

Master of Science in Clinical Research Degree Program

The MS in Clinical Research Degree Program has been offered at the UT Medical School since the fall of 2002. This MS degree program is designed as a focused, flexible, and affordable program to train clinical investigators in designing and conducting patient-oriented research of exemplary quality. The curriculum accommodates clinicians' busy schedules; the courses are concentrated on Wednesdays after noon. The degree can be completed in 2-4 years depending on the amount of time a student devotes to the program. For updated information about this program, see <http://ped1.med.uth.tmc.edu/neo/center-masters.htm>.

M.S. Admission Requirements

This program is expected to appeal primarily to MDs at the fellow and faculty levels as well as other clinicians who have not had previous formal training in clinical research. The rapid pace of the curriculum assumes a working knowledge of clinical medicine and excellent scholastic aptitude.

All applicants are required to be engaged in or preparing to conduct clinical research and meet one of the following two types (a or b) of academic criteria:

- a) Advanced degree in health-related field:
 - (1) M.D. or D.O.
 - (2) Ph.D. in a related field
 - (3) D.D.S. or D.M.D.
 - (4) R.Ph. or Pharm.D.
- b) Bachelor's or master's degree and experience in a health-related field with a G.P.A. of > 3.0 and previous work experience in a health-related field, such as nursing, psychology, dietetics, etc.

Application and Admission Procedures

Completed applications, including letters of reference and transcripts, must be received by:

June 15 for fall semester

Oct. 15 for spring semester

Applications should be submitted online to the Office of the Registrar (<http://registrar.uth.tmc.edu/Admissions/ap-formslist.htm>). The following are required:

- a) A completed application form with a curriculum vitae. Each applicant will be required to summarize his/her career goals, describe how the Master's Program will support these goals, and propose a timeline for completion of the program.
- b) Letters of reference from at least two individuals who are qualified to evaluate the applicant's academic or professional performance, as well as ability and motivation to complete the program. If an applicant will be employed or in a training program while enrolled in the program, a letter of support/recommendation will be required from the applicant's supervisor to verify the supervisor's commitment to provide the applicant with adequate "protected" time to complete the program. Letters should be on official letterhead.
- c) Official transcripts covering all periods of post secondary enrollment in accredited institutions of higher ed-

ucation. Applicants should request the institution to send official (original) transcripts directly to the Office of the Registrar. Graduates of Texas colleges and universities should request that transcripts be sent in electronic format. Copies of official transcripts sent by the applicant are not considered official. Transcripts must include both grades and credit hours.

- d) Applicants who are nationals of countries where English is not the parent language are required to submit scores from the Test of English as Foreign Language (TOEFL). See application form for current requirements and exceptions.
- e) A \$30 non-refundable application fee.

Direct telephone inquiries about the program to:
Center for Clinical Research and Evidence-Based Medicine
The University of Texas Houston Medical School
713-500-6708

Address application inquiries to:
Office of the Registrar
The University of Texas Health Science Center at Houston
P.O. Box 20036
Houston, Texas 77225-0036
713-500-3361

Once an application has been submitted, the applicant will receive a PIN number from the Office of the Registrar. Once the PIN number is received, the status of the application, transcripts, and letters of reference can be checked online at <http://utlink.uth.tmc.edu>.

Factors Considered in Admissions Decisions

The Admissions Committee of the MS in Clinical Research Degree Program will review all completed applications. The committee considers the following factors in evaluating applicants for admission:

- Previous research experience and accomplishments, enrollment in laboratory and research-based courses, and involvement in research projects and publications;
- Expressed commitment to a career involving biomedical research;
- Grade point average;
- Career goals;
- Previous graduate-level study;
- Work experience in a health-related field;
- Honors and awards for academic achievement;

Other factors that may be considered by the Admissions Committee include:

- Success in overcoming socio-economic and educational disadvantages;
- Multilingual proficiency;
- Non-academic responsibilities, such as employment and child-rearing;
- Involvement in community activities; and;
- Race and ethnicity

Preference will be given to candidates who have regularly attended the Clinical

Research Curriculum and have an established committed departmental mentor. Plans for departmental mentoring must be established prior to enrollment to the program. Candidates from institutions outside of UT will be considered for admission if arrangements can be made for appropriate departmental and methodologic mentorship from the applicant's own clinical/academic institution.

Enrollment Status

A student is considered officially enrolled if tuition and fees are paid by the due date listed on the schedule of classes.

- Program Student: a student admitted to an academic program who is following a set curriculum and pursuing a degree without an interruption of more than one year in enrollment.
- Non-degree Student: a student who is admitted to the school for one or more courses but not admitted to a degree program.

Enrollment as a non-degree student does not in any way entitle a student to admission to a degree program. A non-degree student is allowed to register only with the permission of the course instructor.

Degree Requirements

- a) Satisfactory completion of the Clinical Research Curriculum courses (a two-year curriculum composed of a weekly lecture series and homework exercises). In addition to the 9-12 credit hours for the Clinical Re-

search Curriculum (see below), each student will be required to complete an additional 24-27 credit hours (including practica and a thesis) for a total of 36 credit hours.

- b) Satisfactory completion of at least three of these practica (maximum of 4 credit hours):

Institutional Review Board
Clinical Research Center
Scientific Presentation
Scientific Writing

- c) Satisfactory completion of a research thesis project or projects that collectively demonstrate competence in each of these areas:

To critically review clinical research literature

To postulate a sound new research question

To design a clinical research study to address this question using the most unbiased feasible design

To properly analyze clinical research data

To appropriately interpret clinical research findings

- d) Effective fall 2004, an overall cumulative grade point average of 3.0 (B) is required.

- e) Effective fall 2004, a GPA of 3.0 (B) must also be achieved for the core Clinical Research courses (the courses offered at the Medical School for the MS in Clinical Research Degree Program or courses deemed to be equivalent by the student's advisers). (For students enrolled in the program before fall 2004, the B av-

erage requirement will apply only to courses completed after the change has taken effect.)

- f) Effective spring 2005, students must be enrolled for at least 1 credit hour during the semester in which they complete the degree requirements.
- g) Beginning with students admitted to the program in spring 2005, at least 3 thesis credit hours will be required. (A maximum of 6 thesis credit hours can be applied to the 36 credit hour requirement for the degree.)

Clinical Research Curriculum Topics

Clinical Epidemiology
Clinical Trials
Seminars in Clinical Research
Use of Computers in Clinical Research
Scientific Writing
Biostatistics for Clinical Investigators
Literature Appraisal
Ethical Aspects of Clinical Research
Introduction to Translational Research
Clinical Research Design Workshop

Additional Coursework for Master's Degree

The curriculum for the Master's Program consists of two tracks — a Patient-Based Clinical Research Track and a Translational Research Track. In either track, the specific courses (usually 4-5) chosen by an individual student will depend on his/her previous training and course work and current career goals. Most students in the Translational Research Track will take advanced courses in molecular biology and/or genetics; most students in the

Patient-Based Clinical Research Track will take advanced courses in health care economics and health care policy and practice.

Required Advanced Courses for Master's Program

Advanced Epidemiology
Advanced Biostatistics for Clinical Investigators

Elective Advanced Courses for Master's Program

Evaluating Costs and Benefits in Clinical Research
Using Research to Inform Health Care Policy and Practice
Advanced Clinical Research Design
Developmental Biology
Molecular and Cellular Approaches to Human Genetics
Genetics and Human Disease
Eukaryotic Gene Expression
Cancer Biology

Transfer Students

A student may be given up to 18 hours of credit for formal coursework done previously in a comparable program. Students who transfer into the program must meet the same overall degree requirements as students who undergo all of their training at UT.

Petitioning for Course Equivalency

A student who wishes to receive credit for courses taken outside the MS in

Clinical Research Degree Program at UT may submit a Petition for Equivalency form (available in MSB 2.106). This includes the Clinical Research Curriculum courses as well as courses taken at other institutions that are similar in content to courses offered for the MS in Clinical Research Program. The student must complete the form and obtain the approval of his/her program adviser. For courses taken outside the UT Medical School, the student must supply the required documentation about course goals and requirements for approval of credit hours by the Curriculum Committee.

Advisory Committee

Each student in the program will work jointly with two different advisors—a program advisor/mentor who provides methodological expertise and a departmental advisor/mentor from his/her own basic or clinical science department or institution who provides expertise in the participant's specific area of clinical research. For fellows and other trainees, the training program director will also serve as a member of the advisory committee. At the end of each semester, the student will be scheduled to meet with his/her advisory committee to review academic progress, course selection, and thesis development.

M.S. Tuition and Fees

Tuition

Beginning 2005-2006, resident tuition will be \$92 per semester credit hour with a minimum charge of \$120 per semester. The non-resident tuition will be \$328 per semester credit hour. Tuition and fees are subject to change according to the actions of the Texas Legislature or the Board of Regents and are effective when enacted.

Texas Residence Requirements

In general, for tuition purposes, Texas residence for an independent individual over 18 years of age is established if the individual has been gainfully employed within the state for a 12-month period immediately preceding registration to the university. An individual who registers in an institution of higher education before having resided in Texas for 12 months will be classified as a non-resident. An individual who has come to the state primarily for the purpose of education will be classified as a non-resident.

Although classified as non-residents, students falling within certain categories may be given the privilege of paying resident tuition. These categories include: a) employment of a student as a teaching or research assistant in a state institution of higher education at least half-time in a degree-related position; b) employment of the student or student's spouse or parent in a state institution of higher education in a faculty position (instructor level or above), which is at least half-time on a regular monthly salary basis; c) holding a competitive scholarship of at least \$1,000 for the academic year and which

is awarded by a scholarship committee officially recognized by UT Health Science Center. Specific details about all categories that give the privilege of paying resident tuition are available in the Registrar's Office. Students also may consult the Texas Education Code (54.064) and the "Rules and Regulations for Determining Residence Status" published by the Texas Higher Education Coordinating Board.

Enrollment in Affiliated Institutions

Through reciprocal agreements, graduate students at other components of The University of Texas Health Science Center at Houston, as well as graduate students from Rice University, Baylor College of Medicine, Texas Woman's University, and the University of Houston may take graduate courses for credit in the MS in Clinical Research Program at the Medical School, subject to approval of the instructor. In addition, full time students (taking at least 9 credit hours) at the Medical School may take courses for credit at any of the above institutions. The mechanism for payment of the tuition or registration fees varies according to the individual institution. Consult with the Registrar's Office for specific details.

Student Services Fees

The student services fees, required of all students, are assessed per semester credit hour with a maximum charge of \$138.54 per semester. The fee provides for student activities, outpatient care by Medical School Health Services, recreational facilities, counseling services,

and shuttle bus services. A graduation fee of \$40, payable at registration for the final academic semester, is required of all students. The information technology access fee is \$20 per semester.

Tuition and Fees Payment Policy

Tuition for each semester is due at the time of registration. Payment of tuition and fees may be paid through the following alternatives: a) full payment of tuition and fees in advance of the beginning of the semester, or b) one-half payment of tuition and fees in advance of the beginning of the semester, one-fourth payment prior to the start of the sixth class week, and one-fourth payment prior to the start of the eleventh class week. A \$15 installment payment fee will be assessed each semester as student utilizes payment alternative b. A late payment fee of \$15 will be applicable to initial payments. A \$10 charge will be assessed for any subsequent delinquent installment payment.

Mail-in tuition and fees payment received for less than the actual amount due will be returned to the student. Students who have checks returned for insufficient funds will be charged a \$25 fee and will be given one week to make a cash payment. If no cash payment is made during this interim, the registrar will recommend to the dean that the student be barred from readmission. Students who have fees billed to a sponsor are financially responsible for any fees determined by the Accounting Office to be uncollectable from that sponsor.

A student who fails to make full pay-

ment of tuition and fees to the university when the payments are due, including any late fees assessed, is subject to one or more of the following actions at the university's option:

- a) bar against readmission to the institution,
- b) withholding of grades, degree, and official transcript, and,
- c) all penalties and actions authorized by law.

Refund of Tuition and Fees

Refunds shall be made of applicable tuition and fees collected for courses from which the student withdraws within the first 12 days, provided the student remains enrolled at the institution. Refunds of tuition and mandatory fees shall be made to students withdrawing completely from the institution according to the following schedule:

- a) prior to first class day – 100% (after \$15 matriculation fee assessed)
- b) during the first week – 80%
- c) during the second week – 70%
- d) during the third week – 50%
- e) during the fourth week – 25%
- f) after the fourth week – none

All policies regarding the payment or refunding of tuition, fees, and charges are approved by the Board of Regents of The University of Texas System and comply with applicable state statutes. If a person desires clarification of any matter relating to payment or refund of such charges, he or she should contact the Office of the Registrar.

Dropping courses or withdrawing from the university does not relieve a student of the responsibility for unpaid financial obligations to the university. Students enrolled in an installment payment plan will be required to continue making payments until the non-refundable portion of their accounts are paid in full. Refunds or credits are based on the percentage of tuition and fees charged, not on the percentage of tuition and fees paid. Contact the Registrar's Office for more information.

Student Health Insurance

Students are required to carry health insurance including hospitalization coverage. The fee for health insurance coverage will be waived at registration for students who provided proof of comparable existing health insurance coverage.

M.S. Grading, Conduct and Satisfactory Progress Policies

Grades

Core courses in the MS in Clinical Research Degree Program will be graded A, B, C, or F. An 'F' in a required course requires repetition of that course (or a course deemed equivalent by the student's advisers). Practica and thesis credit hours are graded pass (P) or fail (F). An incomplete (I) grade may be assigned at the discretion of the instructor when the course requirements have not been satisfied by the end of the semester. An incomplete grade will remain on the transcript until a final grade is assigned by the instructor. If an incomplete is not changed by the end of the following semester, it will be converted to an 'F.'

Criteria upon which grades are based are given at the beginning of each course. Students may withdraw from a course through the last class day of the term. When a student withdraws from a course, a Withdrawn Passing (WP) or Withdrawn Failing (WF) grade will be recorded depending on the student's standing at the time of withdrawal. This WP or WF grade will remain on the transcript even if the course is repeated and passed.

Academic Conflict Resolution

Individual faculty members retain primary responsibility for grading and evaluations. The faculty member's judgment is final unless compelling evidence suggests discrimination, differential treatment, or a mistake. In attempting to resolve any student grievance regarding academic matters, it is the obligation of the student first to make a serious effort to resolve the matter with the fac-

ulty member with whom the grievance originated. If the student and faculty member cannot resolve the matter, the student should consult the academic grievance procedure described in the Student Handbook available at <http://deanweb.med.uth.tmc.edu/studaff/handbook/index.html> under Academic Guidelines (Grade Grievance Policy).

Satisfactory Academic Progress

The faculty of the Medical School has the responsibility for identifying students who are in academic difficulty and determining whether the deficiency can be remediated or if the student should be dismissed. Satisfactory academic progress is defined for each student by following the degree plan for that student. Each student's Advisory Committee will review the student's course work to assist him or her in achieving the maximum potential and in assessing progress toward academic goals. Satisfactory progress will be evaluated on an individual basis but will generally require successfully completing at least 5-8 credit hours per year. Students are expected to complete the program within 6 years, unless extraordinary circumstances warrant an extension. Overall consideration of performance will be used by the Advisory Committee to determine which students have progressed satisfactorily and which students should be placed on academic probation.

Academic Probation and Dismissal

A student will be placed on academic probation by the program director fol-

lowing the completion of the semester in which any of the following occur:

- 1) a second grade of F or WF is earned
- 2) the student fails to meet with his or her Advisory Committee within a 12-month period
- 3) the student fails to make satisfactory progress toward the degree (see above).

Once on probation, the student will be re-evaluated at least each semester by his or her Advisory Committee. A student placed on probation for failing grades will be taken off probation when he/she has passed at least 2 courses and has passed the same or an equivalent course for any required courses that were failed. The student will be given one year to satisfy these requirements or up to two years if the failed required course(s) is offered only biennially. A student placed on probation for failing to make satisfactory progress and/or meet with his or her Advisory Committee will be taken off probation when he or she successfully completes at least 8 credit hours over the next year. If the academic probation is not removed within the stated time period for remediation, the student will be dismissed by the program director.

If the student wishes to request a reconsideration of the dismissal, a written request to the dean with a copy sent to the chairman of the Student Evaluations and Promotions Committee must be submitted within five (5) working days of receipt of the dismissal letter. The Student Evaluations and Promotions Committee will review the request and render its recommendation in writing to the dean. The student will be notified in writing of the dean's decision within

five (5) working days of the committee's recommendation. The determination of the dean is final and is not subject to further appeal. Students can be referred for evaluation and counseling for academic or personal concerns through the Office of Student Affairs.

Conduct and Discipline

Students are expected to maintain the highest standards of professional conduct and approach their education with honesty and integrity. Students are responsible for becoming familiar with and observing university regulations concerning student conduct and discipline as set forth in Part One, Chapter VI, Section 3 of the Rules and Regulations of The University of Texas System Board of Regents. A reference copy of the Rules and Regulation is available at: <http://www.utssystem.edu/bor/rules> (Chapter VI, Section 3) and in the Deans' Office and the HAM-TMC Library.

For information regarding student academic and behavioral issues, contact:
Margaret C. McNeese, M.D.
Associate Dean of Student Affairs
The University of Texas Medical School at Houston
6431 Fannin G.400
Houston, TX 77030
713-500-5159

Long-Term Absences

Students who are unable to maintain active status (at least 5-8 credit hours per year) may request a long-term absence of up to one year. If the absence lasts for more than one year, re-instatement will be considered at the discretion of

the Admissions Committee. Program students may request a change in enrollment status to non-degree student. Re-instatement in the degree program will be considered at the discretion of the Admissions Committee.

Courses for Clinical Research Curriculum

The following courses are offered as part of a two-year curriculum that is open to all clinical researchers in the Texas Medical Center. Students in the MS in Clinical Research Degree program receive 9-12 hours of formal credit for these courses using the Petition for Course Equivalency described above. Call 713-500-6708 to register for these courses.

Course Name: Intro to Epidemiology Research

Instructor: Moyer

Course Description: This course provides a basis for an understanding of the concepts and methodological skills necessary for designing and interpreting observational studies. These include validity (random error, bias and confounding), measures of disease occurrence and impact, measures of association, reliability and generalizability, causal inference, and critically reviewing evidence.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: This course is given from 5:00-6:30pm each Wednesday evening for 10 weeks (1.0 credit hours).

Course Name: Clinical Trial-Design

Instructor: Tyson

Course Description: This course pre-

pares the student to design and analyze randomized trials of medical interventions. Covered topics include basic study design, recruitment, randomization, masking, data collection and quality control, participant adherence, sample size considerations, data monitoring and analysis, and meta-analysis.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: This course is given from 5:00-6:30pm each Wednesday evening for 10 weeks (1.0 credit hours).

Course Name: Health Services Research

Instructor: Thomas

Course Description: This course begins with an overview of healthcare financing, access to care, quality of care, and health policy. Subsequent classes will focus on: conceptualization of healthcare quality (including the classic "structure, process, and outcome" framework) and safety; quality of care measurements; risk adjustment; and introductions to survey research and qualitative research.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: This course is given from 5:00-6:30pm each Wednesday evening for 8 weeks (1.0 credit hours).

Course Number: CLRS 5006

Course Name: Clinical Research Design Workshop

Instructor: Kennedy, Tyson

Course Description: In this problem-based course, each student is expected to build a clinical research proposal in his/her field of inter-

est. Each week, students are asked to present the appropriate parts of their protocols to facilitate the discussion of successive stages in study design. This course is run in small group sessions (6-14 students per group) to facilitate active participation and interaction.

Prerequisite: Consent of instructor

Schedule: This course is given from 5-6:30p.m. each Wednesday evening for 13 weeks (1 credit hour).

Course Number: CLRS 5007

Course Name: Use of Computers in Clinical Research

Instructor: Lasky

Course Description: This is a hands-on laboratory course. Each student is expected to complete computer-based projects that demonstrate skills searching databases, managing data, and analyzing data sets. Software packages used in the course include Internet-based searching programs, and PC-based spreadsheet, database, and statistics software packages.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: Students schedule the computer modules according to their schedules and the availability of the course instructors. More in-depth classroom courses are offered for specific applications when there is sufficient interest and availability of instructors (1-3 credit hours).

Course Number: CLRS 5008

Course Name: Scientific Writing

Instructor: Moyer

Course Description: This course covers the essential goals of scientific writing and presentation: clarity,

succinctness, and consistency as they apply to specific areas of scientific writing. Detailed specific recommendations will be given for abstract, manuscript, and grant preparation.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: This course is given from 5-6:30p.m. each Wednesday evening for 8 weeks (0.5 credit hour).

Course Number: CLRS 5009

Course Name: Biostatistics for Clinical Investigators

Instructor: Kennedy, Lasky

Course Description: This course begins with an overview of descriptive statistics and provides students with the tools to perform univariate analyses using parametric and non-parametric methods for paired and unpaired designs. Emphasis is placed on choosing appropriate tests, evaluating assumptions for the tests, understanding the limitations of statistical tests, and appropriate interpretation of test results. Survival analysis and multiple regression techniques are introduced to familiarize the student with the availability and limitations of these tests.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: This course is given from 5-6:30p.m. each Wednesday evening for 15 weeks (1.5 credit hours).

Course Number: CLRS 5011

Course Name: Literature Appraisal

Instructor: Moyer

Course Description: In this course, the students will be expected to learn

rules of evidence and demonstrate critical evaluation of the medical literature. Students will have an opportunity to demonstrate these concepts and skills by appraising the evidence in various areas of clinical research. This critical appraisal of existing evidence will be used to determine fruitful areas for new investigation. This course is run in small group sessions (6-10 students per group) to facilitate active participation and interaction.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: This course is given from 5-6:30p.m. each Wednesday evening for 10 weeks (1 credit hour).

Course Number: CLRS 5012

Course Name: Ethical Aspects of Clinical Research

Instructor: Tyson

Course Description: This course introduces the fundamental ethical principles of autonomy, beneficence, nonmaleficence, and justice and applies these principles to clinical research involving human subjects. The use of unproven therapies, the use of placebos, the consent process, institutional review board submission and review processes, conflict of interests, and the costs of clinical research are covered.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: This course is given from 5-6:30p.m. each Wednesday evening for 6 weeks (0.5 credit hour).

Course Number: CLRS 5013

Course Name: Introduction to Translational Research

Instructor: Milewicz

Course Description: This course is an overview of the clinical research that bridges basic science and patient-based research. Topics include pharmaceutical research, genetic research, gene therapy, and genomics.

Prerequisite: None (above admission requirements for MS in Clinical Research Program)

Schedule: This course is given from 5-6:30p.m. each Wednesday evening for 7 weeks (0.5 credit hour).

Course Number: CLRS 5014

Course Name: Seminars in Clinical Research

Instructor: Kennedy

Course Description: In this course, each student prepares, presents, and defends a clinical research protocol in his/her field of interest. Students are encouraged to critique the proposals presented by other students and to participate as a group in problem solving. Enrollment in this course is limited (10-16 students) to facilitate active participation and interaction.

Prerequisite: Consent of instructor

Schedule: This course is given from 4-5:00p.m. each Tuesday for 25 weeks (1 credit hour).

Courses for MS in Clinical Research Degree Program

The following advanced courses are offered as part of the MS in Clinical Research Degree Program.

Course Number: CLRS 5003

Course Name: Advanced Epidemiology

Instructor: Miller

Prerequisite: Clinical Epidemiology or Consent of instructor

Course Description: This course covers the analysis of complex observational studies with emphasis on the identification of interaction and control of confounding variables. Other topics include the use of matching, selection of appropriate control groups, and identification of potential sources of bias. A problem-based approach is used in which students are asked to solve design and analysis problems using existing data sets.

Schedule: This course is given from 1-4:30 p.m. each Wednesday for 17 weeks in the spring (4 credit hours).

Course Number: CLRS 5010

Course Name: Advanced Biostatistics for Clinical Investigators

Instructor: Lasky

Course Description: This course will focus on the mechanics of applying biostatistical techniques in a research setting. Emphasis will be placed on assumption testing and techniques of model fitting. Students will be expected to critically evaluate, develop, and execute analysis plans using descriptive analysis and regression techniques.

Prerequisite: Biostatistics for Clinical Investigators or consent of instructor

Schedule: This course is given from 1-4:30 p.m. each Wednesday for 17 weeks in the spring (4 credit hours).

Course Number: CLRS 5015

Course Name: Using Research to Inform Health Care Policy and Practice

Instructor: Center faculty

Course Description: In this course, the

students apply rules of evidence and health services research to clinical practice, practice guidelines, and health care policy. Decision analysis and methods for quantifying benefit, risk, and cost will be used to evaluate health care interventions at the individual patient and population levels. This critical appraisal will be used to launch discussions of mechanisms to bridge the gap between clinical research evidence and health services delivery and health policy.

Prerequisite: Consent of instructor

Schedule: This course is given from 1-4:30 p.m. each Wednesday for 16 weeks in the fall (4 credit hours).

Course Number: CLRS 5016

Course Name: Evaluating Costs and Benefits in Clinical Research

Instructor: Phillips

Course Description: This course will introduce the concepts and methods for the economic analysis of health care interventions. Topics will include cost-benefit and cost-effectiveness analyses with an emphasis on quality of life assessments, cost-utility analyses, decision analyses, and the application of these methods to the evaluation of alternative health care interventions.

Prerequisite: Consent of instructor

Schedule: This course is given from 1-4:30 p.m. each Wednesday for 16 weeks in the fall (4 credit hours).

Course Number: CLRS 5017

Course Name: Advanced Clinical Research Study Design

Instructor: Tyson, Kennedy, Thomas, Groff

Course Description: This course will build on design concepts for obser-

observational and interventional studies that were introduced in the prerequisite courses. Topics will include the use of matching and restriction to minimize bias in observational studies, consideration of analytic strategies (eg. correlated samples, use of propensity scores) in study design, survey research methods, the relationship between quality improvement and clinical research, adaptive randomization, alternatives for consent for research, factorial designs, cluster randomization, using patient values to select important study outcomes, weighing benefits and harms, approaches to stopping rules, and enhancing feasibility of clinical trials.

Prerequisite: Clinical Epidemiology and Clinical Trials

Schedule: This course is given from 1-4:30 p.m. each Wednesday for 16 weeks in the fall (4 credit hours).