UNDERGRADUATE MEDICAL EDUCATION (UME)
Medical Doctor Program (MD)

COURSE OUTLINE

<table>
<thead>
<tr>
<th>Course Number:</th>
<th>MDCN 445</th>
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<tbody>
<tr>
<td>Course Name:</td>
<td>Applied Evidence Based Medicine II</td>
</tr>
<tr>
<td>Dates:</td>
<td>April 13 – August 31, 2021</td>
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<table>
<thead>
<tr>
<th>Schedules and classroom locations:</th>
<th>For pre-clerkship:</th>
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<tbody>
<tr>
<td></td>
<td>Year 1 &amp; 2 timetable is here</td>
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<tr>
<td></td>
<td><a href="https://cumming.ucalgary.ca/mdprogram/current-students/pre-clerkship-year-1-2/timetable">https://cumming.ucalgary.ca/mdprogram/current-students/pre-clerkship-year-1-2/timetable</a></td>
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<tr>
<td></td>
<td>Detailed scheduled is located online in OSLER</td>
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<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Course Chair:</td>
<td>Fariba Aghajafari</td>
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<tr>
<td></td>
<td><a href="mailto:fariba.aghajafari@ucalgary.ca">fariba.aghajafari@ucalgary.ca</a></td>
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<tr>
<td>Course Chair:</td>
<td>Kerry McBrien</td>
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<td><a href="mailto:kamcbrie@ucalgary.ca">kamcbrie@ucalgary.ca</a></td>
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<tr>
<td>Evaluation Rep:</td>
<td>Nicolle Begert</td>
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<td><a href="mailto:aebm@ucalgary.ca">aebm@ucalgary.ca</a></td>
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<td>UME Program Coordinator:</td>
<td>Nicolle Begert</td>
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<td><a href="mailto:aebm@ucalgary.ca">aebm@ucalgary.ca</a></td>
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<td>Student Course Rep:</td>
<td>Ann Subota</td>
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<td><a href="mailto:ann.subota@ucalgary.ca">ann.subota@ucalgary.ca</a></td>
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<tr>
<td>Student Exam Rep:</td>
<td>Lindey Felske</td>
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<td></td>
<td><a href="mailto:lindey.felske@ucalgary.ca">lindey.felske@ucalgary.ca</a></td>
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**Course Description**

Applied Evidence Based Medicine II teaches critical appraisal of literature and how to apply evidence to practice. It is also an opportunity to explore an area of particular interest to each student. The course is structured elective time, during which the concepts of evidence-based medicine are applied. Options for electives include an academic experience, i.e., participation in research or a directed study, under the supervision of a preceptor, or clinical experience where critical appraisal skills are used to address questions related to prognosis, diagnosis and/or treatment.

**Prerequisites**

Not applicable in the MD program.

**Supplementary Fees/Costs**

- Lab Coat
- Stethoscope
- iClickers
Learning Objectives
All learning objectives are described in Appendix A.

Course Text(s)/Recommended Reading/Learning Resources
The course will draw on a number of resources. The following are resources available through the library.

- Library guide: https://library.ucalgary.ca/guides/AEBM - for detailed information about creating PICO questions and searching the literature and other resources
- http://library.ucalgary.ca/hsl - Key library site for accessing MEDLINE, PubMed, DynaMed

Evaluation and Course Requirements

Evaluation Specifics:

The evaluation is an In-Training Evaluation Report (ITER) that reflects performance during the elective period with a pass/fail final grade. One ITER will be completed for each student by the preceptor for their elective block. For clinical electives, students are required to submit three Educational Prescriptions (EPs) for the 30-hour block. The EPs are not graded but must be signed by the preceptor and submitted to the AEBM coordinator to achieve a pass. For Academic electives a final assignment (product of work) is required that will be assessed within the ITER.

A. Elective ITER – Pass/Fail
Students will choose one 30-hour elective. Electives are evaluated using a standardized ITER depending on the elective type (clinical, research/directed study), and take into account the associated assignment.

Block Elective Choices:

A. 30-hour clinical elective. Includes:
   - 24 hours of booked clinical time with a preceptor
   - 3 Educational Prescription assignments (to be completed outside clinical hours)
   - Final preceptor evaluation (ITER)

B. 30-hour academic (directed study/research) elective. Includes:
   - 30 hours spent on preceptor-guided project, including preparation of assignment
   - Final assignment (elective dependent)
   - Final preceptor evaluation (ITER - includes assessment of assignment)

In the event that a student is unsatisfactory in the Year 2 assessment, the student will be required to complete additional elective time. Additional elective time will consist of 12 hours of clinical experience with a new preceptor, evaluated with a new ITER or an additional academic assignment, the details of which will depend on the original project and will be determined in consultation with the elective preceptor and the UME office.

Calculators for MCQ exam – N/A
**Assessment Dates**

The assessment dates provided in the Evaluation and Course Requirements may be subject to change due to circumstances beyond the MD Program’s control. In the event that an assessment date must be changed notification of the change will be emailed to the student by the evaluation team and posted on Osler. Students will be given as much notice of the assessment date change as possible.

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**Grading**

The University of Calgary Medical Doctor Program is a Pass/Fail program. The grading system that will appear on a student’s legal transcript is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
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<tbody>
<tr>
<td>CR</td>
<td>Completed Requirements</td>
</tr>
<tr>
<td>RM</td>
<td>Remedial Work Required</td>
</tr>
<tr>
<td>F</td>
<td>Fail</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawal</td>
</tr>
<tr>
<td>MT</td>
<td>Multi-Term (Used for Part A Courses that fall under 2 different terms in the calendar year.)</td>
</tr>
</tbody>
</table>

A student’s final grade for the course is the sum of the separate components. It is not necessary to pass each mandatory component separately in order to pass the course.

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**Assignments/Projects**

The following criteria shall generally apply to all written assignments. Faculty responsible for grading specific assignments may add additional criteria.

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**Timeliness**

In general, dates listed in Core Documents are intended to act as guidelines for assisting students to complete their learning activities and assignments in a timely fashion. Students encountering difficulties completing assignments due to health or other serious factors must contact the Course Chair to arrange a deferral of term work. A Physician/Counsellor Statement to confirm an absence for health reasons may be required.

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**Professional Conduct**

As members of the University community, students and staff are expected to demonstrate conduct that is consistent with the University of Calgary Calendar. The specific expectations cited in the Calendar include:

- respect for the dignity of all persons
- fair and equitable treatment of individuals in our diverse community
- personal integrity and trustworthiness
- respect for academic freedom, and
- respect for personal and University (or Host Institution) property.
Students and staff are expected to model behaviour in class that is consistent with our professional values and ethics. Students and staff are also expected to demonstrate professional behaviour in class that promotes and maintains a positive and productive learning environment. All students and staff are also expected to respect, appreciate, and encourage expression of diverse world views and perspectives. All members of the University community are expected to offer their fellow community members unconditional respect and constructive feedback. While critical thought, and debate, is valued in response to concepts and opinions shared in class, feedback must at all times be focused on the ideas or opinions shared and not on the person who has stated them.

Where a breach of an above-mentioned expectation occurs in class, the incident should be reported immediately to the Associate Dean or his/her designate. As stated in the University Calendar, students who seriously breach these guidelines may be subject to a range of penalties ranging from receiving a failing grade in an assignment to expulsion from the University.

University of Calgary Medical School – Student Code of Conduct
https://cumming.ucalgary.ca/mdprogram/current-students/pre-clerkship-year-1-2/student-code-conduct

<table>
<thead>
<tr>
<th>Electronic Submission of Course Work</th>
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<tr>
<td>Most assignments will be submitted via email to the Program Coordinator, UME unless otherwise stated. Assignments may be submitted in MS Word or Rich Text formats. It is the student’s responsibility to confirm with the Program Coordinator that the assignment has been received. This may be done through utilization of the return receipt function available on most email packages, or by a follow up confirmation email to the Program Coordinator.</td>
</tr>
</tbody>
</table>

It is the Program Coordinator’s responsibility to reply to any confirmation email from the student, and to inform the student promptly if there are any problems with the file (unable to open attachment, damaged data, etc.). In such cases, it is the responsibility of the student to promptly consult with the Program Coordinator regarding an alternate delivery method (e.g. courier, fax, etc.). It is the student’s responsibility to retain a copy of the original document. |
## One45 Overview

The MD Program utilizes the One45 Software Program for assessment purposes for all evaluations in Year 1, 2 and 3. Students are able to view completed evaluations online through this software program. Evaluations and assessment data is collected at regular intervals.

It is the student's responsibility to distribute their evaluations to preceptors during any given course and to follow up with preceptors if evaluations have not been completed by the deadline given out by the Undergraduate Medical Education Office.

In addition to assessments and evaluations, One45 is also utilized to evaluate your preceptors and to gather information from students on their learning experiences.

All students are provided training at the beginning of their program in Year 1. This would include a personal log in access code and password.

One45 is used throughout your training in the MD Program (Undergrad) as well as Residency (PGME).

**Website Link to Access One45:** [https://calgary.one45.com/](https://calgary.one45.com/)

**Problems Accessing One45:** Please contact the Academic Technologies at [osler@ucalgary.ca](mailto:osler@ucalgary.ca)

## Course Evaluation/Feedback

Student feedback will be sought at the end of each learning session as well as at the end of each course through the electronic UME evaluation tool.

At the end of each learning activity (ie. Lecture, small group, orientations, etc.), students will be asked to complete online evaluation forms to provide feedback to instructors regarding the effectiveness of their teaching and achievement of the learning objectives. An overall course evaluation will be completed following course completion.

Students are welcome to discuss the process and content of the course at any time with the Course Chairs or Preceptors.

## Clinical Core Overview (Pre-Clerkship Only)

Please refer to the Clinical Correlation Guidelines here: [https://cumming.ucalgary.ca/mdprogram/about/governance/policies](https://cumming.ucalgary.ca/mdprogram/about/governance/policies)

Course specific learning objectives for Clinical Core in the setting of this course can be found in the course document.

## Clinical Correlation Rules of Conduct

Students and preceptors will not be used as patients for clinical correlation sessions. This means that students will not examine the preceptor, the preceptor will not examine the students and students will not examine one another.
UME Policies, Guidelines, Forms & TORs
Please refer to the MD program website
https://cumming.ucalgary.ca/mdprogram/about/governance

Appeals
Please refer to the UME Student Evaluation: Reappraisals and Appeals for details regarding appeals
https://cumming.ucalgary.ca/mdprogram/about/governance/policies

If the student disagrees with the decision of the UME Student Evaluation Committee, the student may
appeal that decision to the UME University Faculty Appeals Committee. Please refer to the CSM UME
Academic Assessment and Graded Term Work Procedures for procedure for appeals.
https://cumming.ucalgary.ca/mdprogram/about/governance

Academic Accommodation
Students needing an accommodation because of a disability or medical condition should contact Student
Accessibility Services in accordance with the Procedure for Accommodations for Students with
Disabilities available at https://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-
students-with-disabilities_0.pdf.

Student Accessibility Services, please contact their office at (403) 220-8237, address: MacEwan Student
Centre room 452 or email: access@ucalgary.ca. Students who have not registered with the Student
Accessibility Services are not eligible for formal academic accommodation.

Accommodations on Protected Grounds Other Than Disability
Students who require an accommodation in relation to their coursework or to fulfil requirements for a
graduate degree, based on a protected ground other than disability, should communicate this need,
preferably in writing, to the appropriate Assistant or Associate Dean

Students who require an accommodation unrelated to their coursework, based on a protected ground
other than disability, should communicate this need, preferably in writing, to the Vice-Provost (Student
Experience).

For additional information on support services and accommodations for students with disabilities, visit
https://live-ucalgary.ucalgary.ca/student-services/access

Academic Integrity
The University of Calgary is committed to the highest standards of academic integrity and honesty.
Students are expected to be familiar with these standards regarding academic honesty and to uphold
the policies of the University in this respect.

It is expected that all work submitted in assignments should be the student’s own work, written expressly
by the student for this particular course. Students are referred to the section on plagiarism in the
University Calendar (http://www.ucalgary.ca/pubs/calendar/current/k-5.html) and are reminded that
plagiarism is an extremely serious academic offence.
**Student Misconduct**

A single offence of cheating, plagiarism, or other academic misconduct, on term work, tests, or final examinations, etc., may lead to disciplinary probation or a student's suspension or expulsion from the faculty by the Dean, if it is determined that the offence warrants such action. A student is defined as any person registered at the University for credit or non-credit courses.

**Freedom of Information and Protection of Privacy**

The Freedom of Information and Protection of Privacy (FOIP) Act indicates that assignments given by you to your course instructor will remain confidential unless otherwise stated before submission. The assignment cannot be returned to anyone else without your express permission. Similarly, any information about yourself that you share with your course instructor will not be given to anyone else without your permission.

**Emergency Evacuations and Assembly Points**

Assembly points for emergencies have been identified across campus. The primary assembly point for the Health Sciences Centre (HSC) building is HRIC - Atrium. For more information, see the University of Calgary’s Emergency Management website: https://www.ucalgary.ca/risk/emergency-management/evac-drills-assembly-points/assembly-points

Emergency Evacuation Procedures - [https://www.ucalgary.ca/risk/emergency-management/plans-and-procedures](https://www.ucalgary.ca/risk/emergency-management/plans-and-procedures). In the case of an emergency during exam, immediately stop writing the examination and follow the direction of the invigilator and go to the nearest exit. Students should not gather personal belongings.

**Internet and electronic device information and responsible use:**

Students are welcome to use laptops and other electronic note-taking devices in this course unless otherwise stated. Please be considerate of others when using these devices.

**Supports for student learning, success, and safety**

Student Advising and Wellness (SAW): [https://cumming.ucalgary.ca/mdprogram/current-students/student-advising-wellness](https://cumming.ucalgary.ca/mdprogram/current-students/student-advising-wellness)

AMA Physician and Family Support Program: [https://www.albertadoctors.org/services/physicians/pfsp](https://www.albertadoctors.org/services/physicians/pfsp)

Student Union Wellness Centre: [https://www.ucalgary.ca/wellnesscentre/](https://www.ucalgary.ca/wellnesscentre/)

Safewalk: [http://www.ucalgary.ca/security/safewalk](http://www.ucalgary.ca/security/safewalk)

Campus security - call (403) 220-5333

Student Success Centre: [https://www.ucalgary.ca/ssc/](https://www.ucalgary.ca/ssc/)

Library Resources: [http://library.ucalgary.ca/](http://library.ucalgary.ca/)

Student Union ([https://www.su.ucalgary.ca/about/who-we-are/elected-officials/](https://www.su.ucalgary.ca/about/who-we-are/elected-officials/)) or Graduate Student’s Association ([https://gsa.ucalgary.ca/about-the-gsa/gsa-executive-board/](https://gsa.ucalgary.ca/about-the-gsa/gsa-executive-board/)) representative contact information

Student Ombudsman: [http://www.ucalgary.ca/ombuds/role](http://www.ucalgary.ca/ombuds/role)
Copyright
All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf) and requirements of the copyright act (https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html) to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Wellness and mental health resources
The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the excellent mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, https://www.ucalgary.ca/wellnesscentre/services/mental-health-services) and the Campus Mental Health Strategy website (http://www.ucalgary.ca/mentalhealth/).

Research ethics
If a student is interested in undertaking an assignment that will involve collecting information from members of the public, he or she should speak with the Assistant Dean, Research (UME) and consult the CHREB ethics website (https://ucalgary.ca/research/researchers/ethics-compliance/chreb) before beginning the assignment.

ATSSL Guidelines
Please refer to the ATSSL Web Lab PPE Requirement: https://cumming.ucalgary.ca/mdprogram/about/governance
APPENDIX A
Elective Details

Selection of Electives
Students are required to secure their own electives. A catalogue will be available on the Core website (core.ucalgary.ca) that includes details about possible electives and contact information for each elective discipline. Some electives are arranged centrally while others require students to make arrangements directly with preceptors. If a desired discipline is not listed in the catalogue, students should first consult with the AEBM course coordinator before attempting to arrange an elective.

Clinical Encounter Elective – 30 hours
Students may choose to do one clinical encounter elective.

Objectives
During completion of a clinical encounter elective the student will:
- Improve his/her ability to identify clinical problems and critically appraise the relevant medical literature.
- Experience a clinical discipline in “real time” so as to assist in career planning.
- Make appropriate application of medical literature to patient problems.

The student agrees to:
- Attend the clinical encounter elective for a total of 24 hours – equivalent to 6 half-day sessions.
  - Seven (7) afternoons have been set aside in the timetable for AEBM electives. This is reserved time for AEBM electives. If possible, please attempt to schedule your elective sessions in these timeslots. Students are not restricted to these timeslots, but using other classroom time (i.e., small groups, lectures, or class time for others courses) is NOT permitted.
  - Generally plan for at least 4 hours in clinic. Some may do longer, as in ER shifts or certain on-call schedules that might occur.
- Spend at least 6 hours on work related to the educational prescriptions during this discipline specific block elective. Review of content from the appropriate lectures should be undertaken as guides in the preparation of the EPs. (24 clinical hours plus 6 assignment related hours make up the 30 required clinical hours)
- Upon initial contact, find out their preceptor’s availability during the timeline of the block and determine if their schedules suitably match.

NOTE: Students must NOT choose a preceptor who is extremely time limited or who is not available to take them within the confines of the block timeline. If a preceptor has either of these limitations, then students must find a new preceptor or talk to the program coordinator to assist them in finding a replacement in their discipline of choice.
• Inform the clinical preceptor at least one week prior if unable to attend a scheduled clinical encounter and be aware that session needs to be made up.
• Be on time, and accommodate preceptor’s schedule – difficult to do, but important.
• Expect to participate in clinical assessments of patients – (no cell phone calls, text/email) so come prepared for the discipline selected and be able to interact with patients in terms of history and physical.
• Develop, with the clinical preceptor, discipline-specific learning objectives. (see below)
• Be respectful of preceptor’s time but try to have a conversation at each clinic regarding potential EP topics.
• Submit the documents listed, by the dates shown in the accompanying tables to the AEBM Coordinator and to the clinical preceptor.

The clinical preceptor agrees to:
• Complete a mid-block evaluation (provides an opportunity to highlight any concerns about student performance) and a final ITER on the student’s performance. This relates to the student’s participation in clinic, enthusiasm to learn, and their application of evidence-based attitudes and skills to the chosen discipline.
• Have enough availability within the timeframe of the block to take on a student for the required 24 hours.
• Let the student know, prior to completing the learning agreement, of any limitations and other time commitments that may hinder the ability to complete the required hours within the timeframe of the block.
• Develop, with the student, discipline-specific learning objectives.
  ▪ Relate the assessment of patients to specific questions developed for at least one each of diagnosis, prognosis, treatment benefits and/or harm.
  ▪ Discuss three educational prescriptions that use summary evidence from the literature on a discipline-specific topic.
  ▪ Review the EP for its overall appropriateness, given the educational level of the student.

Evaluation
1) Three educational prescriptions completed according to the instructions below will be submitted to the preceptor and AEBM coordinator. The EPs are not graded but may be used by preceptors in determining their final evaluation.
2) Final preceptor evaluation (ITER).

Additional Activities
The following are additional activities that may be completed by the student during this block elective:
• Apply history taking skills to elicit key questions that the patient wants answered or is concerned about.
• Evaluate physical exam skills to determine how reliable they are for making a diagnosis or assessing severity.
• Utilize AEBM skills to communicate information to colleagues and patients with statements about diagnosis, prognosis, therapy and harm.
• Translate a patient's implicit or explicit question into a PICO format.
- Utilize clinical practice guidelines to assist in understanding patient care in the selected discipline.
- Conduct literature searches in PubMed to obtain relevant study information on patients.
- Discuss with preceptors the relative value of different evidence-based sources.
- Apply information literacy skills to effectively search literature that has been pre-appraised, such as Dynamed. Evaluate these sources in terms of validity and applicability to particular mandatory response.

**EP Assignment (Clinical Electives only)**

**What is an EP – Educational Prescription?**
The purpose of the educational prescription is to ask an answerable clinical question and relate your findings back to a patient. The source of information should not be primary studies, but rather a **synthesis or synopsis from pre-appraised literature** (students are not precluded from consulting original research if that is deemed the best information source). The major objective of this exercise is to get students in the practice of seeing patients, identifying their gaps in knowledge, finding information to answer their questions, and applying it back to the patient. Students who choose clinical electives will be required to complete 3 EPs per 30-hour block. The EPs should be used as a tool to facilitate a conversation between students and preceptors around specific clinical questions and knowledge gaps. The EP exercise is comprised of three steps – 1) the student and preceptor decide on the question (and applicable PICO statement) to be answered; 2) the student consults pre-appraised literature (e.g., Dynamed) to answer the question; 3) the student reports back to the preceptor and they discuss the students findings and conclusions.

The written assignment includes the EP and brief summary of the findings, including the information source (all to fit within a one-page template available on Osler). The assignments will not be graded but will be checked for completeness and all three must be handed in by the end of the elective block.

**Elements of an EP**
For the purpose of this course, educational prescriptions are expected to be concise (1 page) and will follow a template that includes the following:

- **Patient initials** - (maintain confidentiality at all times but allow yourself a mechanism for returning to that patient at a future date).
- **Patient population and problem** - Who are the relevant patients? You need to consider the relevant aspects of your patient, and/or their condition, that are associated with the problem. Age, sex/gender, and sometimes ethnicity are general considerations. The specific condition they have, such as diabetes mellitus, would be another factor.
- **Interventions or exposures (+/- comparison)** - This item is intended to capture the key element of your patient question that will point you in the direction of a diagnostic test, a prognostic factor, a specific intervention, or harm from a particular agent or therapy. Try to make it specific so that your thought process becomes focused on a meaningful result. For issues of therapy, prevention, or harm, there will always be both an experimental
intervention or putative harmful exposure and a control, alternative, or comparison intervention or state.

- **Outcome** - What are the patient-relevant consequences of the exposures, or the occurrence of certain pathological consequences of a disease process? In the case of diabetes mellitus you might be interested in the outcome of pregnancy for both the mother who has DM, and the fetus, for example.

- **Date and place to be filled** - Be specific and pick a time with your preceptor when you will report back with information to answer the question.

- **Information source(s) consulted** - Resources you searched (e.g., Dynamed).

- **Summary of findings and application to clinical scenario** - A brief description of what you found and how it addresses the original question.

- **Preceptor signature** - to document that discussion took place.

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**CLINICAL ENCOUNTER ELECTIVE DEADLINES – CLASS OF 2023**

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<tr>
<th>ITEM</th>
<th>DEADLINE</th>
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<tbody>
<tr>
<td>1) Select preceptor and complete elective confirmation in Osler</td>
<td>Tuesday, March 16th</td>
</tr>
<tr>
<td>2) Preceptor deadline for OPTIONAL midterm evaluation (ITER) on One45</td>
<td>Tuesday, June 15th</td>
</tr>
<tr>
<td>3) Submit 3 educational prescriptions</td>
<td>Tuesday, August 31st</td>
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<tr>
<td>4) Preceptor deadline for FINAL ITER on One45</td>
<td>Tuesday, September 7th</td>
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*ALL extension requests must be submitted to the AEBM coordinator at least one week prior to the deadline.

*A note about deadlines: The preceptor deadline for the final ITER falls one week after the block ends. It is expected that the student will have completed their hours and submitted the ITER to their preceptor by the block end date, giving the preceptor one week to complete the evaluation.*
Academic Elective - Directed Study or Participation in Research – 30 hours

Academic electives are an opportunity to participate in a project that supports the goals of evidence-based medicine, in general, by encouraging the student to consider a particular aspect of medicine from an academic perspective. It is also possible (though not an expectation) that many of these experiences will give the student and supervisor the tangible and substantial reward of a publication in a respected journal, and/or the opportunity to present their learnings in a scientific or medical education setting.

These electives can take the form of a Directed Study or Participation in Research. These electives are driven primarily by the initiative of the student. The principal objective of the Directed Study is to enable serious and interested students to explore a subject of interest. Types of direct studies include but are not limited to:

- Quality improvement project
- A project in medical education
- A project in the area of the humanities related to clinical care. Specific example of humanities disciplines include ethics, the history of medicine, literature, sociology or the performing arts which can give students a new lens with which to discover and think through patient problems and a way to try out new bedside therapeutic tools to provide the best educational prescription. Humanities techniques of searching for meaning can enhance the relationship that a student creates with a patient, enhancing the chance of therapeutic success for both patient and student. e.g., narratives offer a method for addressing existential qualities such as inner hurt, despair, hope, grief, and moral pain which frequently accompany, and may even constitute, people's illnesses (Greenhalgh & Hurwitz, BMJ 1999).
- Other possibilities include exploring the literature around patients whose problems are not addressed by a Randomized Controlled Trial and those with multiple comorbidities in whom the Clinical Practice Guidelines offer conflicting advice.

The principal objective of Participation in Research is to enable the serious and interested student to experience the investigative process in a meaningful fashion. It is expected that the student will have identified a general area of research and, in some cases, will use the elective time to continue a research project that is already underway. The responsibilities of the faculty remain substantial, however. The selection of an appropriate faculty supervisor is critical to success. Students should strive to identify supervisors who have demonstrated their willingness and availability and who have succeeded in their own investigative careers; some outstanding clinicians or teachers might not have the experience or inclination to be effective research supervisors. Once a supervisor has been identified and a collaborative relationship has been initiated, the supervisor will help the student define their role in the research. 30 hours is not enough time for students to initiate and complete an independent research project from start to finish. Students are therefore encouraged to work with their preceptor to define a discrete role within a research project that is feasible to do within the allotted time (e.g., lit review, chart review or other data collection, data analysis, etc.).
Organization

- Each student and project will have a faculty supervisor.
- A total of 30 hours is allocated in the curriculum.

The student agrees to:

- Upon initial contact, find out their preceptor’s availability during the timeline of the block and determine if their schedules suitably match.

NOTE: Students must NOT choose a preceptor who is extremely time limited or who is not available to take them within the confines of the block timeline. If a preceptor has either of these limitations, then students must find a new preceptor or talk to the program coordinator to assist them in finding a replacement in their discipline of choice.

- Work with their preceptor to define their role and responsibilities within the project.
- Obtain project approval from the course chairs. Project descriptions must be sent to the AEBM program coordinator to be submitted for approval before the elective starts. Project descriptions consist of a brief (~250 words) summary of the project and the student’s role and responsibilities.
- Participate as required in the project work – this may include attendance at meetings, participation in research group activities, collaboration with other team members.
- Be on time for meetings, and accommodate preceptor’s schedule – difficult to do, but important.
- Submit the documents listed, by the dates shown in the accompanying tables to the AEBM Coordinator and to preceptor.

The preceptor agrees to:

- Develop, with the student, a project outline and guide the student to complete the project in the time allotted.
- Complete a mid-block evaluation and a Final ITER on the student’s performance. A mid-block evaluation provides an opportunity to highlight any concerns about performance or professionalism.
- Ensure ethics approval is in place where necessary.
- Have enough available time and funding within the timeframe of the block to take on a student for the 30-hour project.
- Let the student know, prior to completing the learning agreement, of any limitations and other time commitments that may hinder the ability to support the student’s project.

Evaluation

1. A final assignment (work product) will be submitted by the student for evaluation by the preceptor. Assignments should be sent to the preceptor and AEBM coordinator.

The following are examples of acceptable final work products:

- A 500-1000 word final report detailing the work completed
• A manuscript or section of a manuscript, with details regarding the student’s contribution
• An academic essay that summarizes work
• A written report such as a lit review or case report
• Anatomy report
• Powerpoint presentation

While the format of the final work product will be dependent on the discipline and project chosen, the content and effort should be equivalent to a 500-1000 word report with references where relevant. Students are encouraged to speak with the program coordinator early to ensure their planned final report meets program requirements.

2. Final preceptor evaluation (ITER) is based on the final assignment as well as student participation and performance throughout the elective.
3. The student is invited to submit a short comment on the course.

<table>
<thead>
<tr>
<th>Year 2 – April 13th – August 31st, 2021</th>
</tr>
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<tbody>
<tr>
<td><em>ALL extension requests must be submitted to the AEBM coordinator at least one week prior to the deadline</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DEADLINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Choose preceptor, complete electives confirmation in Osler</td>
<td>Tuesday, March 16th</td>
</tr>
<tr>
<td>2) Submit a brief overview of the intended project to the AEBM coordinator (one paragraph)</td>
<td>Tuesday, March 16th</td>
</tr>
<tr>
<td>3) Preceptor Deadline for OPTIONAL midterm evaluation (ITER) on One45</td>
<td>Tuesday, June 15th</td>
</tr>
<tr>
<td>4) Submit Final Assignment to AEBM coordinator and preceptor</td>
<td>Tuesday, August 31st</td>
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<tr>
<td>5) Preceptor deadline for FINAL ITER on One45</td>
<td>Tuesday, September 7th</td>
</tr>
</tbody>
</table>
The following is a list of contacts for the AEBM II course.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Leader and Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Chair</td>
<td>Kerry McBrien: <a href="mailto:kamcbrie@ucalgary.ca">kamcbrie@ucalgary.ca</a></td>
</tr>
<tr>
<td>Course Chair</td>
<td>Fariba Aghajafari: <a href="mailto:fariba.aghajafari@ucalgary.ca">fariba.aghajafari@ucalgary.ca</a></td>
</tr>
<tr>
<td>Evaluation Coordinator</td>
<td>Steven Persaud: <a href="mailto:steven.persaud@ucalgary.ca">steven.persaud@ucalgary.ca</a></td>
</tr>
<tr>
<td>Program Coordinator</td>
<td>Nicolle Begert: <a href="mailto:aebm@ucalgary.ca">aebm@ucalgary.ca</a></td>
</tr>
<tr>
<td>Information Literacy</td>
<td>Nicole Dunnewold: <a href="mailto:nicole.dunnewold@ucalgary.ca">nicole.dunnewold@ucalgary.ca</a></td>
</tr>
<tr>
<td>Clinical Elective</td>
<td>Fariba Aghajafari: <a href="mailto:fariba.aghajafari@ucalgary.ca">fariba.aghajafari@ucalgary.ca</a></td>
</tr>
<tr>
<td>Academic Elective</td>
<td>Kerry McBrien: <a href="mailto:kamcbrie@ucalgary.ca">kamcbrie@ucalgary.ca</a></td>
</tr>
</tbody>
</table>