

### Program-Level Assessment: Annual Report

Program Name (no acronyms): MS Supply Chain Management Department: Operations & IT Management

Degree or Certificate Level: Masters

College/School: Chaifetz School of Business

Date (Month/Year): 9/2023

Assessment Contact: Justin Goodson

In what year was the data upon which this report is based collected? Academic Year 2022-23

In what year was the program's assessment plan most recently reviewed/updated? Academic Year 2020-21

Is this program accredited by an external program/disciplinary/specialized accrediting organization? Not that I know of.

#### 1. Student Learning Outcomes

Which of the program's student learning outcomes were assessed in this annual assessment cycle? (Please list the full, complete learning outcome statements and not just numbers, e.g., Outcomes 1 and 2.)

- 1-Apply an integrated enterprise approach of flow of goods, services and information from suppliers to customers.
- 2-Collect, interpret, evaluate and analyze data relevant to supply chains.
- 3-Apply quantitative and computer models needed to make effective supply chain management decisions.
- 4-Explain in both oral and written forms the interaction among multiple organizations involved in supply chains.
- 5-Use purchasing and strategic sourcing concepts to optimize supply chain operations.

#### 2. Assessment Methods: Artifacts of Student Learning

Which artifacts of student learning were used to determine if students achieved the outcome(s)? Please describe the artifacts in detail and identify the course(s) in which they were collected. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

- 1-The outcome was assessed in OPM 5050 and OPM 6050 via web-based simulations and exam questions.
- 2-The outcome was assessed in OPM 6460 via a web-based simulation.
- 3-The outcome was assessed in OPM 6600 via case assignments, exam questions, and homework questions.
- 4-The outcome was assessed in OPM 5050, OPM 6440, and OPM 6600 via oral project and case presentations and written project and case reports. In OPM 6440, in-class discussions were also evaluated.
- 5- The outcome was assessed in OPM 6460 via exam questions and in OPM 6440 via homework assignments and written case reports.

#### 3. Assessment Methods: Evaluation Process

What process was used to evaluate the artifacts of student learning, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and **include them in/with this report document** (please do not just refer to the assessment plan).

- 1-The instructors evaluated learning by assessing a written report and by grading exam questions.
- 2-The instructor evaluated learning by assessing a written report.

3-The instructors evaluated learning by assessing written reports and oral presentations.

4-In OPM 5050 and OPM 6600, the instructor used a rubric to assess learning, see attached. In OPM 6440 the instructors evaluated learning by assessing written reports and oral presentations.

5- In OPM 6460, the instructor used exams to assess learning. In OPM 6440, the instructor evaluated learning by assessing written case reports and grading homework questions.

#### 4. Data/Results

What were the results of the assessment of the learning outcome(s)? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

1- In OPM 6050, 13 students exceeded expectations, 23 students met expectations, and 1 student needed improvement.

2- In OPM 5050, 80 of 85 students achieved the learning outcome and 5 students did not meet the learning outcome.

3-See attached results. In summary, 85% students exceeded expectations, 14% students met expectations, and 1% students needed improvement.

4 - In OPM 6600, all students achieved the learning outcome.

5- In OPM 6440, all students achieved the learning outcome.

6- In OPM 6460, 15 students exceeded expectations, 30 students met expectations, and 25 students need improvement. In OPM 6440, all students achieved the learning outcome.

#### 5. Findings: Interpretations & Conclusions

What have you learned from these results? What does the data tell you?

Nearly all students are achieving the learning outcomes.

#### 6. Closing the Loop: Dissemination and Use of Current Assessment Findings

A. When and how did your program faculty share and discuss these results and findings from this cycle of assessment?

Following the end of the academic year, faculty shared their findings with the program director. Additionally, faculty met several times over the course of the academic year to discuss what curriculum changes might further improve student learning.

B. How specifically have you decided to use these findings to improve teaching and learning in your program? For example, perhaps you've initiated one or more of the following:

Changes to the Curriculum or Pedagogies

- Course content
- Teaching techniques
- Improvements in technology
- Prerequisites
- Course sequence
- New courses
- Deletion of courses
- Changes in frequency or scheduling of course offerings

Changes to the Assessment Plan

- Student learning outcomes
- Artifacts of student learning
- Evaluation process
- Evaluation tools (e.g., rubrics)
- Data collection methods
- Frequency of data collection

Please describe the actions you are taking as a result of these findings.

Based on assessment findings and discussion, course content is being updated across four courses (OPM 5050, OPM 6460, OPM 6440, and OPM 6600), teaching techniques have been revised to improve students' oral presentation and communication skills, and the courses composing the curriculum have been revised to include more relevant content from the field of data analytics and enterprise systems. The Department of O&ITM is launching two new OPM courses in 2023 to better prepare students for future job markets. OPM 6800 will replace the current OPM 5050. This course will improve students' statistical thinking and data-driven optimization skills. OPM 6090 offers experiential learning. Students will apply supply chain management knowledge to solve real industry projects from local businesses under the guidance of O&ITM faculty.

If no changes are being made, please explain why.

7. Closing the Loop: Review of Previous Assessment Findings and Changes

A. What is at least one change your program has implemented in recent years as a result of assessment data?

In response to students' desire for STEM certification, course offerings and content were revised to focus on STEM-related topics. The new experiential learning course OPM 6090 was launched in Spring 2023.

B. How has this change/have these changes been assessed?

Assessment is in-progress.

C. What were the findings of the assessment?

To date, the change resulted in new OPM courses.

D. How do you plan to (continue to) use this information moving forward?

In close-the-loop fashion, we aim to hone course content and teaching techniques to improve our STEM-related offerings. Besides the two new OPM courses, the Department of O&ITM plans to redesign an existing ITM course and to launch a new ITM course focusing on ERP in 2023-2024.

**IMPORTANT: Please submit any assessment tools (e.g., artifact prompts, rubrics) with this report as separate attachments or copied and pasted into this Word document. Please do not just refer to the assessment plan; the report should serve as a stand-alone document.**

OPM 5050 and OPM 6600 Appendix

OPM 5050 is a required foundational course offered in both Fall 2022 and Summer 2023. OPM 6600 is a required course offered in Fall 2022. The learning outcome ‘**apply quantitative and computer models needed to make effective supply chain management decisions**’ was assessed for both courses. Table 1 shows the assessment rubrics of the learning outcome.

Table 1: OPM 5050 OPM 6600 Rubrics

| Rubric | Attribute                        | Exceeds Expectations<br>(Excellent)   | Meets Expectations<br>(Satisfactory)   | Needs Improvement<br>(Below satisfactory and Unsatisfactory)   |
|--------|----------------------------------|---|--|--|
| 1      | Define Problem                   | Clearly identifies and summarizes the problem/opportunity. Analyzes and assesses the situation with a clear awareness of what needs to be accomplished. | Problem/opportunity is identified but is somewhat clear and summarization is basic. Analyzes and assesses the situation with awareness of the goals of the analysis. | Problem/opportunity is identified but is not clear and summarization lacks focus. Analyzes and assesses the situation with limited awareness of the goals of the analysis. |
| 2      | Identify Solution Alternatives   | Identifies one or more solutions that indicates a thorough comprehension of the problem.  | Identifies one or more solutions that indicates some comprehension of the problem.   | Identifies one solution that indicates surface-level understanding of the problem.   |
| 3      | Computer Solutions               | Organizes data inputs neatly for correct computerized solvers. Generate easy-to-interpret results.  | Organizes data inputs neatly for correct computerized solvers.   | Organizes data inputs neatly.  |
| 4      | Make Appropriate Recommendations | Makes well-articulated actionable recommendation(s) that address most of the business objectives.   | Makes actionable recommendation(s) which address some of the business objectives.  | Makes actionable recommendation which addresses a few of the business objectives.  |

The results of the assessment of OPM 5050 in fall 2022 are provided in Table 2. Around 78% of students exceeded expectations, around 19% of students met expectations, and around 3% of students needed improvement. Students mainly needed to improve their understanding of the waiting time analysis and the inventory management. Students suggested that the instructor should give more real industry examples and case studies.

Table 2: OPM 5050 Assessment Summary Fall 2022

|          | Exceeds Expectations (E) | Meets Expectations (M) | Needs Improvement (N) |
|----------|--------------------------|------------------------|-----------------------|
| Rubric 1 | 42                       | 9                      | 2                     |
| Rubric 2 | 41                       | 10                     | 2                     |
| Rubric 3 | 41                       | 11                     | 1                     |
| Rubric 4 | 41                       | 11                     | 1                     |

\*53 students in total

The results of the assessment of OPM 5050 in summer 2023 are provided in Table 3. Two new case studies were introduced to reinforce students’ learning of the waiting time analysis and the inventory management. Around 60% of students

exceeded expectations, around 28% of students met expectations, and around 12% of students needed improvement. Students mainly needed to improve their understanding of the waiting time analysis and the inventory management. Students suggested that the instructor should give more real industry examples and case studies. Multiple cheating and free riding incidents were observed. 6 students were inactive. 2 students failed the class.

Table 3: OPM 5050 Assessment Summary Summer 2023

|          | <b>Exceeds Expectations (E)</b> | <b>Meets Expectations (M)</b> | <b>Needs Improvement (N)</b> |
|----------|---------------------------------|-------------------------------|------------------------------|
| Rubric 1 | 20                              | 9                             | 3                            |
| Rubric 2 | 19                              | 9                             | 4                            |
| Rubric 3 | 19                              | 9                             | 4                            |
| Rubric 4 | 19                              | 9                             | 4                            |

\*32 students in total

The results of the assessment of OPM 6600 are provided in Table 4. Around 62% of students exceeded expectations, around 38% of students met expectations, and around 0% of students needed improvement. Based on students' feedback, two new case studies and one new game will be incorporated into the course future offerings.

Table 4: OPM 6600 Assessment Summary Fall 2022

|          | <b>Exceeds Expectations (E)</b> | <b>Meets Expectations (M)</b> | <b>Needs Improvement (N)</b> |
|----------|---------------------------------|-------------------------------|------------------------------|
| Rubric 1 | 21                              | 13                            | 0                            |
| Rubric 2 | 21                              | 13                            | 0                            |
| Rubric 3 | 21                              | 13                            | 0                            |
| Rubric 4 | 21                              | 13                            | 0                            |

\*34 students in total