

**Center for Clinical Research and Evidence-Based Medicine  
Clinical Research Curriculum**

<https://med.uth.edu/crebm/clinical-research-education/clinical-research-curriculum/>

**CLRS 5011: Literature Appraisal**

Winter 2020 | 8 weeks (12.2.2020-2.10.2021)

Online | Combination asynchronous and synchronous

1.0 credit hours

**Course Directors Contact Information**

Director: Joyce Samuel, M.D., M.S.

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Co-director: Susan Wootton, M.D.

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**CRC Program Coordinator Contact Information:** Ms. Deborah Garcia, Office: MSB 2.106, Email: [deborah.garcia@uth.tmc.edu](mailto:deborah.garcia@uth.tmc.edu), Office phone: 713-500-6708

**Course Overview**

The critical appraisal of medical literature is an essential skill of any clinical researcher or clinician practicing evidence-based medicine. In the current era of information overload in which published scientific studies can vary greatly in quality and validity, users of medical literature must develop the ability to identify proper study design, potential sources of bias, appropriate statistical analysis and interpretation, and assess generalizability. In this eight week course, students will be introduced to multiple clinical research study designs, and will demonstrate critical evaluation of the medical literature. Basic concepts will be introduced in the first two weeks using asynchronous lectures and educational readings. Over the next six weekly sessions, students will be split into small groups to be led by expert facilitators from diverse clinical backgrounds. Each week during a small group session, students will sharpen their skills in critical appraisal by discussing in detail a recent published article representing each major study design category.

**Prerequisites:** There are no prerequisites to enroll in CLRS 5011: Literature Appraisal.

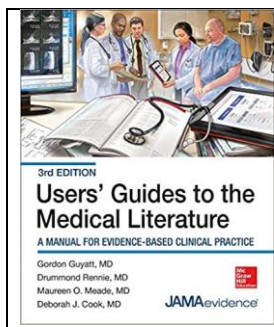
	Session	Date
Week 1	Topic: Course Overview and Introduction to Literature Searching Instructor: Joyce Samuel, M.D., M.S. Format: Asynchronous lecture	Link to view lecture will be accessible starting 12.2.20
Week 2	Topic: Introduction to Literature Appraisal Concepts Instructor: Susan Wootton, M.D. Format: Asynchronous lecture	Link to view lecture will be accessible starting 12.9.20
Week 3	Topic: Therapy (Randomized Trials) Instructor: Small group facilitators Format: Live online small group session	12.16.20, 5:00-6:30pm
Week 4	Topic: Prognosis (Cohort study)	1.06.21, 5:00-6:30pm

	Instructor: Small group facilitators Format: Live online small group session	
Week 5	Topic: Etiology (Case-Control study) Instructor: Small group facilitators Format: Live online small group session	01.13.21, 5:00-6:30pm
Week 6	Topic: Diagnostic Test study Instructor: Small group facilitators Format: Live online small group session	01.20.21, 5:00-6:30pm
Week 7	Topic: Systematic Review and Meta-Analysis Instructor: Small group facilitators Format: Live online small group session	02.03.21, 5:00-6:30pm
Week 8	Topic: Guidelines Instructor: Small group facilitators Format: Live online small group session	02.10.21, 5:00-6:30pm

### Instructional Materials

All required background and appraisal readings will be provided by the program coordinator and/or available at our course website on Canvas.

### Optional textbook:



Gordon Guyatt, Drummond Rennie, Maureen O. Meade, Deborah J. Cook, *Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice*, 3rd Edition (McGraw-Hill Education, 2014). ISBN: 9780071790710

Selected chapters (pdf) from the 2<sup>nd</sup> edition of this text will be provided to all enrolled students by the program coordinator. The full textbook is not required and is only listed for information purposes for students who are interested in supplemental background reading.

### Small group facilitators:

- **Shervin Assassi**, MD, MS; Rheumatology and Clinical Immunogenetics
- **Michal Fishel Bartal, MD**; Obstetrics, Gynecology and Reproductive Sciences
- **Cynthia Bell**, PhD.; Center for Clinical Research and Evidence-Based Medicine
- **Sean Blackwell**, MD; Obstetrics, Gynecology and Reproductive Sciences
- **Lindsay Fleig**, MD; Neonatal-Perinatal Medicine
- **Matthew Greives**, MD, MS; Plastic and Reconstructive Surgery
- **John Harvin**, MD, MS; Acute Care Surgery
- **Julie Holihan**, MD, MS; Surgery
- **Ankur Kamdar, MD**; Pediatric Rheumatology
- **Suzanne Lopez**, MD; Neonatal-Perinatal Medicine
- **Donald Molony**, MD; Renal Diseases and Hypertension
- **Joyce Samuel**, MD, MS; Pediatric Nephrology and Hypertension
- **Joshua Samuels**, MD, MPH; Adult and Pediatric Nephrology and Hypertension
- **David Santos**, MD, MS; Surgical Oncology
- **Jon Tyson**, MD, MPH; Center for Clinical Research and Evidence-Based Medicine
- **Susan Wootton**, MD; Pediatric Infectious Diseases

### **CRC Program Student Learning Outcomes**

1. Review and evaluate existing clinical research data to apply to clinical practice or to formulate appropriate new hypotheses and research questions.
2. Understand and describe the design, analysis, and interpretation of clinical research studies, including the proper use and interpretation of case reports, case series, cross sectional studies, case-control studies, cohort analytic studies, and clinical trials.

### **Course Student Learning Outcomes**

Upon successful completion of this course, students will:

1. Identify the appropriate checklist or appraisal tool to critique various study designs.
2. Appraise medical literature according to relevant critical appraisal tools (CASP checklist).
3. Engage in thoughtful discussions with other health care professionals and researchers to systematically assess the trustworthiness, relevance and results of published papers

### **Student Expectations**

Expect to spend at least 2-3 hours per week outside of class in addition to the time spent during formal instruction or small group discussion. Successful completion of this course requires a combination of the following:

- Read the background readings pertaining to the study design to be discussed each week
- Read in detail the assigned article for appraisal and any supplemental material
- Complete the CASP checklist for the article to be appraised prior to the small group session
- Attend all small group sessions and actively participate in the discussion

The bulk of the learning in this course is derived active participation in the small group discussions, which requires careful preparation and reading of the articles. If you cannot attend at least 5 out of 6 small group discussions, we do not recommend enrolling in this course. The number of students allowed to enroll is limited (based on the number of facilitators available), so please do NOT enroll and take up a spot if your schedule does not allow you to attend at least 5 out of the 6 small group discussions.

### **Assignments, Exams, and Activities**

There are no exams for this course. Attendance and participation in at least 5 out of 6 small group sessions will be required to obtain credit for the course.

### **Grading Formula**

Grading Scale

Pass = attend and participate in at least 5 out of 6 small group sessions

Fail = attend and participate in fewer than 5 small group sessions

Extenuating circumstances may be discussed with the course director. Pre-planned travel or pre-planned work/call schedules do not constitute extenuating circumstances.

### **Syllabus Modifications**

The course director reserves the right to modify the syllabus at any time during the course and will promptly notify students in writing, typically by e-mail, of any such changes.