



**CUMMING SCHOOL OF MEDICINE
UNDERGRADUATE MEDICAL EDUCATION (UME)
Medical Doctor Program (MD)**

COURSE OUTLINE

Term: Spring 2017

Course Number:	MDCN 490	Classroom: Online in OSLER
Course Name:	Intro to Clinical Practice (ICP)	
Day & Time:	June 26, 2017 – July 7, 2017 (detailed schedule available online in OSLER)	
Course Website:	http://intro.ucalgaryblogs.ca	

Course Chair:	Dr. Anthony Seto	Email: anthony.seto@ucalgary.ca
UME Program Coordinator:	Hannah Poulin	Email: intro@ucalgary.ca

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Course Description

Course Description from University of Calgary Calendar

Students are introduced to topics related to senior medical student responsibilities (clerk) such as writing orders, using the regional diagnostic and laboratory services, as well as more advanced ECG, radiological and procedural skills.

Course Objective

The overarching objective of ICP is to help medical students be effective junior clinicians from two key perspectives—patient safety and their own safety. ICP is “practical, and practice for your practice”.

Teaching Philosophy

In designing and delivering ICP, we aim for:

- Interactivity
- Usefulness and practicality
- A “less is more” philosophy

Prerequisites

Not applicable to all courses in our program.

Supplementary Fees/Costs

- Stethoscope

Learning Objectives

Orientation

- Refuel excitement and energy for clinical training and future clinical practice, by drawing on medical school admission emotion
- Understand course completion criteria
- Review ICP course content
- Find the Medication Reconciliation module online

Electronic Tools for Patient Care

- Identify electronic apps that can be used for patient care
- Identify online resources that can be used for patient care
- Practice finding information for clinical questions

X-Ray Interpretation

- Describe an approach to interpreting chest x-rays
- Describe an approach to interpreting abdominal x-rays
- Use a system to describe fractures
- Practice interpreting chest x-rays, abdominal x-rays, and fractures

Pain Management

- Describe the WHO ladder approach to analgesia
- Discuss common dose regimens and adverse effects for acetaminophen
- List commonly encountered NSAIDs (e.g. ibuprofen, aspirin, naproxen, ketorolac) and their common dose regimens and adverse effects
- List commonly encountered opioids (e.g. morphine, codeine, tramadol, oxycodone, hydromorphone, fentanyl) and their common dose regimens and adverse effects
- List medications that can be used for neuropathic pain
- List examples of local anesthesia agents, their toxic doses, and toxic adverse effects
- List strategies of analgesia for infants and pediatric patients
- Given pain scenarios, outline an appropriate analgesia plan

Fluids

- Discuss strategies to determine volume status (hypovolemia, euvoemia, hypervolemia)
- Identify the bedside ultrasound as a tool to look at JVP and IVC for volume status
- Use the Gorelick scale to determine level of dehydration in pediatric patients
- List a differential diagnosis for hypovolemic shock (use scheme)
- Describe different types of fluid (i.e. crystalloids, blood/blood products, other fluids/infusions such as dextrose and bicarbonate and colloids)
- Calculate maintenance fluid rates for adult and pediatric patients
- Calculate bolus fluid amounts for adult and pediatric patients
- Discuss methods of administering a fluid "bolus": gravity, pressure bag, push-pull
- Calculate fluid doses for medical cases: sepsis (crystalloid), GIB (blood), burns (Parkland formula with crystalloid)

Introduction to simulation training and altered level of consciousness

- Review the low-fidelity and high-fidelity simulation modalities used in the ICP course (low-fidelity with BLS manikins and sticky notes; high-fidelity with theatre-based simulation)
- List and describe the components of the simulation contract:
 - o The basic assumption
 - o Confidentiality agreement
 - o Realism
- Review the BLS algorithm
- Identify elements of effective chest compressions in CPR
- List and discuss differences in pediatric care scenarios including:
 - o Weight-based drug-dosing and use of Breslow tape
 - o Vital signs: HR, RR, BP
- Use the DIMS/DIMES mnemonic to create differential diagnoses for altered level of consciousness

- Drugs
 - Opioid intoxication (presentation and management)
 - EtOH intoxication (presentation and management)
 - Other (covered in other courses, e.g. Course 4, Course 6, ER Clerkship)
- Infection: covered in other courses, e.g. Courses 1-4
- Metabolic:
 - Hypoglycemia (adult/peds cutoffs, administering dextrose)
 - Other (covered in other courses, e.g. Course 4)
- Structural: covered in Course 5
- Describe an approach to acute care presentations, expanding on ABCs approach previously learned
 - Initial steps
 - Assessment: initial impression (see, smell, hear), vitals
 - Action: ?code blue management, IV, O2, monitor
 - Code Blue management
 - Assessment: rhythm, pulse
 - Action: CPR/defibrillation, epinephrine, Hs & Ts, teamwork
 - Primary survey/assessment
 - Assessment: Airway, Breathing, Circulation (ABCs)
 - Action: Management of ABCs, consider glucose level and ECG
 - Secondary survey/assessment
 - Assessment: SAMPLE history, head-to-toe exam, repeat vitals
 - Action: DDX, tailored investigations, treatment, disposition
- Watch a video demonstration on how a team of medical students may facilitate an altered level of consciousness scenario in a theatre-based simulation environment

Team Trauma Day

Inter-professional Collaboration (Teamwork) Objectives

- During the scenarios, a leader is clearly identified and recognized by all team members
- The individual in the leader role assures an appropriate balance between command authority and team member participation
- Each team member demonstrates a clear understanding of his or her role
- Learners can describe the roles of those in other professions, and use this knowledge appropriately to meet shared patient care goals
- Team members prompt each other to attend to all significant clinical indicators throughout the scenario
- When team members are actively involved with the patient, they verbalize their activities aloud
- Team members repeat back or paraphrase instructions and clarifications in indicate they heard them correctly
- Learners communicate with each other in a collaborative, responsive, and responsible manner
- All members of the team are appropriately involved and participate in the activity

Medical Student Objectives

- Recognize trauma: mechanism and potential injuries
- Conduct a primary survey: trauma assessment and initial management
 - A (airway with C-spine protection):
 - assessment: patency/obstruction, voice, level of consciousness
 - management: chin-lift/jaw-thrust, suction, towels/collar
 - B (breathing):
 - assessment: respiration, work of breathing, tracheal deviation
 - management: oxygenation, ventilation
 - C (circulation):
 - assessment: bleeding, pulse, skin colour/temperature, blood pressure
 - management: stop bleeding, volume replacement, temperature control
- Conduct a secondary survey
 - SAMPLE history (Signs/symptoms, Allergies, Medications, Past Medical History; Last oral intake; Events re: incident)
 - Head-to-toe exam
 - Ongoing reassessment

Intro To Code Blue

- Demonstrate an approach to primary and secondary surveys
- Suggest initial management plans for select acute care patient presentations (ACS, anaphylaxis, tension pneumothorax, and UGIB)
- Demonstrate an approach to the management of cardiac arrest cases
- Discuss the importance of early CPR and defibrillation in cardiac arrest cases
- Demonstrate effective CPR and BVM techniques
- Demonstrate accurate dosing and frequency of epinephrine administration in cardiac arrest cases
- Select the appropriate defibrillation dose for cardiac arrest cases
- Identify the following code blue rhythms: VF, pulseless VT, PEA, asystole
- Demonstrate the management of VF, pulseless VT, PEA, and asystole
- List causes of cardiac arrest, using H's and T's as a mnemonic
- Describe and demonstrate the ACLS elements of effective team dynamics
- Discuss the roles of the interdisciplinary health care team in cardiac arrest cases

Presentations and Consultations

- Practice a process for presenting clinical cases to preceptors
- Practice a process for providing verbal consultations
- Discuss a process for writing consultations
- Identify unique, specialty-specific items to include in consultations

Writing Notes

- Discuss the purpose of writing notes
- Discuss the important elements of all notes
- List and write out the components of the following notes:
 - o Admission note
 - o ER / Urgent Care note
 - o Progress note (e.g. SOAP note)
 - o OR note
 - o Delivery note
 - o Procedure note

Suturing and Tying

Suturing

- Demonstrate appropriate technique with respect to:
 - o Handling of needle driver and forceps
 - o Loading and protecting the needle
 - o Handling of tissues
 - o Placement of suture with respect to distance from the wound and depth
 - o Discarding of needle in sharps container
- Be familiar with and demonstrate basic proficiency in:
 - o Interrupted sutures: simple, vertical mattress, horizontal mattress, subcuticular
 - o Continuous/running sutures: simple, subcuticular
 - o Instrument ties

Knot-tying

- Understand the concepts of:
 - o Appropriate tension for knot-tying
 - o "Placing" knots to minimize shear forces on the wound
 - o Basic terminology: square knots, surgeon's knots, sliding knots
- Demonstrate basic proficiency in:
 - o One-handed ties
 - o Two-handed ties

Simulation 1 and 2

- Working in a team of medical students, manage a case of:
 - o Hypotension
 - o Respiratory distress
 - o Altered level of consciousness

- o Acute pediatric illness
- Demonstrate collaborative practice skills

Skills Fair: Needles/Syringes, Hand Hygiene / PPE, ECG

Needles, Syringes, and Safe Disposal

- Identify the types and sizes of needles
- Identify the uses for needles versus the using needle-less system
- Describe what are “safety engineered devices”
- Identify the use for the blunt needle (filtered and non-filtered)
- Differentiate the types and sizes of syringes (leur lock vs slip tip)
- Demonstrate aseptic technique to open needle, non-needle, and syringe packaging
- Demonstrate aseptic technique to connect needle or non-needle and syringe
- Demonstrate the correct aseptic technique to withdraw fluid from a vial or glass ampoule
- Demonstrate correct technique to inject fluid
- Demonstrate correct mapping technique for administering an IM injection
- Demonstrate correct mapping technique for administering a SC injection
- Demonstrate correct disposal of sharps and syringes

Hand Hygiene Certification / Personal Protective Equipment

- Correctly demonstrate proper hand hygiene technique
- Demonstrate the proper sequence and technique of donning and doffing personal protective equipment

ECG Interpretation

- Identify where to place electrodes for a 12-lead and 15-lead ECG
- Discuss various ECG interpretation approaches
 - o Rate, Rhythm, Axis, Intervals, Ischemia, Morphology
 - o Rule of 4's
- List components of the rules of 4's for ECG interpretation
 - o 4 features: history, rate, rhythm, axis
 - o 4 waves: P, QRS complex, T, U
 - o 4 intervals: PR, QRS width, ST, QT
- List components of the normal ECG in terms of...
 - o Features: rate, rhythm, axis
 - o Waves: P, QRS complex, T, U
 - o Intervals: PR, QRS width, ST, QT
- Discuss and interpret ECG features that may be abnormal or cause concern
 - o History (e.g. exertional symptoms, syncope, chest pain, dyspnea, prior ECG. Also, keep in mind worrisome chest pain features: radiation, diaphoresis, exertion, nausea/vomiting.)
 - o Rate (normal, bradycardia, or tachycardia)
 - o Rhythm
 - Bradycardias
 - Tachycardia
 - o Axis
- Discuss and interpret ECG waves that may be abnormal or cause concern
 - o P
 - o QRS complex morphology (e.g. Q waves, height)
 - o T
 - o U
- Discuss and interpret ECG intervals that may be abnormal or cause concern
 - o PR
 - o QRS width
 - o ST
 - o QT

Patient Safety Lecture & Patient Safety Small Group: Cognitive Biases

- Recognize and describe common cognitive errors that physicians are prone to making during the diagnostic process
- Describe approaches that could help physicians avoid diagnostic errors

- Use pretest probabilities and likelihood ratios to become better informed about the probability of a particular diagnosis before excluding it or confirming it

Teamwork Revisited and Handoffs Workshop

Teamwork Revisited

- Using the team scheme, identify and discuss teamwork skills from video demonstrations

Handoffs Workshop

- Discuss barriers and pitfalls to handoff communication
- Suggest strategies to improve handoff communication
- Practice a structured process for providing written handover
- Practice a structured process for providing verbal handover

Motivational Interviewing

- Describe and practice an approach to motivational interviewing

Difficult Conversations

- Describe common pitfalls in holding conversations about difficult issues
- Conduct a conversation about a difficult issue

Patient Safety: Prescriptions and Orders

- Write prescriptions according to the Alberta College of Pharmacists Standards of Practice
- Demonstrate modifications to prescription-writing for pediatric patients by including a patient's weight and calculating weight-based doses
- Identify tools to look-up prescription considerations for patient contexts such as liver disease, renal disease, pregnant, and breastfeeding patients
- Identify methods to cross-check drug interactions
- Locate medications under the Triplicate Prescription Program
- Discuss pitfalls when writing prescriptions and physician orders that may lead to medical error
- Discuss safe practice approaches to writing prescriptions and physician orders
- Identify abbreviations and acronyms that should be avoided when writing physician orders to prevent medical error
- Write an admission order, using the mnemonic "AD-DAVID"
- Write legibly on all prescriptions and physician orders

Reflective Practice

- Explore how attending to patients' stories can improve health outcomes and protect against cynicism in clinical practice
- Reflect on the tensions between listening for stories and the demands of clinical practice
- Describe insights into the value of reflective practice

Tips & Tricks

- Address questions accumulated throughout the course
- Discuss tips and tricks from medical students, residents, and staff in the follow topics:
 - o Studying and Learning
 - o Communication
 - o Medical pearls
 - o Clinical Performance
 - o Well-being

Medication Reconciliation

- Complete the Medication Reconciliation module by Alberta Health Services

Relationship to Other Courses

N/A

Course Text(s)

There are no required textbooks for this course. Pre-readings and materials, as relevant to each session, can be found on OSLER.

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 Course Chair and consult the CFREB ethics website (<http://www.ucalgary.ca/research/researchers/ethics-compliance/cfreb>) *before* beginning the assignment."

WRITING EXPECTATIONS

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 (www.ucalgary.ca/pubs/calendar/current/k-2.html) and are reminded that plagiarism is an extremely serious academic offence.

Evaluation & Course Requirements

Evaluation Method

ICP is a "complete" or "fail" course. In order to successfully complete the course and receive credit, all of the following must be satisfied:

- 100% Attendance (or completed make-up assignments with excused absences)
- Hand Hygiene Certificate (see "Examination", below)
- Submit a hardcopy of your Medication Reconciliation Certificate to UME office before 1PM on Tuesday, July 4, 2017. Students are strongly encouraged to complete this assignment during the first week of the course, or even prior to the course beginning.
- Submit a hardcopy of your Reflective Practice Writing Assignment to the facilitators of the Reflective Practice session, which you will write live, within that session itself.

Examination

- There is no written examination for this course. In lieu of a written examination, attendance must be 100% to complete the course.
- Hand hygiene will be examined. If successful, a hand hygiene certificate will be granted. If unsuccessful the first time, a second attempt may be attempted. If unsuccessful for two times, remediation will be scheduled for a future date.

Excused Absences

Occasionally, certain circumstances may preclude a student from attending sessions. Please contact the Course Chair and Assistant Dean (Preclerkship) if this applies. Completion of make-up assignments will be required for excused absences to ensure that students meet the learning objectives of missed sessions. Make-up assignments must be emailed to intro@ucalgary.ca within 72 hours of the scheduled end of the missed session(s).

Academic Misconduct

Signing an attendance sheet for a classmate, signing-in but not attending, or forging a Medication Reconciliation certificate are all considered forms of academic misconduct. Disciplinary action for academic misconduct may include a failing grade, disciplinary probation, suspension, or expulsion.

"Teamwork" Formative Assessment

In "Teamwork Revisited", students will be assessed on their understanding of the team scheme. This is a formative assessment to evaluate the efficacy of the Collaborative Practice Unit curriculum so far.

Recommended Readings

Recommended readings and resources are posted on OSLER.

Grading

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

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

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. Consistent with the aims of the BSW Program, 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 participating in the BSW Program 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.

Withdrawal

See the Academic Schedule for important dates:

<http://www.ucalgary.ca/pubs/calendar/current/academicschedule.html>

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.

Policy Information for the MD Program

MD Program Policy link:

<http://www.ucalgary.ca/mdprogram/home/ume-policies-guidelines-forms-tors>

University of Calgary Policy link:

<http://www.ucalgary.ca/policies/>

Internet & Electronic Communication Device Information

MD Program Policy link:

<http://www.ucalgary.ca/mdprogram/home/ume-policies-guidelines-forms-tors>

STUDENTS WITH DISABILITIES

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the 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 their Instructor or the appropriate Associate Dean, Department Head or the department/faculty designated contact person. Students who require an accommodation unrelated to their coursework or the requirements for a graduate degree, 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 www.ucalgary.ca/access/."

Dr. Maria Bacchus is the Accommodations Committee Chair for the Undergraduate Medical Education program.

SAFEWALK (403) 220-5333

Campus security will escort individuals, day or night. Call (403) 220-5333. Use any campus phone, emergency phone or the yellow phone located at most parking lot pay booths.

IMPORTANT INFORMATION

The University of Calgary copyright policy has changed. It is the responsibility of each individual to ensure compliance with copyright regulations. Individual questions and concerns should be directed to copyright@ucalgary.ca.

Students may be asked, in all courses, to participate in as subjects in research. Any research in which students are invited to participate will be voluntary, explained in class, and approved by the appropriate University Research Ethics Board.

Cell phones must be turned off in class unless otherwise arranged with the instructor.

Assembly points for emergencies have been identified across campus. The primary assembly point for the Professional Faculties building is the Education Block Food Court. The alternate assembly point is Scurfield Hall Atrium.

The Social Work representative to the Students Union is to be determined (swsacalgary@gmail.com). The Student Ombudsman's Office can be reached at the [U of C Student Services Website](#)

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.

You are reminded that academic misconduct, including plagiarism, has extremely serious consequences, as set out in the University Calendar. More information about academic misconduct can be found on page 52 and 53 of the University of Calgary Calendar.

Emergency Evacuation/Assembly Points

Evacuation Process

<https://www.ucalgary.ca/emergencyplan/emergency-instructions/evacuation>

Emergency Assembly Points

<https://www.ucalgary.ca/emergencyplan/home/evacuation-assembly-points/assembly-points>

PPE REQUIREMENTS

At a minimum, the following **MUST** be worn by students and staff when in the ATSSL Wet Lab:

FOOTWEAR
Non-Slip with Closed Toes, Closed Sides and Closed Heels (No High Heels)
CLOTHING
Long Pants (No Shorts/Skirts)
PPE
Plastic Apron
Gloves
Please Note:
Aprons and Gloves must be removed and properly disposed of prior to exiting the lab

May 22, 2014
UME Management/ATSSL

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/>

Problems Accessing One45: Please contact the eLearning Team at osler@ucalgary.ca