The Mentored Scholarly Activity – Scholarship for Life-Long Learning

The School of Medicine’s curriculum includes a four year longitudinal course requirement for all students to pursue and complete a mentored scholarly project. The MSA project culminates with a cap-stone presentation prior to graduation. The MSA project is aimed at fostering self-directed, life-long learning. Students will do an in-depth scholarly project in an academic area of interest related to medicine or health care with the mentorship of a faculty member. MSA requirements can also be satisfied through the successful completion of the MSTP program or the School of Medicine Research Track.

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Goals:
- Encourage curiosity, innovation, and creativity and their translation into scholarly activity
- Prepare physicians for a life of self-directed learning
- Stimulate the learning of new methods of research and scholarship
- Develop analytical thinking and problem-solving skills
- Experience effective mentoring and learn to mentor others
- Integrate scholarship with clinical care
Learning Objectives:
- Progress through the phases meeting course expectations and deadlines
- Display independence and collaboration
- Formulate a specific hypothesis or question
- Work effectively with a mentor
- Critically review and analyze the literature on an important scholarly topic
- Develop an effective plan to complete a scholarly project
- Prepare a scholarly project with appropriate methods
- Log progress and reflect on the MSA project on your MSA plan form.
- Complete an acceptable paper and capstone presentation of the scholarly project

Thematic Areas: To best support students, we have defined five thematic areas of scholarship.
- **Basic Science** – Fundamental scientific discovery through laboratory research
- **Clinical Science** – Patient centered research - clinical investigation and trials, translational research, behavioral research, and drug development.
- **Epidemiology, Public & Community Health** – populations as patients, international health, rural health, occupational and environmental health, infectious diseases, chronic diseases, health services research and health policy.
- **Global Health** - Understanding and applying public health and clinical decision making in low resource settings with vulnerable populations. (Please note special requirements for travel abroad).
- **Humanities, Social Sciences & Education** – the human side of medicine including ethics, law, medical anthropology and sociology, psychology, literature, art, history, education.

These thematic areas are not meant to be restrictive in any way; for example, an appropriate project might bridge two or more thematic areas, or might not clearly fall under any of the thematic areas.

**Benchmarks**

IDPT 5091 Requirements and Timeline: All students must complete the following requirements by the end of the course:

Note: All submissions will be electronic
- Attend the IDPT 5091 Introductory Course location date and time TBD.
- Meet with your mentor at least bi-weekly
- Submit summer MSA Plan Form and have mentor send email confirming plan (this can be done by e-mail from the mentor) by June 7.
- Submit Abstract of your work by July 22, per instructions in Appendix B
- Present current status of project and participate in Work in Progress sessions in July Date and time TBD per instructions in Appendix C
- Submit updated MSA Comprehensive Plan Form send email confirming plan (This can be done by e-mail from the mentor) by July 26.
• Annotated bibliography (20 references minimum) by July 26.
• COMIRB certification and approval notice (if your project requires COMIRB approval)
• Students will be required to complete online evaluations and meet with the course directors as necessary to provide feedback.

Library Resources
The librarians will be involved with students during the summer elective.
They can help MSA students with:
• Problem identification and focus (as far as helping with preliminary searching to identify whether a topic has been covered previously in the literature)
• Question formulations (asking answerable questions)
• Translating the question into a search strategy
• Identifying resources for literature review
• Organizing and managing citations and article reprints or other resources
• Accessing software for various research needs (such as SAS/SPSS) and referral to training resources
• Understanding manuscript style requirements
• Identifying opportunities for publishing or sharing research

Helpful information is available at:  http://hslibraryguides.ucdenver.edu/msa
• The easiest way to get to it is to go to the University webpage and search mentored activity. The library page should show up in the middle of the results list. Some sections of immediate interest: Finding a Mentor, Online Tutorials, recommended books (reference resources on how to do research), information on software resources for the research process, statistical resources, EndNote and information on MyNCBI for organizing references, and other advice for organizing and Electronic Reprint File.
• Please email Lynne.Fox@ucdenver.edu for suggestions for improvement.

To make an appointment with the librarian:
• Students should identify themselves as working on the MSA project when contacting the library.

Basic Research – Bench Research
Lynne Fox  Lynne.Fox@ucdenver.edu  303-724-2121

Clinical Research – From Bench to Bedside
John D Jones Jr. John.Jones@ucdenver.edu  303-724-2117

Global Health
John D Jones Jr. John.Jones@ucdenver.edu  303-724-2117

Public Health & Epidemiology
Ben Harnke  ben.harnke@ucdenver.edu  303-724-2146

Arts & Humanities, Bioethics, Law, Education & Social Sciences
Lilian Hoffecker  Lilian.Hoffecker@ucdenver.edu  303-724-2121
Statistical Resources:

The MSA Program has contracted with the Colorado School of Public Health Research Consulting Laboratory to provide statistical services to students working on their MSA projects. The Research Consulting Laboratory (Biostats Lab) can help with project design, statistical analysis and result interpretation. This service is provided at no additional cost to MSA students – please be sure to identify yourself as an MSA student.

To make an appointment:

rcl@ucdenver.edu  303-724-4619

Children’s Hospital – Administration Pavilion Room C4149, on the south side of the 4th floor, facing the light well

Or

University of Colorado building 4063 NW corner of campus 12477 E 19th Avenue room 102, south side of first floor, west wing.

Attendance: Sessions at which attendance is required will be so designated in Blackboard or communicated via e-mail to your UCDenver e-mail account. Otherwise you will be expected to organize your own schedule, with guidance from your Associate Director and mentor. See Appendix A for schedule.

Please refer to Phase I Essentials Core General Information for full description of requirements.

- Failure to attend a required session will be considered a Professionalism issue:
  - 1st unexcused absence in a Phase – the Assistant Dean, Essentials Core Curriculum (Dr. Michaels) will contact the student, the situation will be discussed, and the student will be warned that a second infraction will result in filing a Professionalism Feedback Form.
  - 2nd or subsequent unexcused absence in a Phase – the student will meet with Dr. Michaels, who will file a Professionalism Feedback Form.
  - At any time during a Phase, if a second Professionalism Feedback Form is filed owing to a student’s unexcused absence at a required session, the student’s case will be referred to the Professionalism committee.

Having a negative impact on the small group learning environment, including arriving late for a session will be treated as a separate Professionalism issue.

Course Evaluations: Students will be required to complete online evaluations. Class representatives and class officers will meet with the course directors as necessary to provide feedback.

How will students be graded in the Mentored Scholarly Activity Course?
For full description of grading policy, please refer to the Phase I Essentials Core General Information.
The MSA is a Pass/Fail course. There are two major components to a student’s grade in the MSA course. 1) Each student will receive a grade (Pass/Fail) at the end of each semester based on their progress through the course requirements. 2) During Phase I Fall the requirement is to evaluate the research posters in the Research Forum. (Students are encouraged to present their project, but it is not a requirement to present.) 3) During Phase I Spring the requirement is to complete the Plan Form (online) by April 15th. If you do not complete the requirements for the two semesters in Phase I you will not be able to register for Phase II. Refer to Appendix A for schedule.

Grade Definitions:

Pass (P)
A student who completes the requirement for Phase I will receive a Pass (P). A student who does not complete the requirement will receive a Fail (F) and a recommendation will be made by the block directors to offer the student one chance at remediation (please see details under “Fail and Pass with Remediation”).

Fail (F) and Pass with Remediation (PR)
At the end of a block a student whose does a not complete mandatory requirement will be given a grade of Fail (F). The Block Directors will notify the Associate Dean for Student Affairs and recommend that a student with a final grade of F be offered one chance at remediation. The Associate Dean of Student Affairs will notify the Student Promotions Committee, which makes the final recommendation. Block directors, in consultation with the Student Promotions Committee, will define the process for remediation with the student, referred to as the remediation plan (comprehensive exam, shelf exam, unit exams, etc.). Unless otherwise noted by the block directors, if the student completes the requirements on the remediation plan, the Fail (F) will be deleted from the transcript and replaced by a Pass with Remediation (PR), indicating the student has successfully passed the block following remediation. If the student does not complete the remediation plan, the Fail (F) will remain on the transcript, indicating the student has failed the block, and the Block Directors will recommend to the Associate Dean for Student Affairs that the student be referred to the Student Promotions Committee.

In Progress (IP)
A student who is unable to complete the requirements for a Block because of illness or other extenuating circumstance and who is in good academic standing in the Block at the time that grades are awarded (as defined by the block directors) will receive an In Progress (IP). When the student has completed the Block requirements, the In Progress (IP) is deleted from the transcript and is replaced by a grade of Honors (H), Pass (P), or Fail (F), whichever is appropriate. If the final block grade is a Fail (F), a recommendation will be made by the block directors to offer the student one chance at remediation (please see details under “Fail and Pass with Remediation”).

Withdrawal (W)
A grade of Withdrawal (W) is given to a student who withdraws from a required course; a student may only withdraw from a required course with the permission of the Associate Dean of Student Affairs.
APPENDIX A: Sample (for complete Plan form go to MSA website)

Mentored Scholarship Plan Form

Student Name: _______________________ Date: _______

Student Contact info
  Email:________
  Phone:________

Class: _____________

MSA Content Area: ___________________________

Associate Director: ___________________________

Faculty Mentor(s):

Faculty Mentor’s Department

Faculty Mentor’s Contact info
  Email:________
  Phone:________

Are you a member of a track or program? (Global Health, Rural, Leadership/Advocacy (LEADS), etc.): ________________ No:_____________________

Track: ________________ Track Mentor:_____________________

If you do not have a firm plan, select a topic of interest and complete the required sections of this form as if that topic is the one you have chosen.

1) Scholarship Area (required all Phases):

2) Project Title (required all Phases):

3) COMIRB #:___________________

4) Project Aims What do you hope to accomplish, demonstrate, and improve? What are the overarching aims? What is the ultimate product of your work?

5) Background/Rationale Why is this important? How did I become interested in this? How will this advance the field, my professional development, improve patient care, etc?

6) Resources/Equipment What steps of the project have already been devised and/or piloted? What data sources are already available? What other resources do you have access to which are appropriate to complete the project?
7) **Organization - Steps & Timeline** For each element below, document where and when each step will be begun and then completed. Describe how many hours per week you intend to devote to each component and when you plan to spend those hours.

   a. Literature review –

   b. IRB – If your project requires COMIRB or IACUC approval, when will you accomplish that?
      i. COMIRB or IACUC # ________________
      ii. COMIRB or IACUC Title

   c. Data collection (Or primary work of the scholarship if data gathering is not a part of the project)

   d. Preparation of final scholarship product (What will you produce and when?)

   e. Submission of final product for pre-approval (Recommended to submit by November 1st, required to be submitted by Dec 15th of Phase IV)

   f. Final product submission (Recommended to submit by Dec. 15, required to submit by Feb. 1 of Phase IV)

   g. If you have published or presented a paper or abstract from your work, please reference it here.

8) **Methods** Which techniques or approaches will be used to accomplish your project aims?

9) **References (required all Phases):** Document a literature search plan and list references (minimum of 20) that are critical for the development of your project.

   Highly recommended: meet with a librarian, develop a thorough plan for a literature review, and complete a significant portion of the review.

I have met with ________________ and reviewed this plan. I have agreed to be the mentor for the project outlined above. I believe this student can complete this project prior to graduation.

Signature ___________________ Date ___________________
APPENDIX B: Instructions for Abstract Submission

Instructions for Abstract Submission
Abstracts Due: July 22, 2013

Type abstract in the 7” X 4 ¾” box on electronic form in Blackboard. The size of type should be no smaller than 10 point. Simple graphs and tables may be included if they fit within the box.

TITLES AND AUTHORS
The title should be brief, clearly indicating the nature of the study. Do not use abbreviations in the abstract title. CAPITALIZE ENTIRE TITLE. State all authors’ initials and last names, (presenting author first), including the name of the faculty sponsor of the research, other major contributors, and the Department or Institution in which the work was done. Underline presenting author only. After presenting author’s name, state degree sought and School or Program. i.e. for Alicia C. Brown, Ph.D. candidate in the Graduate School, AC Brown, (Ph.D., GS).

BODY
Organize the body of the abstract to include a purpose of study, methods used, *summary of results, and conclusions reached. Do not skip a line between the title and body of the abstract. Indent the first line of text at least three spaces. *(Note progress to date, issues encountered and implications of those issues in the abstract in cases where results are not yet available).

ABBREVIATIONS
Abbreviations should conform to the Style Manual for Biological Journals (American Institute for Biological Sciences, 3900 Wisconsin Ave., Washington, DC, 20016). Place nonstandard abbreviations in parentheses after the full word the first time it appears.

Abstract Deadline is July 22. Please submit the completed abstract to the Digital Dropbox in Blackboard using the electronic form provided on Blackboard.

Proper Form

ARRHYTHMIAS OF THE HEART: MECHANISIM(S). AC Brown, (Ph.D., GS), JB Green, and RT White, Department of Medicine, University of Colorado, Denver, CO.

Digitalis, potassium (K+), and nicotine induce automaticity and propagation block. The initial event is enhanced conduction........
APPENDIX C:

For your WIP sessions, prepare a short PowerPoint presentation that should be about 10 minutes long. Here are some helpful tips:

1. What do you want to do? This will include your main Idea or Hypothesis and who your mentor is.
2. Why do you want to do it? Indicate the important significance. In other words, if your project works, what will you have learned and what impact will it have on that research field?
3. What have you done? This should include what progress you have made to date.
4. What’s next? This should include your future plans to complete the project. What more will you do and when will you do it?