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. For more detailed information on the MSA and resources, please refer to the MSA Website.

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For questions related to the MSA:
You are welcome to contact any of the Associate Directors directly, or email the MSA coordinator or contact SOM.MSA@ucdenver.edu. At least one of us will be available before and after lectures to talk to you, but you can also set up a time to meet with us individually. E-mails will be checked daily and answered within 24 hours during weekdays, but may not be answered on weekends. Please check the calendar regularly for session updates.

MSA Course Goals
• Demonstrate progress through the Phases and display independence and collaboration.
• Demonstrate ability to formulate a specific problem statement, question, hypothesis or aim.
• Demonstrate ability to work effectively with a mentor.
• Demonstrate ability to critically review and analyze literature on an important scholarly topic.
• Demonstrate ability to prepare a scholarly project with appropriate methods and develop a plan to complete the project.
• Demonstrate ability to synthesize and present results of a scholarly project.

Common Components of all Scholarly Projects
The following components are an important part of any scholarly project. They do not necessarily have to be followed in sequence.
• Meet with your Associate Director to explore potential projects and strategies.
• Identify your general goals—what do you want to learn, where do you want to go, what kind of mentor would you like to work with?
• Meet with one or more potential mentors to refine your ideas.
• Identify a question, need, or idea that you could explore and ultimately make a new contribution.
• Define a hypothesis.
• Define objectives that are realistic and achievable.
• Demonstrate an understanding of the existing scholarship (both theory and methods) relevant to your project.
• Develop a protocol with a clear hypothesis and set of objectives and a work plan that will lead to meeting them.
• If human research subjects are involved, obtain COMIRB approval.
• Develop the necessary skills and support to do the work.
• Allocate the time and effort needed to complete the project on time.
• Apply the scholarly methods effectively.
• Modify the project objectives and methods in response to changes, learning and experience.
• In a report written in a style appropriate for your area of scholarship:
  o Describe what is known and unknown on your topic as background
  o Describe and analyze the results or products of your project;
  o Critically evaluate your work in light of relevant evidence and indicate how it contributes to relevant fields of scholarship;
  o Identify areas for improvement, further study and exploration.
• Clearly communicate your work to others in the capstone presentation and in other forums.
• Consult with your mentor and Associate Director regularly for support and help in reaching your goals.

Group MSA Projects
It is acceptable for groups of students to work on MSA projects. These groups may be composed of students in a single class or may be spread out over several classes. The latter is particularly appropriate for projects that have a long lead time for administrative approval (e.g. international research) or that involve ongoing interventions (e.g. a school curriculum change). The first class may lay all the groundwork for the project and subsequent classes may then move to data collection and to expansion to other project goals.

If groups of students work on a project, a couple of points need to be kept in mind regarding MSA Plan Forms, the final paper, and capstone:
1) Teams of students may do a Mentored Scholarly Project together.

2) Each student must independently submit an MSA Comprehensive Plan Form that defines their particular role in the project.

3) Each student should make his/her own scholarly contribution to the work.

4) A single paper, published or unpublished, can be submitted to describe the work on a project that involves several students. This authorship of this paper should reflect the contributions of the participants. Each student on a group project will submit a 1-page supplement that describes their role in more detail and describes what they have learned as a result of participation in the project.

5) A group of students in the same class can use the same physical poster for their capstone presentation. Each student will, however, present the findings to the reviewers separately. Since there are three poster sessions, a project that involves more than 3 students in a single year will need to prepare an additional poster so that each student has the opportunity to present the work independently.

MSA Course Requirements and Due Dates

**Please note that all below due dates are tentative and subject to change.**

**Phase 1 (IDPT 5090):**
- Interest Form – August 30, 2018
- One-on-ones – October 15 – December 1, 2018
- Annual Student Research Forum – December 11, 2018
- Capstone Attendance (as student judge)– February 28, 2019
- Phase I Project Outline – April 15, 2019
- Online Research Module – May 15, 2019

**Summer Elective (IDPT 6090):**
- Abstract and Annotated Bibliography – End of July (Date TBD) 2019
- Work in Progress (WIP) Slide Upload—End of July (Date TBD) 2019
- Work in Progress (WIP) – End of July (Date TBD) 2019 **Fulfills the Phase 2 WIP requirement**

**Phase 2 (IDPT 6090):**
- Abstract & Annotated Bibliography– November 1, 2018
- Work in Progress (WIP) – September 1 – November 1, 2018

**Phase 3 (IDPT 7090):**
- Annual Student Research Forum Attendance (as student judge)– December 11, 2018
- Phase III Project Update – March 15, 2019

**Phase 4 (IDPT 8090):**
- Draft Paper – December 1, 2018
- Final Paper – February 1, 2019
- Capstone Poster Presentation – February 28, 2019

**Early Completion Option**
The Final MSA paper may be turned in at any time and students may present at an earlier Capstone. If they do this they still will be required to participate in their class’ Capstone as evaluators. This allows students
increased flexibility to submit the final paper and complete the oral/poster presentation at any year-end Capstone event if project is completed prior to 4th year.

The MSA is a Pass/Fail course
Each student will receive a grade (Pass/Fail) at the end of each semester based on their progress through the course requirements. You must complete each component of the MSA requirements by the deadline to receive a passing grade. Please note that all feedback on assignments is through the MSA Canvas Course. Make sure that you have all of the MSA Canvas Course notifications on, to ensure you are receiving your grade or feedback information. Occasionally edits will be needed on incomplete submissions, so it is important that you check your assignments in Canvas for any comments from the MSA Faculty.

Grade Definitions
The School of Medicine uses the following grades for the official transcript: Honors (H), High Pass (HP), Pass (P), Pass with Remediation (PR), Incomplete (I), In Progress (IP), Fail (F), and Withdrawal (W). The Block, Course and Clerkship Directors have the latitude to not use the full range of grades available.

Unless otherwise specified, “grades” once assigned become a permanent part of the student’s academic record and transcript. Incomplete (I) and In Progress (IP) are temporary grades which will be permanently replaced by one of the other listed grades.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definitions</th>
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<tr>
<td>Honors (H)</td>
<td>A grade of Honors is given to a student whose performance is of a very high caliber. Total honor points are calculated as the number of credit hours with the honors grade and may be used to determine academic nomination of students for various awards and commendations.</td>
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<tr>
<td>High Pass (HP)</td>
<td>A grade of High Pass is given to a student whose performance clearly exceeds the Pass requirements but does not reach Honors level.</td>
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<tr>
<td>Pass (P)</td>
<td>A grade of Pass is given to a student whose performance meets the minimum requirements established by the Block, Course or Clerkship Director.</td>
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<tr>
<td>In Progress (IP)</td>
<td>A temporary grade of In Progress is given when a student is unable to complete the requirements for a Block, Course or Clerkship because of illness or other extenuating circumstances AND is considered to be passing by the Block, Course or Clerkship Director at the time the grade is given. For more detail, see 3.3.3 and 3.3.6.</td>
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<tr>
<td>Incomplete (I)</td>
<td>A temporary grade of Incomplete is given when a student has not successfully completed all of the Block, Course or Clerkship requirements at the end of the Block AND requires remediation as determined by the Block, Course or Clerkship Director in order to meet the minimum requirements of the Block, Course, or Clerkship. For more detail, see 3.3.3 and 3.3.6.</td>
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<tr>
<td>Pass with Remediation (PR)</td>
<td>A grade of Pass with Remediation is given to the student whose performance is initially below the passing standard (I) or (F), but who demonstrates competency in the course requirements after remediation.</td>
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<tr>
<td>Fail (F)</td>
<td>A grade of F is given when a student’s performance is clearly below the passing standards of the Block, Course or Clerkship.</td>
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<tr>
<td>Withdrawal (W)</td>
<td>A grade of withdrawal is given when a student leaves a Block, Course, or Clerkship before being assigned a final grade AND requires approval by the appropriate faculty, course director, or Assistant or Associate Dean. In some cases, a student must be in “good standing” before being allowed to withdraw. For more detail, see 3.3.4.</td>
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Required only if your project includes human subjects
• CCTSI Scientific Advisory and Review Committee (SARC)- If your project involves human subjects beyond the exempt category, it first needs to be review by SARC. The purpose of SARC is to evaluate the scientific merit of research protocols. After receiving scientific and feasibility approval by SARC, it then moves on for approval by COMIRB (see next bullet). http://www.ucdenver.edu/research/CCTSI/programs-services/crc/SARC/Pages/SARC.aspx

• Colorado Multiple Institutional Review Board (COMIRB) – If your project involves human subjects of any kind, you must complete COMIRB training/certification on line and plan ahead to submit your protocol as soon as possible.  http://comirbweb.ucdenver.pvt/portal/

• IRB applications for students completing international research projects the summer between Phase I and Phase II must be submitted by March 15th.

• If you are submitting a Global Health protocol, it must be reviewed by both Dr. Nadeau and the Global Health Director prior to submission to COMIRB.

MSA Mentor Expectations
• Meet with students to explore potential scholarly projects
• Determine if you are the person to mentor the project
• Develop an agreement, including meeting/communication schedule, and work on your professional relationship
• Review student’s critical literature reviews
• Help the student develop a scholarly and doable project
• Review the student’s scholarly proposal
• Submit verification of progress with each plan form submission, rough draft and final draft papers (verification can be sent via e-mail to SOM.MSA@ucdenver.edu)
• Help develop and review the work plan and timing
• Communicate with the MSA Associate Director
• Review the student project and plan form
• Submit recommended grades to Associate Director
• Help the student gather, analyze and prepare for capstone presentation
• This is a 4 year project-- the mentor and student should work together for that entire period
• Always be attentive to the student’s rigor and professional development

Associate Directors will work with the mentor-student teams to provide ongoing support.

Narrative Comments and Assessment
Narrative comments from individual MSA mentors will be obtained in Phase II and Phase IV. Narrative comments from MSA Directors will be submitted for each student’s Work In Progress session and for their initial draft of the MSA paper (required in Phase IV). This will be used to obtain faculty input and to jointly develop individual student goals to improve their skills.

Library Resources
The librarians 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 John.Jones@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.

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Clinical Science Research Kristen DeSanto, MSLS, MS, RD, AHIP (303-724-2121)

Bioethics, Humanities, Arts & Education Research Lilian Hoffecker, PhD, MLS (303-724-2121)

Epidemiology, Public & Community Health Research Ben Harnke, MLIS (303-724-2146)

Global Health Research John D Jones Jr, MSIS (303-724-2117)

Writing Center Resources
The campus writing center is an excellent resource to help you with your rough and final draft papers. To get more information or to make an appointment with the writing center, please visit here: http://www.ucdenver.edu/academics/colleges/CLAS/Centers/writing/Pages/TheWritingCenter.aspx

Statistical Resources
The Colorado Biostatistics Consortium (CBC) has partnered with the MSA program to provide guidance on how to design and analyze your MSA research project. Through the MSA Consulting Clinics, the CBC will help you move beyond a general research question in order to craft a testable hypotheses. You will develop a research plan consisting of your study design details, the specific data to be collected, and the methods you will use to analyze your data. During these clinics, you will also receive assistance with implementing your analysis and interpreting your findings. Each clinic will be a mix of small group (2-3 individuals) and one-on-one interactions with biostatistics graduate students dedicated to answering your specific questions.

Registration is required, and must be done at least 48-hours in advance. To get more information or to sign up for a clinic with the CBC, please visit here: http://www.ucdenver.edu/ACADEMICS/COLLEGES/PUBLICHEALTH/RESEARCH/CENTERS/CBC/RESOURCES/Pages/MSA.aspx

For projects requiring larger amounts of biostatistical analyses, MSA students can apply for an MSA Small Grant from the CBC for assistance in analyses. http://www.ucdenver.edu/academics/colleges/PublicHealth/research/centers/CBC/student-support/Pages/MSA-Small-Grant-Program.aspx

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.
EXAMPLES of SCHOLARSHIP
To see examples of previous projects, you can visit the MSA website page dedicated to last year’s Capstone Projects. Additionally, located under the Student Resources sidebar, there is a section entitled “Potential MSA Projects”.