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 capstone 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:
- 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 (Appendix A)
- 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.

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 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 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 personal 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 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.

Global Health MSA Projects

All Global Health MSA and Global Health Track students must meet special requirements in order to participate in and complete an MSA in global health. Such special requirements may include but are not limited to: Successful completion of the Introduction to Global Health Course (10/19 – end of semester; Wed afternoons 1-3), course work away permissions from the Registrar and Student Affairs, risk management processes including applications to study abroad programs through the downtown UCDenver campus, risk waivers, itinerary, passport, emergency contact submissions, additional International IRB processes, travel vaccinations, infection mitigation precautions, U.S. State Department registration, VISA and travel requirements of the respective country.

Timeline for Completing a Global Health Project
• 10/1 Identify yourself to MSA Global Health Associate Director, Karen Gieseker at karen.gieseker@ucdenver.edu
• 10/19 Begin Introduction to Global Health Course (required course for students participating in Global Health MSA or traveling internationally). Meets Wed 1-3pm 10/19 - end of fall semester
• 12/15 International Project and Site Plan Form Due (Appendix B)
• 2/15 IRB/Ethics Training Complete and review of COMIRB Draft Protocol by Dr. Prochazka and Dr. Gieseker (if you plan to do human subjects research)
• 3/15 Draft MSA Comprehensive Plan Form Due and COMIRB Submission (if you plan to do human subjects research)
• 4/15 Final MSA Comprehensive Plan Form Due
• 5/15 ALL Travel Documents Due

The timeline for Global Health projects includes travel the summer between Phase I and Phase II for at least 160 contact hours at the site (self-financed or financed via scholarships) to continue ongoing efforts of upper-level students and mentors. The work is then presented during the fall of Phase II in a Work in Progress session. Travel again will be possible to continue the project during certain months early in Phase IV, or the student may choose to continue the scholarly work state-side with research and write up of the findings that have
already been obtained. There are multiple conference opportunities available for students to present their global health work during the course of medical school.

**Finding a Global Health Project**
The field of global health is very broad and requires a great deal of experience and skill to navigate. There are many mentors with a great deal of experience in international research, education, or have the capacity to build a project in our UCDenver community. You will meet with your Associate Director who, based on your interests, will direct you toward possible mentors. You need to meet and discuss potential projects and interests with those mentors and get a sense of how you might fit into ongoing work that they have available. The University is in the process of consolidating project sites in order to provide more supportive mentoring environments for our students. It is our recommendation that you choose one of the sites available and join a project already in progress. Realizing that some students enter medical school with close ties to previous international research projects, you may discuss the feasibility of continuing such a project with the Associate Director of Global Health.

**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 2-4 students may do a Mentored Scholarly Project together. However, the proposed work and contributions of each student must be defined and approved.

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. If you work as a group, be sure to include an acknowledgements section in the final paper that indicates each student’s contribution.

4) A single paper 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 author on the paper should complete the JAMA criteria for authorship form and attach it to the paper (Appendix D) (see weblink http://jama.ama-assn.org/site/misc/auinst_crit.pdf). If a given student on a group project doesn’t meet the criteria for authorship on the group paper, that student may submit a separate paper. Each student on a group project will also submit a 1-2 page supplement that describes their role in more detail and describes what they have learned as a result of participation in the project (see Page 7 for more detail).

5) If a paper is published from a project that involves several students, that paper can be submitted to meet the requirements of the MSA. However, as described above, each
student on such a paper will also submit a 1-2 page supplement that describes their role in more detail and describes what they have learned as a result of participation in the project.

6) 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.

Phase I Course Requirements

- Attend the MSA Course sessions in Phase I
- Meet and communicate with your Associate Director
- Serve as a student evaluator at the Annual Student Research Forum in December
- Select a thematic area, project and mentor by April 15. **Global Health projects and mentors need to be selected by December 15.** Other tracks and programs may have earlier deadlines as well. If you are involved in a track program, please check with the director.
- Complete and submit the first MSA Comprehensive Plan Form by **April 15th** (this is the final exam equivalent for the MSA course).
- Mentor will review and sign the MSA Comprehensive Plan Form by **April 15th**. In lieu of a physical signature, your mentor may send an e-mail to SOM.MSA@ucdenver.edu
- COMIRB – If your project involves human subjects you must complete the COMIRB certification on line and plan ahead to submit your protocol for IRB approval as soon as possible. [http://comirbweb.ucdenver.pvt/portal/](http://comirbweb.ucdenver.pvt/portal/)
- COMIRB (if you plan do human subjects research) IRB applications for students completing international research projects the summer between Phase I and Phase II must be submitted by March 15th. All others must be submitted by April 1st.
- Review of human subjects protocols by Dr. Prochazka **prior** to submission to COMIRB. If you are submitting a Global Health protocol, it must be reviewed by both Dr. Prochazka and Karen Gieseker prior to submission to COMIRB.

**NOTE:** If you plan to do your intensive work in the first summer, review the requirements for Phase II and consider enrolling in the MSA summer elective course IDPT 5091.

Phase II Course Requirements

- Attend MSA lectures
- Communicate with the appropriate Associate Director and discuss your progress (each semester or more often as needed)
- Meet or communicate with mentor regularly
- Review and utilize relevant literature (ongoing)
- Define approach, methods, and scholarly plan (ongoing)
• Present current status of project at Work In Progress sessions by November 1
• Update and submit MSA Comprehensive Plan Form by November 1 (this is the final exam equivalent for the MSA course)
• Mentor will review and sign the MSA Comprehensive Plan Form by November 1. In lieu of a physical signature, your mentor may send an e-mail to SOM.MSA@ucdenver.edu

Phase III Course Requirements
• Attend MSA lectures during ICCs
• Communicate regularly with mentor regarding progress on project
• Meet with mentor between third and fifth clerkship
• Utilize non-curriculum time or intersessions and other times for investigation or refinement of project
• Meet with Associate Director by the end of the Fall semester (during ICC)
• Serve as student evaluator at Annual Student Research Forum in December
• Update and submit MSA Comprehensive Plan Form by January 15 (this is the final exam equivalent for the MSA course)
• Mentor will review and sign the MSA Comprehensive Plan Form by January 15. In lieu of a physical signature, your mentor may send an e-mail to SOM.MSA@ucdenver.edu

NOTE: Completion of your updated Comprehensive Plan Form will aid in your residency applications during Phase IV

NOTE: Students who did not complete intensive course work in Phases I and II must schedule two, four-week MSA blocks early in Phase IV to work on their project

Phase IV Course Requirements and Timeline
• Work on project between April and January
• Communicate with your Associate Director
• Meet regularly with your mentor
• Submit first draft of paper with mentor review by December 15. Mentor will need to send an e-mail to SOM.MSA@ucdenver.edu verifying that they have reviewed and approve of the final draft.
• Submit final 10-25 page MSA paper by February 1. Mentor will need to send e-mail to SOM.MSA@ucdenver.edu verifying that they have reviewed and approve of the final draft. (A paper published in a peer-reviewed journal may substitute (see MSA Rubrics for assessment criteria))
• Present your work at your assigned poster session during the MSA capstone event in March (see MSA Rubrics for assessment criteria)
• Evaluate peer presentations at the MSA capstone event in March

Draft and Final Paper
Papers will be double spaced, typed in 12 pt Arial font and have 1 inch margins. Most papers will include the following components:
- Cover Page – Title of paper, your name, mentor's name (Please make a cover page even if you are submitting a peer-reviewed published paper).
- Abstract
- Introduction
- Methods
- Results
- Limitations
- Conclusions
- References (minimum of 20) using APA or AMA reference style created with EndNote Web (please visit a librarian if you need training with EndNote Web)
- Acknowledgements
- Contributorship: This will consist of a 1-2 page description of your role in the project, including 1) your contributions to the design/conception of the project, conduct of the project and data acquisition, data analysis and interpretation and drafting/critical review of the final paper; and 2) a summary of what you personally learned by taking part in the project.

Capstone Presentation
- Prepare and present a poster summarizing the paper you submitted
- Present project to classmates and faculty during ICC in March
- Evaluate peer presentations during the sessions you are not assigned to present

Students MUST pass the MSA course to graduate

Pathways for Mentored Scholarly Projects:
The MSA project is a 4 year pursuit. It is expected that students will spend an average of one-half day per week in Phase I & II exploring, reviewing literature, making correlations from coursework, meeting with Associate Directors, developing a hypothesis or question, meeting with potential mentors, developing appropriate methodologies for the project, developing an achievable plan, developing and keeping a plan form.

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.

**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.

**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?**

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. The progress rubric is below. 2) Each student will receive a grade on their final product in Phase IV, based on the Final Product rubric below. Their grade (Pass/Fail) will be determined by their mentor, Associate Director (reviewing their papers) and a team of faculty reviewing their posters/presentations during the capstone session in March of Phase IV.

**Progress Rubric**

<table>
<thead>
<tr>
<th>↑ Meets Expectations</th>
<th>↓ Below Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑ Student meets established deadlines for each Phase</td>
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<tr>
<td>↓ Student does not meet established deadlines for each Phase</td>
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**Final Product Assessment Rubric**

**Product:** There are 3 parts to the MSA final product.

1. **Paper** – The paper will describe your project in detail as outlined below. A, published paper in a peer reviewed journal will satisfy the paper requirement. The paper will be 10 to 25 pages in length, depending on your thematic area. Most projects will have a paper length of 10 pages. Projects that use a critical analysis methodology (such as humanities) will be longer. Draft and final paper will be double spaced, typed in 12 pt Arial font and have 1 inch margins. References for your paper will be AMA or APA created using
EndNote Web. Most papers will include the following components: cover page (title of paper, your name, mentor’s name – even if you are submitting a peer reviewed published article), abstract, introduction, methods, results, limitations, conclusions, references (minimum of 20), acknowledgements, statement about funding and possible conflicts of interest, and contributorship (as defined above).

2. Poster – For all projects, the poster will summarize your paper and include some version of the following key components: abstract, introduction, methods, results, limitations, conclusions, references, statement about funding and possible conflicts of interest, regulatory approval (IRB, IACUC or other relevant groups) and acknowledgments.

The abstract should be a 200 word or less summary of your paper that includes the 1) title 2) background and objectives 3) methodology and 4) conclusions.

3. Presentation – For all MSA projects, you will present your poster at the MSA capstone event in March (during Phase IV) and include a brief project summary and answer questions.

↑+ Exceeds Expectations ↑ Meets Expectations ↓ Below Expectations

1. Paper

1A. Statement about conflicts of interest
↑ Clear statement of potential conflicts of interest or their absence
↓ No clear statement about the presence or absence of potential conflicts of interest

1B. Statement of an appropriate problem statement/question/hypothesis/aim.
↑+ Problem statement/question/hypothesis/aim complete and clear; additionally, the problem/hypothesis/aim is compelling and insightful
↑ Problem statement/hypothesis/aim clear and credible; key constructs are defined and variables explained
↓ Vague problem statement, research question(s) not measurable; key constructs too broad and/ not clearly defined

1C. Background Literature Search
↑+ More extensive search with many citations from key journals; key data bases represented; citations current; additionally, creativity and diligence in locating relevant literature
↑ Adequate number of citations from key journals; key data bases represented; citations current; in creative arts – not only written materials – but visual sources / or performances – musical/theatrical performances accessed
↓Too few citations; Citations not from key journals; key data bases not represented; citations old and not representative of more current work

1D. Selection of an appropriate methodology to answer problem statement/question/hypothesis/aim.

↑+ problem statement/question/hypothesis/aim clearly translated into appropriate choices at the design level; In addition, selection of methodology represents creative thinking and demonstrates a new or improved approach to a problem

↑problem statement/question/hypothesis/aim clearly translated into appropriate choices at the design level; appropriate research objectives

↓vague or incorrect methodology chosen to answer/address problem/hypothesis/aim; inappropriate research objectives

1E. Appropriate Application of Regulatory Requirements
↑ Appropriate COMIRB (Human Subjects) or IACCUC (Animal Subjects) approval obtained

↓ No appropriate COMIRB or IACCUC approval obtained

1F. Application of an appropriate methodology
Quantitative Analysis

↑+ Sufficient number/power to answer the question; adequately designed instrument to answer the question; adequate statistical analysis performed; valid results/conclusions; limitations acknowledged; appropriate lab skills applied (e.g. pipetting skills; data base creation and/or manipulation; survey design and analysis); In addition, application of the methodology represents creative input from the student and not just a repeat of established work

↑ Sufficient number/power to answer the question; adequately designed instrument to answer the question; adequate statistical analysis performed; valid results/conclusions; limitations acknowledged; appropriate lab skills applied (e.g. pipetting skills; data base creation and/or manipulation; survey design and analysis)

↓ Insufficient number/power to answer the question; inadequately designed instrument to answer the question; inadequate statistical analysis performed; invalid results/conclusions; no or inadequate explanation of limitations; inadequate skills applied (e.g. pipetting skills; data base creation and/or manipulation; survey design and analysis)
Qualitative Analysis

↑+ Convincing number of documented observations (reached saturation point of focus groups, document analyses and interviews); insightful questions that mirror interesting research objectives; superior analysis of transcriptions leading to novel observations and conclusions; limitations acknowledged; adequate checks for reliability of analyses and conclusions; appropriate skills applied (e.g. interviewing, transcribing); in addition, application of the methodology represents creative input from the student and not just a repeat of established work

↑ Sufficient documentation of observations including focus groups, document analysis and interviews); appropriate questions which match research objectives; appropriate analysis of transcripts and/or field notes; limitations acknowledged; applied inductive reasoning and generated appropriate inferences; adequate checks for reliability of analyses and conclusions; appropriate skills applied (e.g. interviewing, transcribing)

↓ Insufficient documentation of observation (also includes focus groups, document analysis and interviews); inadequate questions; inadequate analysis of transcripts; no or inadequate limitations acknowledged; inadequate checks for reliability of analyses and conclusions; inadequate application of skills (e.g. interviewing, transcribing)

Meta-analysis or Critical Systematic Review of Existing Literature

↑+ Clearly focused question for review; criteria clearly identified for inclusion of articles; all relevant studies included; validity of studies clearly appraised; relevant data extracted from studies; assessment of studies reproducible (more than one reviewer to avoid bias); measuring similar results from study to study so that comparisons are valid; superior discussion of overall results/conclusions; in addition, application of the methodology represents creative input from the student and not just a repeat of established work

↑ Clearly focused question for review; criteria clearly identified for inclusion of articles; all relevant studies included; validity of studies clearly appraised; relevant data extracted from studies; assessment of studies reproducible (more than one reviewer to avoid bias); measuring similar results from study to study so that comparisons are valid; overall results/conclusions clearly discussed

↓ Inadequately focused question for review; inadequate identification of criteria for inclusion of articles; missing relevant studies; validity of studies inadequately appraised; inadequate extraction of relevant data – points missed or misinterpreted; bias in the assessment of studies; inadequate comparison of results from study to study; Overall results/conclusions not adequately discussed

Historical Analysis

↑+ Primary sources utilized; gaps in knowledge identified; superior analysis of sources; appropriate skills applied (e.g. locating primary sources); in addition, application of the
methodology represents creative input from the student and not just a repeat of established work.

↑ Primary sources utilized; gaps in knowledge identified; appropriate analysis of sources; appropriate skills applied (e.g. locating primary sources)

↓ Primary sources not utilized or underutilized; gaps in knowledge not identified; inappropriate or inadequate analysis of sources; appropriate skills not applied (e.g. interviewing, transcribing)

**Critical Analysis of texts (ethics, philosophy, laws or policies)**

↑+ Superior analysis of texts/laws/policies; arguments clear; counterarguments articulated; responses to counterarguments articulated; limitations of analysis acknowledged; gaps in knowledge identified; superior discussion of conclusions; appropriate skills applied (e.g. legal research). In addition, critical analysis is creative and not just a review of established work.

↑ Appropriate analysis of texts/laws/policies; arguments clear; counterarguments articulated; responses to counterarguments articulated; limitations of analysis acknowledged; gaps in knowledge identified; adequate discussion of conclusions; appropriate skills applied (e.g. legal research)

↓ Inadequate or inappropriate analysis of texts/laws/policies; arguments undeveloped or unclear; counterarguments not articulated or inadequately articulated; responses to counterarguments absent or inadequately addressed; limitations of analysis not articulated or inadequately articulated; gaps in knowledge not clearly identified or inadequately identified; inadequate discussion of conclusions; appropriate skills not applied or not adequately applied (e.g. legal research)

**Creative Arts (Visual/Performance)**

↑+ The media (visual/performance) communicates the goals of the project in a superior manner; superior analysis of the goals; superior composition and expression; superior aesthetic appeal; superior discussion of conclusions; superior application of appropriate skills (e.g. photography, dark room, staging); in addition, the work is very creative and not just a review of established work

↑ The media (visual/performance) adequately communicates the goals of the project; adequate analysis of the goals; adequate composition and expression; adequate aesthetic appeal; adequate discussion of conclusions; adequate application of appropriate skills (e.g. photography, dark room, staging)

↓ The media (visual/performance) does not adequately communicate the goals of the project; inadequate analysis of the goals; inadequate composition and expression;
inadequate aesthetic appeal; inadequate discussion of conclusions; inadequate application of appropriate skills (e.g. photography, dark room, staging)

**Creative and Reflective Writing**

↑+ The creative/reflective writing communicates the goals of the project in a superior manner; superior analysis of the goals; superior composition and expression; superior aesthetic appeal; superior discussion of conclusions; superior application of appropriate skills (e.g. staging, writing); in addition, the work is very creative and not just a review of established work

↑ The media creative/reflective writing adequately communicates the goals of the project; adequate analysis of the goals; adequate composition and expression; adequate aesthetic appeal; adequate discussion of conclusions; adequate application of appropriate skills (e.g. staging, writing)

↓ The creative/reflective writing does not adequately communicate the goals of the project; inadequate analysis of the goals; inadequate composition and expression; inadequate aesthetic appeal; inadequate discussion of conclusions; inadequate application of appropriate skills (e.g. staging, writing)

**Literary Analysis and Interpretation**

↑+ Superior analysis of literary materials; thesis clear; overview of criticism sufficient; limitations of analysis acknowledged; gaps in knowledge identified; superior discussion and illustration of textual interpretations. In addition, critical analysis is creative and not just a review of established work.

↑ Appropriate analysis of literary materials; thesis clear; overview of criticism sufficient; limitations of analysis acknowledged; gaps in knowledge identified; adequate discussion and illustration of textual interpretations.

↓ Inadequate analysis of literary materials; thesis unclear; overview of criticism insufficient; limitation of analysis not articulated or inadequately articulated; gaps in knowledge not clearly identified or inadequately identified; inadequate discussion and illustration of textual interpretations.

**1G. Discussion**

↑+ Excellent discussion of the conclusions of the research/scholarship. Integration of the literature, clear discussion of limitations and future directions, shows creativity and insight.

↑ Clear discussion of the conclusions of the research/scholarship, integration of the literature, clear discussion of limitations and future directions.

↓ Inadequate discussion of the conclusions of the research/scholarship. Inadequate integration of the literature. No discussion of limitations and future directions
2. **Poster** - All elements – A through G as described above are necessary for the poster. Additionally,

2H. **Clarity of Poster**

↑+ well organized and clear; presents complex ideas/data in an understandable way; includes all key components - abstract, introduction, methods, results, limitations, conclusions, references, statement of funding and potential conflicts of interest, and acknowledgments; in addition, poster is visually attractive and catches the reviewer’s eye and holds his/her attention long enough to convey its message

↑ well organized and clear; presents complex ideas/data in an understandable way; includes all key components – abstract, introduction, methods, results, limitations, conclusions, references, statement of funding and potential conflicts of interest and acknowledgments

↓ disorganized and unclear; missing key component(s) - abstract, introduction, methods, results, limitations, conclusions, references, statement of funding and potential conflicts of interest and acknowledgments

3. **Presentation** (All elements A – G as described above are necessary for the presentation) additionally,

3H. **Quality of Capstone Presentation**

↑+ Summary is organized, clear and concise; all components are present; student able to adequately respond to questions; additionally, student is able to demonstrate creative and original thinking and is able to apply the concepts of the work to other domains complete and clear; additionally, the problem/hypothesis/aim is compelling and insightful

↑ Summary is organized, clear and concise; all components are present; student able to adequately respond to questions

↓ Summary is disorganized and unclear; missing key components; student unable to respond adequately to questions about the project

**Resources available to MSA students**

**Library Resources:**
The librarians will be involved with students starting early in Phase I
A resource page is available at [http://hslibraryguides.ucdenver.edu/msa/](http://hslibraryguides.ucdenver.edu/msa/)

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 formulation (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.

To make an appointment with the librarian in your thematic area contact the following:

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

Clinical Research
John D Jones Jr. john.jonesjr@ucdenver.edu or 303-724-2117

Global Health
Peggy Cruse, margaret.cruse@ucdenver.edu or 303-724-2142

Public Health & Epidemiology
Lynne Fox lynne.fox@ucdenver.edu or 303-724-2121

Arts & Humanities, Bioethics, Law, Education & Social Sciences
Lilian Hoffecker lilian.hoffecker@ucdenver.edu or 303-724-2124

To get in touch with the Reference Department e-mail, chat, or phone go to http://hsclibrary.uchsc.edu/aal/.

Writing Center Resources:
The campus writing center is an excellent resource to help you with your rough and final draft papers. The writing center is available as follows:
• Health Sciences Library 1204, Anschutz Medical Campus
  • TF 10-6
  • Sun 2-8
• North Classroom 4014, Denver Campus
  • M-Th 9-6
  • F 9-2
• Online: http://www.ucdenver.edu/academics/colleges/CLAS/Centers/writing/aboutUs/Pages/onlineConsultations.aspx
  • Every evening 6-10
• Drop-Box
EXAMPLES of SCHOLARSHIP

Social Sciences:
In college you took a course in the History of the West that piqued your interest in frontier physicians. Dr. Bob Shikes gave a lecture on the history of the School of Medicine at the University of Colorado that really fascinated you. You have decided to do your mentored scholarly activity on frontier physicians. After discussions with Dr. Jackie Glover, Associate Director for the Humanities thematic area, you contact Dr. Shikes as a possible mentor. He gives you many references, including the names of several historians working in the history of medicine at the Downtown Denver and Boulder campuses. You meet with them.

An appropriate mentor is selected from among the interested faculty. You had no idea that there was so much written both about and by frontier physicians. With the advice of your mentor, and after reading many texts, including several survey texts, you have an idea of how to narrow down your topic. You decide to focus on woman frontier physicians. You discover that Dr. Sonya Erickson, faculty in OB/GYN, did an honors paper on this topic. You meet with her. You spend your time critically reading texts about frontier woman physicians, and reading primary sources. You are working from a very helpful on-line collection of information about women in medicine at the National Library of Medicine. Over the course of the four years, you produce a scholarly paper on Frontier Women Physicians that is thoroughly researched and includes sound critical analysis of major writings and themes. You present your paper at a national humanities meeting and submit it for publication.

Scientific Research:
Your interests lie in the problem of infectious disease in the third world. Your idea is that learning more about the molecular biology of parasites will provide important information that could be used therapeutically. You look at the mentor list and find that Richard Davis, PhD in Pediatrics (Infectious Disease) is a basic scientist who studies RNA processing and protein translation in the parasitic nematode roundworm, Ascaris.

You go to Dr. Davis web site (http://www.uchsc.edu/molbio/davisr.htm) and learn about his research. Dr. Davis states, “Nematodes infect 3 billion people worldwide, leading to considerable morbidity; they are a problem for livestock and domestic animals; and they result in billions of dollars in annual crop damage. The socioeconomic effects caused by these parasites are severe and present a major obstacle in facilitating medical and economic improvements in many parts of the world. A major goal of our work is to develop tools to facilitate the study of worm parasites in an effort to better understand parasite biology and pathogenesis with the long-term goal of identifying and developing drugs to novel parasite targets”. You read the scientific literature and learn about why the Ascaris system of protein translation different from humans. You contact him about a project and decide to work in his laboratory during the summer of phase 1 and continue during phase 2 in the afternoons.

You work as part of a team that includes graduate students and fellows. Your experiments help Dr. Davis to find a protein that is unique to worms that is used to process mRNA and without the protein the worm cannot propagate. During Phase 3 you attend a meeting and present some of your work about this protein in the parasites. You also co-author a peer-reviewed
paper on the subject published by Dr. Davis’s lab. Although you do not materially participate in
the lab in most of phases 3 and 4, you follow the field and discover that a number of
pharmaceutical companies are developing drugs against the protein you studied. You give a
capstone presentation summarizing your work, how it fits into the work of Dr. Davis and the
parasite field and the promise of drugs to prevent the disease.

Epidemiology and Public Health:
You read an article on the epidemiology of dengue and became interested in determining
whether the viral infection will become prevalent in the United States, given that it is endemic
on the Mexican side of the US-Mexican border.

You meet with your Associate Director and find out that the CDC in Ft. Collins has ongoing
research in dengue, and that the Associate Director knows some of the researchers who
regularly recruit students to help with research projects.

You visit with researchers at the CDC lab and are impressed with the opportunities. You are
particularly interested in the possibility of doing an epidemiologic study of mosquito populations
and dengue seroprevalence on the Mexican-US border. You get back in touch with your
Associate Director and want to get started. The Associate Director advises that you contact Dr.
Fly, a UCHSC faculty member who has ongoing research projects with the CDC in Ft. Collins,
and has an interest in dengue surveillance in the southwestern United States. He looks like a
good possibility for a mentor.

Dr. Fly contacts his colleague Dr. Bugg at CDC and learns about the surveillance projects
planned for the next three years along the US-Mexican border, determines that you will be
welcome to help with the research, and agrees to be your mentor. You prepare a proposal for
participating in a project that involves setting mosquito traps in communities around Nogales,
Arizona and analyzing mosquitoes for dengue viral RNA, and collecting blood samples from
persons who live near the sampling sites and analyzing them for antibodies to the four
serotypes of the dengue virus.

You launch the sampling program in the summer between phase 1 and phase 2 of medical
school and are able to collect mosquito samples from over 100 locations, and blood samples
from over 200 subjects. The samples are analyzed at the CDC lab over the subsequent year
by other members of the research team, and the results are provided to you in the middle of
phase 2. You work with Dr. Bugg to develop analytic datasets and conduct statistical analyses
in the spring of phase 2, and continue to refine analyses in phase 3, while you are completing
your clinical rotations. You find evidence that *Aedes aegypti* mosquitoes trapped in the US
carry the virus and that rates of seropositivity in the US border communities correlate with the
percentages of virus-positive trapped mosquitoes. These data suggest that more work need to
be done to prevent the breeding of *Aedes aegypti* mosquitoes.

At the start of phase 4, you complete a draft report of your research, and refine it for final
presentation over the next few months. You also work with your collaborators at CDC to
complete a manuscript for publication.
Clinical Research:
Your interests are in cardiovascular disease and especially in stroke because a number of your family members have either had a stroke or are worried that they may develop one in the future. As you study your textbooks on cerebrovascular disease, you read about some interesting links between migraine headaches and strokes. One of the books points out that many patients with migraine headaches have also been found to have a patent foramen ovale and there are some data suggesting this may be important in the pathophysiology of migraine and stroke. In your meeting with the Associate Director, you are pointed to some of the potential mentors in the Cardiology Division of the Department of Medicine and in the Neurology Department. It turns out they are actively doing research on this issue.

After reviewing the potential mentors’ areas of interest, you meet with Dr. Smith since her research seems to be the most relevant to you. Dr. Smith is doing a clinical trial looking at the effects of PFO closure on migraine outcomes and she is also examining factors such as nitric oxide and cytokines in migraines. She agrees to work with you as a mentor and suggests some additional readings on the topic both in cardiology textbooks and in journal articles. As you learn more about the problem of nitric oxide and migraine, it becomes clear that there are some major gaps in the literature. One of the gaps is that no one has really pulled together all the data on the effect of transcatheter closure on nitric oxide levels and migraine frequency. So, at the end of Phase 2, you write a proposal for a systematic review. During Phase 3, you continue to meet periodically with Dr. Smith as your clinical work allows and you read about how to conduct a systematic review and meet with one of the Health Sciences Center librarians. At the start of Phase 4, you work steadily to conduct the systematic review and meet several times with Dr. Smith and the librarian to go over your progress and troubleshoot issues in the review. The review includes extensive searching of Medline and other on-line databases, retrieval of meeting abstracts, contacts with manufacturers of catheters to see if there are any unpublished studies on nitric oxide, and contacts with investigators of key studies to verify data or to obtain additional information about their research. Two of the main papers are written in Japanese, so you find a translator to help you extract the relevant data for your project. Based on this review, you are able to make a quantitative summary of the effect of catheter closure on nitric oxide. You, along with your mentor and the librarian, then write an abstract on this for a cardiology meeting during Phase 4. You prepare a draft of your capstone presentation by November of your 4th year and review it with your mentor and the Associate Director. In March you then present your project in a poster form and turn in the paper that is a written summary of your project and its findings.

Global Health:
Any of the projects described above could add a Global Health component and become a project in the Global Health thematic area. Additional examples of ongoing projects or past projects include: Assessing community use of improved cook stoves in the Highlands of Peru; Community health assessment and teaching IMCI to health workers in a river community in Peru; Understanding the prevalence and genetics of Hypertensive disorders in a high altitude population in Bolivia; Assessing nutritional status of children and teaching the Hearth Nutrition model in Haiti; Assessing use of telemedicine services in Nepal; and Complications of chest tube placement in patients with HIV and TB and violent trauma in South Africa.
APPENDIX A:

Mentored Scholarly Activity
Research Plan Form

Please refer to the MSA Course Guide for the detailed description of the MSA goals, objectives, and definitions.

This plan form is how you document and communicate your progress on your MSA. You will be required to submit an updated plan form as you progress through each Phase of medical school and anytime there is a change in your project, mentor or Associate Director. Each phase will have a minimal requirement to be met. We strongly encourage you to challenge yourself and exceed the expectations outlined for each phase.

Keep in mind:
A record of scholarly activity is very valuable in the residency selection process and will make your application much more competitive. Residency programs DO NOT necessarily expect you to have done scholarship in the area you’ve chosen for clinical training. While not impossible, it will be very difficult to document scholarly activity for your residency application if you have not completed a large part of your project before starting Phase III.

MSA Comprehensive Plan Form submission dates:
(Note each successive submission should show progress from the prior phase)

Phase I – April 15
Phase II – November 1
Phase III – January 15
Phase IV – See below

December 15 - Submit draft of paper to date with timeline explaining how you will complete the project by the deadline of February 1. Your mentor must send an e-mail verifying that they have read the rough draft version of the paper and will continue to mentor you through project completion.

February 1 – Submit final draft of paper (a first author paper published in a peer reviewed journal may substitute.) Your mentor must send an e-mail verifying that they have read the final draft of the paper and assign a grade of P/F.

March – Present work at assigned poster session during capstone event.
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) Project Title (required all Phases):

2) Project Methodological Approach
   
   a. Creative Arts (Visual Performance)  
   b. Creative/Reflective Writing  
   c. Critical Analysis of Texts  
   d. Historical Analysis  
   e. Literary Analysis and Interpretation  
   f. Meta-Analysis/Critical Systematic Review of Existing Literature  
   g. Qualitative  
   h. Quantitative  
   i. Other (please provide explanation)

3) Is this a group project?
   Yes _______  No________
   a. Who will be the first author on the final paper that results from this project?
b. Is this a longitudinal project involving other students? If yes, please list student’s names and year of graduation.

4. What is your unique scholarly contribution to this project? Just doing data collection without any intellectual contribution does not meet expectations. When several students are working together on a project, it is anticipated that each should identify a particular aspect of the project or a particular specific aim that would be his/her focus of work.

   The description of your planned contributorship should include a description of your role in the project, including your planned contributions to the design/conception of the project, conduct of the project and data acquisition, data analysis and interpretation and drafting/critical review of the final paper;

4) COMIRB #:___________________

5) Project Aims (required all Phases). What do you hope to accomplish, demonstrate, and improve? What are the overarching aims? What is the ultimate product of your work?

6) Background/Rationale (required all Phases). Why is this important? How did I become interested in this? How will this advance the field, my professional development, improve patient care, etc?

7) Resources/Equipment/Facilities (required all Phases). 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?

8) Organization - Steps & Timeline (Required all Phases): 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
         ________________________________
      iii. PI # ___________________________
   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.

9) Methods (Required all Phases): Which techniques or approaches will be used to accomplish your project aims?

10) References (required all Phases): Document a literature search plan and list references (minimum of 3 in Phase I, 7 Phase II and III) 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.

Mentor Attestation - can be completed by e-mail to SOM.MSA@ucdenver.edu or by submitting a written signature below.

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:

International MSA/Global Health Track
International Project and Site Plan Form
Due: December 15, 2011

Name____________________________________

Email____________________________________

Cell_____________________________________

Project Name________________________________________________________

Project Country_______________________________________________________

Project Mentor Name___________________________________________________

Project Mentor Email___________________________________________________

Project Mentor Office Phone_____________________________________________

Project Description (brief)_______________________________________________
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Student Signature________________________________  Date_________________

Mentor Signature_________________________________  Date_________________
# APPENDIX C: MSA Schedule/Class of 2015 Phase I Course Sessions

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th>Session Title</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 28, 2011</td>
<td>Introduction and Orientation to MSA Course</td>
<td>ED I 1300</td>
</tr>
<tr>
<td>9:00 - 10:00am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>September 29, 2011</td>
<td>Scholarship in Tracks</td>
<td>ED I 1300</td>
</tr>
<tr>
<td>9:00 - 10:00am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 3, 2011</td>
<td>Scholarship in Epidemiology &amp; Public Health, Global Health, Humanities &amp; Social Sciences: A presentation from students</td>
<td>ED I 1300</td>
</tr>
<tr>
<td>9:00 - 10:00am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 6, 2011</td>
<td>Scholarship in Basic Science and Clinical Science: A presentation from students</td>
<td>ED I 1300</td>
</tr>
<tr>
<td>9:00 - 10:00am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 11, 2011</td>
<td>Thematic Area Small Group Meetings</td>
<td>ED I 1300</td>
</tr>
<tr>
<td>9:00 - 10:00am</td>
<td>(Need 5 Rooms)</td>
<td>Small Groups Rooms TBA</td>
</tr>
<tr>
<td>December 2, 2012</td>
<td>How to choose a project and the core Biostatistics Laboratory Facility and Support.</td>
<td>ED I 1300</td>
</tr>
<tr>
<td>11:00 - 12:00pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 6, 2011</td>
<td>½ of the Class: How to choose a Mentor &amp; making the most of your Mentor.</td>
<td>ED II N 2303</td>
</tr>
<tr>
<td>10-12:00pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 7, 2011</td>
<td>Other ½ of the Class: How to choose a Mentor &amp; making the most of your Mentor.</td>
<td>ED II N 2303</td>
</tr>
<tr>
<td>10:00 – 12:00pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 13, 2011</td>
<td>Research Poster Review</td>
<td>ED II N &amp; S</td>
</tr>
<tr>
<td>1:00 - 4:30pm</td>
<td>Required Attendance at Research Day</td>
<td></td>
</tr>
<tr>
<td>1:00-1:15pm</td>
<td>MSA Instructions for 1st Year Students</td>
<td>ED II N 2104</td>
</tr>
<tr>
<td>1:00-1:30pm</td>
<td>MSA Instructions for 3rd Year Students</td>
<td>ED II N 2303</td>
</tr>
<tr>
<td>1:00-2:15pm</td>
<td>1st Poster Session</td>
<td></td>
</tr>
<tr>
<td>2:15-3:30pm</td>
<td>2nd Poster Session</td>
<td></td>
</tr>
<tr>
<td>1:45-3:00pm</td>
<td>Associate Directors available for discussion all afternoon. Librarians will be present</td>
<td></td>
</tr>
<tr>
<td>January 10, 2012</td>
<td>IRB Information and Q&amp;A</td>
<td>TBD</td>
</tr>
<tr>
<td>8:00-9:00am</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD</td>
<td>IDPT 5091: MSA Summer Elective Q&amp;A</td>
<td>TBD</td>
</tr>
</tbody>
</table>
APPENDIX D: MENTORED SCHOLARLY ACTIVITY COURSE

Frequently Asked Questions:

1. Why is there a Mentored Scholarly Activity (MSA) Block in the medical school curriculum?
   The MSA requirement was included in the curriculum to foster in our students a commitment to self-directed, life-long learning by collaborating with a faculty mentor on a scholarly project of mutual interest. In addition, residency programs increasingly use research or scholarly work as an important factor in their selection processes.

2. What is scholarly activity?
   Scholarly activity is advanced study in a specific field.

3. Why is it important for a physician to be a scholar?
   As a physician you will be expected to stay informed about and evaluate current diagnostic and therapeutic techniques, and to use your knowledge to deliver state-of-the-art medical care to your patients.

4. How does the Mentored Scholarly Activity (MSA) Block help students become scholars?
   The MSA Block allows students the opportunity to explore different areas of medicine and medical research with the guidance of a faculty mentor.

5. How does the program work?
   You meet with the Associate Director in the thematic area of your choosing to identify a mentor. Over the 4 years of the curriculum you and your mentor collaborate on a scholarly project of mutual interest. Near the end of the Phase IV you present your results at a campus-wide Capstone Celebration.

6. When will I work on my project?
   Some students will perform intensive work on the project in the summer between Phase I and II. For many students much of your scholarly activity will occur during early electives in Phase IV. Some students will work regularly and consistently throughout all Phases of the curriculum.

7. How do I choose a mentor and project?
   The MSA program has 5 Associate Directors, each of whom oversees one of 5 thematic areas: Basic Science, Clinical Science, Public Health and Epidemiology, Humanities and Social Sciences, and Global Health. Shortly after the Molecules to Medicine Block starts, the Associate Directors will describe the types of projects you might do in their thematic area and help you find a faculty mentor. You and your mentor will then work together to develop an appropriate project. They can guide you through the thematic area database of mentors and their interests.

8. How much time will a project take?
   In Phase I and II most students will probably spend, on average, approximately ½ day per week attending meetings, talking to Associate Directors, contacting faculty, planning and researching your project. In Phase III the heavy requirements of the clinical blocks will occupy most of your time. In Phase IV there are a number of electives during which you can devote all your time to completing your project and preparing your capstone presentation.
9. **What if I finish my project early?**
Some students will do a large portion of their project during the summer break after Phase I. The MSA program expects that all students will continue to pursue their scholarly interests during all 4 years of the medical curriculum, for example by staying in contact with your mentor and updating your project as necessary.

10. **What do I need to do for the capstone presentation?**
You will submit a 10-25 page paper describing your project and present your results as a poster summarizing your project at a campus-wide Capstone Celebration, to be held in March of Phase IV.

11. **Can I change projects or mentors in midstream?**
You are always free to change projects if you and your mentor think that is appropriate. If you decide you want to change your mentor, you will need to consult with the Associate Director for your new thematic area who will help you choose a new mentor and a project that can be competed in the time available. You must complete a new project form if you change your project/mentor/Associate Director.

12. **Are there different ways to complete the MSA requirement?**
All students are required to present their results in the form of a poster. Each project will be unique and some may have an additional component in other formats, such as a video-taped documentary or an exhibit of photographs. All projects are expected to be related in some way to the practice of medicine. Students who successfully complete the MSTP program or the Research Track have satisfied all requirements of the MSA.

13. **Can I do a team project?**
Yes. Student teams of 2-4 students may do a Mentored Scholarly Project together. However, the proposed work and contributions of each student must be defined and approved. Students may team with students in the next classes to provide continuity.

14. **What if I have a problem with my mentor or Associate Director?**
If you have problems with your mentor, meet with your Associate Director to resolve the problems. If you have problems with an Associate Director, meet with the MSA Program Director to resolve the problem.

15. **Is funding available for a project?**
Funding is available through a variety of summer research opportunities and scholarships on a competitive basis. Faculty members who have research funds may also be able to support your project.
APPENDIX E: Establishing Authorship

1. Authorship Responsibility, Criteria, and Contributions. Each author should meet all criteria below (A, B, C, and D) and should indicate general and specific contributions by reading criteria A, B, C, and D and checking the appropriate boxes.

☐ A. I certify that

• the manuscript represents original and valid work and that neither this manuscript nor one with substantially similar content under my authorship has been published or is being considered for publication elsewhere, except as described in an attachment, and copies of closely related manuscripts are provided; and
• if requested, I will provide the data or will cooperate fully in obtaining and providing the data on which the manuscript is based for examination by the editors or their assignees; and
• for papers with more than 1 author, I agree to allow the corresponding author to serve as the primary correspondent with the editorial office, to review the edited typescript and proof, and to make decisions regarding release of information in the manuscript to the media, federal agencies, or both; or, if I am the only author, I will be the corresponding author and agree to serve in the roles described above.

☐ B. I have given final approval of the submitted manuscript.

☐ C. I have participated sufficiently in the work to take public responsibility for (check 1 of 2 below)

☐ part of the content.

☐ the whole content.

☐ D. To qualify for authorship, you must check at least 1 box for each of the 3 categories of contributions listed below.

I have made substantial contributions to the intellectual content of the paper as described below.

1. (check at least 1 of the 3 below)

☐ conception and design

☐ acquisition of data

☐ analysis and interpretation of data

2. (check at least 1 of 2 below)

☐ drafting of the manuscript

☐ critical revision of the manuscript for important intellectual content

3. (check at least 1 below)

☐ statistical analysis

☐ obtaining funding

☐ administrative, technical, or material support

☐ supervision

☐ no additional contributions

☐ other (specify)

__________________________  _________________________
Signature                  Date
PROFESSIONALISM FIRST

The University of Colorado School of Medicine and EthicsPoint have teamed up to provide medical students and residents an ANONYMOUS means for reporting on the PROFESSIONALISM of Faculty and Residents.

This new system is ideal for both commending exemplary and identifying lapses of professional behavior. Every lapse in professional behavior will be investigated and remediated as indicated.

No identifying information is required to report.

This new online system is designed to compliment other existing mechanisms (e.g., Course and Block Directors, Assistant and Associate Deans in the School of Medicine, Ombuds Office, and both Medical Student and House Staff Associations).

For more information and access to the EthicsPoint portal go to:

www.UCDenver.edu/ProfessionalismFirst

or email

ProfessionalismFirst@UCDenver.edu