

Research Track Syllabus

**Phase 1 – Phase IV,
2022 - 2023
IDPT 5094, 5095, 6095, 7095, 8095
Electives: IDPT 8601, 8602**

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For questions related to Research Track: You are welcome to contact us directly, or email at coloradoresearchtrack@cuanschutz.edu. E-mails will be checked daily and answered within 1 business day (normal weekdays), but will not be answered on weekends/holidays.

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Research Track Overview

The SOM Research Track provides students with in-depth long-term exposure to research. This is an open and competitive program students apply to during their 1st year of medical school. Students in Research Track will:

- Work with a mentor to build a research plan
- Carry out that plan through their four years of medical school
- Receive a stipend over the summer between Preclerkship and Clerkship years for one month of full time research with their mentor
- Receive a second stipend during the Postclerkship period of medical school for 1-2 months of full time research with their mentor
- Have multiple opportunities to present their work
- Present their research at the Western Student Medical Research Forum in Carmel California
- Present their research at a national meeting in their specialty
- Submit a first-author or co-first author manuscript prior to residency

The Research Track is a four-year program. Students leave medical school prepared to continue their research into residency, fellowship and throughout their academic careers.

The Research Track also serves the dual purpose of fulfilling students' Mentored Scholarly Activity requirement.

Research Track Goals

- Graduates will have the knowledge, attitudes, and skills to be lifelong, self-directed learners.
- Foster student development of an identity as a physician capable of being involved with and completing research efforts
- Graduates will acquire the knowledge and skills to successfully complete the components of a research project including:
 - Identification of a health care related scientific questions
 - Participation in data collection and analysis □ Oral dissemination of scientific information

- Written dissemination of scientific information

Application Process

- Entry into the Research Track is a competitive process.
- Application to the Research Track is via the development of an individualized Research Plan which will be created and monitored by the student in collaboration with a primary research mentor. The application due date is determined on a yearly basis and further details and due dates are provided to the first-year medical student class well before the application deadline.
- If accepted into the Research Track, students will need to agree to and sign the acceptance letter and the student/mentor agreement. **Application Process Objectives**
- Identify a mentor
- Review and assess the commitment level necessary to complete the research track.
- Complete a research plan which includes a description of the scientific question and its relationship to established scientific literature; appropriate methodology including, if appropriate, sample collection; analysis; and early plans related to dissemination.

Assignments, Due Dates and Requirements

Class of 2026 Preclerkship Year (Plains)

Precelership Year (Year 1) Assignment Due Dates

- Research Track Application Period Opens: August 1, 2022
- Research Track Applications Due: October 3, 2022
- CITI/IACUC Training Submission: January 23, 2023
- Capstone Poster Judging: TBD
- HR Finance Information: May 15, 2023

Preclerkship Year Session Dates

- Orientation: November 16, 2022
- EndNote Training (asynchronous): February 6, 2023
- 1:1 session with Track Director (December-February 2023)
- How to Present a Work in Progress Talk (April 2023)
- Work In Progress Presentations: April-June 2023
- Summer Research Track Course Orientation: July 19, 2023, 12-1 PM

Class of 2026- Summer Discovery Period July/August 2023

- Summer Research Track Course Orientation: July 19, 2023, 12-1 PM
- 4 weeks full time research work on your Research Track project with your mentor
- Asynchronous Sessions (Due Aug 17, 2023)

- How to Write an Abstract Video:
 - How to Make a Scientific Poster Video
 - How To Do An Oral Presentation Video:
- Work In Progress Presentation: August 18 and 19, 2023

Preclerkship Year Requirements

- Students are expected to spend approximately ½ day per week working on their project, starting in November through the Preclerkship Year (Plains curriculum) through the remainder of the academic year.
- Students will attend mandatory meetings of the Research Track beginning in January 2023. There will be 4 mandatory meetings in Spring semester (Jan through July). These include a 1:1 meeting with the Track Director, a session on how to do a work in progress session, your work-in-progress session, and a summer orientation session.
- Students will spend four weeks in a full time summer research experience between the Preclerkship Year and Clerkship during the “Discovery period” (July 24, 2023 to August 18, 2023). Students will receive a stipend of for the 4-week full-time research work (40 hours per week). ***Note: Research Track students must terminate any other University employment they may have before beginning their full-time research experience.***
- There may be additional requirements depending on the source of funding.

Required if your project includes human subjects:

- Colorado Multiple Institutional Review Board ([COMIRB](#)) – If your project involves human subjects you must complete [COMIRB](#) training/certification on line and plan ahead to submit your protocol as soon as possible.

Required if your project includes vertebrate animal subjects:

- If your project involves vertebrate subjects your project must be approved by IACUC. Plan ahead to submit your protocol as soon as possible.

Preclerkship Year (Year 1) Goals

1. Students will identify a mentor and establish a research mentor-mentee relationship.
2. Students will develop a well-defined mentored research project and timeline for completion.
3. Students will have basic skills in the use of scientific article citation management

Learning Objectives Individualized Research Experience

1. Develop a relationship with a scientific mentor
2. Review scientific literature pertinent to the individual research project.

3. Identify skills that are needed to carry out components of the individual research project.
4. Begin training to master the identified skills needed to carry out components of the individual research project.
5. Identify whether the research project needs approval from oversight bodies (i.e. COMIRB, Institutional Animal Care and Use Committee) and develop a plan (if needed) to obtain approval.

Learning Objectives-Work in Progress Presentation 1

1. Present WIP to peers and faculty in an oral presentation
2. Effectively respond to comments and questions from peers about your research efforts
3. Identify scientific questions in other students' presentations
4. Evaluate strengths and weaknesses in presentations by others

Class of 2025 (Trek Curriculum) Clerkship Year

IDPT 5095-Summer Between Preclerkship and Clerkship Year (Discovery); July 25, 2023-August 19, 2023; Dates should be changed to: July 24, 2023-August 18, 2023

Goals:

1. Demonstrate progress towards the completion of research project
2. Publicly communicate understanding of the project to peers

Summer Requirements and Due Dates for IDPT 5095:

1. Attend the summer orientation session on **7/19/2023 at 12 PM via Zoom**.
2. Advance your research project as much as possible (collect data, analyze, etc)
3. Work on your research project 40 hours a week for the 4 weeks of the course.
4. Meet with your mentor
5. Watch the 3 videos on North Star: **Deadline 8/15/2023**
 - a. How to write an abstract
 - b. How to make a poster
 - c. How to do an oral scientific presentation
6. Present your project orally, with a power point presentation during a Work-in-Progress session that will be scheduled near the end of the course (**WIPS will be held on 8/15, 8/16, and 8/17**).
Evaluate the presentations of your peers in a Work in Progress session (**WIPS will be held on 8/15, 8/16, and 8/17**).

Learning Objectives- Summer Orientation Session

1. Describe the overall expectations and structure of the summer experience in the Research Track

Learning Objectives-Work in Progress Session 2

1. Present WIP to peers and faculty in an oral presentation
2. Effectively respond to comments and questions from peers about your research efforts
3. Identify scientific questions when others present
4. Evaluate strengths and weaknesses in presentations by others.

Learning Objectives Individualized Research Experience

1. Regularly meet with a scientific mentor
2. Gain any necessary skills needed for data collection.
3. Begin data collection appropriate to the individualized research project

Learning Objectives Asynchronous Videos (How to do an oral scientific presentation, How to write an abstract, How to create a scientific poster).

1. Describe basic components of an oral scientific presentation
2. Describe the basic components of an abstract.
3. List the components of an effective scientific poster.

Class of 2025 (Trek Curriculum) Clerkship Year

Clerkship Year Assignment Due Dates

- Submit a scientific abstract to Western Medical Research Conference (Carmel) by September 23, 2022 (don't wait until the last day)
 - Submission of an abstract to Carmel AFMR during the Clerkship Year is strongly encouraged. If the student and mentor determine the work is not ready for submission, the student can elect to submit for the Carmel AFMR during the Postclerkship Year (Year 3 or 4) Note that the class of 2025 calendar currently shows that likely the 2024 Carmel meeting will fall during the Trail Immersions- so it may not be possible for you to travel then (which would mean you would need to defer until Year 4 in going to Carmel). We won't know for sure about the potential conflict until next summer when the Carmel 2024 meeting dates are released.

- Note that the student must submit all co-authors disclosures during the abstract submission process and this may take some time to collect—so start this process early.
- Annual Research Forum Poster Submission: Optional this year
- Annual Research Forum Presentation: Optional this year
- Project Update Survey: June 12, 2023 (exact date TBD)

Clerkship (LIC) Year Requirements

- Students will have the opportunity to present their research plans and findings:
 - To campus-wide peers and faculty judges: In a virtual poster presentation format at the annual Anschutz campus Student Research Forum (this is optional this year)
 - To regional peers and faculty at the Western Section of the American Federation of Clinical Research in Carmel (If determined by the student and mentor that the research is not ready for submission, the student will submit to Carmel in the Postclerkship phase)

Clerkship Year Goals

1. Demonstrate progress towards the completion of your research project
2. Publicly communicate understanding of the project to others

Learning Objectives- Research Forum

1. Create a research poster describing the research question, methods, results and conclusions.
2. Present research to peers and faculty in a combined oral presentation (poster format)
3. Effectively respond to comments and questions from peers and faculty about the research project.

Learning Objectives-Western Student Medical Research Forum

1. Deliver an oral presentation of the individual research project (oral podium or poster) to peers and faculty at a scientific meeting.
2. Effectively respond to comments and questions from peers and faculty about your research

Learning Objectives- Individualized Research Experience

1. Further develop a relationship with a scientific mentor
2. Advance your progress toward completion of a research project

Class of 2024 (Hybrid Curriculum) Academic Year 2022-2023 (End of Clerkships, Advanced Science Courses, AI/Electives)

Clerkship Year Assignment Due Date

- Project Update Survey: 11/14/2023

Session Dates

- ICC/Basecamp Track Time: March 13-24, 2023 (Track time will occur sometime during this timeframe -exact date to be determined)

Requirements Hybrid Students 2022-2023 Year (End of Clerkships, Advanced Science Courses, AI/Electives)

- Students will provide an update on the status of their project.
- Students will engage with project mentor and begin to plan (or complete) research months for this academic year through graduation

Goals:

1. Gain experience reading and assessing scientific posters and oral presentations.
2. Demonstrate progress towards the completion of your research project

Learning Objectives- Individualized Research Experience

1. Further develop a relationship with a scientific mentor
2. Advance your progress toward completion of a research project

Beginning in mid-March 2023 (after the Advanced Science Courses end), students will be engaged in doing their Active Internship and Electives. Students may spend up to 12 weeks (three 4-week rotations) in a full-time elective research experience from March 2023 through graduation. Students should plan to do at least 2 Research elective months: one of IDPT 8601 and one of IDPT 8602 (IDPT 8601 is the first research track elective month and IDPT8602 is the second one). Grades for 8601 and 8602 will be assigned as Honors/High Pass/Pass/ or Fail for work completed in these courses in addition to the IDPT 8095 (Research Track) Pass/Fail grade. It is recommended to complete the first four-week rotation prior to August of the 4th year It is recommended to start the second 4-week rotation two to three months after the first rotation, Both the first and second rotation should be completed before December 1 (preferably before November 1) of the 4th year. Your manuscript draft will be due December 1, 2023 (your 4th year of medical school)—so plan ahead so you be prepared to meet the deadlines.

- For students who take Research Track Electives-Students will receive a stipend for successfully completing elective 8601 and 8602. 8602 may be taken a second time for

an additional 4 weeks of credit and a grade, but there is no stipend for the second 8602 enrollment.

- Course 8601: goal should be to have first submission of first author paper by the end of this month
- Course 8602: Usually this elective is taken 2-3 months after course 8601). This elective is appropriate for writing, rewriting and/or resubmission of a submitted manuscript Course 8602 may be repeated once for credit; however, there is no stipend for the second 8602 month.
- Work submissions (assignments) for 8601 and 8602 – Due the last day of each rotation

If you submit an abstract and plan to present at a national meeting be aware of the following:

- It must be a national, non-student meeting
- **As of 7/1/2023: The meeting must be held in the 48 continental United States. International conferences will not be supported financially by the Research Track (and therefore you can NOT be reimbursed for expenses related to international meetings).**
 - For the remainder of 2022-2023 academic year: Currently, students can travel to meetings in the United States, Canada, and Mexico. US meetings are strongly preferred. No other international locations will be supported by the Research Track. As stated above, for any meetings for travel on or after 7/1/2023, they must be in the 48 continental United States only.
- Please be thoughtful in planning which meeting to attend. Since abstracts are often due 6 months in advance of a meeting-you may already be planning to submit an abstract and attend a meeting. Meetings which occur between Nov 1 and Jan 31 of your 4th year may conflict with residency interviews. Dates to potentially avoid: November 1 – January 31 (of 4th year). A meeting during this time may be possible, but know you could have a conflict with an interview date.
- With COVID-19 continuing to circulate, some meetings may be virtual (this is still acceptable to meet your Research Track requirement for presentation at a national meeting).
- You must obtain permission to travel to the meeting (and be away from your clinical experiences) from the Office of Student Life as soon as you know your abstract has been accepted (you need to get your absences approved through OSL). You must also

notify whoever is supervising you during your elective or clinical rotation of your planned absence.

Class of 2023 Phase IV (Academic Year 2022-2023) Legacy Curriculum

Phase IV Assignment Due Dates:

- Draft of First author manuscript: December 1, 2022 OR a copy of a First author manuscript you have submitted to a peer reviewed journal Evidence of Abstract Submission to a National Meeting: December 1, 2022
- Submit Final First Author Manuscript: February 1, 2023
- Evidence of Manuscript Submission to journal – February 1, 2023
- Capstone Data Collect Survey: February 6, 2023
- Capstone Presentation: March 3, 2023

Phase IV Session Dates:

- ICC/Transition to Residency Basecamp Track Time: Track time will occur between April 24-May 19, 2023 (see ICC/Basecamp schedule)
- Capstone Presentation: March 3, 2023

Requirements Phase IV

- Students may spend up to 12 weeks (three 4-week rotations) in a full-time elective research experience during Phase IV via IDPT 8601 and IDPT 8602. Grades for 8601 and 8602 will be assigned as Honors/High Pass/Pass/ or Fail for work completed in these courses in addition to the IDPT 8095 (Research Track) Pass/Fail grade. It is recommended to complete the first four-week rotation in the first few months of Phase IV (August or earlier); It is recommended to start the second 4-week rotation at two to three months after the first rotation, Both the first and second rotation should be completed before Dec 1 (preferably before Nov 1) of Phase IV. Students will receive a stipend for IDPT 8601 and 8602. 8602 may be taken a second time for an additional 4 weeks of credit and a grade, but there is no stipend for the second 8602 enrollment.
 - Note: Research Track students may need to complete elective rotations in their mentor's lab in the Aurora/Denver or Ft. Collins (depending on mentor's location) area during Phase IV.
 - Course 8601: May-August – goal should be to have first submission of first author paper by the end of this month
 - Course 8602: Sept-Dec (generally 3-4 months after first month)
 - appropriate for rewriting and resubmission
 - Course 8602 may be repeated once for credit; however, remember there is no stipend for the second month.
 - Work submissions – Due the last day of the rotation

- Students must submit an abstract and present at a national non-student meeting. **With COVID-19 still circulating, some national meetings may be virtual (this is still acceptable to meet your Research Track requirement for presentation at a national meeting).**

(Remember abstract deadlines are often 6 months before a meeting) * Refer to Appendix B for travel information

- **As of 7/1/2023: The meeting must be held in the 48 continental United States. International conferences will not be supported financially by the Research Track (and therefore you can NOT be reimbursed for expenses related to international meetings).**
 - **For the remainder of 2022-2023 academic year:** Currently, students can travel to meetings in the United States, Canada, and Mexico. US meetings are strongly preferred. No other international locations will be supported by the Research Track. As stated above, for any meetings for travel on or after 7/1/2023, they must be in the 48 continental United States only.
- Research Track students are NOT eligible to attend a national meeting during ICCs/Basecamps, during the week of the Match, or during graduation week. For the 2022-2023 academic year, dates not permissible to attend a national meeting are:
 - March 13-17, 2023: Match Week
 - March 2023: ICC/Transition to Residency Basecamp- Track time will occur sometime during the April 24- May 19 Transition to Residency Basecamp (see the ICC/Transition to Residency Schedule)
 - May 22-26, 2023: Graduation week
- Please be thoughtful in planning which meeting to attend. Meetings which occur between Nov 1 and Jan 31 of each year may conflict with residency interviews. Dates to potentially avoid: November 1– January 31.
- **Submit a draft first-author or co-first author manuscript to Canvas or a final first author manuscript to a peer-reviewed journal and evidence of submission -Submit by December 1st**
 - This is what your fall Research Track IDPT 8095 course grade is based on.
- Submit a **final first-author manuscript** to a peer-reviewed journal and evidence of submission -Submit by February 1, 2023.
- This, in addition to the Capstone presentation, is what your spring Research Track IDPT 8095 course grade is based upon.
- All research track students will **present at the MSA Capstone** presentation in the Spring of their graduating year.
- Optional – Students may also submit and present a poster at the Annual Student Research Forum during December of Phase IV.

Phase IV Goals

1. Submit a manuscript to a peer reviewed journal
2. Submit and have an abstract accepted to a national meeting
3. Present an abstract at a national meeting

Phase IV Learning Objectives

1. List the elements needed for a scientific abstract.
2. List the generally accepted basic elements needed in a research manuscript that will be submitted to a peer reviewed journal.
3. Analyze and interpret the results of your research project.
4. Describe the potential weaknesses or limitations of your individual research project.
5. Describe the process from start to finish of writing and submitting a research manuscript to a peer reviewed journal.
6. Respond effectively to questions during presentation of your scientific research.

Attendance and Conduct Expectations [Need to clarify this for each class]

Please refer to SOM MD Program Policies and Procedures for the Trek, Hybrid, or Legacy Curriculum (whichever is appropriate) accessible at these links for details on absence policies and conduct expectations:

- Policies and Procedures for Trek:
https://medschool.cuanschutz.edu/docs/librariesprovider31/education-docs/ome/2021-2022-som-md-policies-and-procedures_trek-curriculum-a.pdf?sfvrsn=bcb58fba_0
- Policies and Procedures for Hybrid/Legacy:
https://medschool.cuanschutz.edu/docs/librariesprovider31/education-docs/ome/2021-2022-som-md-policies-and-procedures_-hybrid-and-legacy-curriculum-a.pdf?sfvrsn=4db58fba_0

Preclerkship Year: We limit the number of required sessions in the Research Track since most of the work in the Track is focused on your individual project work with your mentor. However, we will have some required sessions (via Zoom or in-person) during the year. During the period from November through August of the Preclerkship Year, students are allowed to miss one required session (without an excused absence), only if they notify the research track coordinator and research track director in advance. If student is late to or leaves early from 2 required meetings, the research track director may count this as a missed session.

- **Failure to attend a required session, without an excused absence, will be considered a Professionalism issue:**

- 1st unexcused absence in a year/phase –an Assistant Dean 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. Anderson, who may 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.
- Otherwise, you will be expected to organize your own schedule, with guidance from your mentor.
 - Having a negative impact on the small group learning environment, including arriving late for more than one session, will be treated as a separate Professionalism issue.

Course Evaluations

- Students will be required to complete online evaluations.

Grading- How will Students be Graded in the Research Track?

For a full description of grading policies, please refer to the SOM MD Program Policies and Procedures for the Trek/Hybrid, or Legacy Curriculum at these links:

- **Policies and Procedures for Trek:**
https://medschool.cuanschutz.edu/docs/librariesprovider31/education-docs/ome/2022-2023-som-md-policies-and-procedures_trek-curriculum_july-26-22.pdf?sfvrsn=5b2399ba_0
- **Policies and Procedures for Hybrid/Legacy:**
https://medschool.cuanschutz.edu/docs/librariesprovider31/education-docs/ome/2022-2023-som-md-policies-and-procedures_hybrid-and-legacy-curriculum-a.pdf?sfvrsn=15009fba_0

Additional Grading Information Specific to Research Track:

- **All Students:** A passing grade is assigned in the Required Research Track Courses IDPT 5094, 5095, 6095, 7095, and 8095 based on successful completion of the research track requirements for that semester.
- **Legacy and Hybrid Students:** The grades of “Honors” and “High Pass” are not available for the required Research Track Courses (IDPT 5094, 5095, 6095, 7095, 8095). A grade of P (Pass), F (Fail), I (Incomplete), IP (In Progress) or PR (Pass with Remediation) will be assigned in accordance as described in the SOM Policies. W (Withdrawn) will appear on the transcript for those that withdraw from a course.
- **Trek Students:** The grades of “Honors” and “High Pass” are not available for the required Research Track Courses (IDPT 5094, 5095, 6095, 7095, 8095). A grade of P

(Pass), F (Fail), IP (In Progress) or PR (Pass with Remediation) will be assigned in accordance as described in the SOM Policies.. W (Withdrawn) will appear on the transcript for those that withdraw from a course.

- **All Students:** The grades of “Honors and “High Pass” are available in the Postclerkship Research Elective courses 8601 and 8602 if the student achieves the standards described for “Honors” or “High Pass”.
- **All Students:** For the Fall semester of the Preclerkship Year (Plains), the student will receive a grade in Mentored Scholarly Activity (MSA) instead of Research Track (since students are still in the application process for Research Track until late in the semester when decisions are made about Research Track acceptance). **Please see the MSA grading policy for information regarding Preclerkship Year MSA Fall Semester grades.**
- **All Students:** Students who are placed on academic warning, probation, or are not advanced to the next year may be notified by the Promotions Committee that they can not participate in electives (including Research Track activities). Students who have not already successfully completed that semester’s Research Track requirements may need to be moved to the Mentored Scholarly Activity program (which generally has less rigorous requirements) in order to give the student more time to focus on their classwork and be successful. Students with ongoing academic difficulties, but without a Promotions Committee mandate, may still be advised that moving to MSA would be in their best interests.

As noted above, grading is slightly different for the Hybrid/Legacy students than for Trek students. Refer to the Policies and Procedures link (above) for the Hybrid/Legacy or Trek students for more details on definitions for each grade. The I grade is only used in the Hybrid/Legacy grading scheme. Please also note that the Policies and Procedures contain a more detailed explanation of of IP, I (Legacy/Hybrid only), PR, and F grades.

Trek, Hybrid, and Legacy Grading for Postclerkship Phase Research Track Courses (IDPT 8601 and IDPT 8602)

IDPT 8601 - Grading Rubric

Honors:

Completion of an abstract appropriate for submission to a non-student national meeting (student must submit name of the meeting, abstract submission dates, and intent to attend and present at the meeting if the abstract is accepted). If the submission deadline has passed, student must provide evidence of abstract submission, and, if available, the results.

And

Submission of a first-author (or co-first author) manuscript for review for possible publication (student must provide a copy of the manuscript and evidence of submission, such as an email from a scientific journal or book editor).

High Pass:

Completion of an abstract appropriate for submission to a non-student national meeting (student must submit name of the meeting, abstract submission dates, and intent to attend and present at the meeting if the abstract is accepted). If the submission deadline has passed, student must provide evidence of abstract submission, and, if available, the results.

Or

Submission of a first-author (or co-first author) manuscript for review for possible publication (student must provide a copy of the manuscript and evidence of submission, such as an email from a scientific journal or book editor).

Pass:

Evidence of progress towards completion of a scientific project, including: A draft of a first-author (or co-first author) scientific manuscript **and** the current status of the project and a reasonable plan, including a time-line, for how the project and the accompanying manuscript will be completed

Or

A submitted non-first author manuscript with an accompanying detailed description of the role the student played in the project.

Or

A description of what barriers prevent completion of the project, what attempts were made to overcome the barriers, and, if the project is not to be completed, what was learned from the project.

IDPT 8602 - Grading Rubric**Honors:**

Completion of an abstract appropriate for submission to a non-student national meeting (student must submit name of the meeting, abstract submission dates, and intent to attend and present at the meeting if the abstract is accepted). If the submission deadline has passed, student must provide evidence of abstract submission, and, if available, the results, **AND EITHER:**

- Re-submission of a first-author (or co-first author) manuscript for review for possible publication (student must provide a copy of the manuscript and evidence of submission, such as an email from a scientific journal or book editor).

Or

- Evidence of acceptance of a first-author (or co-first author) manuscript for publication (please provide evidence of submission-i.e. email confirmation or letter from journal).

High Pass:

Completion of an abstract appropriate for submission to a non-student national meeting (student must submit name of the meeting, abstract submission dates, and intent to attend and present at the meeting if the abstract is accepted). If the submission deadline has passed, student must provide evidence of abstract submission, and, if available, the results.

And

Submission of a first-author (or co-first author) manuscript for review for possible publication (student must provide a copy of the manuscript and evidence of submission, such as an email from a scientific journal or book editor).

Pass

Submission of a non-first author manuscript with an accompanying detailed description of the role the student played in the project, **AND** completion of an abstract appropriate for submission to a non-student national meeting (student must submit name of the meeting, abstract submission dates, and intent to attend and present at the meeting if the abstract is accepted). If the submission deadline has passed, student must provide evidence of abstract submission, and, if available, the results.

OR

A description of what barriers prevent completion of the project, what attempts were made to overcome the barriers, and, if the project is not to be completed, what was learned from the project **AND** submission of a first-author manuscript to the Track Director in the style of and meeting all requirements of the MSA program **AND** Completion of an abstract appropriate for submission to a non-student national meeting (student must submit name of the meeting, abstract submission dates, and intent to attend and present at the meeting if the abstract is accepted). If the submission deadline has passed, student must provide evidence of abstract submission, and, if available, the results

Withdrawing from the Track

If a student is unable to continue or wishes to withdraw from the Research Track, the student must meet with the Research Track Director to review the issues. If the Research Track Director agrees that continuing in the track is not feasible and/or in

the student's best interests, the Research Track Director will advise the student to meet with the Associate Dean in the Office of Student Life to discuss a plan to withdraw from the Research Track and transfer to the Mentored Scholarly Activity (MSA) program. Once a decision has been made that the student will withdraw from the Research Track program, the student must contact the MSA director to start a plan for the student's MSA project.

Resources available to Research Track students

HEALTH SCIENCE LIBRARY—the Research Track program has librarian who can help with research for the background sections of proposals and with systematic reviews. Librarians can assist with:

- Problem identification and focus
- Question formulation
- Search strategy
- Identifying resources for literature review
- Organizing and managing citations
- Manuscript style requirements

Research Track students can contact the librarian to schedule a FREE individual consultation. Most consultations are scheduled for an hour and provide training and help in customizing your research strategy for PubMed, Google Scholar, or other resources such as EMBASE (European and international medical journals), Cochrane Library (evidence based systematic reviews), genetic/molecular biology or legal/historical/ethics resources. After the initial consultation librarians are available via email, phone or in person for follow up.

Library Contacts:

- Basic Science Research Wladimir Labeikovsky, PhD (303-724-2114)
- Clinical Research Kristen DeSanto, MSLS, MS, RD, AHIP (303-724-2121)
- Global Health Nina McHale, MSLS, AHIP (303-724-2133)
- Humanities & Social Sciences Christi Piper, MLIS, AHIP (303-724-2170)
- Public Health & Epidemiology Ben Harnke, MLIS (303-724-2146)

Students can also contact the Library via the Ask Us! Link on the Library's homepage. Please provide information on your research topic or identify your thematic area as part of your Ask Us! Request.

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:

- [Online Drop Box](#), The Online Drop Box is an asynchronous service whereby students submit a document and receive feedback in about four business days. CU Anschutz students might be especially interested in our [Principles of Scientific Writing Handout](#). More handouts available on the [How-To Guides page](#).

[Biostatistical support](#) – The Research Consulting Laboratory is available for teaching on statistical approaches without charge to Research Track students. Please be sure to identify yourself as a Research Track/MSA student.

Research Track Mentor Expectations:

- Meet with students to explore projects and develop an Individualized Research Plan (to be used Work with the student to develop a plan that is feasible in the limited time available to a medical student, will lead to a first-author publication, and where the manuscript reflecting the results obtained in Phases I and II can be deferred to Phase IV for submission.
- Sign off on student agreement, including meeting/communication schedule, and work on your professional relationship
- Review student's critical literature reviews
- Work with the student on data collection and analysis
- Help the student develop a first author paper
- Help develop and review the work plan and timing
- Work with the student to write abstracts and to choose an appropriate scientific meeting for abstract submission and attendance during Phase IV
- 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.

APPENDIX A: Research Track Western Student Medical Research Forum-Carmel, CA Meeting Information

1. SUBMISSION OF ABSTRACT AND ABSTRACT ACCEPTANCE

- **Complete Abstract:** Prep submission of the abstract prior to the abstract deadline.
- **Abstract submission website:** <https://wrm2023.abstractcentral.com/>
- **Submission Deadline: September 23, 2022 by 11:59pm (PST)**
- **Finalize and pay for abstract submission** prior to September 23rd, 2022. Contact the Research Track Coordinator to schedule meeting.
- **Wait to book flights, reserve hotel rooms, and register for the meeting** until you've received notification of abstract acceptance. Notify and seek approval from your LIC Director, OSL and Research Track Leadership on presentation dates.
- Upload the following to North Star under the Phase II: Carmel Abstract Submission assignment: 1) Confirmation of submission to the Carmel (WMRC) meeting (email notification of acceptance), and 2) The abstract you submitted. This link will direct you to the assignment to upload your materials. If your abstract was not accepted, only upload the abstract submitted.
 - https://cuanschultz.elentra.cloud/profile/gradebook/assignments?section=view&assignment_id=253

2. PLANNING FOR TRAVEL to the Meeting – Arrange Flights, Reserve Rooms, Register for Meeting

A) Arrange Flights – Get the information below ready as the Travel agency will need it:

Full Name (exactly as it reads on your government issued photo ID - driver's license or passport):

Cell Phone:

Birthdate:

Email:

Gender on government issued photo ID:

If using Passport (complete highlighted area):

Issuing Country:

Issuing date (mm/dd/yyyy)

Passport Number:

Expiration date (mm/dd/yyyy)

Nationality:

When do you need to travel to Carmel? Date and approximate time:

When do you need to return to Denver? Date and approximate time:

Additional Comments: frequent flyer numbers, seat preferences, specific flights, etc.

B) Call the Travel Agency to Arrange Flights

- **Booking Flights:** Christopherson Business Travel will help book flights for each student. Contact them below with the following information. **Plan to fly to/from Monterey, CA**, as direct flights are available and it is the closest airport to Carmel.
- If you can't arrange travel via Monterey that is within your time frame you have approval to be gone, flights can be arranged from San Jose International Airport—but note this will mean you will need to have plenty of travel time to/from San Jose to Carmel built in—this is likely a 2 hour trip due to traffic (possibly longer). There is a shuttle that can take you to/from the San Jose Airport to Carmel. You can investigate it and see how to book it via this link: <https://www.montereyairbus.com/schedules>. We strongly recommend calling for shuttle details before you decide to book flights through San Jose. Also, note shuttle times are **not** guaranteed due to traffic issues that may arise. Overall, this will be a longer and more stressful trip—so please try to book flights via the Monterey, CA airport
 - **To book flights, call Christopherson Business Travel at 1-800-285-3603**, or email university.travel@cbtravel.com. Let the travel advisor know that you need to book flights for the **"CU AFMR Carmel Conference Event"** (**terminology is very important**), the advisor will be able to book travel according to our specifications. They have a list of how we are paying for your flights.
 - Have your information from the page 1 table in this document available when you call.

C) Make Hotel Reservations

- **Hotel Reservations:** Students will stay at the Carmel Mission Inn Hotel.
 - To reserve a room at Carmel Mission Inn Hotel:
 - By Phone: 855-235-3915 (identify yourself as being with the Western Students Medical Research Forum room block arriving January 18-22, 2023)
 - Online: www.carmelmissioninn.com (enter arrival and departure dates, click "Promo Code" drop down and select "Group Code", then enter the code 2301WESTER and click "Apply")
 - Use code: **"Western Medical Research Conference"** when making reservations.
 - A room block has been reserved at the Carmel Mission Inn from January 18-22. The rate for this block of rooms is \$179.00/night plus daily facility/resort fee of \$25 and taxes of 10.5% + \$2.00 for a total of \$227.42 per night. This is for single or double occupancy standard rooms. **Reservations must be made by December 19, 2022.**
 - Rooming with another student is highly recommended
 - Reimbursement will not occur until after trip.
 - For hotel charges to be reimbursed you need to provide an **itemized receipt**.
 - Note: if you are sharing a room, reimbursement information:
 - Split the bill as evenly as possible between both parties. Both students will need a copy of their portion of the bill and what they paid (receipt) for reimbursement.

D) Register for the meeting

- **Registration** – Registration opens in November. **Watch for email communication from the research track coordinator for specific instructions.** The Research Track Coordinator will assist in payment.

3) TRAVELING To and From Meeting

- **Parking** – You will only be reimbursed for the contracted rate. Uber/Lyft or similar vendors will be reimbursed for travel to and from airports as well as conference related activities. Below is a list for approved lots for parking at DIA.
 - [Canopy Parking - Commerce City - 8100 Tower Road](#)
- **Shuttle** – Transportation to/from the airport and hotel will need to be arranged individually by students. Students can use Uber/Lyft or taxi if receipts are submitted. Keep receipts to be reimbursed after the conference for each individual trip.
- **Baggage Fees** - Provide a receipt for all fees. (maximum reimbursement is for 1 bag for each flight)
- **Meals** will only be reimbursed if conference is not providing a meal. Please note, the reimbursement will only be for food and non-alcoholic drinks (CU will not reimburse for alcohol).
 - You will be reimbursed for meals (other than meals provided by the conference) up to the following per diem rates. You do not need to save meal receipts.
 - Per diem rates for Carmel, CA in 2023.

Continental Breakfast/ Breakfast	\$17
Lunch	\$18
Dinner	\$34
Incidentals	\$5
Total (per day)	\$55.50

4. AFTER TRAVEL – Reimbursement of Expenses

- **Reimbursement Information:** After the trip is completed submit all original itemized receipts (in PDF format) to the research track coordinator to coloradoresearchtrack@cuanschutz.edu. Receipts should be individual and saved as .pdf files.
- **Reimbursement requests must be submitted within 10 days of travel.**
- **Personal Expenses** – Expenses incurred for traveler’s personal benefit – e.g., magazines, candy, athletic club fees, movie rentals, and other entertainment – are not allowable reimbursements.

APPENDIX B: Travel to a National Conference to Present Research

1. SUBMISSION OF ABSTRACT AND ABSTRACT ACCEPTANCE

- **National Conference Abstract Presentation:** To complete your national conference Research Track requirement, students must submit an abstract (and present if accepted) to a national (nonstudent) conference. Conferences in the US are strongly preferred: 1) Extra steps are required for you to gain University permission to travel outside the United States, 2) Permission to travel may be revoked if problems arise in the country that might compromise your safety, and 3) The usual excused time away for research presentations is 48 hours (an international travel schedule may be difficult to arrange on that timeline). You may attend a conference outside of the USMCA zone, but it will not complete the Research Track requirement and meeting/travel expenses will not be paid for by the Research Track.
 - **Policy for meeting travel as of 7/1/2023:** **The meeting/conference must be held in the 48 continental United States. International conferences will not be supported financially by the Research Track (and therefore you can NOT be reimbursed for expenses related to international meetings).**
 - **For the remainder of 2022-2023 academic year:** Currently, students can travel to meetings in the United States, Canada, and Mexico. US meetings are strongly preferred. No other international locations will be supported by the Research Track. Conferences in the US are strongly preferred because:
 - 1) Extra steps are required for you to gain University permission to travel outside the United States. **Do NOT book any international travel or registration prior to discussing your plans with the Research Track Coordinator and ensuring you have approval for travel through Concur (discuss with Research Track Coordinator),**
 - 2) Permission to travel may be revoked if problems arise in the country that might compromise your safety, and
 - 3) The usual excused time away for research presentations is 48 hours (an international travel schedule may be difficult to arrange on that timeline).
 - As stated above, for any meetings for travel on or after 7/1/2023, they must be in the 48 continental United States only.
- **Complete Abstract:** Prep submission of your abstract prior to the abstract deadline. Avoid submitting your abstract on the due date, as submission portals sometimes crash on the deadline date.
- **Finalize and pay for abstract submission** prior to conference deadline. Contact the Research Track Coordinator to schedule a meeting to assist in payment.
- **Wait to book flights, reserve hotel rooms, and register for the meeting** until you've received notification of abstract acceptance. Notify and seek approval from LIC Directors/course directors, OSL and Research Track Leadership on presentation dates prior to arranging travel or registration.

• **Upload the following to North Star or Canvas to fulfill your track requirements:**

- Evidence of Abstract Submission to a National Meeting
 - This is the receipt of your abstract submission to the conference of choice. Email confirmation is sufficient.
- Submitted First Author Abstract – National Meeting
 - This is a copy of the abstract you submitted to the conference.

2. PLANNING FOR TRAVEL to the Meeting – Arrange Flights, Reserve Rooms, Register for Meeting

It is highly advised that you communicate with the Research Track Coordinator to make sure you are following all University policy to make sure your tickets and travel expenses will be reimbursable. Note that currently the University requires approval through the Concur system prior to buying your tickets (or they will not be reimbursed). If you decide to purchase tickets yourself, these costs may not be reimbursable. Expenses are not reimbursed until after the conference has concluded and receipts issued to the coordinator.

A) Arrange Flights – Fill in the information below and call or send it to the Track coordinator. Passport information should be transmitted via phone call rather than sending it by email (since that is sensitive information). You may email the Track coordinator to set up a time to call and transmit the information.	
Full Name (exactly as it reads on your government issued photo ID - driver's license or passport):	
Cell Phone:	Birthdate:
Email:	
Gender on government issued photo ID:	
If using Passport (complete highlighted area):	
Issuing Country:	Issuing date (mm/dd/yyyy)
Passport Number:	Expiration date (mm/dd/yyyy)
	Nationality:
When do you need to depart Denver? Date and approximate time:	
When do you need to return to Denver? Date and approximate time:	
Additional Comments: frequent flyer numbers, seat preferences, specific flights, etc.	

B) Arrange Flights with Coordinator

- **Booking Flights: The Research Track Coordinator will assist in booking flights on your behalf and getting those paid for.** Note that currently the University requires approval through the Concur system prior to buying your tickets (or they will not be reimbursed). It is highly advised that you communicate with the Research Track Coordinator to make sure you are following all University policy to make sure your tickets will be reimbursable. If you decide to purchase tickets yourself, these costs will not be reimbursed until after the conference has concluded and receipts issued to the coordinator.

- Concur is online the meeting and travel reimbursement mechanism for the University. All students traveling to a meeting need to do the following to ensure expenses are reimbursable. First, add the Research Track Coordinator as a delegate to your account in Concur. Below are the steps:
 - Go to <https://my.cu.edu/>
 - Click on CU Denver/Anschutz tile.
 - Click on Concur Travel & Expense System tile.
 - Click on “Profile” drop down in upper right corner, then “Profile Settings”
 - In the left column, under “Travel Settings”, click on “Assistants/Arrangers”, click on “Add an Assistant” in the upper right corner of that box, find coordinator name, add coordinator (click on the permissions you are able to, system already knows what the coordinator has permission to do).
 - Scroll up (while still under Travel Settings) and add your seat preferences, passport, frequent flyer number, etc. (option task)
 - Hit the “Save” button.
 - In the left-hand column, do the same (find coordinator and add that name) under the “Request Settings-Request Delegates” option and “Expense Settings-Expense Delegates” options.
- **Send your travel information (in the table at the top of this page) to the Research Track Coordinator to approve travel dates and book flights.**

C) Make Hotel Reservations

- **Hotel Reservations:**
 - Students need to book hotel.
 - Students will be reimbursed after travel.
 - Price should be under \$200 per night. Please contact coordinator if rates are above \$200 for approval.
 - Use of the conference hotel is preferred (conferences traditionally have reduced rates for a block of rooms at one or more hotels—see the conference information to find out which hotels are offered). Usually, to get the reduced rate, you need to book your room through the conference reservation process (rather than directly through the hotel).
 - Students will be reimbursed a maximum of \$200 per night, only with an itemized receipt.
 - Reimbursement will not occur until after trip.
 - For hotel charges to be reimbursed you need to provide an **itemized receipt**.

D) Register for the meeting

- **Registration** – Registration often opens shortly after the abstract deadline. **Watch the conference website (and/or email communication from the conference) for specific instructions.** Register as soon as you can after receiving word that your abstract has been accepted and you have been cleared by the Office of Student Life for an excused absence to travel. The Research Track Coordinator will assist in payment. Please reach out to coordinator to schedule meeting. Reimbursement will not occur until after the conference if purchased yourself.

E) Poster Printing:

- Printing of a conference poster is available on the Anschutz Campus. The printing center is in the Fitzsimmons building. Please see their website (usual turn-around time is 5 business days). <https://www1.ucdenver.edu/offices/printing/print>
 - Fabric posters although slightly higher in cost than paper posters, are about the same cost as paper when you figure in the cardboard tube that paper posters require. Fabric posters can be put in your suitcase (paper posters can't) so they might be the best option.
 - Pay for the printing with your personal credit card and save your receipt to submit for reimbursement with your other meeting expenses after the meeting.

3) TRAVELING To and From Meeting

- **Parking** – You will only be reimbursed for the contracted rate. Uber/Lyft or similar vendors will be reimbursed for travel to and from airports as well as conference related activities. Below is a list for approved lots for parking at DIA.
 - [Canopy Parking - Commerce City - 8100 Tower Road](#)
- **Shuttle** – Transportation to/from the airport and hotel will need to be arranged individually by students. Students can use Uber/Lyft or taxi if receipts are submitted. Keep receipts to be reimbursed after the conference for each individual trip.
- **Baggage Fees** - Provide a receipt for all fees (maximum reimbursement is for 1 bag for each flight)
- **Meals** will only be reimbursed if conference is not providing a meal. Please note, the reimbursement will only be for food and non-alcoholic drinks (CU will not reimburse for alcohol).
 - Reimbursement will only be for food and drink.
 - CU will not reimburse for alcohol.
 - Receipts need to be itemized with totals.
 - Only 1 person's meal/drink on an itemized receipt.
 - Ask for a separate check for alcohol.
 - Write in the tip amount on your receipt.
 - Meal reimbursements will not exceed the recognized per diem rate. Per Diem is different for each state. Check with the research track coordinator for per diem rates for the location you are traveling to.
 - **NOTE:** University policy is that on travel days (the first and last days of your travel), meal allowance is 75% of the maximum per diem rate. Since most students will only have a 48-hour excused absence this rule will apply throughout your travel. The research coordinator can provide you with the information on how much you can be reimbursed for meals at your specific travel location. Ask the research track coordinator for additional information, regarding travel and reimbursement.