

## CLINICAL RESEARCH SCHOLARS PROGRAM (CRSP)

Case Western Reserve University (CWRU)

### CRSP COURSE DESCRIPTIONS

For current offerings/substitutions/schedule/classrooms, please view <https://www.case.edu/registrar/registration/schedule-of-classes/> - Schedule of Classes.

Select the semester of interest, type the first four LETTERS OF THE COURSE CODE (e.g., CRSP) in the first available field and submit

COURSE NAME, NUMBER, & SEMESTER	DESCRIPTION – TOPICS - REQUIREMENTS	LOCATION OF COURSE AND SCHEDULE	INSTRUCTOR OR COURSE DIRECTOR	CONTACT INFORMATION
CRSP 401 Introduction to Clinical Research Summer Series Credit Hours: 1-3 Summer Semester	<p>Introduction to clinical research and overview of Master's program. This course is designed to familiarize students with the language and concepts of clinical investigation and statistical computing, as well as provide opportunities for problem-solving and practical application of the information derived from the lectures. The material is organized along the internal logic of the research process, beginning with mechanisms of choosing a research question and moving into the information needed to design the protocol, implement it, analyze the findings, and draw and disseminate the conclusion(s).</p> <p><i>Text: Hulley et. al.: Designing Clinical Research - ISBN 0-7817-2218-7</i> <i>Software: None</i></p>	<p>Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes</p> <p>Case School of Medicine</p>	Douglas Einstadter, MD, MPH	<a href="mailto:deinstadter@metrowealth.org">deinstadter@metrowealth.org</a> or 216-778-3902
CRSP 402 Study Design and Epidemiologic Methods Credit Hours: 3 Fall Semester	<p>This course covers the methods used in the conduct of epidemiologic and health services research. The course begins with how to quantify disease frequency and compare it across populations, often as a way to generate hypothesis about what factors may cause a given condition. The course will introduce methodologic issues that need to be considered in the design and conduct of epidemiologic studies, including classification of disease and exposure status, types and consequences of misclassification, effect modification and related concepts. Additional sessions will focus on the control of confounding and on the three main types of study designs: randomized trials, cohort studies and case-control studies.</p> <p>Topics include: Measures of disease frequency, measures of effect, classification and misclassification, cross-sectional studies, case-control studies, cohort studies, randomized controlled trials, confounding, bias, effect modification and select topics.</p> <p><i>Prereq: CRSP 401 or consent of instructor – permit required</i> <i>Suggested Text: Hennekens CH, Buring JE. (1987). Epidemiology in Medicine, Little, Brown and Company.</i></p>	<p>Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes</p>	Douglas Einstadter, MD, MPH	<a href="mailto:deinstadter@metrowealth.org">deinstadter@metrowealth.org</a> or 216-778-3902
CRSP 406	This course will provide students with an introduction to R (Version 3.0 or higher). Major	Consult	Steven Lewis,	<a href="mailto:Sal25@case.edu">Sal25@case.edu</a>

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Introduction to R Programming  Credit Hours: 2  Summer Semester	<p>topics will include session management, reading and writing data, R data objects, combining and restructuring data frames, handling missing data, working with dates, statistical analysis concepts, data aggregation, statistical functions, and R traditional graphics. Students will learn R programming conventions, how to troubleshoot R code, as well as how to interpret R output. Small research datasets will be used in class examples, computer laboratory sessions, and homework assignments. Each session will include a lecture immediately followed by a computer lab to reinforce the concepts introduced. Students will work in small groups or individually.</p> <p><i>Prereq. Instructor's consent required</i>  <i>Texts: Zuur, Alain F. (2009). A Beginners Guide to R. Springer. Dalgaard, Peter (2008). Introductory Statistics with R, 2<sup>nd</sup> ed. Springer</i>  <i>Software: Latest versions of R and RStudio software installed</i></p>	<a href="http://www.cwru.edu/pr ovost/registrar/registrar.html">http://www.cwru.edu/pr ovost/registrar/registrar.html</a> - select Schedule of Classes	MS, MBA	
CRSP 410  Independent Study in Clinical Research  Credit Hours: 1-3  All Semesters	<p>This course enables the student to undertake study of advanced topics in clinical research that are not offered as standing courses at CWRU. The student(s) and a member of the CRSP faculty, or another faculty member at CWRU, submit a 1-2 page proposal for independent study to the CRSP Program Director. The proposal should include a descriptive title (e.g., research method or clinical topic area) to be studied; a list of up to 5 student-centered objectives of the study; how the subject matter will be learned; and how success in achieving the objectives will be measured (e.g., manuscript, essay, grant proposal, or other written product; examination, etc). It is expected that there will be approximately one contact hour per week for each credit hour requested.</p> <p><i>Prereq: Consent of CRSP Department</i></p>	Consult <a href="http://www.cwru.edu/pr ovost/registrar/registrar.html">http://www.cwru.edu/pr ovost/registrar/registrar.html</a> - select Schedule of Classes or your instructor or CRSP faculty advisor	James Spilsbury, PhD	<a href="mailto:jcs5@case.edu">jcs5@case.edu</a>
CRSP 412  Communication in Clinical Research – Grant Writing  Credit Hours: 1  Spring Semesters	<p>Written communication is a critical skill in clinical science. We disseminate our work to others through publications, and we obtain the resources to conduct research through grant proposals. This course has been developed for KL2 and CRSP scholars. The course focuses on writing grant proposals and, in particular, specific sections of an NIH-style grant. However, the principles discussed in the course apply to any type of proposal.</p> <p><i>Prereq: CRSP 401 or equivalent and instructor's consent required</i></p>	Consult <a href="http://www.cwru.edu/pr ovost/registrar/registrar.html">http://www.cwru.edu/pr ovost/registrar/registrar.html</a> - select Schedule of Classes	James Spilsbury, PhD	<a href="mailto:jcs5@case.edu">jcs5@case.edu</a>

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<p>CRSP 413 Communication in Clinical Research – Oral Presentation, Posters, &amp; the Mass Media Credit Hours: 1 <b>Fall Semesters</b></p>	<p>To move their work forward, investigators must be able to present their research effectively to both scientific and lay audiences. Although “the written word” is probably the first medium that comes to mind when we think of communication in scientific circles, other modes of communication are also vital. The main objective of this course is to help scholars improve their oral and poster presentation skills, as well as interactions with the mass media. This objective will be achieved through a combination of didactic sessions, readings, and presentations by the students.</p> <p><i>Prereq: Instructor's consent required</i></p>	<p>Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes</p>	<p>James Spilsbury, PhD</p>	<p>cs5@case.edu</p>
<p>CRSP 431 Statistical Methods I Credit Hours: 3 <b>Fall Semester</b></p>	<p>Application of statistical techniques with particular emphasis on problems in the biomedical sciences. Basic probability theory, random variables, and distribution functions. Point and interval estimation, regression, and correlation. Problems whose solution involves using packaged statistical programs.</p> <p><i>Prereq: Instructor's consent required</i> Offered as ANAT 431, BIOL 431, CRSP 431, PQHS 431, and MPH 431</p>	<p>Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes</p>	<p>Thomas E. Love, PhD</p>	<p><a href="mailto:thomas.love@case.edu">thomas.love@case.edu</a></p>
<p>CRSP 432 Statistical Methods II Credit Hours: 3 <b>Spring Semester</b></p>	<p>Methods of analysis of variance, regression, and analysis of quantitative data. Emphasis on computer solution of problems drawn from the biomedical sciences. Design of experiments, power of tests, and adequacy of models.</p> <p><i>Prereq: Instructor's consent required</i> Offered as BIOL 432, CRSP 432, PQHS 432, and MPH 432</p>	<p>Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes</p>	<p>Thomas E. Love, PhD</p>	<p><a href="mailto:thomas.love@case.edu">thomas.love@case.edu</a></p>
<p>CRSP 440 Translational &amp; Patient-Oriented Research Theory Credit Hours: 3 <b>Fall Semesters</b></p>	<p>This course provides an overview of the theoretical framework, rationale, process, methodologies, and ethics of clinical and translational research. An integral feature of this course is the participation of a multidisciplinary teaching team, whose expertise and perspective will contribute to providing real-world insights into the complexities of translational and patient-oriented research.</p> <p><i>Prereq: Instructor's consent required</i></p>	<p>Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a></p>	<p>James Spilsbury, PhD</p>	<p><a href="mailto:james.spilsbury@case.edu">james.spilsbury@case.edu</a></p>

COURSE NAME, NUMBER, & SEMESTER	DESCRIPTION – TOPICS - REQUIREMENTS	LOCATION OF COURSE AND SCHEDULE	INSTRUCTOR OR COURSE DIRECTOR	CONTACT INFORMATION
<p>CRSP 450 Seminar in Multidisciplinary Clinical and Translational Research Credit Hours: 0 Each Semester</p>	<p>The purpose of this monthly seminar is to introduce students to the processes and challenges of multidisciplinary clinical/translational science, through which discoveries in the laboratory or in early clinical studies are transformed into interventions, treatments, and ultimately, best practices and policies on national and international levels. The seminar will use a case-based approach. Examination of active projects at CWRU, Cleveland Clinic Foundation, the MetroHealth Medical Center, University Hospitals, and Louis Stokes Veterans Administration Medical Center will enable students to learn first-hand about clinical translational science in action.</p> <p><i>Prereq: Instructor's consent required</i></p>	<p>Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a></p>	<p>Li Li, PhD</p>	<p>Li.Li@case.edu</p>
<p>CRSP 500 Design and Analysis of Observational Studies Credit Hours: 3 Spring Semester</p>	<p>An observational study is an empirical investigation of treatments, policies or exposures and the effects that they cause, but it differs from an experiment because the investigator cannot control treatment assignment. We introduce appropriate design, data collection and analysis methods appropriate for clinical investigators, preparing students to design and interpret their own studies, and those of others in their field. Technical formalities are minimized, and the presentations will focus on the practical application of methodologies and strategies. A course project involves the completion of an observational study, and substantial use of the R statistical software. Topics include randomized experiments and how they differ from observational studies, planning and design for observational studies, adjustments for overt bias, sensitivity analysis, methods for detecting hidden bias, and propensity score methods for selection bias adjustment, including multivariate matching, stratification, weighting and regression adjustments, along with some comparison of these methods with instrumental variables approaches.</p> <p><i>Prereq: Instructor's consent required</i> <b>Recommended preparation:</b> a working knowledge of multiple regression, some familiarity with logistic regression, and some exposure to fitting such models in R. <b>Syllabus &amp; Course Material:</b> <a href="https://sites.google.com/a/case.edu/love-500/home/course-materials-and-handouts">https://sites.google.com/a/case.edu/love-500/home/course-materials-and-handouts</a></p>	<p>Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes</p>	<p>Thomas E. Love, PhD</p>	<p><a href="mailto:thomas.love@case.edu">thomas.love@case.edu</a></p>
CRSP 501	This course will assist learners to understand why and how different professional	Consult	Shirley Moore,	<a href="mailto:shirley.moore@case.edu">shirley.moore@case.edu</a>

COURSE NAME, NUMBER, & SEMESTER	DESCRIPTION – TOPICS - REQUIREMENTS	LOCATION OF COURSE AND SCHEDULE	INSTRUCTOR OR COURSE DIRECTOR	CONTACT INFORMATION
Team Science -Working in Interdisciplinary Research Teams Credit Hours: 1 <b>Fall Semester</b>	<p>disciplines, each representing a body of scientific knowledge, can best work together to develop and disseminate translational knowledge. Learners will develop a set of skills specific to be an effective member and leader of an interdisciplinary research team, including working with different value and knowledge sets across disciplines, understanding the mental models of other disciplines, creating shared mental models, running effective meetings, managing conflict, giving and receiving feedback, and group decision making techniques. Using the small group seminar approach and case studies, learners will practice individual and group communication, reflective and self-assessment techniques, and engage in experiential learning activities regarding effective teamwork in interdisciplinary research teams. Techniques to increase group creativity and frame new insights will be discussed.</p> <p><i>Prereq: K grant appointment and instructor's consent required</i></p>	<a href="http://www.cwru.edu/pr ovost/registrar/registrar .html">http://www.cwru.edu/pr ovost/registrar/registrar .html</a> - select Schedule of Classes	RN, PhD	<a href="mailto:ase.edu">ase.edu</a>
CRSP 502 Leadership Skills for Clinical Research Teams Credit Hours: 2 <b>Spring Semester</b>	<p>This semester-long course uses methods of Intentional Change Theory to engage students in a series of self-assessment activities to gain insights into their behavior and its effect on others, and to learn a set of skills to be an effective member and leader of an interdisciplinary research teams. Such skills include working with different values and knowledge sets across disciplines, running effective meetings, conflict management, giving and receiving feedback, and group decision making techniques. This small group series of sessions includes case-based learning and sequentially introduces three sets of sessions: at the conclusion of the first sets, Scholars develop a Personal Vision essay; the second sets, a Personal Balance Sheets, and in the third set, a Personal Learning Plan, including components leading to effective leadership skills and skill building in teamwork. As an example, the focus of a case study in developing a "program project"-type grant proposal highlights the effect of disciplinary-specific language on multidisciplinary research team functioning, and the needs for and methods to create a "common language" for team use.</p> <p><i>Prereq: K grant appointment and instructor's consent required</i></p>	Consult <a href="http://www.cwru.edu/pr ovost/registrar/registrar .html">http://www.cwru.edu/pr ovost/registrar/registrar .html</a> - select Schedule of Classes	Philip Cola, PhD	<a href="mailto:Philip.cola@uhhospitals.org">Philip.cola@uhhospitals.org</a>
CRSP 503	<p>This module is to acquaint and ultimately engage clinical researchers with the business of innovation and entrepreneurship. Goals include: (1) provide researchers with many of the</p>	Consult <a href="http://www.cwru.edu/pr">http://www.cwru.edu/pr</a>	Scott Shane, PhD	<a href="mailto:Sas46@case.edu">Sas46@case.edu</a>

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Innovation and Entrepreneurship  Credit Hours: 1  Summer Semester	skills that they would need to translate academic research into commercial uses; (2) sensitize clinical researchers to the goals of the business community and facilitate their ability to work with the private sector on technology development; and (3) make clinical researchers aware of the processes of academic technology development and transfer. Sessions consist of a lecture and case discussion facilitated by one of the co-directors.  <i>Prereq: Consent of course director</i> <i>Course pack: Available from <a href="http://www.hbsp.harvard.edu">www.hbsp.harvard.edu</a></i>	<a href="http://www.cwru.edu/pr/ovost/registrar/registrar.html">ovost/registrar/registrar.html</a> - select Schedule of Classes		
CRSP 504  Managing Research Records - A System's Approach  Credit Hours:2 - 3  Spring Semester	This course will provide an approach to managing data for research studies. Major topics will include a discussion of a research study system including database design and development, data management, and clinical data management; how to evaluate the data needs of a study including the impact of required regulations; summary of key regulations; the role of the data manager including protocol review, development of a data management plan, CRF design, data cleaning, locking studies and ensuring best practices. Each session will include a lecture, class discussion, and student presentation.	Consult <a href="http://www.cwru.edu/pr/ovost/registrar/registrar.html">http://www.cwru.edu/pr/ovost/registrar/registrar.html</a> - select Schedule of Classes	Carolyn Apperson-Hansen, MStat	<a href="mailto:cva9@case.edu">cva9@case.edu</a>
CRSP 505  Investigating Social Determinants of Health  Credit Hours:2-3  Spring Semester	The biopsychosocial model highlights the inter-related roles that biological, psychological, and social factors play in health and illness. This course is geared towards clinical research scholars who would like to incorporate aspects of the "social context" in their research. This course will examine the conceptualization and measurement of several key socio-cultural determinants of health and illness. This course is organized by social determinant. Each session focuses on a specific social determinant or set of related determinants. The session examines how the determinant is conceptualized (including relevant theoretical models or frameworks), how it is measured, and the challenges researcher face as they incorporate the social determinant in their research. Sample studies that incorporate social determinants of health will be reviewed. This course will also consider strategies and techniques to conduct clinical research involving social factors in socially and ethnically diverse settings. Students will be encouraged to develop a prototypical study design to incorporate social determinants in their research.  <i>Recommended preparation: CRSP 401 and instructor's consent</i>	Consult <a href="http://www.cwru.edu/pr/ovost/registrar/registrar.html">http://www.cwru.edu/pr/ovost/registrar/registrar.html</a> - select Schedule of Classes	James Spilsbury, PhD	<a href="mailto:jcs5@case.edu">jcs5@case.edu</a>
CRSP 510  Health Disparities	This course aims to provide theoretical and application tools for students from many disciplinary backgrounds to conduct research and develop interventions to reduce health disparities. This course will be situated contextually within the historical record of the	Request schedule from Dr. Sudano or consult <a href="http://www.cwru.edu/pr/ovost/registrar/registrar.html">http://www.cwru.edu/pr/ovost/registrar/registrar.html</a>	Joseph J. Sudano, Jr., PhD and Ash	<a href="mailto:jsudano@metrohealth.org">jsudano@metrohealth.org</a>

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Credit Hours: 3 <b>Fall Semester</b>	<p>United States, reviewing social, political, economic, cultural, legal, and ethical theories related to disparities in general, with a central focus on health disparities. Several frameworks regarding health disparities will be used for investigating and discussing the empirical evidence on disparities, research and outcome measurement issues, policy and policy formation concerns, and intervention practices. While racial/ethnic disparities in health and health outcomes will be an important focus of this course, disparities among other subgroups (e.g., the poor, women, uninsured, disabled, and non-English speaking populations) will also be included and discussed. Students will be expected to develop a research proposal (observational, clinical, and/or intervention) rooted in their disciplinary background that will incorporate materials from the various perspectives presented throughout the course, with the objective of developing and reinforcing a more comprehensive approach to current practices within their fields.</p> <p><i>Prereq: Instructor's consent required – contact Dr. Sudano</i>  <i>Offered as CRSP 510, EPBI 510, MPH 510, NURS 510, and SASS 510</i></p>	<a href="http://www.cwru.edu/provost/registrar/registrar.html">provost/registrar/registrar.html</a> - select Schedule of Classes	Sehgal, MD	<a href="mailto:axs81@cwru.edu">axs81@cwru.edu</a>
CRSP 550 Meta-Analysis and Evidence Synthesis Credit Hours: 2 – 3 <b>Spring Semester</b>	<p>This course is designed to introduce students to the methods of conducting a high quality systematic review. We will cover the design, methods, and analytic techniques involved in systematic reviews. These concepts will prepare students to conduct their own systematic review or evaluate the systematic reviews of others. Sessions will mainly include problem-based learning supplemented by lectures.</p> <p>Topics include developing a search strategy, abstracting key data, synthesizing the results qualitatively and quantitatively, meta-analytic techniques, grading the quality of studies, grading the strength of the evidence, and manuscript preparation specific to systematic reviews.</p> <p>Offered as CRSP 550 and PQHS 550.</p> <p><i>Prereq: CRSP 401, MPH 405, PQHS 431, NURS 532 or equivalent and Instructor's consent required</i></p>	Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes	TBA	
CRSP 560 Special Topics in Clinical Research	<p>In this variable 1-3 credit hour course, students will explore particular issues and themes related to Clinical Research. The course content will vary and is designed to explore content not covered in other CRSP courses or to expand student knowledge on topics introduced by other CRSP courses.</p>	Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule	TBA	

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Credit Hours: 2  May be offered during the Fall/Spring/Summer Semester		of Classes		
CRSP 603  Research Ethics and Regulation: Emerging Issues and Ongoing Challenges  Credit Hours: 2  Fall Semester	<p>This course designed to introduce students to the ethical, policy, and legal issues raised by research involving human subjects. It is intended for law students, post-doctoral trainees in health-related disciplines and other students in relevant fields. Topics include (among others): regulation and monitoring of research; research in third-world nations; research with special populations; stem cell and genetic research; research to combat bioterrorism; scientific misconduct; conflicts of interest; commercialization and intellectual property, and the use of deception and placebos. The course will meet once per week for two hours over the semester. Grades will be given based on class participation and a series of individual and group projects.</p> <p><i>Prereq: Instructor's consent required</i>  <i>Text: Coleman, C et. al. (2005). The Ethics and Regulation of Research with Human Subjects.</i>  <i>Offered as BETH 503 and LAWS 603</i></p>	Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes	Patricia Marshall	patricia_marshall@case.edu
CRSP 651  Thesis Research  Credit Hours: Variable, 1 to 18  Fall/Spring/Summer Semesters	<p>Thesis development and research towards the Master's degree, including defense of the thesis proposal and final oral and written defense of research.</p> <p><i>Prereq: Consent of CRSP faculty advisor</i></p>	Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a>	CRSP Faculty Advisor	

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PQHS 411 (Previously known as EPBI 411) Introduction to Behavioral Health Credit Hours: 3 Spring Semester	Using a biopsychosocial perspective, the course provides an overview of the measurement and modeling of behavioral, social, psychological, and environmental factors related to disease prevention, disease management, and health promotion is provided.  <i>Prereq: Instructor's consent required</i> <i>Offered as PQHS 411 and MPH 411</i>	Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes	As per Schedule of Classes	Instructor
PQHS 450 (Previously known as EPBI 450) Clinical Trials and Intervention Studies Credit Hours: 3 Spring Semester	Issues in the design, organization, and operation of randomized, controlled clinical trials and intervention studies. Emphasis on long-term multicenter trials. Topics include legal and ethical issues in the design; application of concepts of controls, masking, and randomization; steps required for quality data collection; monitoring for evidence of adverse or beneficial treatment effects; elements of organizational structure; sample size calculations and data analysis procedures; and common mistakes.  <i>Recommended preparation: PQHS 431 or consent of instructor</i> <i>Offered as EPBI 450 and MPH 450</i>	Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes	As per Schedule of Classes	Instructor

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PQHS 467 (Previously known as EPBI 467)  Comparative and Cost Effectiveness Analysis in Health Care  Credit Hours: 3  Summer Semester	<p>Comparative effectiveness research is a cornerstone of healthcare reform. It holds the promise of improved health outcomes and cost containment. This course is presented in a convenient 5-day intensive format in June. There are reading assignments due prior to the 1<sup>st</sup> session.</p> <p>Module A (Days 1-2): Overview of comparative effectiveness research (CER) from a wide array of perspectives: individual provider, institution, insurer, patient government, and society. Legal ethical and social issues, as well as implications for population and public health, including health disparities will also be component.</p> <p>Module B (Day 3): Introduction to the various methods, and their strengths, weaknesses and limitations. How to read and understand CER papers.</p> <p>Module C (Days 4-5): Cost-Effectiveness Analysis. This will cover costing, cost analysis, clinical decision analysis, quality of life and cost-effectiveness analysis for comparing alternative health care strategies. Trial version of TreeAge software will be used to create and analyze a simple cost-effectiveness model.</p> <p>Take all 3 modules for full 3 credits. Modules A or C can be taken alone for 1 credit. Modules A and B or Modules B and C can be taken together for a total of 2 credits. Module B cannot be taken alone. If taken for 2 or 3 credits, some combination of term paper, project and/or exam will be due 30 days later.</p> <p><i>Offered as EPBI 467 and MPHP 467</i></p>	Consult <a href="http://www.cwru.edu/provost/registrar/registrar.html">http://www.cwru.edu/provost/registrar/registrar.html</a> - select Schedule of Classes	As per Schedule of Classes	Instructor

\*To obtain software, click on <http://softwarecenter.case.edu/>

Key: TBA = to be approved

# Clinical Research Scholars Master's Program (CRSP) at CWRU

## Curriculum

Academic Year 201-2019

36 credit hours are required for completion of this Master of Science in Clinical Research degree, of which at least 12 credits must be letter graded

### **CORE COURSES (13 credits) and THESIS REQUIREMENT (9 CREDITS):**

Course #	COURSE TITLE	Units	Grading	Semester
CRSP 401	Introduction to Clinical Research	3	Graded	Summer
CRSP 402	Study Design and Epidemiologic Methods	3	Graded	Fall
CRSP 431*	Statistical Methods I	3	Graded	Fall
CRSP 413	Communication in Clinical Research – Oral Presentation, Posters, and the Mass Media	1	P/F	Fall
CRSP 412	Communication in Clinical Research Seminar – Grant Writing	1	P/F	Spring
CRSP 603	Research Ethics and Regulation: Emerging Issues and Ongoing Challenges	2	Graded	Fall
CRSP 651	Thesis Research (1-9 credits per semester, once initiated must be continuous until graduation)	9	Satisfactory/Unsatisfactory	Summer/Fall/Spring
<b>TOTAL</b>		<b>22 CREDITS</b>		

\*Or equivalent (e.g. NURS 630: Advanced Statistics – Linear Models)

### **RECOMMENDED COURSES (8 credits):**

CRSP 406	Introduction to R Programming	2	P/F	Summer
CRSP 432*	Statistical Methods II	3	Graded	Spring
CRSP 500	Design and Analysis of Observational Studies	3	Graded	Spring
<b>TOTAL</b>		<b>8 CREDITS</b>		

\* Or equivalent (e.g. NURS 631: Advanced Statistics – Multivariate Analysis)

Each scholar is encouraged to develop his/her own Program of Study based on personal interests and needs. Please consult with CRSP faculty and your Research Mentor on which electives will best suit your needs.

### **The choices of electives listed below are for illustrative purposes and include but are not limited to:**

CRSP 410	Independent Study in Clinical Research (May be taken more than once)	1-3	P/F	Summer/Fall/Spring
CRSP 440	Translational & Patient-Oriented Research Theory	3	Graded	Fall
CRSP 450	Seminar in Multidisciplinary Clinical & Translational Research	0	P/F	Fall/Spring
CRSP 501	Team Science -Working in Interdisciplinary Research Teams	1	P/F	Fall
CRSP 502	Leadership Skills for Clinical Research Teams	2	Graded	Spring
CRSP 503	Innovation and Entrepreneurship	1	Graded	Summer
CRSP 504	Managing Research Records - A System's Approach	2-3	P/F	Spring
CRSP 505	Investigating Social Determinants of Health	2-3	P/F	Summer
CRSP 510	Health Disparities	3	Graded	Fall
CRSP 550	Meta-Analysis & Evidence Synthesis	2-3	Graded	Spring
CRSP 560	Special Topics in Clinical Research	1-3	P/F	Varies
GENE 526	AMG Quantitative & Genomics	3	Graded	Spring
PQHS 450	Clinical Trials and Intervention Studies	3	Graded	Spring
PQHS 467	Comparative & Cost-Effectiveness in Health Care	3	Graded	Summer
BIOC 407	Intro to Biochem.: Molecules to Medical Science	4	Graded	Fall

For current offerings/substitutions/schedule, please view [www.case.edu/registrar](http://www.case.edu/registrar), click Schedule of Classes. Select the semester of interest, type the first four LETTERS of the course code (e.g., CRSP) in the first available field and depress the Enter key. Click on the Course Number for a description of the subject matter.

## **SYLLABUS – SPRING 2018**

### **CRSP 460: SPECIAL TOPICS IN CLINICAL RESEARCH – GETTING YOUR MESSAGE ACROSS TO REPORTERS, POLICYMAKERS, and the PUBLIC**

**Credit Hours:** 1

**Dates:**

Session 1 January 24<sup>th</sup> 9:30 -12:00 PM;  
Session 2 February 3<sup>rd</sup> 10AM-3:00 PM  
Session 3: February 13<sup>th</sup> 4:00-7:00 PM  
Session 4: February 28<sup>th</sup> 9:30 -12:00 PM

**Location:** TBD

**Course Instructors**

Bill Sheil, JD  
Anchor & Senior Investigative Reporter  
Fox 8 News Cleveland  
Email: contact through J Spilsbury  
Office Hours: By appointment

Jim Spilsbury, PhD, Associate Professor  
Dept. PQHS  
Case School of Medicine  
Email: [james.spilsbury@case.edu](mailto:james.spilsbury@case.edu)  
Phone: 216-368-7559  
Office: 6127 Wolstein Research Building  
Office Hrs: Wed 12-1PM, or by appointment

#### **COURSE DESCRIPTION**

“Special Topics in Clinical Research” provides a mechanism for CWRU faculty involved in the MS Clinical Research and PhD Clinical Translational Science programs to explore with groups of students a topic related to clinical research that is not covered (or only superficially covered) by the existing curricula.

This Spring 2018 version of the course involves communication. Not all important communication about clinical research is directed towards scientists and clinicians. Clinical scientists are frequently asked by journalists to be interviewed about their own research as well as to comment about related work in their field. Clinical scientists may also be called upon to make presentations before governmental and non-governmental officials in order to guide the development of policy. Some scientists are bypassing the mass media altogether and communicating directly with the public through the use of social media. The purpose of this course is to provide students with enhanced skills to present their work and knowledge in these “non-scientific venues.”

#### **COURSE OBJECTIVES**

As a result of this course students will have enhanced their skills to:

1. Interview with members of the mass media
2. Present study findings and implications of those findings to policymakers
3. Develop a social media presence for their research

#### **REQUIRED READINGS**

There is no required textbook for the course. Instead, several relevant readings will be posted electronically on Canvas or sent via email prior to each course session.

## COURSE POLICIES

1. Class attendance and participation are critical because your contribution to class activities will help us all achieve course objectives.
2. Please do the readings, which will provide a common platform for discussion.
3. Please speak in class. Everyone's ideas are important.
4. Class participation should facilitate learning and should always be respectful of others, especially those with divergent views. Part of this work involves reviewing other scholars' work. Criticism should always be constructive.
5. Ask questions. If we don't know the answers, we'll do our best to find them.

## COURSE REQUIREMENTS

**Grading:** This course is pass/fail. Pass consists of  $\geq$  70 points; fail  $<$  70 points. Grading will be assessed by successful completion of assignments, interviews, and class participation:

*Assignment #1* (10 pts): Due by 5PM January 29<sup>th</sup>. Email to Jim Spilsbury ([jcs5@case.edu](mailto:jcs5@case.edu)). Select one of your recent studies. If you do not have a study of your own to discuss, select a recently published study that you like. In either case, email J. Spilsbury an abstract or summary of the study (bullet points are fine). The instructors will be using these summaries to guide the development of interview questions for Session #2.

*Interviews* (25 points each): To be conducted on February 3<sup>rd</sup>.

*Assignment #2* (10 pts): Due by 5PM February 9<sup>th</sup>. Email to Jim Spilsbury ([jcs5@case.edu](mailto:jcs5@case.edu)). Pick one of the hearings clips and in 1-2 pages critique the testimony. How effective was the speaker? Were you convinced by the argument? Will be discussed in February 13<sup>th</sup> class.

*Assignment #3* (10 pts): Due by 5PM Find and critique an investigator's or study's existing facebook page or blog. Email to Jim Spilsbury ([jcs5@case.edu](mailto:jcs5@case.edu)). Will be discussed in class on February 28<sup>th</sup>.

*Class Participation* (20 pts): Active participation in class discussions and in providing feedback to students

Date	Session Description
January 24 <sup>th</sup>	<p><b>Session #1 Introduction &amp; Interviewing Tips</b></p> <p>In this session, after instructors introduce the seminar and discuss course objectives and requirements, the following topics will be covered:</p> <ul style="list-style-type: none"><li>• Interview nuts and bolts</li><li>• Types of interviews and how to prepare for them.</li><li>• Concrete tips for being effective interviewee</li></ul> <p>Session activities: didactic presentations, observation of good and bad TV interviews, group critique and discussion, give assignment #1.</p>

	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• AAAS <i>Media Interviewing Tips</i></li> <li>• AAAS <i>Television and Radio Media Interviewing Tips</i>.</li> <li>• Woloshin S, Schwartz LS, Kramer BS. Promoting healthy skepticism in the news: Helping journalists get it right. <i>Journal of the National Cancer Institute</i> 2009;101:1596-1599.</li> </ul>
February 3 <sup>rd</sup>	<p><b>Session 2: Practice interviewing in front of a camera.</b></p> <p>Each student will be interviewed by a senior reporter twice. Once as an investigator discussing her/his recent study results, and a second time as an “expert” being called upon to discuss another investigator’s study or salient health issue. The interviews will be filmed and then discussed by the class.</p> <p>Session activities: two interviews, critique and discussion, give assignment #2.</p>
February 13 <sup>th</sup>	<p><b>Session 3: Communicating to Policymakers</b></p> <p>This session will focus on the process of presenting information to policymakers on national, state, local levels. Activities will consist of:</p> <ul style="list-style-type: none"> <li>• Overview on how the process works, tips on being effective in this setting.</li> <li>• Guest presentation by a policy maker (e.g., state legislator).</li> <li>• Observation and critique of good and bad policy presentations.</li> <li>• Role playing of a presentation before a policymaking body</li> </ul> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Melillo KD. Preparing and presenting testimony. Guidelines for the health care practitioner. <i>Nurse Pract.</i> 1994;19:59-64.</li> <li>• Falk R, Shapiro L. Physicians heal thy laws: ten steps to becoming an effective citizen lobbyist <i>J Med Pract Manage.</i> 2005;21:35-38.</li> </ul>
February 28 <sup>th</sup>	<p><b>Session 4: Developing a Research Presence in the Brave New World of Social Media.</b> This session will focus on researchers’ use of social media (e.g., Facebook, Twitter, Blogs) to disseminate information about research. Activities will consist of:</p> <ul style="list-style-type: none"> <li>• Presentation by Guest Speaker Marc Kaplan (Associate Dean, Marketing and Communications</li> <li>• Case Western Reserve University School of Medicine)</li> <li>• Discussion &amp; critique of social media sites found by students</li> <li>• In-class Demonstration: Facebook Live</li> <li>• Course Wrap-up</li> <li>• Student Evaluation</li> </ul> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Jay M. Bernhardt JM, Alber J, Gold RS. A Social Media Primer for Professionals: Digital Dos and Don’ts. <i>Health Promot Pract.</i> 2014;15:168–172</li> <li>• Fox CS, Bonaca MA, Ryan JJ, Massaro JM, Barry K, Loscalzo J. A</li> </ul>

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|  | <p>Randomized Trial of Social Media From Circulation. <i>Circulation</i>. 2015;131:28-33.</p> <ul style="list-style-type: none"><li>• Jenny K. Hoang JK, McCall J, Dixon AF, Fitzgerald RT, Gaillard F. Using Social Media to Share Your Radiology Research: How Effective Is a Blog Post? <i>J Am Coll Radiol</i> 2015;12:760-765</li><li>• Buckarma EMH, Thiels CA, Gas BL, Cabrera D, Bingener-Casey, J, Farley DR. Dissemination of a Traditional Surgical Research Article. <i>J Surg Ed</i>. 2016;74:79-83.</li></ul> |
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