

**Masters of Science in Clinical Research (MSCR)
Plan for Assessment of Student Learning Outcomes
University of New Mexico**

A. College, Department and Date

1. College: Biomedical Research Education Program (BREP), School of Medicine
2. Department: Office of Research
3. Date: May 15, 2008

B. Academic Program of Study

Masters of Science in Clinical Research (MSCR)

C. Contact Person(s) for the Assessment Plan

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D. Broad Program Goals & Measurable Student Learning Outcomes

1. Broad Program Learning Goals for this Degree/Certificate Program

- A. Knowledge of the basic principles and core concepts that form the foundation of clinical and translational research.
- B. Successfully perform, manage, present and publish clinical and translational research project(s).
- C. Demonstrate professional, responsible behavior, cultural competence and ethical reasoning in action.

2. List of Student Learning Outcomes (SLOs) for this Degree/Certificate Program

- A1. Learners will obtain basic (MSCR Level 1) knowledge in the 12 domains considered essential for clinical and translational research. *The 12 domains are: Bioinformatics, Biostatistics, Bioethics, Research Design, Epidemiology, Measurement in Clinical and Translational Research, Patient Outcomes Research, Cultural Competency in Clinical and Translational Research, Research in Health Care Systems, Study Implementation and Management, Current and Emerging Technology in Clinical and Translational Research, and Grantsmanship in Clinical and Translational Research.
- B1. Learners will be able to appropriately apply knowledge and skills to conduct independent research.
- B2. Learners will conduct thesis research in a manner that exemplifies good clinical and translational research skills.
- B3. Learners will produce a thesis that is acceptable for submission to a peer-reviewed journal.
- C1. Learners will demonstrate professional, responsible behavior in the program.
- C2. Learners will demonstrate cultural competence in clinical and translational research.
- C3. Students will demonstrate knowledge and skills of ethical human research or animal use to ethical review committees (HRRC or IACUC)

E. Assessment of Student Learning Three-Year Plan

All programs are expected to measure some outcomes annually and to measure all priority program outcomes at least once over two consecutive three-year review cycles. Describe below the plan for the next three years of assessment of program-level student learning outcomes.

1. Student Learning Outcomes

Relationship to UNM Student Learning Goals (insert the program SLOs and check all that apply):

Program SLOs	Knowledge	Skills	Responsibility
Obtain basic (MSCR Level 1) knowledge in the 12 domains* considered essential for clinical and translational research.	X		
Appropriately apply knowledge and skills necessary to conduct independent research.	X	X	
Conduct thesis research in a manner that exemplifies good clinical and translational research skills.	X	X	X
Produce a thesis that is acceptable for submission to a peer review journal.	X	X	
Demonstrate professional, responsible behavior in the program.	X	X	X
Demonstrate cultural competence in clinical and translational research.	X	X	X
Students will demonstrate knowledge and skills of ethical research human research or animal use to ethical review committees (HRRC or IACUC)	X	X	X

2. How will learning outcomes be assessed?

- a. *For each SLO, briefly describe the means of assessment, i.e., what samples of evidence of learning will be gathered or measures used to assess students' accomplishment of the learning outcomes in the three- year plan?*
- b. *Indicate whether each measure is **direct** or **indirect**. There is an expectation that at least **half of the assessment methods/measures will be direct** measures of student learning.*
- c. *Briefly describe the **criteria for success** related to each direct or indirect means of assessment. What is the program's performance target (e.g., is an "acceptable or better" performance by 60% of students on a given measure acceptable to the program faculty)*

Program SLOs	Means of Assessment	Measurement Type	Criteria for Success
Knowledge			
Obtain basic (MSCR Level 1) knowledge in the 12 domains* considered essential for clinical and translational research.	Course Grade	Direct	90% of students will attain a B or better for each course
Self-efficacy of learners about their knowledge of basic principles of clinical and translational research will improve over time.	Score on Clinical Research Appraisal Inventory	Indirect	80% of students' self-efficacy will increase from baseline
Skills			
Appropriately apply knowledge and skills necessary to conduct independent research.	Average of all grades	Direct	B or better on all coursework
Conduct thesis research in a manner that exemplifies good clinical and translational research skills.	Dissertation Committee Decision	Direct	Pass or High Pass
Produce a thesis that is acceptable for publication in a peer review journal.	MSCR Publication Committee Decision	Direct	Publishable and posted on D-Space
Graduating students will successfully submit grant proposals and manuscripts for publication in peer review journals within the first two years after graduation.	Alumni Survey	Indirect	80% of students will submit at least one manuscript and at least one grant proposal within two years of graduation
Graduating students will publish research in peer reviewed journals and attain grant support consistent with promotion and tenure guidelines at their institution.	Alumni CV	Indirect	80% of graduates will be successfully promoted within 7 years after graduation
Professional, Responsible, Ethical and Culturally Appropriate Behavior			
Demonstrate professional, responsible behavior in the program.	Instructors and peers complete rubric	Direct	80% of evaluations are positive
Employer assessment of the graduates' ability to conduct independent research in a professional, responsible, and culturally competent manner.	Employer Survey	Indirect	80% of evaluations are positive
Demonstrate cultural competence in clinical and translational research.	Instructor, peer and dissertation committee members complete rubric	Direct	80% of evaluations are positive
Students will demonstrate knowledge and skills of human research or animal use ethical review committees (HRRC or IACUC)	Preparation of application for HRRC or IACUC	Direct	Application is accepted

B. Who:

All students will be included in the evaluation.

3. When will learning outcomes be assessed? When and in what forum will the results of the assessment be discussed?

[Briefly describe the timeframe over which your unit will conduct the assessment of learning outcomes selected for the three-year plan. For example, provide a layout of the semesters or years (e.g., 2008-2009, 2009-2010, and 2010-2011), list which outcomes will be assessed, and which semester/year the results will be discussed and used to improve student learning (e.g., discussed with program faculty, interdepartmental faculty, advisory boards, students, etc.)]

Indicator	Summer 2008	Summer 2009	Summer 2010	Summer 2011
Obtain basic (MSCR Level 1) knowledge in the 12 domains* considered essential for clinical and translational research.	X (for class entering Summer 2007)	X (for class entering Summer 2008)	X (for class entering Summer 2009)	X (for class entering Summer 2010)
Appropriately apply knowledge and skills necessary to conduct independent research.		X (for class entering Summer 2007)	X (for class entering Summer 2008)	X (For class entering Summer 2009)
Conduct thesis research in a manner that exemplifies good clinical and translational research skills.		X (for class entering Summer 2007)	X (for class entering Summer 2008)	X (For class entering Summer 2009)
Produce a thesis that is acceptable for submission to a peer review journal.		X (for class entering Summer 2007)	X (for class entering Summer 2008)	X (For class entering Summer 2009)
Demonstrate professional, responsible behavior in the program.	X (for class entering Summer 2007)	X (for class entering Summer 2007 and 2008)	X (for class entering Summer 2008 and 2009)	X (for class entering Summer 2009 and 2010)
Demonstrate cultural competence in clinical and translational research.	X (for class entering Summer 2007)	X (for class entering Summer 2007 and 2008)	X (for class entering Summer 2008 and 2009)	X (for class entering Summer 2009 and 2010)
Students will demonstrate knowledge and skills of human research or animal use ethical review committees (HRRC or IACUC)	X (for class entering Summer 2007)	X (for class entering Summer 2008)	X (for class entering Summer 2009)	X (for class entering Summer 2010)

4. What is the unit's process to analyze/interpret assessment data and use results to improve student learning?

Briefly describe:

1. *who will participate in the assessment process (the gathering of evidence, the analysis/interpretation, recommendations).*

MSCR program staff will collect the information and will provide it to the MSCR Curriculum Committee (CC). The CC will convene a student progress sub-committee each summer (once per year) to review the progress of each class. This subcommittee will complete an assessment of each student (for example: grades in courses, 1st year GPA, responsible behavior, cultural competency) and present the results of this compilation to the CC. The CC will review the information and make recommendations to the Director of the Program for each student. At the end of each two-year cycle, the CC will review the results for the entire program (for example: ethical research, GPE, thesis research, publication).

2. *the process for consideration of the implications of assessment for change:*
 - a. *to assessment mechanisms themselves,*
 - b. *to curriculum design,*
 - c. *to pedagogy, in the interest of improving student learning.*

If individual students are not accomplishing their goals, meetings will be convened with the student and his or her advisor, and if necessary his or her Committee on Studies.

If faculty members are not presenting his or her materials such that the students (overall) are not gaining knowledge and skills, revisions will be made to the course content and/or the faculty member will be replaced.

If students are not demonstrating responsible behavior, special seminars will be devoted to the practice of responsibility in graduate programs and in research.

If the assessment mechanisms are thought to require improvement, a subcommittee of the Curriculum Committee will be convened to improve the measures; this subcommittee will report back to the Curriculum Committee with recommendations.

If the overall program is not meeting its goals, the Curriculum Committee will hold a retreat to reconsider the methods of teaching, the approach to learning, and the course competencies that are the foundation of the MSCR program.

Assessment measures are direct and indirect measures. If students are consistently not achieving the criteria and no changes to course content, instructor delivery, or pedagogy is called for, the curriculum committee will convene an ad hoc committee to address the assessments. For example, currently an ad hoc committee is designing rubrics to assess cross-disciplinary competencies such as leadership (professionalism), communication (cultural competency), and ethical behavior. The ad hoc committee then presents the draft rubrics to the curriculum committee for their review and approval. Similarly, forms used by independent committees on studies are reviewed by the curriculum committee. Feedback on these forms from committee members is taken into consideration should revisions be needed.

2. *How, when, and to whom will recommendations be communicated?*

Recommendations will be made to the Assistant Dean for Research Education on an annual basis through a report prepared by the MSCR Curriculum Committee and a subsequent meeting convened to discuss the recommendations, implications for the program and its budget, and plans for implementation.