ASSESSMENT REPORT: 2014–15 AND 2015-16 ACADEMIC YEARS

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MASTERS OF SCIENCE IN SYSTEMS MANAGEMENT (MSSM) PROGRAM

OVERVIEW

This report summarizes our assessment activities in the School of Business and Management's Masters of Science in Systems Management (MSSM) graduate program for academic years 2014-15 and 2015-16. The report is based on assessment data gathered during the fall and spring semesters of both academic years.

Please note that we have recently modified our assessment processes in all graduate programs in order to make them more rigorous and comprehensive and to optimize the statistical accuracy and representativeness of the findings that emerge from analysis of the assessment data. Furthermore, we have recently begun assessing Concentration Learning Outcomes which has necessitated a streamlining of our entire data collection and analysis process. 2014-16 represents our third assessment cycle of using the new assessment methodology.

The process we used for the academic years 2011-12, 2010-11 and 2009-10 consisted of evaluating capstone projects assigned within the MSSM Capstone courses for achievement of all six Program Learning Outcomes. The process we have switched to as of 2012-13, have refined in 2014-15, and which we plan to continue using for the next year consists of assessing the relevant Program Learning Outcomes in the "core" Common Professional Component (CPC) classes. We feel this approach is superior to the capstone-only method used previously since it provides a greater number of data points using a more diverse set of assessment methods and faculty evaluators as a gauge of our progress toward achieving the PLOs and allows us to collect and analyze data for the concentration outcomes (which the capstone-only method does not) in other programs (there are currently no concentrations in MSSM).

GENERAL PROCESS

The process described below was followed in order to assess our achievement of the Program Learning Outcomes in the MSSM program:

- 1. Program Learning Outcomes (PLOs) for each of the graduate programs were created and vetted with faculty and administration within the School of Business and Management. Our PLOs were most recently revamped and renewed in 2010.
- 2. Instructors teaching core (CPC) courses or concentration elective courses in the MSSM program are asked to identify the set of Program Learning Outcomes (PLOs) relevant to their course(s).
- 3. Instructors identify provisional methods to assess each of the relevant learning outcomes identified in 2.

- 4. The provisional methods are vetted with the School of Business and Management's Director of Graduate Programs for appropriateness and feasibility. In some cases, instructors are asked to revise their initial assessment methods to align more closely with the PLO, to ensure a more feasible data collection and assessment process, or to provide a greater degree of concrete evidence of outcome achievement. Instructors may also be advised to focus on different PLOs in order to arrive at the aforementioned beneficial outcomes.
- 5. Once approved, instructors are asked to assess student work according to their approved assessment plans.
- 6. The Director of Graduate Programs obtains data from each of the assessing instructors, and then compiles and analyzes the data, noting trends and issues (reported here). See "Program Assessment Rubric" for a description of our assessment benchmarks.
- 7. The Director of Graduate Programs shares the findings with SBM and NDNU faculty, staff and administration. The group jointly brainstorms action steps for "closing the loop" on outcome achievement deficiencies. Suitable ideas emerging from the discussions are then implemented as early as possible in the academic year.
- 8. The next review cycle's results are examined to see if improvement has occurred in the areas of deficiency.

DATA SOURCES

As mentioned above, our PLO assessment data comes from assessments made in the "core" (Common Professional Component or "CPC") courses in the MSSM program. We have created a system that optimizes the simultaneous collection of data for both program and (other program) concentration outcomes given our limited faculty resources. New faculty members teaching core courses may initially be exempt from providing assessment data since they are less familiar with the pedagogy used in the courses they are teaching. Furthermore, assessments are typically provided by full-time faculty and not by part-time adjunct faculty, though there are exceptions. We compensate for these data deficiencies by collecting more data in courses staffed by veteran faculty.

Data for the assessments are collected in the fall and spring semesters of each academic year. We typically do not collect assessment data for summer courses given the diminished number of courses taught in summer semester. It should be noted that the most current review cycle is based on two years (i.e. four semesters) of aggregated data, as opposed to one year (i.e. two semesters) of aggregated data as we have done in the past. Limited faculty resources coupled with the additional demand of assessing concentration learning outcomes has necessitated that we collect data over a longer longitudinal timeframe (i.e. two years instead of one). The amount of data we were able collect for each individual year (either 2014-15 or 2015-16) would have been inadequate for properly analyzing the outcomes. Combining the data for both years enables us to perform more robust analyses.

The "core" CPC courses for the MSSM program that provide data for our PLO assessments are:

| MSSM Core Courses |
|----------------------------------|
| Organization Management & Theory |

| Enterprise Information Management Systems |
|---|
| Global Operations Management |
| Decision Support |
| Systems Management |
| Systems Modeling |
| Sustainability |
| Project System Analysis (MSSM Capstone) |

It should be noted that we include assessments of Online MSSM courses in our data, though we do not break achievement in Online MSSM courses out as a separate component of analysis in the current report. Given the paucity of courses offered online (versus the on-ground MSSM program which offers a more stable and substantial number of courses each semester) that results in a scarcity of online data available to evaluate achievement of the PLOs, we are unable to produce robust evaluations of the Online MSSM as a separate and distinct component of our MSSM program.

MSSM Program Learning Outcomes

The Program Learning Outcomes for the MSSM Program are as follows: (key word in **bold blue italics**)

- 1. Students will be able to develop their abilities to analyze the creation of *value* through the integrated production and distribution of goods, services, and information.
- 2. Students will learn the stages of group development, communicate the role systems serve in an organization, and use *systematic* problem solving to best achieve the goals of the organization.
- 3. Students will learn essential issues of sustainability, systems theory, and organization behavior to be able make *decisions* that achieve organizational efficiency and social responsibility.
- 4. Students will be able to present management *leadership* concepts and techniques with reference to general management and management specialties clearly, concisely, and professionally through written, oral, and visual means.
- 5. Students will develop information literacy (*info literacy*) and technological competency by utilizing electronic media to research management issues, properly communicating management decisions, and learning how to optimally manage work teams and work flow with reference to general management and management specialties.
- 6. Students apply the NDNU *mission* (community engagement and social justice) to course curriculum.

OUTCOME ASSESSMENT RUBRIC

PLO and ConLO data is coded on a 2-5 scale, with the following point descriptors:

5 = Exemplary Achievement of Learning Outcome

- 4 = Satisfactory Achievement of Learning Outcome
- 3 = Questionable Achievement of Learning Outcome Possible Deficiency
- 2 = Learning Outcome Not Achieved Definite Deficiency

Data for the PLOs and ConLOs are reported as averages and standard deviations. We generally consider averages between 4 and 5 to be acceptable and averages between 2 and 3 to be unacceptable outcomes. Averages between 3 and 4 are considered on a case by case basis, but generally indicate a cause for concern, especially if the average is tending closer to the 3.0 mark. Standard deviations are used to evaluate the confidence level of the calculated averages (i.e. high SD means we are less confident in the data).

Our assessment goals for the program are to:

- 1. Maintain all yearly PLO / ConLO averages above 4.0.
- 2. Maintain all semesterly PLO / ConLO averages above 4.0.
- 3. Reverse and rectify any significant, sustained downward trends in PLO / ConLO averages, including those having central tendencies in the lower part of the 4-5 range.

CURRENT ASSESSMENT DATA

Below we present data summaries for our Fall 2014 – Spring 2016 review cycle PLO and ConLO assessments.

| Program I | Learning Outcomes | 5 | | | | | |
|-----------|-------------------|----------|---------------|--------------|---------------|------------------|--------------|
| | | | | | | | |
| | | | | | | | |
| MSSM Pro | ogram | | | | | | |
| | | 1: Value | 2: Systematic | 3: Decisions | 4: Leadership | 5: Info Literacy | 6: Hallmarks |
| | 2014-16 Average | 3.9 | 4.5 | 4.6 | 3.5 | 5.0 | - |
| | 2014-16 St Dev | 0.4 | 0.8 | 0.6 | 0.7 | 0.0 | - |
| | | | | | | | |

Below we present a trend analysis of PLO data for three consecutive analysis periods.

| MSSM - Trend D | ata by Semest | er | | | | |
|----------------|---------------|---------------|--------------|---------------|------------------|--------------|
| | 1: Value | 2: Systematic | 3: Decisions | 4: Leadership | 5: Info Literacy | 6: Hallmarks |
| Fall 2012 | 3.9 | 4.4 | 4.1 | 3.8 | 4.3 | 3.8 |
| Spring 2013 | 3.7 | 4.5 | 4.1 | | | |
| Fall 2013 | | 4.0 | 4.1 | | | |
| Spring 2014 | | | | | | |
| F2014-Sp2016 | 3.9 | 4.5 | 4.6 | 3.5 | 5.0 | |
| | | | | | | |

DATA ANALSYSIS, FINDINGS AND DISCUSSION

Program Learning Outcomes

The following observations can be made about the most recent and cumulative MSSM PLO data:

- 1. Results were satisfactory for the "Systematic", "Decisions" and "Info Literacy" PLOss in the Fall 2014 Spring 2016 period. The "Value" score approached the the "satisfactory" mark (3.9).
- 2. As with our MBA program, "Leadership" scored somewhat below the "satisfactory" mark (3.5). A deficiency in Leadership pedagogy is apparently pervasive throughout our graduate curriculum (not just in MSSM).

Action Items:

1. **Leadership**: In the prior PLO analysis, both 'Leadership' had shown a need for improvement (though less drastically than in the current analysis period). As part of the program review process, we have endeavored to improve our students' leadership and communication skills by integrating more leadership pedagogy, activities and assessments into our curriculum.

We plan to integrate more of a Leadership focus into the MSSM curriculum as follows:

- More emphasis on Leadership topics within the BUS 4000 Organizational Management course.
- Greater focus on evaluation of leadership abilities and outcomes in team projects.
- Proposal to add 'Leadership Concepts' course to the list of MSSM electives.

NEXT STEPS

As the MSSM Program has been terminated and is currently in teach-out mode, we only plan to address the 'Leadership' issue mentioned above in the MSSM courses that remain to be taught.