rapidly developed and implemented to serve broad needs across the HSC:
 - Bioinformatics (focus on analysis of “-omics” data)
 - Medical Informatics
 - Biostatistics (separate coursework for basic scientists and outcomes researchers)

- Allow students to opt out of research rotations by mutual agreement of student and mentor for students who possess considerable research experience prior to admission into one of the HSC graduate programs.
- The committee recommends that the College of Medicine and Dentistry reorganize their graduate program in favor of discipline based training programs housed in and administered by the academic basic science departments (Anatomy and Cell Biology, Biochemistry and Molecular Biology, Molecular Genetics and Microbiology, Neuroscience, Oral Biology, Pathology, Immunology and Laboratory Medicine, Neurosciences, Pharmacology and Therapeutics, and Physiology and Functional Genomics) in addition to a Cancer Concentration.
- The general organizational structure of graduate programs in the HSC should follow the structure shown below:



2) Graduate Student Recruitment

The Committee recommends strengthening of the recruiting process at both College and HSC levels. We agreed that recruiting must ultimately be done by disciplines, labs and mentors, but that a HSC-wide initiative to increase the visibility of graduate programs in the HSC is needed. This requires the hiring of someone with marketing and recruiting savvy as well as experience in use of appropriate media for a major retooling of the recruiting effort.

Recruiting should be based on these goals:

- Recruiting the highest quality students from the pool of available students regionally in FL, especially at UF, across the US, internationally, and from historically minority undergraduate programs, by building on existing mechanisms such as USP.
- Identifying UF as an ideal home for pre (and postdoctoral) interdisciplinary training in disease-based research
- Increased involvement of faculty in the admissions process, and opportunities of prospective students to interact with faculty in their interest area

To accomplish these goals, we make these recommendations:

- Creation of a HSC Office of Graduate Programs website that highlights excellence in faculty and mentorship, the graduate certificate programs, and specific research programs of excellence, including fundamental and disease-focused research.

- Innovations in recruitment:
 - Use of videos of faculty, current students and alumnae
 - Use of active social media
 - Alumni participation (especially in social media)
 - Creation of recruiting materials for use by faculty and students
 - Plans that highlight successful graduates and current students
 - Engagement of UF undergraduate students and minority students, including considering use of “boot camps” (modelled on Neurogenetics)
 - Application of positive recruiting tools used elsewhere on campus, for example Genomics/Genetics recruiting
 - Collection of data from students on why they accepted UF, what further means could be used to recruit to determine other strategies
 - Identification of mechanisms to increase yield of accepted students - for example post-acceptance outreach from faculty and students, programming of events to include accepted students, second look visits for highly qualified students
 - Align admission decisions with programs’ ability to assimilate students in to their respective programs. In practical terms departments, disciplines and training programs will have an active voice in admission decisions
 - Every effort should be made to accept highly qualified students; highly qualified applicants who have identified a potential mentor during the application process should be reviewed by said potential mentor and automatically accepted if the potential mentor can incur the obligation normally associated with supporting graduate students.
 - Flexibility in admission time, consideration of rolling admissions for highly qualified applicants

3) Organizational Structure for Graduate Education in the HSC

The Committee recommends that an Office of Graduate Programs be created within the HSC that serves to facilitate graduate activities across the HSC.

We recommend the following administrative structure to be housed within this office:

- Educational Staff: to facilitate accomplishment of the programmatic goals in education described in 1. The staff duties would include:
 - assisting in the ongoing activities of the CTSI program and the T32 programs
 - providing support related to the development of graduate certificate programs, new T32s, and any potential cross-college programs.
 - maintaining a HSC web resource for tracking degree and certificate requirements, and for tracking courses offered
 - assistance in tracking for program evaluation

- high-level coordination of career development and placement activities
- interfacing with UF Graduate School in administrative support of new certificates and courses and in assuring that courses are appropriately labelled and listed to assure faculty receive teaching effort, units receive tuition credit, and students receive credit towards graduation
- Marketing/Recruiting Staff: to accomplish the recruiting goals as described in 2. Staff duties would include:
 - Duties necessary to achieve improved and innovative recruiting (as defined in 2)
 - assistance in research summer program organization and outreach
 - assistance in philanthropy efforts related to graduate and postdoctoral training

An Advisory Council, chaired by the Executive Vice President for Research and Education and consisting of Deans, Chairs and Graduate Coordinators would meet each semester to provide input and to discuss plans for course development, course implementation, commitment of resources and scheduling as well as coordination of events and recruiting across the *programs* and *concentrations*, and to insure integration needed for the *graduate certificate programs*.

