

Student Outcomes Assessment and Success Report AY2019-20 *Consult with your college dean's office regarding due date and how to submit. Deans will submit reports to the Office of Assessment & Accreditation annually by October 15.*

Unit/Program Name: _____ OSCM _____ Contact Name(s) and Email(s) Kuntal Bhattacharyya Kuntal.Bhattacharyya@indstate.edu _____

Part 1a: Summary of Student Learning Outcomes Assessment

NOTE: If data from Spring 2020 is missing due to COVID-19 transition issues, please describe these issues, their impact on your ability to assess student learning, and what, if anything, will change as a result.

<p>a. What learning outcomes did you assess this past year?</p> <p>If this is a graduate program, identify the Graduate Student Learning Outcome each outcome aligns with.</p>	<p>b. (1) What assignments or activities did you use to determine how well your students attained the outcome? (2) In what course or other required experience did the assessment occur?</p>	<p>c. What were your expectations for student performance?</p>	<p>d. What were the actual data/results?</p>	<p>e. What changes or improvements were made or will be made in response to these assessment results or feedback from previous year's report? Can expand on this in Part 2.</p>
<p>1. Develop Supply Chain Framework</p>	<p>Students worked in teams with external clients to analyze (a) their product's supply chain in light of the SCOR Model and delivered recommendations for supply chain efficiency and process improvements (OSCM 300); (b) a specific process using the DMAIC six sigma principles and provide recommendations by designing an updated process map (OSCM 445)</p>	<p>At least 70% students will perform at a "satisfactory" level in the client presentation and status reports.</p>	<p>100% of OSCM 300 students and close to 98% of OSCM 445 students performed at the desired levels in the client presentations.</p> <p>80% performed satisfactorily in the written reports (OSCM 300)</p>	<p>Industry 4.0 initiatives have been injected into the fall 2019 coursework to better prepare students for a career in advanced manufacturing.</p> <p>Guest speakers in the areas of warehouse automation and blockchain integration have added valuable insights to students graduating into the world of Industry 4.0.</p>
<p>2. Apply Problem solving methods</p>	<p>Cases dealing with the five core areas of supply chain analytics (statistical analyses, forecasting, optimization, simulation, and data mining; OSCM 310)</p> <p>Apply the problem solving approach into spreadsheet modeling, utilizing Excel and other tools used in the</p>	<p>At least 70% students will perform at a "satisfactory" level in the client presentation and status reports.</p>	<p>70% of students performed at a satisfactory level.</p>	<p>To maintain relevance and currency, more applications of R and Tableau were injected into the fall 2019 curriculum. The Process simulation software ARENA was also used for a simulation course in summer 2020.</p>

	industry (Minitab/R/Rapidminer; OSCM 320, OSCM 425, OSCM 435)			
3. Supply Chain overall body of knowledge	<p>A body of knowledge exam is administered in the capstone OSCM 490 class.</p> <p>The exam comprises a good mix of analytics and MCQs pertaining to the SCOR (Supply Chain Operations Reference) Model in operations and associated dynamics - conceptual paradigms, acronyms - that test a student's preparation ahead of pursuing a career in supply chain. It is designed in accordance with the basic APICS (now ASCM) body of knowledge, also called the GSCA (Graduate Supply Chain Associate) certification.</p>	65% of students are expected to pass the exam with 65% or more correct answers.	Around 50% students passed the exam with 65% or more correct answers.	<p>Our target was significantly reduced in spring 2020. However, the results can be primarily attributed to a paradigm change in pedagogy during the middle of the semester due to the CoVID-19 pandemic - - from online teaching, online exams to lack of internet stability, and so on. It was a steep learning curve at the rear end of the spring semester for everyone concerned.</p> <p>The plan is to make this process completely EXTERNAL in the near future and have ASCM administer the Global Supply Chain Associate (GSCA) certificate exam for the OSCM 490 students. Passing this exam will automatically qualify the student through Exam 1 of the coveted CPIM certification. This endeavor requires a FEE, and we are working to find an avenue to pay for all students in the program.</p>

Note: *If you would like to report on more than three outcomes, place the cursor in the last cell on the right and hit "tab" to add a new row.*

Helpful Hints for Completing this Table

- a. Use your outcomes library as a reference. Note any alignment with professional standards, as applicable.

- b. Each outcome should be assessed by at least one direct measure (project, practica, exam, performance, etc.). If students are required to pass an examination to practice in the field, this exam should be included as one of the measures. At least one of the program's outcomes must use an indirect measure (exit interview, focus group, survey, etc.). Use your curriculum map to correlate outcomes to courses. Describe or attach any evaluation tools such as rubrics, scales, etc.
- c. Identify the score or rating required to demonstrate proficiency (e.g., Students must attain a score of "3" to be deemed proficient; at least 80% of students in the program will attain this benchmark.)
- d. Note what the aggregate level of proficiency actually was and the number of students included in the cohort or sample (e.g., 85% of the 25 students whose portfolios were reviewed met the established benchmark).

Part 1b: Review of Student Success Data & Activities

Use [Blue Reports](#) to generate the following information (as well as any other information helpful to you). A dashboard has been created in the Chairs view:

- 1) Cohort Sizes
- 2) Year-to-Year Retention
- 3) 5-Year Graduation Rate (undergraduate); Average time to completion (graduate)

2019-20 Marketing & Operations All Student Levels All D

Degree Awards
Marketing & Operations, All Distance Program Indicators, All Student Levels, All IPEDS Ethnicities, 2019-20, All

Cohort	Degree Conferred Count	Distinct Graduates	Avg Years to Graduation
First Time Freshman (FTFR)	56	53	4.1
First Time Transfer (FTTR)	7	7	4.0

1yr Retention by Latest Dept
All Cohort Latest Major Departments, Cohort Latest Major College, Fall, Operations & Supply Chain Mgt (7232), Baccalaureate Degree,

	Fall 2013	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018
Cohort Retention %	100.00%	100.00%	85.71%	100.00%	92.86%	100.00%

4yr Graduation
All Cohort Latest Major Departments, Cohort Latest Major College, Fall, Operations & Supply Chain Mgt (7232), First Time Freshman (FTFR), Baccalaureate De.

	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
Cohort Graduation %	25.00%	87.50%	84.62%	84.62%	91.67%	82.35%	71.43%	72.73%

What worked well in supporting student success this year?

The introduction of Industry 4.0 has really sparked an interest in the current crop of students as we continue to inject advanced manufacturing tools and technology (AI, robotics, machine learning, cybersecurity, etc.) into the curriculum...

What are the most significant opportunities for improvement upon which to focus in the coming year?

The CoVID-19 pandemic has opened new avenues to exploit the capabilities of a connected world in a virtual medium. The online medium has provided opportunities to reinvent virtual learning and investigate opportunities with a possible online curriculum, certificate programs, and a possible offering with 8-week courses.

Part 1c: Summary of Career Readiness Activities – required for undergraduate programs; optional for graduate programs

If you submitted a report last year, you only need to resubmit if there are changes to your current career readiness competencies map.

If you have not previously done so, please submit your Career Readiness Competencies curriculum map along with this report as a separate attachment. You can find the template here: <https://www.indstate.edu/assessment/plan-components>

Part 2: Continuous Quality Improvement

Reflect on the information shared above regarding student learning, success, and career readiness. In no more than one page, summarize:

- 1) the discoveries assessment and data review have enabled you to make about student learning, success, and career readiness (ex: What specifically do students know and do well—and less well? What evidence can you provide that learning is improving? How might learning, success, and career readiness overlap? What questions do your findings raise?)**

The OSCM program builds on a rigorous set of courses that forces the student to be inquisitive and diligent with the ability to use both sides of the brain. Challenging the student to think "outside the box" is never easy and requires patience and a concerted effort. We normally start seeing the impact of our approach AFTER the student has successfully completed an external internship in the summer prior to their senior year. The internship brings learning and realization to a full circle for the students when they see the connections between our teaching and the real world. That is where "value" of our program is created in the students' mind. We have noticed a very different approach from students after their internship - their way of carrying themselves, taking classes seriously, pushing themselves to their best abilities - all of these come together.

Our approach to analytics in every coursework allows students to reinforce and repeat the learning so that they can retain it through the program and into the career. Our attrition rate after a student has declared the OSCM major in sophomore year is ZERO. This is because the students are advised meticulously in the context of FIT. The only students who defect from the program had declared OSCM major before they started university to later find a mismatch between the major's expectations and their capabilities.

It also helps that the OSCM faculty work very closely among each other (many of our assignments have same grading rubrics to ensure that the student does not have to reinvent the wheel in every OSCM class) and with our students (through personalized one-on-one advising on multiple fronts).

- 2) findings-based plans and actions intended to improve student learning and/or success (expansion of Part 1a, box e as needed)**

The MO Department will continue to deploy faculty in the Meis Center and continue to provide support activities to work directly on Freshman retention. We have traditionally rolled out a day of OSCM for students (interested in) pursuing a career in OSCM. This event includes multiple activities like panel discussions with freshmen, supply chain majors, and a supply chain focused career fair.

- 3) what your assessment plan will focus on in the coming year**

For AY 2020-2021, the following outcomes will be assessed: 1- Develop Supply Chain Framework; 2- Apply Problem solving methods; 3- Supply Chain overall body of knowledge.

4) how this information will be shared with other stakeholders

Assessment data collected in the 2019-20 academic year and reported above are kept on a department Blackboard site which is available to all department faculty as soon as it is collected. Additionally, data will be presented and discussed at a department meeting with opportunities for discussion among program faculty during the semester that the data is reported. Notes will be made in meeting minutes to reflect this.

Thank you so much for sharing your assessment process and findings for AY 2019-20 with the Assessment Council. You will find feedback and ratings on the rubric below. It is understood that some of the feedback might encompass practices that you already engage in but were not documented in this report. As the purpose of this evaluation is focused on recognizing great work and helping faculty improve assessment practice, it is not necessary to retroactively add documentation. Please feel free to let me know if you have any questions or if there is any way I can assist you in further developing assessment practice and use in your program.

This report will be shared with the Associate Dean(s) and Dean of your college and summarized findings will be shared as composite college/institutional data with the President’s Office and the Provost’s team.

Sincerely,

Kelley (x7975)

Program: BS Operations & Supply Chain Management	Overall Rating: Mature (2.06/3.00)
Strengths	Recommendations
<ul style="list-style-type: none"> • Learning outcomes are generally specific and measurable. • Good information is provided about the measures used for outcomes 1 and 3. It is clear what students will do to demonstrate their learning relative to the outcome. • Good information is provided about the potential impact of COVID-19 on student performance in Spring 2020 compared to prior performance. • Good information is provided about course content and pedagogical practices (guest speakers, simulations, etc.) that have potentially influenced student success in the program. • Good move to add the GSCA exam into the curriculum and into the assessment plan. This will be a good indicator if the alignment of outcomes and teaching in the curriculum prepares students to work in the field. I hope you will be able to find the funding to support this! • Clear information is provided about how faculty can access results and how results are shared and discussed. 	<ul style="list-style-type: none"> • Learning outcome 3 does not describe the action students will demonstrate. • The measures for outcome 2 are well-described, but the aligning expectations refer to performances that don’t seem clearly reflected in the measures. Is this a copy/paste error from the cell above? • It is unclear how student performance was evaluated (e.g., rubrics, checklists, employer evaluations, etc.). Providing this information will clarify how the data is obtained, how it ensures accuracy of alignment between data and outcomes, and what the term “satisfactory” means in terms of achievement. This would be especially helpful for outcome 2 where measures are taken from 4 courses but only 1 point of data is provided.

Evaluation Criteria	3 Exemplary	2 Mature	1 Developing	0 Undeveloped
<p>Student Learning Outcomes</p>	<p>Identified, aligned learning outcomes are specific, measurable, student-centered, and program-level. Outcomes directly integrate institution or college-level learning goals.</p> <p>Outcomes are consistent across modes of delivery (if applicable).</p> <p>More than one outcome is assessed this cycle, and rationale is provided for why they were selected for assessment.</p>	<p>Identified, aligned learning outcomes are specific, measurable, student-centered, and program-level. Outcomes support institution or college-level learning goals.</p> <p>Outcomes are consistent across modes of delivery (if applicable).</p> <p>At least one outcome is assessed this cycle, and rationale is provided for why it was selected for assessment.</p>	<p>Learning outcomes are identified and alignment with courses is demonstrated. <i>(in one case - see recommendations)</i></p> <p>Outcomes are consistent across modes of delivery (if applicable).</p> <p>At least one outcomes is assessed this cycle.</p>	<p>No <i>(program)</i> learning outcomes are identified, and/or alignment of learning outcomes to courses is not demonstrated (e.g. – curriculum map).</p>
<p>Performance Goals & Measures</p>	<p>Performance goals are clear and appropriate, and rationale is provided for why these were selected.</p> <p>Identified measures and tools are assigned to each outcome, are clear and intentionally designed to address student performance on aligned outcomes, and rationale and examples are provided (e.g. – rubrics, checklists, exam keys). Most are direct measures, and their design enhances the validity of findings.</p> <p>Licensure exams and high-impact practices are reflected in measures (if applicable).</p>	<p>Performance goals are clear and appropriate.</p> <p>Identified measures and tools are assigned to each outcome, are clear and intentionally designed to address student performance on aligned outcomes, and examples are provided (e.g. – rubrics, checklists, exam keys). At least one direct measure is included.</p>	<p>Performance goals are identified with little rationale or clarity. <i>(see recommendations)</i></p> <p>Identified measures are poorly suited to performance goals, underdeveloped, or are solely indirect measures.</p>	<p>No goals for student performance of learning outcomes are identified, and/or no measures are provided.</p>

<p>Analysis & Results</p>	<p>Data collection process is clear and designed to produce valid/trustworthy results. The process is useful to those collecting and/or interpreting data.</p> <p>Data is collected and analyzed with clear rationale and description.</p> <p>Results are provided with thoughtful discussion of analysis and description of conclusions that can be drawn.</p>	<p>Data collection process is clear and designed to produce valid/trustworthy results.</p> <p>Data is collected and analyzed with clear rationale and description.</p> <p>Results are provided with some discussion of analysis.</p>	<p>Description of data collection is unclear as to process and quality.</p> <p>Some data is collected and analyzed with little rationale or description.</p> <p>Some results are provided with no discussion of analysis.</p>	<p>No information is provided about the data collection process, and/or no data is being collected.</p> <p>No results are provided</p>
<p>Sharing & Use of Results for Continuous Improvement</p>	<p>A plan for sharing information and included program faculty and appropriate staff in discussion and planning is detailed and enacted. Outcomes and results are easily accessible on the program website or other appropriate designated area.</p> <p>Plans for improvement or change based on results are clear and connected to results. If few students met performance goals, this is included in discussion and plans.</p> <p>Reflection if offered about results or plans moving forward, and compares prior year plans to current outcomes in an effort to foster continuous improvement as a result of assessment process.</p>	<p>A plan for sharing information broadly across program faculty is detailed and enacted.</p> <p>Plans for improvement or change based on results are clear and connected to results. If few students met performance goals, this is included in discussion and plans.</p> <p>Reflection is offered about results or plans moving forward.</p>	<p>Information is provided about sharing results, but sharing is limited in scope or content.</p> <p>Plans for improvement or change based on results are incomplete, vague, or not clearly connected to results.</p> <p>Little reflection is offered about results or plans moving forward.</p>	<p>No information is provided about sharing results and/or plans for improvement or change based on results.</p> <p>No evidence of reflection on results in provided.</p>
<p>Overall Rating</p>	<p><input type="checkbox"/> Exemplary</p>	<p><input checked="" type="checkbox"/> Mature</p>	<p><input type="checkbox"/> Developing</p>	<p><input type="checkbox"/> Undeveloped</p>

Please see reviewer notes for more details.