Departmental Mentoring and Career Development Plan
DEPARTMENT OF FAMILY MEDICINE
Medical University of South Carolina

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1.   Introduction

The Department of Family Medicine seeks to recruit excellent faculty members and provide support and guidance so that individuals can have stimulating and productive careers. The goal of mentoring is to help these faculty members achieve academic success, which includes promotion and, when appropriate given the faculty member's position, tenure. The following plan delineates many of the activities of the Department that contribute to faculty members' development.

2.   Framework For Departmental Mentoring Plan

2.1   A Statement of the Family Medicine Department's Goals on Mentoring

The goal is for all faculty of the department to achieve their individual full potential as members of the College of Medicine and Medical University of South Carolina and to be rewarded for that achievement. Since the University is a place where everyone is learning, it is vital that each member of the faculty see tangible evidence of that professional growth, whether it be in the easily measured domains of writing papers for publication, writing and receiving grants, or preparing and presenting lectures for students and trainees of our colleges, or in the less easily measured aspects of teaching students, residents and fellows, mentoring young investigators and junior faculty, or developing clinical expertise by specializing in some area of clinical medicine. It is incumbent on faculty members, their mentors, the Department Chair, and the university leadership to see that tangible progress is being made and documented. This mentoring plan is designed to assist in this process.

2.2   Description of Promotion and Tenure Process Within Department

Each College at MUSC has different tracks and ranks and a process through promotion in which faculty progress is documented. The various tracks in our Department and College are listed below.

- *Tenure Tracks within the Department.*
- ACADEMIC INVESTIGATOR
- ACADEMIC INVESTIGATOR/EDUCATOR
- ACADEMIC CLINICIAN
- CLINICIAN EDUCATOR

--and the following non-tenure tracks:
- RESEARCH FACULTY
- CLINICAL FACULTY

How Department's Promotion and Tenure Committee operates:
　　　　The Department's Promotion and Tenure committee consists of full professors in the department and meets at least twice a year (but usually quarterly) to discuss the progress toward

tenure and promotion of all faculty. The Committee reviews accomplishments in the appropriate preceding period for each faculty member, and discusses their progress toward requirements for the next step in tenure or promotion. The committee may meet more often at the discretion of the Chair. The Committee is advisory to the Chair, and is responsible for updating the Chair on progress of each faculty member, but the Chair (not the committee) has the final say regarding whether the Chair makes a recommendation regarding promotion or tenure to the University committee. Any faculty member in the department may make a request for review by the committee to solicit advice and consultation on their progress, and obtain advice on what they need to meet requirements for the next step in promotion or tenure.

2.3   Documentation of Career Development

In order to achieve promotion and tenure, the professional growth of the faculty member must be documented. In addition to an up-to-date curriculum vitae in the format required by the College in which your Department resides (http://academicdepartments.musc.edu/family_medicine/faculty/), portfolios of your research, teaching, and clinical accomplishments are important to develop and keep updated as you progress through the academic ranks. To advance through the academic ranks the quality of the faculty member's individual scholarship is of critical importance, but depending on your track, more emphasis will need to be placed on a specific portfolio e.g., for academic investigators, the research portfolio is most important, whereas for a faculty member in an clinician educator track, the teaching portfolio is of primary importance. The typical components of each of these portfolios include but are not limited to the following:

Clinician Educator Portfolio

This track recognizes the clinician who carries a heavy clinical load and is actively involved both in undergraduate and graduate medical education. These faculty also may participate in research but this is not required for advancement. The clinician educator has major commitments to patient care and teaching. These faculty members are clinical scholars involved in the scholarship of integration, application, and teaching. Scholarship of integration involves interpreting published research, integrating new clinical knowledge with previous concepts and selecting outmoded clinical concepts for discard. Scholarship of application tests new knowledge in clinical practice. Combining new knowledge with experience in clinical practices, they teach medical students, residents, and peers. They may have major interest in developing more effective teaching methods. Settings for education include the classroom, ambulatory clinics and offices, continuing medical education programs, diagnostic suites, operating rooms, and the hospital bedside.

The typical components of a teaching portfolio include the following:
1. Completion of educational requirements necessary for career in academic teaching
2. Philosophy of teaching and learning
3. Teaching goals for student accomplishment
4. Teaching methods and evaluation strategies
5. Participation in course and/or curriculum development
6. Engagement in the scholarship of teaching and learning (SoTL)

7. Evidence of teaching accomplishments
    a. Description of types of different teaching activities such as formal courses, small group seminars, one-on one tutorials, supervision of student research projects, chairing thesis or doctoral committees, and coaching manuscript preparation for students, residents, and fellows
    b. Course materials (syllabi, readings, handouts, assignments, examinations)
    c. Samples of teaching innovation (simulation, educational technology)
    d. Samples of manuscripts related to teaching and or educational activities
    e. Student, resident and fellow evaluations of teaching
    f. Peer evaluations of teaching
    g. Audience evaluations of presentations at state or national meetings
    h. Membership in departmental, college, university, society, community, state, regional, national and international committees or organizations related to teaching
    i. First authored publications (papers, chapters, reviews, textbooks) related to teaching
    j. Senior authored publications (papers, chapters, reviews, textbooks) related to teaching
    k. Co- authored publications (papers, chapters, reviews, textbooks) related to teaching
    l. Grant awards related to teaching
    m. Presentations on teaching at national / international meetings
    n. Leadership roles in teaching in appropriate department, college, or university
    o. Honors and awards for teaching
8. Mentoring achievements in teaching: individuals mentored, achievements of mentees in teaching arena, and where mentees are today

Academic Clinician Portfolio

These faculty members are clinical scholars and scientists. This track is designed to recognize clinical faculty who have a strong commitment to research (basic biomedical, clinical, educational, health services). Research and teaching are of paramount importance in this track. Involvement in patient care is expected, but is not necessarily the primary obligation and should not override the faculty commitment to research and teaching. The quality of research and productivity are judged by multiple criteria, including the candidate's role in well focused, research as a participant, project initiator or leader, publication of results in peer-reviewed journals and presentation of peer-reviewed research. There should be evidence of the candidate's ability to consistently and actively participate in research protocols that receive high ratings from national funding agencies. However, evaluation must take into account the fact that funding can be subject to variables that lie beyond the scientific and scholarly merits of the investigator. The candidate's approach to clinical medicine often will lead them into one or more areas of clinical research. They share their knowledge gained from clinical practice and research by providing high quality teaching.

1. Completion of educational requirements necessary for career as an academic clinician, including certification by appropriate specialty board

2. Co-investigator on research grant awards
3. Mentoring achievements: clinicians trained, achievements of trainees, and where trainees are today
4. Membership and involvement in professional and scientific organizations
5. Contributions to department, college, university, community, state, regional, national and international levels
6. Leadership roles in clinical activities in appropriate department, college, or university.
7. Presentations of research at national / international meetings
8. Peer recognition for research activities including invitations to present at national / international meetings and other universities
9. National recognition as evidenced by election to specialty societies, editorial boards, service on national committees, NIH study sections, grant review panels of other funding agencies
10. Institutional or external research awards
11. Mentoring achievements: individuals mentored, achievements of mentees including grants received and important publications of mentees under your guidance, and where mentees are today

At times there are unique cases where faculty members' roles are not primarily in research, teaching, or clinical activities, but rather they may serve in extramural program development, as faculty development program coordinators, curriculum designers, or providers of academic support for students, as examples. In such cases the fundamental anchor for promotion and tenure is scholarship. Opportunities for scholarship exist in many areas including discovery, application, integration, and teaching such as the development of local and global initiatives, the development of online programs of study, research related to the use of educational technology, and the design and implementation of faculty development opportunities. These scholarship activities may be conducted individually or in collaboration with others. Evidence of scholarship typically includes publications in peer reviewed journals, a strong regional or national visibility related to area(s) of expertise, and evidence of funding. No matter the individual circumstance, one of the most fundamental components of seeking promotion and/or tenure is to determine at the time of faculty appointment the expectations for promotion and tenure, and have a mentor to help guide and advise in this process.

2.4 Resources Available for Faculty Development

Resources are required for optimal faculty development and may be found in the department, at the institutional level, and at the state or national level.

Departmental Resources

i. *Protected time for research or teaching –protected time for research and teaching is negotiated as part of each faculty member's contract and duties in the department. These duties are reviewed on at least an annual basis.*
ii. *Personnel support—the Department of Family medicine provides a faculty level Faculty Development leader who is responsible for the overall support and resources provided in the department. The Department also provides a dedicated individual to provide Faculty*

> *Development Support—administrative support, make available resources, coordinate the mentoring and faculty development activities, communicate the schedule, and provide and coordinate data analysis for pilot and in-house;*
>
> iii. *Research support within the Department provided by the faculty development staff coordinator;*
>
> iv. *Travel to scientific meetings, and purchase of books, journals or software—each faculty member is allotted up to $2500 annually toward work related travel and scientific materials; further support may be designated from consultation or other department related income, not to exceed $5000 annually .*

In addition to the department's resources, a detailed list of institutional and state and national resources for supporting clinical and translational research, basic science research, and education are provided in Appendix 1.

It is also important for all faculty to be aware of two important faculty groups on campus that serve important organizational, support and advocacy roles for faculty:

The Faculty Senate is the representative body of the Medical University of South Carolina faculty (http://academicdepartments.musc.edu/faculty_senate). The Senate's recommendations reflect and advocate the faculty's collective interests to further the university's mission. The mission of the MUSC Faculty Senate is to represent the views, needs, and interests of faculty in the educational, research, and service programs of the university. One of the important roles of the Faculty Senate is arranging the New Faculty Orientation Program. This is a biannual event that includes a general welcome from key leaders at MUSC and breakout sessions detailing clinical, research, and teaching resources specific to MUSC. The Faculty Senate also provides Town Hall Meetings and Workshops several times a year to update the faculty on University Initiatives, Tenure and Promotion, and other relevant topics.

MUSC Initiative for the Advancement, Recruitment, and Retention of Women (ARROW Initiative) is a joint initiative of the Office of Academic Affairs and the Office of the President with a long-term goal of promoting careers of women faculty. This organization provides a monthly workshop series (recent topics include promotion and tenure, work/life balance, contract negotiation, financial planning, and establishing good mentoring relationships). Other events sponsored by the ARROW include the annual Eminent Scholar Seminar and Award, which brings an eminent scientist to MUSC to talk about his/her work and visit with MUSC faculty members. Past Eminent Scholars include members of the National Academy of Sciences and the Howard Hughes Medical Institute. ARROW sponsors the John R. Raymond Fellowship, an annual award made to a junior faculty member to be used towards building a collaboration with a renowned expert (male or female) in her field. ARROW also sponsors a number of peer mentoring events and roundtables. ARROW events are open to all MUSC faculty. Learn more at http://academicdepartments.musc.edu/arrowinitiative/about_us/index.htm.

2.5   Hiring of New Faculty and Initial Mentoring

Successful faculty development begins during the hiring phase of a new faculty recruit. When new faculty members fail to fulfill their potential or get frustrated professionally, it can

sometimes be traced back to a failure in the hiring process, e.g., misunderstanding the demands of the position by the new recruit, not knowing about impending decisions that could impact the job, not negotiating for adequate resources to be successful, or not identifying a committed mentor.

- As such, the Family Medicine Department mentoring plans places special emphasis on the process of hiring new junior (assistant professor or lower rank) or mid-level (associate professor) faculty. Once a decision is made to hire a new faculty member, a member of the department who met and interacted well with the recruit during the initial interview and who is willing to be the <u>interim</u> mentor for the new recruit should be identified if possible. Ideally this should be a senior faculty member (not the Department Chair).

The final offer letter from the Department Chair to the new hire should include identification of the interim mentor, and the new faculty member should be urged to select a permanent mentor within the first 6 months after starting the new position.

Attendance at a new faculty orientation session should be compulsory for all new faculty within 1-3 months of arrival at MUSC. These orientation sessions are described under Faculty Senate in section 2.4 above.

2.6   Existing Faculty

All existing faculty at ranks lower than full professor should have a mentor. If an existing faculty member does not have a mentor, the faculty member and the Department Chair should meet to discuss the assignment of one. This mentor should have the same characteristics as those described above for new faculty, i.e., a senior faculty member (not the Department Chair). The interim mentor would then help the faculty member come up with a career development plan and introduce the faculty member to other potential mentors that might be part of a mentoring team.

2.7   Mentoring Plans and Agreements

The Department of Family Medicine has created a faculty mentoring plan within the department

- Faculty Development Program leader – the Department Chair has designated a senior faculty member to be the mentoring facilitator for the department. The facilitator's role is to design a faculty mentoring plan for the department based on the department's resources and needs of the faculty using this document as a framework, to implement the plan, to monitor each mentee – mentor partnership in the department and suggest solutions when problems arise, and to network with mentor facilitators in other departments and the Chair of the Mentor Leadership Council to enhance mentoring programs across campus.

- The responsibility of developing an individual mentoring plan for each faculty member will be shared by the individual faculty member, the lead mentor, and the mentoring facilitator.

- A successful mentoring plan provides guidance in several different areas including: advice in area of focus (e.g., research, teaching, clinical care); professional development, which should include an active role for the mentor in promoting the career of the mentee (e.g., suggesting role for mentee on a grant review panel or scientific writing committee, introducing the mentee to leading experts in the field, etc); monitoring the progress of the mentee; helping to ensure academic promotion of the mentee at MUSC; academic career guidance; and psychosocial support.

- The traditional model of one-on-one mentoring may not be effective for each faculty member and a team approach to mentoring may be more effective. Successful junior faculty often learn to rely on different mentors, including peers [14-15], for each of these components of the mentoring plan listed above, i.e., they use a team of mentors rather than an individual mentor. Typically this team would consist of a scholarly mentor who is an expert in the scientific or scholarly area of the mentee and a career mentor who is a senior faculty member who provides career guidance and support [16]. These different roles can sometimes be performed effectively by one mentor. Developing a mentoring team for a faculty member may take time and trial and error. The lead mentor, mentoring facilitator, and the Department Chair will have important roles in helping the mentee develop an effective mentoring team.

- Regardless of whether the mentee has a single mentor or a team of mentors, one mentor should be the lead mentor. Initially, the assigned interim mentor will be the lead mentor but this could change by mutual agreement of all parties if the faculty member identifies another willing potential mentor that might be better suited for the lead mentor role.

To ensure that each mentee – mentor relationship is an effective one and for each party to understand their commitments to that process, we recommend that a formal agreement between the mentee and each mentor should be reached that describes how they will work together and collaborate on the development of a mentoring plan.

The Department-endorsed Mentor Agreement is included in appendix 2. Meetings between the mentee and the career mentor should occur at least quarterly to review the mentee's updated curriculum vitae and Career Development Plan (CDP). The Department CDP is provided in appendix 3. The frequency of meetings between the mentee and the scholarly mentor are typically 1-2 times per quarter (but may vary) to discuss the progress of research or scholarly activities, grant and manuscript preparations, facilitating networking, provide guidance on coursework and training opportunities.

2.8 Developing, Training and Rewarding Mentors Within the Department

Mentoring should be part of each faculty member's Departmental and academic responsibilities. Mentoring is professionally stimulating and personally satisfying, and is a way of giving back to the profession. There is a continuum in mentoring from teaching and advising students and

trainees to assisting faculty colleagues with research and career development, often across college or departmental lines. These mentoring relationships are critical and are part of the fabric of an academic institution. While this document focuses on faculty development, it is important for all faculty members to mentor students and trainees.

To be eligible for promotion to professor, a faculty member has to be deemed to be appropriate as a mentor and to have demonstrated the ability to mentor and/or assist current faculty members in their career development.

2.9   Metrics of Successful Mentoring

To determine the success of each mentee – mentor relationship and the department mentoring plan, metrics need to be developed for measuring these criteria. The mentee and mentor in each relationship will be encouraged to complete a confidential evaluation report at least annually which will be reviewed by the Department Chair. The department-endorsed surveys are provided in appendix 4.

Other metrics that should be used to determine the effectiveness of the mentee – mentor relationship will depend on whether mentoring is related primarily to research, education, or clinical activities.

Research-related metrics for determining the effectiveness of mentoring
- number of grants submitted by mentee under the mentor's guidance
- number of these grants funded
- number of original publications under the mentor's guidance
- importance of original publications under the mentor's guidance (e.g., impact factor, editorial written on paper)
- career development progress of mentee while guided by the mentor, e.g., presentation of research at national / international meetings, invited presentations at meetings or other universities, election to study sections or specialty societies, promotion of mentee
- research awards of mentee under the mentor's guidance

Teaching related metrics for determining the effectiveness of mentoring
- teaching accomplishments of mentee under mentor's guidance, e.g., formal courses taught, course materials developed, innovative teaching methods developed
- number of education publications under the mentor's guidance
- importance of education publications under the mentor's guidance (e.g., impact factor, editorial written on paper)
- number of education grants submitted by mentee under the mentor's guidance
- number of these grants funded
- career development progress of mentee while guided by the mentor, e.g., presentations at national / international meetings, invited presentations at meetings or other universities, membership in education committees in or outside of the institution, promotion of mentee

- honors and awards for teaching to the mentee under the mentor's guidance

Clinical related metrics for determining the effectiveness of mentoring
- number of presentations at institutional, national, or international meetings by trainees (students, residents, and fellows) or junior clinical faculty under the mentor's guidance
- number of publications by trainees (students, residents, and fellows) or junior clinical faculty under the mentor's guidance
- innovative clinical care developed by junior faculty under mentor's guidance
- career development progress of trainees and junior clinical faculty while guided by the mentor, e.g., graduation from clinical training program of trainees and subsequent positions, invitations to junior clinical faculty to present at meetings or other universities, junior faculty participating as members in clinical committees in or outside of the institution, promotion of junior clinical faculty
- honors and awards for teaching to the junior faculty member under the mentor's guidance

Metrics to determine the overall effectiveness of the departmental mentoring plan will include:
- surveys of faculty on their satisfaction with the plan and their job overall
- attrition of faculty within the department, especially junior and mid-level faculty
- promotion of faculty within the department
- number of successful mid-career awards for trained mentors NIH (K05, K07, or K24 grants)
- number of career development awards of mentees (e.g., K23, K08, KL2)
- total funding from all mentored activities
- total number of publications overseen by mentors
- an external review of the mentoring program by a senior member of the College leadership designated by the Dean every 3-5 years.

2.10 Role of Chairs, Promotion Committees, and Deans

The Department Chair is ultimately responsible for ensuring that all faculty in the department are mentored successfully. This includes overseeing the development of a specific mentoring plan for the department and monitoring the effectiveness of the plan. The Chair should meet with each mentee at least annually to review the progress of the mentee and the effectiveness of the mentee – lead mentor relationship, and to ensure that areas of concentration facilitate the mentee's successful career development and departmental strategic plan. The Chair may also suggest and facilitate a change of mentor(s) if the relationship is not deemed beneficial for either participant.

The department's internal promotions committee should also review the mentee's career development annually, list what is missing in the faculty members portfolio for promotion, and make specific recommendations about how to achieve promotion to the Chair (or faculty member directly)

The Deans of the colleges should hold the Department Chairs accountable for ensuring that their faculty are well mentored and are being promoted, and organize periodic reviews of each department's mentoring plan.

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Appendix 1. Institutional, State and National Resources for Supporting Faculty Development at MUSC

1.   Institutional Resources

1.1   Research Support

There are a number of institutional resources that either currently or recently support clinical, translational, and basic science research. These are listed on the MUSC Research and Discovery website (http://academicdepartments.musc.edu/research/index.html). Some of these resources are described below:

- **The South Carolina Translational Research (SCTR) Institute.** The recently NIH funded MUSC Clinical Translational Science Award (CTSA) that is called the South Carolina Translational Research (SCTR) Institute (http://academicdepartments.musc.edu/sctr/) provides research support to investigators across campus. Within SCTR is the **SUCCESS Center** which provides research navigation support such as collaborator and mentor matching and links to institutional cores and programs. Additionally, the SUCCESS center (http://academicdepartments.musc.edu/sctr/programs/success_center/index.htm) provides consultation for regulatory submissions and study subject recruitment, lists studies on clinical trials registry, and helps with grant budget development. At SCTR there is a toolkit that can help the most inexperienced investigator navigate the process required to get clinical trials underway and much more. MAP-R is a web portal that identifies approvals needed for all types of grant submissions Visit https://sctrweb2.musc.edu/research_toolkit to find a wealth of information and pertinent advice about research at MUSC.

- **Funding Opportunities** are available through the KL2 and Pilot Project Program of SCTR and the University Research Council. http://academicdepartments.musc.edu/sctr/education_training/kl2/index.htm http://academicdepartments.musc.edu/sctr/programs/pilot_projects
http://academicdepartments.musc.edu/urc/

- **SCTR Vouchers** can be requested for up to $1,000 for research services and supplies per approved protocol every six months. Investigators are limited to two active vouchers in any one six month period as long as they are for two different protocols. For more information please visit http://academicdepartments.musc.edu/sctr/funding_opportunities/vouchers.

    If you think that applying for a SCTR Voucher could be beneficial to your research study, please visit http://academicdepartments.musc.edu/sctr/ and fill out a Service Request Form. The SUCCESS Center staff reviews all voucher requests and a decision of award is made within two business days of application.

- **The Office of Research Development (ORD)**
  (http://academicdepartments.musc.edu/research/ord/index.html), which is funded through the Vice President for Academic Affairs & Provost's Office, focuses on program and proposal development, identifies funding opportunities, develops proposal concepts, networks faculty members with complementary interests, provides grant-writing consultation and workshops, offers pre-submission critiques, compiles institutional data, and prepares competitive proposals for research resources and research training. New faculty and trainees are encouraged to visit the office in 101 Basic Science Bldg to meet the ORD staff and learn about networking opportunities. The following are among the services offered by the Office of Research Development:

  Research Project Grant (RPG) Retreats are held approximately 3 times / yr. These interactive half-day sessions give individual investigators the opportunity to gain constructive criticism on a specific research concept or proposal. Researchers at any phase of career development are encouraged to present or attend.

  ORD Alerts mailing list is a service for MUSC faculty and trainees to receive research news and funding opportunities by email (http://www.carc.musc.edu/ordalerts/).

  Community of Science (COS) is an external web-based system, offered as an institutional subscription service, that provides a range of services including searchable databases for funding opportunities and expertise, as well as a personalized workbench from which to access and manage COS services.

  Institutional "Boilerplate" is a compilation of information about MUSC, its components and programs, primarily used to assist MUSC faculty, staff, and trainees in preparing institutional resources and environment sections for research grant and contract proposals.

  Grantsmanship Workshops are held twice per year. Led by an external consultant, the workshop content focuses on the NIH organization, peer review system, grantsmanship tips, and the ABCs of an R01 or other NIH grant application. Individual and team consultations are also offered. The workshops and consultation opportunities are an institutional research support service, provided at no charge to investigators or programs.

  MyPeerReview is an internal, on-line searchable database of information about MUSC faculty service on review panels and study sections for the NIH and other federal and non-federal sponsors, as well as journals for which MUSC faculty members have served or currently serve as an ad hoc reviewer, member, editorial board, etc.

- **Grant Writing Help** is provided by: i. The Office of Scientific Editing and Publications (OSEP) which provides support to augment manuscript and grant writing skills for MUSC faculty, trainees, and staff http://academicdepartments.musc.edu/esl/writingcenter/serv_offrd.html, and ii. through the SUCCESS center http://academicdepartments.musc.edu/sctr/programs/success_center/index.htm.

- **Grant Administrative Support**. The Office of Research and Sponsored Programs (ORSP) and Office of Grants and Contracts Accounting (OGCA) provide the fundamental support need to obtain and manage sponsor-supported research funding. In addition to individual support, their websites provide important information regarding basic information needed for submission, and management of grants and contracts.
  - Office of Research and Sponsored Programs (http://academicdepartments.musc.edu/research/orsp/index.html)
  - Office of Grants and Contracts Accounting (http://academicdepartments.musc.edu/vpfa/finance/gca/index.htm)

Some Specific Resources for Clinical and Translational Research:

- **Clinical & Translational Research Center (CTRC)** http://academicdepartments.musc.edu/sctr/programs/. The primary purpose of the CTRC is to support clinical and translational research projects within the institution and SCTR affiliate members as well as pilot studies that may lead to future NIH or other sources of peer-reviewed clinical/translational research grant support. The specialized staff of the CTRC consist of research nurses, laboratory personnel, nutritionists, IT specialists, and professional/administrative personnel. A core laboratory, fully-equipped outpatient clinic, dental suite, and imaging suite comprise the highly-technical physical facilities that are on hand to support your research.

- **Biostatistics Consultation** through the SCTR Biostatistics & Epidemiology Program. Services offered are:
  - Biostatistical Education: Consultation and assistance in understanding one or more biostatistical concepts
  - Methodology/Study Design: Guidance with selecting an appropriate study design or developing a statistical analysis plan
  - Power Analysis / Sample Size Calculation: Assistance with determining the statistical power or sample size required for a proposed study
  - Data Analysis: Assistance with analyzing data collected for a research study
  - Other: (e.g. help with presentations, manuscripts, etc.)

  These services are offered for several different settings:
  Assistance Preparing Grants (Federal, Foundation, Other)
  Assistance Preparing CTRC Protocols
  Assistance with Current CTRC Funded Project
  Unfunded Research Project (e.g. Abstract/Manuscript Preparation)

  Links to these services are
  http://academicdepartments.musc.edu/sctr/programs/biostatistics.html and
  https://sctrweb2.musc.edu/research_toolkit/preaward/grantproposal/statistic

- **Master of Science in Clinical Research Program (MSCR)** http://academicdepartments.musc.edu/mscr_domestic/ degree is offered by MUSC. This

program teaches core competencies in clinical research methods, fosters development of a sustainable research focus, and provides the participant with the skills to compete for extramural support.

- **Society of Clinical Research and Translational Early Scientists (SOCRATES)** http://academicdepartments.musc.edu/sctr/education_training/socrates provides a forum for junior faculty to present their research projects in front of peers, senior researchers and statisticians, foster collaboration across multiple subspecialties at MUSC, and trouble shoot about ways to improve mentoring across campus.

Some Specific Resources for Basic Science Research:

- **Research Support** (http://academicdepartments.musc.edu/research/resources/)
    - Shared Core Facilities. A number of core facilities are available to support basic research (see information of each of these facilities in Research Shared Facilities on this website). In addition, an annual EXPOsition of these facilities that enables meetings with core personnel occurs in the Fall each year.
    - College of Graduate Studies (CGS) Office of Postdoctoral Affairs. In addition to providing useful information regarding practical aspects of hiring and mentoring postdoctoral scientists, the office also offers services to enable recruitment of postdoctoral scientists.

- **Responsible Conduct of Research (RCR).**
    - CGS RCR Retreat resources. All MUSC postdocs participate in a mandatory 2-day retreat focused on career development, conflict resolution, and compliance issues related to the responsible research practices. All lectures and handouts are available on the CGS website.(https://mainweb-v.musc.edu/grad/postdoc/rcr.html)
    - The HHS Office of Research Integrity website has a wealth of educational resources on RCR practices with case scenarios, videos and tutorials for all stages of research professionals (http://ori.dhhs.gov)

- **Personnel/Trainees Relationships**
    - College of Graduate Studies (http://academicdepartments.musc.edu/grad/)
        - Graduate Faculty Resources – application for appointment to graduate faculty and conflict of interest forms.
        - Mentoring Compact – AAMC recommendations for mentoring graduate students and postdocs (https://www.aamc.org/initiatives/research/postdoccompact/).
        - Graduate Council Minutes – record of monthly meetings and policy discussions.
        - Graduate Faculty Research – web-based database of faculty research interests to aid students looking for potential mentors.

- - Training Grants – listing of MUSC training grants and career development programs for graduate students and postdocs.
    - Student Handbook – specifics of graduate programs, resources, dissertation requirement, and CGS policies.
    - Summer Research Programs for Undergraduates and Health Professional Students. These programs provide students the opportunity of a 10-week long internship with MUSC faculty. (http://academicdepartments.musc.edu/grad/summer_research_program/)
  - Howard Hughes Medical Institute
    - "Lab Management: Making the Right Moves" is an essential resource for postdocs and faculty, available free on-line. (http://www.hhmi.org/educational-materials/labmanagement/moves.html).
  - Human Resources Career Development Courses and Seminars. MUSC HR provides a variety of professional development workshops and seminars to facilitate more effective lab management and hiring practices. (http://academicdepartments.musc.edu/hr/university/emp_corner/training/index.htm)
  - International Scientific Presenters Toastmasters. This club provides a supportive environment for learning how to give effective scientific presentations, and benefit from constructive feedback of peers and faculty sponsors. (http://musc.toastmastersclubs.org/)

- **Networking Opportunities**
  - Research INKlings (http://academicdepartments.musc.edu/research/ord/researchnews/). INKlings is a monthly on-line news letter of recent events of interest to MUSC researchers.
  - SACNAS promotes a diverse research academy by providing workshops and networking opportunities that encourage Chicano/Hispanic and Native American students and postdocs to pursue and persist in STEM fields. This is also an excellent recruitment resource. (http://sacnas.org/)
  - ABRCMS is an annual conference that brings underrepresented minority students and postdocs together to present their research in an environment that encourages their development into future STEM faculty. This is also an excellent recruitment venue. (http://www.abrcms.org/index.php/abrcms)
  - http://www.minoritypostdoc.org/ hosts a variety of career development resources for postdocs, including job listings and articles, with an emphasis on minority scholars.

1.2   Resources for Education

i.   1.2.1. Types of Educational Technology

a. Tegrity - Tegrity is a lecture capture service that lets faculty automatically capture every class – on and off campus – for later review by every student, anytime, anywhere. http://tegrity.musc.edu

b. Adobe Connect - Adobe Connect is a Web conferencing software that securely shares presentations and multimedia right from a desktop computer, supporting feedback from hundreds of participants — all using a web browser and the Adobe

Flash® Player runtime.   http://connect.musc.edu

c. Moodle - Moodle is MUSC's current Learning Management System. A Learning Management System is a software package that enables the management and delivery of learning content and resources to students. http://muscce.mrooms3.net/login/index.php

1.2.2   **Education Technology Services (ETS)** Provides support in the areas of digital imaging, audio visual support in centrally scheduled classrooms and distance education technologies, and video production.

1.2.3.   **Apple Tree Society** - The Apple Tree Society exists to foster dialogue and activity related to the scholarship of health professions teaching through campus and national partnerships. http://academicdepartments.musc.edu/appletree/

The following are the goals of the Society:
- Expand the faculty development opportunities related to teaching and learning on campus and beyond.
- Initiate programs that recognize and enhance the value of the scholarship of teaching and learning.
- Explore and support innovative methods and technologies for teaching and learning.
- Promote professional development of current and future educators across all colleges.
- Foster networking opportunities and conversations about teaching, learning, and educational technology.

Activities of the Society include:
- Monthly Brown Bags – noontime sessions on topics related to the
- Scholarship of teaching
- Workshops focused on development of teaching skills including lecture and presentation skills, case based discussions, evaluating learners, and using technology such as Moodle (see below)
- Collegiality – informal meetings to discuss teaching and learning

1.2.4.   **Copyright Toolkit** - Understanding and complying with the laws governing the use of copyrighted materials is daunting. The information on this site is directed at teaching faculty, students, scientific writers, researchers, and others at MUSC who use copyrighted works. It includes Copyright @ MUSC: Policies, Forms, & Resources, forms, and information about Coursepacks, Plagiarism and How to Cite Sources, releases, Images and text, and print and digital/online resources. Many of the links lead to the excellent copyright Websites of other universities. http://copyright.library.musc.edu/page.php?id=1314

1.2.5.   **Creating Collaborative Care/Interprofessional Education** - Creating Collaborative Care (C3) is a Quality Enhancement Plan (QEP) for the Medical University of South Carolina that focuses on inter-professional education. http://academicdepartments.musc.edu/c3/

1.2.6. Faculty teaching awards (College and University) - In recognition of faculty accomplishments the individual colleges, as well as the university, present annual awards in teaching, research, and service. These awards are very competitive underscoring the excellence of the faculty with respect to their achievements. The awards are sponsored by various groups. The university annual awards include:
- Developing Scholar Awards
- Outstanding Clinician Awards
- Teaching Excellence Awards (Developing Teacher, Educator-Lecturer, Educator-Mentor)
- Distinguished Faculty Service Awards

1.2.7. Library resources - http://www.library.musc.edu/
a. Computer labs – 4 computer labs are available for use by faculty for their classes. The labs host an average of 25 iMac computers that support the use of both Windows and Macintosh operating systems
b. Learning Commons – An initiative of the MUSC library currently under development designed to provide spaces for study and socialization and access to the latest technologies for teaching and learning.
c. Center for Academic and Research Computing – Works with faculty and staff across the campus to design, develop and support interactive instructional programs.
d. Journals The library currently provides access to approximately 17,498 e-journals and 34 current print-only subscriptions http://muscls.musc.edu/

1.2.8. Center for Academic Excellence - The CAE is dedicated to improving learning and teaching on campus. Health care providers must learn and re-learn in order to adapt their practices to the latest advances in biomedical science. They also must collaborate with colleagues across professions to provide quality care and conduct groundbreaking research. That's why the CAE provides collaborative learning groups; and the effectiveness of these groups is why a majority of MUSC students choose to participate—in addition to their scheduled class time. Another vital part of the work of the CAE is teaching the material and the strategies necessary for success on national and state licensing board/certifying exams. Under the tutelage of CAE faculty and their fellow students, students approach these rigorous exams with confidence and exceed national performance averages. http://academicdepartments.musc.edu/esl/cae/

1.2.9. The Writing Center - The Writing Center faculty members teach students to communicate effectively with their professors, their fellow students, and their patients. http://academicdepartments.musc.edu/esl/writingcenter/

1.2.10. Enrollment Management - Enrollment Management oversees student admissions, records and financial aid. http://academicdepartments.musc.edu/esl/em/

2.   State or National Resources

2.1. Funding Agencies

By going to the MUSC Research and Discovery website (http://academicdepartments.musc.edu/research/resources/) and clicking on Funding Opportunities under the Office of Research Development, information on the following opportunities is available:

- Funding alerts
- Federal and state funding opportunities
- Sponsor opportunities (Corporate and Foundations)
- New Investigator Funding Opportunities (http://academicdepartments.musc.edu/research/ord/fundingops/internal_op_ps.html)
- Postdoctoral Funding Opportunities
- Limited Submissions Competitions Opportunities

2.2. Associations

- **Association of American Medical Colleges (AAMC)**. The AAMC represents all 133 accredited U.S. medical schools; approximately 400 major teaching hospitals and health systems, including 68 Department of Veterans Affairs medical centers; and nearly 90 academic and scientific societies. Through these institutions and organizations, the AAMC represents 125,000 faculty members, 75,000 medical students, and 106,000 resident physicians. Through its many programs and services, the AAMC strengthens the world's most advanced medical care by supporting the entire spectrum of education, research, and patient care activities conducted by member institutions. http://www.aamc.org/

- **Association of Women in Science (AWIS)** is a national advocacy organization championing the interests of women in science across all disciplines and employment sectors. By breaking down barriers and creating opportunities, AWIS strives to ensure that women in these fields can achieve their full potential. http://www.awis.org/

- **National Postdoctoral Association**. The NPA provides many resources useful for enriching the research environment, managing a research lab, and expectations of mentors and trainees. MUSC is an affiliate institution which provides membership to all faculty, postdocs, and students. http://www.nationalpostdoc.org/

MENTORING PARTNERSHIP AGREEMENT
DEPARTMENT OF FAMILY

We have agreed on the following goals and objectives as the focus of this mentoring relationship:

       -to develop a dynamic reciprocal relationship fostering professional growth
       -to work towards the development of a career development plan
       -to introduce the Mentee to best practices in academic medicine

We have discussed the process by which we will work together, develop, and, in that same spirit of partnership, collaborate on the development of a work plan. In order to ensure that our relationship is a mutually rewarding and satisfying experience for both of us, we agree to:

1. Meet regularly. Our specific schedule of contact and meetings, including additional meetings, is as follows:

2. We agree to look for multiple opportunities and experiences to enhance learning.
We have identified, and will commit to, the following specific opportunities for learning:

3. Maintain confidentiality of our relationship.
Confidentiality for us means that

4. Honor the ground rules we have developed for the relationship.
Our ground rules will be:

5. Provide regular feedback to each other and evaluate progress. We will accomplish this by:

_____   _____

Mentor's Signature and Date   Mentee's Signature and Date

Source: Adapted from *The Mentor's Guide* by Lois J. Zachary. 2000 © by Jossey-Bass, San Francisco, CA.

CAREER DEVELOPMENT PLAN (CDP)
DEPARTMENT OF FAMILY MEDICINE
(Prepared by Mentee)

Instructions to Mentees:
Please complete this form at least every 6 months and give a copy to your career mentor before your mentoring session. Attach an updated CV in the recommended format

This form also should be included in the packet provided to the Chair each year before your contract negotiation.

Instructions to Mentors:
Please review the mentee's CV and this CDP prior to meeting your mentee.

Date:

Mentor Name:

Mentee Name:

Overall self-assessment

How are you progressing in your career development? Are you where you think you should be/would like to be? Why or why not? What are the helpful factors that have assisted you to this point? What are the barriers you have encountered?

Academic Appointment

Do you understand the expectations for your career advancement and promotion within the University?   ___Yes   ___No

If no, provide questions you have about career advancement and promotion at the University:

Current Professional Responsibilities

List your major professional responsibilities and if you anticipate significant changes in the coming year:

Future Professional Goals

Short Term Goals

Initial visit: List your professional goals for the coming year.
Indicate how you will assess if the goal was accomplished (expected outcome)
Follow up visit: assess your progress for each goal to this point.

1. Goal:

Expected outcome:

2. Goal:

Expected outcome:

3. Goal:

Expected Outcome

Long Term Goals

List your professional goals for the next 3 to 5 years. Have these goals changed since we last met, and if so, in what way? What has prompted the change?

Indicate each goal, old, new, or revised, and how you will assess if the goals are accomplished.

1. Goal:

Expected outcome:

2. Goal:

Expected outcome:

3. Goal:

Expected Outcome:

Time allocation as estimated by Mentee:

_____% Teaching/training/providing mentoring
_____% Research
_____% Patient Care
_____% Administration
_____% Other Creative Professional Activity

How (if at all) would you like to change this time distribution and how could you justify that change?

Are you satisfied with your personal-professional balance? If not—what are your plans for modifying how you spend your time

Adapted from UCSF Faculty Mentoring Program

Appendix 4. Mentor/Mentee relationship evaluation.

Part 1. TO BE COMPLETED BY MENTEE.

Mentee: _____

Mentor: _____

ITEM	Excellent	Fair		Poor	
1. The mentor is available on a regular basis and approachable.	1	2	3	4	5
2. The mentor helps define goals	1	2	3	4	5
3. The mentor has respect for the mentee	1	2	3	4	5
4. The mentee has respect for the mentor	1	2	3	4	5
5. The mentor is an appropriate role model for the mentee	1	2	3	4	5
6. The mentor has a good understanding of the challenges presented to the mentee.	1	2	3	4	5
7. The mentor has been helpful in guiding the mentee through the challenges presented	1	2	3	4	5
8. The mentor provides both support and constructive criticism of the mentee.	1	2	3	4	5
9. The mentee Maintains a portfolio of publications, lectures, clinical development, faculty/university service for periodic review with mentor(s) and annual review with Chair	1	2	3	4	5

Appendix 4. Mentor/Mentee relationship evaluation.

Part 2. TO BE FILLED OUT BY MENTOR.

Mentee: _____

Mentor: _____ **Check box if you are lead mentor [   ]**

ITEM	Excellent		Fair		Poor
1. The mentee is available on a regular basis and approachable.	1	2	3	4	5
2. The mentee has developed a reasonable set of goals	1	2	3	4	5
3. The mentor has respect for the mentee	1	2	3	4	5
4. The mentee has respect for the mentor	1	2	3	4	5
5. The mentee exhibits understanding of the requirments, policies, and procedures for promotion and tenure	1	2	3	4	5
6. The mentee has a good understanding of the challenges presented to the mentee.	1	2	3	4	5
7. The mentee has developed established relationship(s) with a mentor(s) in the areas of teaching, research, clinical service, and faculty development	1	2	3	4	5
8. The mentee takes criticism/suggestions from the mentor and reacts appropriately	1	2	3	4	5