Graduate Assessment by Degree/Certificate Program

1. List in detail your Student Learning Outcomes (SLOs) for each graduate degree/certificate offered.

   A. Master of Science in Biomedical Sciences (Clinical Research)

   Adult learning theory and problem-based learning will be used to ensure that graduates develop the skills to become self-directed learners. The five competency domains include research, professionalism/ethics, culturally competent leadership and communication, interdisciplinary collaboration, and self-directed learning.

   **Research**: Develop and implement ethically and culturally appropriate clinical research that addresses health disparities in Asian, Pacific Islander, and Filipino populations.

      - Conduct clinical research with cultural competence.
      - Analyze and synthesize literature to ascertain state of the science in regard to selected areas of clinical research, especially health disparities in Asian, Pacific Islander, and Filipino peoples.
      - Use the Internet to access clinical research information.
      - Apply appropriate research methodologies to answer clinical research questions.
      - Demonstrate successful scientific writing skills by producing scholarly works and writing an approved clinical research proposal.
      - Make correct inferences from data.
      - Apply clinical research findings by implementing and monitoring an action plan based on relevant data.

   **Professionalism/ethics**: Conduct ethically responsible and culturally competent clinical research

      - Demonstrate knowledge of laws, regulations, and policies related to clinical research on the development and implementation of protocols.
      - Apply ethical principles in the design and conduct of clinical research, especially with disadvantaged and underserved populations.

   **Culturally competent leadership and communication**: Establish community-based research networks in selected areas of clinical research interest

      - Communicate in a culturally competent manner with persons from diverse cultural, socioeconomic, educational, and professional backgrounds and with persons of all ages and lifestyle preferences.
Communication effectively in writing and voicing demographic, statistical, and scientific information for professional and lay audiences.

**Interdisciplinary collaboration:** Work collaboratively, interdependently and effectively with other members of the clinical research team

- Manage clinical research project, including budget.
- Recruit and supervise necessary staff for clinical research project.
- Demonstrate the ability to manage research team task assignments.
- Demonstrate good interpersonal skills, including the ability to work interdependently with other clinical research team members.

**Self-directed learning:** Demonstrate the skills for self-directed learning

- Be able to obtain appropriate feedback, consultation, and/or review before, during, and after a research project.
- Conceptualize and synthesize the state of the science related to selected clinical research questions.

**A. PhD in Biomedical Sciences (Clinical Research)**

The PhDCR builds on the MSCR. The PhDCR includes additional coursework in applied bioethics, cultural competence and team building, and also requires completion of a dissertation. Curriculum is designed to explore scientific, ethical, legal, social and cultural issues inherent to the full and equal participation of ethnic minority populations in research, particularly in the areas of genetics, genomics and end-of-life decision making. This enables students to develop a broader awareness of issues involved in reducing barriers to community-based participatory research, particularly in these distinct fields. The curriculum, includes classroom, laboratory and community-based experiential training, prepares multidisciplinary teams to work in partnership with communities to conduct translational health disparities research.

2. **Where are these SLOs published (e.g., departmental web page)?**

   These SLOs are all listed on the MSCR’s Web page and in all materials given to each incoming students

3. **Explain how your SLOs map onto your curriculum, i.e., how does your program of graduate studies produce the specific SLOs in your students?**

   Adult learning theory and problem-based learning will be used to ensure that graduates develop the skills to become self-directed learners. The three competency domains include applied biomedical ethics, cultural competence, and multidisciplinary team building. All of the required courses, which will intensify clinical research training, have been specifically designed for the proposed PhDCR. Although MSCR students
obtain foundational training in bioethics and cultural competence, the PhDCR will offer in-depth analytical and theory-generating interdisciplinary experiences that are not currently available in the MSCR. The proposed required PhDCR curriculum is explained in Table 1 and followed by specific course descriptions:

### Table 1: Competency-based Curriculum for the PhDCR

<table>
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<th>Competencies</th>
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Except for required courses, the program of study will be tailored to the needs and future career plans of each individual graduate student. A minimum of 30
credits is required for the MS degree. There is not a specific credit requirement for the PhD. Once admitted to PhD candidacy, the student’s advisory committee determines what further coursework, if any, the student shall take.

4. What population(s) is covered by your assessment(s)?

All students admitted to the MS and PhD programs in Biomedical Science (Clinical Research) are covered by the assessments described herein.

5. Please list/describe all the assessment events and devices used to monitor graduate student progress through the program. Consider the following questions:
   – How are written exams used to assess graduate students?

A. Written exams, usually multiple choice, are the main basis for grades in our courses. These are constructed, as much as possible, using questions with which we have prior experience. They are intended to define a minimal competence in the subject matter of each course. Together with other behaviors defined by the instructor (class participation, reviewing a classic or recent paper, literature review paper, etc.) they form the basis for the course grade.

B. Literature review papers are part of the evaluation scheme in some courses. They are intended to exercise literature search techniques, critical thinking, and expository writing skills. They are evaluated for these attributes by the faculty who teach the subject matter of the paper. Most courses require they be submitted for publication.

D. Oral Comprehensive Exams are administered as part of the thesis or dissertation defense. Questions are submitted by all the members of the students committee.

   – How are independent and/or culminating projects (theses, dissertations, performances, capstone courses, etc.) used to assess graduate students?

All of our programs have a “culminating experience”. These are: For Plan A MS students, the masters degree thesis; and for PhD students, the doctoral dissertation.

These culminating experiences are the basis for judging the attainment of research expertise, and the acquisition of scientific maturity. Each paper/thesis/dissertation is reviewed by a faculty committee chosen for background in the relevant subject matter. To the extent that deficiencies are identified in the student’s product, remediation of those deficiencies becomes an opportunity for further, focused, development of the student.

   – How are oral presentations/reports/performances used to assess graduate students?

Oral presentations are required in all our courses, in seminars, and in the
culminating experience. Oral presentations are used to provide feedback, and remedial assistance if needed, on organizing the flow of a presentation, on how to prepare materials for presentation, and on articulate delivery. Both faculty observation and student evaluations of instructor performance and are used to provide feedback to graduate students on their ability to communicate effectively.

6. Please list/describe how your graduate students contribute to your discipline/academic area? Consider the following questions:

– To what extent do your graduate students present their work at professional conferences?

Our MS students present an average of 2-3 papers or posters at national meetings in the course of their UH career. All of our MS students are authors or coauthors on papers/posters at national meetings.

– To what extent do your graduate students publish their work?

Only a small minority do not. Most have more than one publication at the time of graduation from the program.

7. What attempts are made to monitor student post-graduate professional activities?

We do not yet have graduates but plan a formal program of surveying our graduates.

8. How were the assessment data/results used to inform decisions concerning the curriculum and administration of the program?

– Was pedagogy changed?

We presented our findings to our external advisory committee and discussed the findings during the 2 day meeting and were commended for our results. No changes were advised at this time. A copy of their report is attached.

– Did you make administrative changes?

No, none were advised.

– Were there changes in interactions with students? Advising, counseling, etc.

No, none were advised

– Were degree requirements changed?

No, none were advised

– Were courses changed?
No, none were advised.

This is only the second year of the MS and we have just completed admissions of the first students into the PhD.