

**NSMS**  
**Academic Program**  
**Plan for Assessment for Student Learning Outcomes**  
**The University of New Mexico**

**A. College, Department and Date**

- a. Graduate Studies
- b. Department: Nanoscience and Microsystems
- c. Date: 1/15/2009

**B. Academic Programs of Study**

MS in NSMS & PhD in NSMS

**C. Contact Person(s) for the Assessment Plan**

Dr. Abhaya Datye, Chair NSMS, [datye@unm.edu](mailto:datye@unm.edu)  
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**D. Broad Program Goals & Measurable Student Learning Outcomes**

See attached cover sheets (3) for “Broad Program Goals & Student Learning Outcomes

**E. Assessment of Student Learning Three-Year Plan**

**a. Student Learning Outcomes**

| Program SLOs   | Knowledge | Skills | Responsibility | Program SLO is conceptually different from university goals. |
|--|-----------|--------|----------------|--|
| 1. Knowledge of NSMS Fundamentals  | X         |        |                |  |
| 2. Depth of knowledge in a specialization                                      | X         |        |                |  |
| 3. Ability to conduct original and independent research                        | X         | X      | X              |  |
| 4. Ability to perform critical review of literature in area of specialization. | X         | X      |                |  |
| 5. Able to communicate effectively.  | X         | X      |                |  |

**b. How will learning outcomes be assessed?**

All assessment for the above outcomes will be assessed as follows;

**PhD Programs** For students receiving a NSMS PhD, the assessment of student learning outcomes will be done by the student’s PhD qualifying exam committee during the final dissertation defense. The assessment

will be documented on a rubric that has been developed for this purpose, to be filled out by a consensus of the committee (rather than by each individual member of the committee).

**MS Program** For MS students, assessment will be done at the NS exit exam for both Plan I and Plan II students. The assessment will be documented on a rubric that has been developed for this purpose, to be filled out by a consensus of the committee (rather than by each individual member of the committee)

Results of the outcomes assessment for each student will be evaluated by the NSMS graduate committee. The evaluations prepared by the graduate committee will be reported to the NSMS curriculum committee for analysis, and to recommend any necessary actions. The NSMS chair and associate chair will review all recommendations, make appropriate changes in the curriculum based on feedback from these two committees.

Success is equal 100% of PhD students achieving an average of acceptable (or “2”) or higher on the outcomes rubric for the final dissertation defense and 100% of Masters students achieving an average of acceptable (or “2”) or higher on the exit exam.

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

Learning assessment will be done for every graduating student. Assessments will be discussed in conjunction with the annual NSMS advisory board meetings. We also have monthly management meetings at which faculty monitor and review all program activities.

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

The NSMS gathers assessment data from 4 main sources. These sources include an annual retreat, annual advisory board meetings, qualifying exam outcomes and advisement sessions every semester. Information from each of these is gathered, analyzed, presented to both a management group as well as an advisory board. Management meetings are held on a monthly basis, when possible. Information gathered from semester advisements and daily operations are gathered into an agenda and presented to the faculty members of the management board. The management team reviews and makes recommendations which are then voted upon and changes are made based on these votes. The management board is made up of faculty from participating departments, who come from Chemistry, Physics and Astronomy, Chemical and Nuclear Engineering, Electrical and Computer Engineering, Mechanical Engineering as well as the Biomedical Sciences Graduate Program among others.

