Administering an Asynchronous Professional Master's Degree: Effective Strategies for Design, Delivery, and Engagement

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Abstract

Online delivery is popular due to its flexibility of time and space, especially for those who for various reasons are unable to pursue their educational dreams, such as those in remote locations or those who work full time. The opportunity to receive a graduate education entirely online with no in-residence requirements is an appealing prospect for many adult learners who wish to advance themselves by earning a master's degree without the necessity to pause their careers.

The Master of Engineering Management (MEM) Program at the University of Nebraska Lincoln (UNL) has no face-to-face component or requirement, and it is offered through Canvas, a Learning Management System, widely adopted by many institutions. The entire program is web-based and delivered asynchronously. The MEM is a professional master's degree for individuals with STEM undergraduate degree and employed in engineering and technology industry. Relevant work experience is required for admission. Average experience (post baccalaureate degree) was 59 months (~ 5 years) for those enrolled between July 1, 2019 – June 30, 2020.

The non-traditional demographic of MEM students is a key criterion to consider in administration of the program, engaging the students, and design and delivery of courses. Pedagogical design strategies and delivery practices that are carefully planned for working professionals must be considered to ensure success in achieving learning outcomes as well as full engagement of the students with the program and curriculum. The right combination of advising, administration, technology, pedagogy, and content is required to produce an environment in which these non-traditional students thrive and succeed in achieving learning outcomes and objectives and persist in enrollment and degree completion in a reasonable amount of time.

Literature points to effective strategies for programs that cater to non-traditional students, best practices in asynchronous course design, and ways to prepare faculty for asynchronous delivery mode. The role that experts trained in instructional design and technology play is paramount to success of such programs. These are all ways that could be leveraged to administer a successful program.

This paper will discuss three focal areas in administering the MEM program:

- Student onboarding practices to inform, advise, and engage students
- Faculty onboarding practices to align learning outcomes, activities, and assessment
- Building community through forming a hub for information sharing and engagement

The MEM program started implementing some of these strategies over the past 12 – 18 months. This paper will discuss our practices and methods and invites further discussions on fully online graduate program development and improvement.

Introduction

Online education is gaining momentum rapidly. Seaman [1] reports the number of graduate students taking distance courses in 2016 was nearly 28% higher than in 2012. Online delivery is attractive for its flexibility of time and space to full-time working professionals who wish to earn a graduate education while not pausing their careers [2], [3], [4], [5], [6].

Graduate engineering is not an exception in the expanded online space. The National Center for Education Statistics [7] reports that 36% of graduate students in math, engineering, and computer science took some online courses in 2015-2016, compared to 25.5% in 2011-2012. In the same period and for the same academic disciplines, enrollment in entirely online degrees increased from 13.3% to 19.9%.

Gross and Peters [8] conducted a study to compare returning and direct-pathway graduate engineering students. Returner was defined as someone with 5 or more years of work experience beyond baccalaureate degree. They found returners to have a median age of 26 years and mean and median time in industry of 9.5 and 6.75 years, respectively. Also, they reported returners tend to choose an online program to maintain their home and lifestyle. While Blackwood, et. al. [9] found 68% of master's students choose a major that is different from their undergraduate degree, Gross and Peters [8] found 75% of returners changed their discipline for graduate studies. In their sample, "... only returners chose engineering management for their graduate major. Engineering management was a choice found only in master's programs for the survey participants and was a more common choice among returners". In fact, next to civil engineering at 16%, engineering management was the second highest degree of choice with 13% of returners choosing it as their discipline of study for their graduate studies.

The literature describes a typical online student as a person who is older, married, a U.S. citizen, employed full-time, geographically restricted, part-time student, and likely to be a parent [10], [11]. This profile means online students have different needs with respect to instruction and student services compared to face-to-face students who are on campus full time and have access to campus services [12].

The Master of Engineering Management (MEM) program at the University of Nebraska – Lincoln (UNL) is offered entirely online in 8-week mini-session format, and its student profile matches that described in the literature. The program requires work experience and recommends two years of relevant post-baccalaureate work in engineering and technology industry. In rare instances where the applicant has extensive engineering co-operative education and internships throughout their undergraduate career, admission is granted with less than two years of post-baccalaureate experience. The program completes the statistical survey from the US News and World Report to be included in their annual rankings. In the survey completed for the rankings released in January of 2021, the 2019-2020 entering class was comprised of 40 students with average age of 29 years and average of nearly 5 years (59 months) of post undergraduate work experience.

Cognizant of our student population, to improve student satisfaction and experience, and to increase enrollment and retention rates, since fall 2019 several changes have been implemented in the entire cycle of interactions that a student has with the program, from the time of application to admission, enrollment, onboarding, advising, instruction, and all the way to graduation. Considering the non-traditional profile of students in the program, improving faculty

and staff responsiveness, care, and quality of interactions, instruction, and service became a primary goal. The purpose of this study is to describe administrative and curricular practices, to learn whether they are satisfactory to the working professional student population, and to identify areas of improvement. Findings are expected to be of interest to online programs with similar student population.

Application and Admission

Monthly informational sessions are offered by the Program Director during which prospective students learn about the MEM and ask questions. This serves as a recruitment activity and educates attendees about the application process. Graduate admission at UNL goes through a 3-phase process. In phase 1 the applicant submits the online application form and uploads document to Office of Graduate Studies (OGS). If the student meets OGS admission criteria (often lower than the program criteria), OGS sends the application to the MEM Director, which marks the start of Phase 2.

Program staff begins communicating with the applicant even while the application is in phase 1 and under review by OGS. Communication starts with a welcome note that explains the admission process. At times phase 1 may be prolonged for various reasons such as: missing transcripts or an applicant with a degree from another country may not have English proficiency test score. Program Director and staff facilitate and expedite the admission process, when possible. For example, they identify and report to OGS applicants who are exempt from English test scores because language of instruction at their home country was English, or they provide expedited options to applicant for submitting official transcripts.

Program admission requirements are also checked while the application is still in phase 1. Applicants with missing documents or those who qualify for conditional admission are advised on ways to remove deficiencies such as completion of required undergraduate courses or encouraged to contact recommenders to supply letters of recommendation. Therefore, by the time the application comes to phase 2 often the program is ready to make a recommendation to OGS with minimal delay in phase 2. If the program recommends admission, a final check by OGS is quick before the offer of admission is made. Students often comment on the high level of involvement and guidance provided to pave the application and admission process, and some say that the attention they received was the deciding factor to select this program over others to which they had applied.

Student Onboarding and Initial Advising

Close communication with the student continues once they accept the offer of admission. An Onboarding document is emailed to them and an hour-long one-on-one web conferencing session is scheduled with the program Director. The Onboarding document includes details of several processes at the University such as claiming their student identity and their student email account. Other items included in the document are links to forms, websites, and processes needed from start of the program to graduation. During the onboarding session programs policies and expectations are reviewed and the student is added to the MEM Student Success Center (SSC), described later in this paper.

An initial advising also takes place during the onboarding session by discussing their career goals and recommending electives that best help them achieve those goals. At the end of the

onboarding session the student is instructed to visit university and program policies related to academic integrity and submit a form pledging commitment and adherence to those policies. They are also instructed to access sample course syllabi located in SSC and to complete the Memorandum of Courses (MOC) which is a listing of courses to be taken for degree completion. The form includes core (required) courses, and the student must add electives they wish to take.

Once the student returns the MOC the MEM Director prepares a Program Completion Plan (PCP) that minimizes time to graduation by listing when to take each course. The Director prepares the PCP with student's availability to enroll, in mind. For example, some individuals skip enrollment throughout the year due to annual limits on their employer tuition reimbursement benefits, or others may skip certain academic terms due to personal matters or heavy workload at their job. Program Director is the academic advisor for MEM students and works closely with them throughout the year if changes to the MOC are required or if their PCP needs adjustment.

Online MEM Student Success Center

Ambiguity in content or communication is difficult for students in an online program and quality of communication is associated with student satisfaction [13]. With the intention of offering sufficient support and information to the MEM students, the MEM Student Success Center (SSC) has been developed in Canvas, which is the Learning Management System used at the University. SSC is a hub for MEM students, staff, faculty, and Director. It provides students immediate access to Canvas once they gain their university credentials so they can spend some time to get familiar with the system before they start taking online courses. It also allows them to receive emails and announcements sent through Canvas from the program.

SSC is also utilized to manage all program-related content and resources aiming to ensure student's success to complete the program. Once students are enrolled in the MEM program, they will be able to learn the student onboarding process, program faculty and staff members, curriculum, course schedules, and access course syllabi and instructional technology tutorials, and more. For example, tutorials on using Canvas as well as web conferencing and screen capture technologies used at the university are included in SSC. The SSC is especially helpful to self-sufficient students which is a characteristic of most students in the program.

The program uses course analytics to examine students' activities in the online success center. The results provide explicit information on the visits of each page, which indicates what content students are seeking and what could be potential problems, so the program Director can be proactive in reaching out to the students and be effective to give support during student advising sessions. Program Director and other staff, including the MEM instructional designer, maintain the MEM SSC by frequently updating the files, links, processes, announcements, resources, and tutorial videos. For example, before each term syllabi are updated and latest versions are uploaded to the site.

Enrollment and Student Services

About a month prior to start of each semester program staff verifies student enrollment in the upcoming term. Students who are not enrolled are contacted and reminded of courses remaining in their degree program and are advised about which course to take in the upcoming semester. Staff members report that since the practice of PCP was started in early 2020, most students follow the PCP designed for them and self-enroll without the need to be reminded. It appears the

PCP serves as a road map that gives the student some autonomy to take charge of their program of study. This in turn results in higher engagement with the program and timely degree completion. Of course, unplanned events occur that might necessitate a student to deviate from their PCP, either in terms of changing elective courses they wish to take or inability to enroll in a term which might impact their PCP. In such a case an advising session with the program Director takes place and a revised PCP is created for them.

Program staff are responsive and ready to address student inquiries on a gamut of issues such as billing clarification, military benefits, registration hold removal, enrollment permission codes, or confirmation letters issued for employer tuition reimbursement. When the staff is unable to handle or respond to an inquiry, they pursue the matter by contacting the appropriate campus office or unit the matter is resolved and they can provide sufficient information to the student. This level of care and service is critical when dealing with working professionals who must balance personal, professional, and academic commitments competing for their time. Program staff also help students by facilitating graduation process. They perform early graduation audits, send reminders about important deadlines in the MEM SSC for each graduation, provide application forms, and process forms and distribute them to various campus offices on behalf of the student.

Faculty Onboarding for Instruction and Course Design

Quality of instruction is paramount to student satisfaction with any academic program [14]. Shelton [15] created a quality scorecard for online education programs that includes instructional design as a critical element in course design and development to ensure alignment of learning goals with instructional strategies and assessment activities. The process of the online course design, development, and delivery plays an important role in the MEM program. It ensures the quality of all courses, which strengthens the foundation of the program that could affect the student's satisfaction rate and further influence student's enrollment and retention. An instructional designer (ID) is a specialist who helps faculty to help students learn knowledge and obtain skills efficiently and effectively [16].

For consistency across all courses, one ID is assigned to work with faculty in the MEM. As part of course design process, each instructor collaborates with the ID to design and develop their course. As subject matter experts (SME), instructors are specialized in their subject areas, and most of them have had the experience of teaching face-to-face classes. However, design and delivery of online courses could be challenging, especially if one has not taught online before or has limited experience in that area. The success of online courses greatly depends on the implementation of online pedagogy, using appropriate research-based instructional strategies, and the effective selection of instructional technology [17]. IDs with expertise in pedagogy and technology can assist faculty in this matter.

Keppell [18] asserted that fostering a successful working relationship between the SME and ID is crucial for developing effective instructions. To facilitate the process, the ID initiates a dialog with the MEM faculty to organize their first meeting. The main purpose of the meeting is to build a trustworthy relationship. The ID will learn the instructor's teaching philosophy and their experiences in teaching and course design which helps the ID to understand the SME's beliefs and perspectives about teaching and learning, and their general pedagogical practices. And, the SME will learn the ID's design experience, and will understand the design model that will guide the course design and development process. The open conversation helps establish a

collaborative relationship recommended by Keppell [18] with “emphasis on an ongoing and continuous relationship in which advice is sought and accepted with confidence.” After the initial meeting, the ID will collaborate with the instructor to outline a work plan to decide the best communication method, how much effort and time to allocate for course design, and how much is needed for learning new instructional technology and discussions on best practices.

When the design process starts, the backward design principle is followed [19]: always keep the end-goals in mind while designing and developing learning activities, assessments, resources, etc. Backward design emphasizes student’s learning and understanding, and assures activities and assessments are aligned with learning objectives. To facilitate the process, the SME will

Figure 1: Backward Course Design Process

complete a course blueprint (see **Appendix A**) first. It serves as a guide for the SME to elaborate not only on course-level learning objectives but also module-level ones; design and examine assessments that ensure students will be effectively evaluated to achieve those objectives; decide resources and activities that will engage students and enable them to accomplish the goals. After completing the blueprint, the SME has undergone the three stages of backward design (see **Figure 1**) and constructed a preliminary course structure in the document. Following the blueprint, the SME and ID will meet on a regular basis to discuss the course design progress, instructional resources development, online activities, etc. that will help students achieve their goals.

Clear communication and consistency in program policies and expectations impact student satisfaction in online programs. The syllabus is a critical element of a well-designed online course as it communicates course details, policies, and expectations to students [20]. The MEM Director has created a syllabus template based on recommendations from the literature [21], [22], [23] that is used across all courses in the program. While instructor policies may vary, students know where to look for that information in each course. The ID reviews the syllabus template with the SME and clarifies ambiguities that the SME may have.

A student’s satisfaction with the online program is largely explained by the quality of instructor interaction and feedback. Ivankova and Stick [24] found student satisfaction is influenced by instructor feedback and Ojokheta [25] reports student perception of course content is a function of feedback. Additionally, the instructor’s ability in an online course to reduce the geographical gap between them and students positively predicts student learning and course satisfaction [14]. Hence, during interactions between ID and faculty, the instructor’s presence in an online course

is addressed and learning activities and interactions are emphasized in course development and delivery. Faculty are encouraged to use rubrics to clearly communicate expectations on assignments, but are also encouraged to provide a personal comment, observation, or feedback to help students learn better [22].

It is crucial to create various learning activities to help students achieve the learning objectives. Providing opportunities for interactions, not only among students, but also between the students and the instructor, and students and the content, will encourage collaborations and promote students' learning. To do so, activities like team projects, discussions that help foster communication and problem-solving skills are developed. Providing feedback to students' submitted work and joining in students' discussions will help student's learning and build a sense of community.

Providing a variety of engaging resources that support learning is another effort in design and development. These resources are either existing ones that could be adopted, such as textbooks, online articles, YouTube and TED talk videos, podcasts and blogs, resources available at professional organizations, or content that needs to be developed, such as instructional videos, demonstrations, e-learning modules, and the like. To optimize student learning, a range of materials will be used aiming at different cognitive domains of learning. The other reason for using a variety of online learning resources is to provide opportunities for students to build the most appropriate learning environment that meets their personal preferences which facilitates creating an inclusive online learning environment for the students.

Once course development is completed, the ID will conduct a comprehensive syllabus and course review. Two rubrics (**Appendix B and C**) are used to support this endeavor. After the review process, the SME will make some improvements by adopting the recommendations provided in the review forms. Once the SME has implemented recommendations by the ID, the MEM Director conducts a course review and provides recommendations to the faculty member. The entire process starts approximately 6 to 8 months prior to first day of class and concludes approximately 2 weeks prior to first day of class to allow the instructor ample time to implement all recommendations before publishing the course in Canvas.

Lower attrition rates are expected when student satisfaction is high resulting in higher persistence and completing additional online courses [26]. Therefore, gauging satisfaction can be a key factor in successful administration of an online program. Ojokheta [25] reported that satisfaction with program delivery methods and consistency in course design across the curriculum increases persistence in online programs.

Program Satisfaction Survey

In Fall 2020 the MEM Director started a new practice to conduct exit interviews of graduating students to capture data about their experiences in the program to adjust and improve based on input provided. In November 2020 eight students graduating in December were interviewed who had either finished their course work or were completing their last course at the time of the interview. They were full-time employed and fit the profile of a typical student in the program. The interviews were structured with the purpose of identifying program-related issues that they considered important to shape a student's satisfaction with the program. The interview process helped develop questions for a survey to be completed by MEM students during Spring 2021

with the purpose of capturing students' satisfaction with the program from point of application to graduation.

The instrument was created as a survey in the MEM Student Success Center in Canvas. Responses were anonymous and all MEM students were invited to participate in January 2021. Of the 90 students in the program, 58 responded (64% response rate). **Exhibit 1** shows summaries for the respondents. Spring 2021 is comprised of two 8-week mini-sessions A and B, starting on January 11 and March 8, respectively. Therefore, respondents admitted in Spring 2021 would have at best experienced the curriculum and faculty only for about two weeks when the survey was distributed in early January.

Exhibit 1. Profile of Survey Respondents

Gender (n = 58)		Courses completed, of 10 (n = 57)		Term Admitted (n = 56)			
Male	47 (81%)	Mean	4.96	Fall 2017	1	Fall 2019	7
Female	11 (19%)	Median	5	Summer 2018	1	Spring 2020	7
Age in years (n=57)		Yrs. of work experience (n=56)		Fall 2018	2	Summer 2020	8
Mean	31.1	Mean	6.7	Spring 2019	2	Fall 2020	11
Median	29	Median	5	Summer 2019	6	Spring 2021	11
Min	23	Min	1				
Max	50	Max	25				

The proportion of men and women in the survey is representative of the composition of the MEM program. Eleven students were admitted in Spring 2021. Their response to the number of courses completed was zero because they had not yet completed a course in the program at the time of completing the survey. Those responses were not used in computing the mean and median number of courses completed at the time of taking the survey. The median was 5 courses, indicating 50% of respondents were in the first half of their program, and 50% were in the second half of the degree completion. Not everyone answered all questions. For example, two persons did not report the Term in which they were admitted to the program.

In the exit interview, graduating students indicated that to mitigate low response rate, the survey must be concise and not impose on the students' time. To reduce survey burden, ensure high participation rate, and not be too demanding on students, a set of *example factors* were developed to accompany each question so the respondent would consider as they marked their answers. For example, the first survey question appears below, along with its related example factors.

Please rate your satisfaction with the MEM Application and Admission Process

Examples of factors to consider in your rating:

How soon you were contacted by MEM staff once you submitted application; Welcome email; Explanation of what to expect during the admission process, MEM Director/staff staying in close contact to ensure timely admission to MEM, etc.

Exhibit 2 shows results of the first survey question. Except one person who said neutral, the remaining 57 respondents said they were either satisfied (28%) or very satisfied (71%) with the application and admission process. The one person who marked Neutral provided a written

comment saying the admission process to the program was smoother than admission to the University. This person was admitted to MEM in Fall 2018 before process changes were implemented.

A Similar format was used in developing questions related to Onboarding Process (Exhibit 4), Effectiveness of the MEM SSC (Exhibit 5), Advising (Exhibit 6); Staff Support (Exhibit 7); Curriculum, Courses, and Faculty (Exhibit 8); Consistency in Course Program Design (Exhibit 9); Engagement & Participation at Course and Program Levels (Exhibit 10); and whether the student Feels Valued and Has a Sense of Belonging to a Community (Exhibit 11). Exhibits 4 - 11 are in **Appendix D**.

Exhibit 2: Application and Admission Process

Mean response = 4.7 (where, 5 = Very Satisfied, 1 = Very Dissatisfied)

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Examples of factors to consider in your rating:

How soon you were contacted by MEM staff once you submitted application; Welcome email; Explanation of what to expect during the admission process, MEM director/staff staying in close contact to ensure timely admission to MEM, etc.

Very Satisfied	41 respondents	71 %
Satisfied	16 respondents	28 %
Neutral	1 respondent	2 %
Dissatisfied		0 %
Very Dissatisfied		0 %

Neutral: Was admitted in Summer 2018, completed all courses; commented saying admission to program was smoother than admission to the University.

Findings from the Survey

Exhibit 3 shows numerical summaries of responses to survey questions. Students admitted in Spring 2021 could only answer the first 3 survey questions related to Application & Admission, Onboarding, and MEM SSC Effectiveness. This was due to minimal interaction and experience with the program at the time of survey completion. Hence, several students admitted in Spring 2021 wrote in the open comments area of the survey that they marked Neutral or they chose to not answer questions 4 – 9 (see Exhibit 3).

Questions were measured on a 5-point Likert scale and an open response field was provided for each. The last column in **Exhibit 3** shows the number of respondents who provided written comments for each question. The majority were positive and complimentary. A few that prompted attention are discussed in this section.

Students are generally quite satisfied with items 1 through 5 in Exhibit 3 (Application and Admission through Staff Support). In most cases, those who said Neutral were students recently admitted in Spring 2021 who did not have much experience with the program; hence chose

Exhibit 3: Summary of Likert Scale Questions (percentage and count of responses)

Survey Questions Measured on Likert Scale	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	No Answer	# of written Comments
1. Application & Admission	71% (41)	28% (16)	2% (1)				19
2. Onboarding	59% (34)	40% (23)	2% (1)				11
3. MEM SSC Effectiveness	57% (33)	36% (21)	7% (4)				11
4. Advising	57% (33)	29% (17)	14% (8)				14
5. Staff Support	64% (37)	28% (16)	9% (5)				10
6. Curriculum, Courses, Faculty	41% (24)	45% (26)	7% (4)	5% (3)		2% (1)	15
7. Consistency in Course & Program Design	43% (25)	43% (25)	10% (6)	2% (1)		2% (1)	6
8. Engagement & Participation at Course & Program Levels	52% (30)	36% (21)	9% (5)	2% (1)		2% (1)	8
9. Feel valued and has a sense of belonging to a community	40% (23)	50% (29)	5% (3)	3% (2)		2% (1)	5

Neutral or did not respond to the question. Related to Advising, one person wrote a comment stating that perhaps a document should be created that clarifies differences in MEM and MBA courses and content of each. Related to Staff Support, two individuals who said Neutral wrote comments saying they cannot comment because they have not yet needed to seek support from staff. One person said they wanted MEM staff to help them get into MBA courses that were full or wanted MEM staff to help open new MBA course sections. This issue is not controlled by the MEM program but is frequently visited and monitored by the MEM and MBA Directors and Administrators from both colleges.

Only one of three who were dissatisfied with Curriculum, Courses, and Faculty wrote a comment. It said there is inconsistency between professors and their expectations in terms of the amount of time and effort needed from the student. Of the seven students who chose Neutral for Curriculum, Courses, and Faculty, three commented. One was a recent student (Spring 2021) who said *So far So good*. Another one who had started in Summer 2019 noted that initially the range of course offerings was limited. However, they recognized and expressed satisfaction with new offerings and expanded electives. Finally, one who said neutral had two comments related to dislike of group assignments and vague expectations and instructions on assignments.

The one person (respondent #25) who marked dissatisfied with Consistency in Course and Program Design also marked dissatisfied for Engagement and for Sense of Belonging to Community (items 7, 8, and 9 in Exhibit 3). This person did not provide any comments to explain their position, nor did they provide information on when they were admitted, how many courses they had completed, or their number of years of work experience. One of the six who

said Neutral to Consistency in Course and Program Design commented, saying design is consistent, but workload varies from course to course.

On Engagement and Participation at the Course and Program Level one person who selected Neutral provided a written comment with two suggestions. They recommended adoption of Yellowdig technology as the preferred method for discussion relative to Canvas. The same person voiced dismay about group assignments and projects, indicating they would rather avoid working in groups as it conflicts with work and home life. Finally, only one of those who chose Neutral commented about feeling valued and having a sense of belonging to a community. They said this is tough to do at a distance and they were not sure how it best can be done.

It is worth noting that in reporting findings from the survey we focused on the responses of *just the few individuals* who had selected Neutral or Dissatisfied in answering the survey questions. The overwhelming number of respondents were quite satisfied with all aspects of the program. In fact, majority of the written comments were provided by those who marked Satisfied or Very Satisfied and whose writing reflected appreciation for positive experiences across all survey questions. However, there is room for improvement in the MEM program based on the handful of written remarks that indicated some level of critique and were discussed in this section. The Summary and Conclusions section will address them.

Online Community Engagement and Development, Beyond Graduation

Currently, an online community for the MEM program is under development. It will provide a channel for MEM graduates to engage with the program and with its current students. Its main purpose will be to engage alumni, allow them to share their experiences and expertise, and celebrate their successes. It will also help people network and provide opportunities to advance their careers. It is hoped that engaging people who share the same value and seek excellence can fulfill the program's missions, build a good reputation, and attract more competent engineers to join the program.

Summary and Conclusions

Survey results indicate that the MEM staff and Director's active involvement throughout the program plays an essential role in the success of the MEM program. From the admission phase through program's completion, it was mentioned numerous times that the MEM staff team's timely responses and willingness to answer their questions have provided important guidance for students' academic progress. One person wrote, "This application process was incredibly fast and well communicated. There was transparency in what stage my application was". By using Canvas analytics and communications, program staff provides students with apt information to address their concerns.

The one-on-one onboarding process with the Director provides an individualized experience for each student. It helps clarify misunderstandings and address personal questions. A person who was admitted in Summer 2018 (i.e., prior to implementation of student Onboarding) said, "Onboarding process was somewhat vague. More information would have made the first couple of sessions easier in terms on registration." However, with the Onboarding process in place and through personal conversations, newer students made comments like, "it feels like the staff is invested in you and gives the best advice to help you succeed". Students also value the opportunities to connect with the MEM personnel rather than reading a written document.

Through those conversations, they expressed their appreciation of being “treated as a professional, not a young inexperienced student”, and evaluated the Onboarding process as “Very responsive and informative. Most universities provide cold responses, but MEM is very personable”. Open and clear communication of expectations is cited in many studies as an important indicator of satisfaction with the program. One individual wrote, “The onboarding process address a lot of useful information up front and was very useful for understanding expectations and program format.”

All comments related to Staff Support were quite positive, and summed up as, “Simply amazing” by one respondent.

The respondent who was admitted in Fall 2018 said this about Advising process prior to changes made, “This process was a bit impersonal. I would have liked to have had a quick video call to discuss advising/MOC”. On the other hand, the following is representative of responses from recently admitted students, “Very personable and understanding of my goals. Went through iterations to get to the perfect set of courses”. One respondent appreciated the dialog but suggested to create a handout to compare courses, particularly between MEM and MBA.

Students appreciate the consistent course design throughout the program. It provides a unified course organization for easy access and locating course content. However, different instructor’s approaches presented some challenges among a few students. There were concerns about different course loads throughout the program, and disagreement in comments about deploying team projects as a learning assessment. It poses the problem of miscommunication between certain students and the course instructor. Hence, it is vital for the instructors to express their expectations implicitly at the beginning, and to list clear and measurable learning objectives to help students understand the purpose of assignments they must complete. Another student asked to have access to the Canvas shell for courses they completed in the past.

Having a hub for information and resource sharing seemed to be greatly appreciated. It provides a channel for students to receive and retrieve the program’s information, as one of the students said that “with an on-line program, the Student Success Center is crucial in staying connected with the University.” One student suggested that there should be a way for students to communicate outside of a classroom setting to discuss issues, which would be addressed by the online community that is under development.

Based on written comments on the survey, the following may help improve student satisfaction and experiences:

- Consistency in course design must include consistency in workload. Discuss with faculty their expectations on workload and a range of what may be reasonable on a weekly basis. Communicate to faculty that if students are expected to spend more time, this should be clearly communicated in the syllabus to provide a reasonable expectation on the part of students.
- Students are and will remain divided on team assignments. Therefore, it is recommended that faculty clearly communicate to students the rationale and the pedagogical reasoning and need for using or not using team assignments.
- Recognize that it is impossible to satisfy everyone when it comes to choosing technology and methods of interaction. Whether a faculty uses Yellowdig or Canvas discussions (or other technologies), there are bound to be a few students who support the choice and

others who do not. Therefore, faculty must work with instructional designers to create an engaging and rich environment for exchange of ideas that invites participation and involvement, regardless of the technology used.

- Discuss with faculty adoption of a policy to allow students access to the courses they have completed, while they are in the program.
- Collaborate with MBA Director to create a document that highlights content of courses in each program to facilitate decision process for students in choosing their elective courses.
- Conversations with the College of Business must continue to facilitate higher availability of their popular courses for MEM student enrollment. With the University moving toward an incentive-based budget model, and given the growth in MEM student population, the MEM program will be in a stronger position to ask for cooperation and accommodation from the Business College in this respect.

Recommendations

The literature is clear in expectations of students who pursue online graduate programs with respect to their interactions with program faculty and staff, and quality and consistency of communication and instruction. The literature points to several factors that contribute to increased student satisfaction and higher persistence and retention rates. Understanding satisfaction level of students with various aspects of the program is essential to continued success in administering the program and can be accomplished with surveys.

In developing the student satisfaction survey, it is recommended to engage recent graduates or soon-to-graduate students who have fully experienced the program. Such individuals not only can help identify topics that are relevant to the student population in the program but also can help frame the questions and word them in a meaningful and relevant manner. It is also important to include recently admitted students who have a fresh memory of their experiences through the application, admission, and onboarding phases.

Helpful, responsive, professional, and approachable staff are valued and appreciated by non-traditional, working students. In a professional master's degree with students who are pulled in various directions by their academic, professional, and familial obligations, streamlining administrative processes presents a unique opportunity to increase student satisfaction by affording them time to focus on their studies. This may be facilitated through strategically timed announcements and reminders about deadlines such as for enrollment, drop/add, bill-pay, or graduation deadlines and requirements.

Professional master's students want to have autonomy and access to forms, documents, weblinks, information, and processes that they may need throughout their program. A central information-sharing and communication hub is highly advisable, such as the MEM Student Success Center described in this study. Consolidating relevant information that pertains to "them" in one place minimizes search and saves time.

Faculty must not teach in silos and communication must be open to discuss and balance workload expectations in courses across the curriculum. Taking courses online when working full time can be stressful particularly if from one course to another the look and feel of the experience changes. Hence, consistency in course design across the curriculum is imperative. It is highly recommended for faculty to form close working relationship with instructional design and instructional technology experts. In situations where the program partners with other units,

every effort must be made by program staff to inform students of differing style in design and delivery of courses in the other program to prepare them for what would be a new experience. Students may feel disoriented when they must adjust to another environment. It requires close collaboration between the administrators of the two programs to better facilitate students' learning and success.

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Appendix A: Course Blueprint

Course number and name:

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Course description:

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Course objectives:

By the end of the course, students will be able to:

1.	Objective 1: <i>(example: use different strategies to build self-efficacy)</i>
2.	Objective 2:
3.	Objective 3:
4.	Objective 4:
5.	...

Final assessment (how you will assess students to know they have met the objectives listed above):

Present a lesson plan that will consider a list of relative motivation theories and applications in educational settings.

Course outline

[illegible]

Appendix B: Syllabus Review Checklist

Syllabus Review Checklist

COURSE INFORMATION	Provided	COMMENT
Course title		
Course number		
Number of credit hours		
Prerequisites		
Course description		
Time and location of course meetings		
Exam format (DLC information if applicable: https://its.unl.edu/dlc/)		
Date, time, and location of final exam		

INSTRUCTOR INFORMATION	Provided	COMMENT
Instructor name		
Instructor office location		
Instructor email address and/or phone number		
Office hours-time and location		

COURSE STRUCTURE AND FORMAT	Provided	COMMENT
Course learning outcomes		
ABET outcomes covered (https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-engineering-programs-2016-2017/)		
Required materials—text book, calculators, other equipment		
Supplemental materials—other references or equipment		
All course assessments (assignments, quizzes, exams, projects)		
ACE outcomes (https://ace.unl.edu/about/outcomes)		
Opportunities to achieve ACE learning outcomes		
Graded assignments used to assess ACE learning outcomes		
Tentative course schedule		
Course format		
Attendance policy		

Appendix C: Course Review Checklist

Course Review Checklist

Criterion Rating Legend

*** Essential

** Important

* Recommended

1	COURSE OVERVIEW AND INFORMATION	Legend	Criteria Met	COMMENT
1.1	Course includes a welcome message and Getting Started content.	**		
1.2	An orientation or overview is provided for the course to help students navigate and learn what tasks are due.	***		
1.3	Unutilized course items are hidden from Course Navigation.	**		
1.4	Course syllabus, schedule, and other important information are easily located.	***		
1.5	Course includes links to policies on plagiarism and/or academic dishonesty, disability accommodations, etc.	***		
1.6	Course provides information to student success resources (technical help, orientation, students resources).	***		
1.7	Course learning objectives are clearly defined, measurable, and aligned to learning activities and assessments.	***		
1.8	Course provides contact information for instructor, department, and program.	***		
1.9	Home Page provides visual representation of course; a brief course description or introduction; clear instructions for students (e.g., where to begin) and navigation to current content in less than three clicks UDL 2.5 Illustrate through multiple media	*		
1.10	Home Page utilizes a course banner with imagery that is relevant to subject/course materials UDL 2.5 Illustrate through multiple media	*		

2	COURSE TECHNOLOGY & TOOLS	Legend	Criteria Met	COMMENT
2.1	Required skills for using technology tools are clearly stated.	***		
2.2	Tutorials and resources are provided for any specialized technology used in the course.	***		
2.3	Course includes links to privacy policies for technology tools.	**		
2.4	Any technology tools meet accessibility standards.	***		

3	DESIGN AND LAYOUT	Legend	Criteria Met	COMMENT
3.1	A logical and consistent layout continues throughout the course. The course is easy to navigate (consistent color scheme and icon layout, related content organized together, self-evident titles).	***		
3.2	There is enough contrast between text and background for the content to be easily viewed.	***		
3.3	Instructions are provided and well written.	***		
3.4	Course is free of grammatical and spelling errors.	***		
3.5	Course achieves U.S. Federal Government Section 508 Guidelines for accessibility.	***		
3.6	Presentations use simple, non-automatic transitions between slides.	**		

4	CONTENT AND ACTIVITIES	Legend	Criteria Met	COMMENT
4.1	Course offers access to a variety of engaging resources that facilitate communication and collaboration, deliver content, and support learning and engagement.	***		
4.2	Course provides activities for students to develop higher-order thinking and problem-solving skills, such as critical reflection and analysis.	**		

4.3	Course provides activities that emulate real world applications of the discipline, such as experiential learning, case studies, and problem-based activities.	**		
4.4	Modules and items within modules have a thoughtful naming convention (e.g. name the module "Chapter 1: Pandas in the News," not just "Chapter 1") UDL 2.2 Clarify syntax and structure	***		
4.5	Modules begin with an Introduction/Overview page and end with a Conclusion/Summary page to "bookend" each module UDL 3.1 Activate or supply background knowledge	*		
4.6	Course materials and resources include copyright and licensing status, clearly stating permission to share where applicable.	**		
4.7	Text, graphics, and images are relevant. Text should be used as a primary method for delivering information.	***		
4.8	Hyperlink text is descriptive and makes sense when out of context (avoid using "click here").	**		

5	COMMUNICATION AND INTERACTION	Legend	Criteria Met	COMMENT
5.1	Expectations for participations are clearly stated and easy to find.	***		
5.2	Expectations for professional and respectful communication are clearly stated and easy to find.	***		
5.3	Timeframe for instructor to response to students is clearly stated and easy to find.	***		

5.4	Course contains resources or activities intended to build a sense of class community, support open communication, and establish trust (at least one of the following - Ice-breaker, Bulletin Board, Meet Your Classmates, Ask a Question discussion forums).	*		
5.5	Course offers opportunities for learner to learner interaction and constructive collaboration.	*		
5.6	Students are encouraged to share materials and inject knowledge from diverse sources of information in their course interactions.	**		

6	ASSESSMENT AND FEEDBACK	Legend	Criteria Met	COMMENT
6.1	Course grading policies, including consequences of late submissions, are clearly stated in the course information area or syllabus.	***		
6.2	Course includes frequent and appropriate methods to assess students' mastery of content.	**		
6.3	Criteria for the assessment of a graded assignment are clearly articulated (rubrics, exemplary work).	**		
6.4	Students have opportunities to review their performance and assess their own learning throughout the course (pre-tests, automated self-tests, reflective assignments, etc.).	**		
6.5	Students are informed when a timed response is required. Proper lead time is provided to ensure there is an opportunity to prepare an accommodation.	***		
6.6	Students have easy access to a well designed and up-to-date gradebook.	***		

Overall Feedback

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Reviewed by: _____

Review date: _____

Course review checklist adapted from

[OSCQR – Open SUNY Course Quality Review Rubric](#)

[Canvas Course Evaluation Checklist](#)

Appendix D: Exhibits 4 – 11 (Summary of Survey Questions)

Exhibit 4: Student Onboarding

Mean response = 4.6 (where, 5 = Very Satisfied, 1 = Very Dissatisfied)

Please rate your satisfaction with the **MEM Onboarding Process**

Examples of factors to consider in your rating:

Usefulness of the Onboarding document; Receiving help and instructions to:

Gain system login credential, student email account, MEM Student Success Center, course enrollment process, etc.

Very Satisfied	34 respondents	59 %
Satisfied	23 respondents	40 %
Neutral	1 respondent	2 %
Dissatisfied		0 %
Very Dissatisfied		0 %

Neutral: Was Admitted summer 2018 prior to changes; said onboarding was vague.

Exhibit 5: Effectiveness of the MEM Student Success Center

Mean response = 4.5 (where, 5 = Very Satisfied, 1 = Very Dissatisfied)

Please rate your satisfaction with **Effectiveness of the MEM Student Success Center (MEM SSC)**

Examples of factors to consider in your rating:

MEM SSC as a hub for information sharing, program policies, forms, announcements, staying connected to my program; resource to learn basics of Canvas, Zoom, VidGrid, etc.

Very Satisfied	33 respondents	57 %
Satisfied	21 respondents	36 %
Neutral	4 respondents	7 %
Dissatisfied		0 %
Very Dissatisfied		0 %

No comments made by those who chose neutral. All were admitted before changes.

Exhibit 6: Advising

Mean response = 4.4 (where, 5 = Very Satisfied, 1 = Very Dissatisfied)

Please rate your satisfaction with MEM Advising

Examples of factors to consider in your rating:

Help in identifying courses for MOC and degree program; Guidance and assistance to identify a program completion plan (PCP) to minimize time to program completion, etc.

Very Satisfied	33 respondents	57 %
Satisfied	17 respondents	29 %
Neutral	8 respondents	14 %
Dissatisfied		0 %
Very Dissatisfied		0 %

Four comments by Neutrals. One new to program in Spring 2021. One admitted in fall 2018. One in summer 2019. One asked for summary of differences in courses.

Exhibit 7: Staff Support

Mean response = 4.6 (where, 5 = Very Satisfied, 1 = Very Dissatisfied)

Please rate your satisfaction with MEM Staff Support

Examples of factors to consider in your rating:

Timeliness and usefulness of response to questions; Facilitating communication with other campus offices; Issuing enrollment permission codes; Announcements of deadlines; Sharing course enrollment information, etc.

Very Satisfied	37 respondents	64 %
Satisfied	16 respondents	28 %
Neutral	5 respondents	9 %
Dissatisfied		0 %
Very Dissatisfied		0 %

Three comments by neutrals. Two said N/A because they had not needed support from staff. One said it is difficult to enroll into MBA courses due to limited space and sections. However, this is not a MEM staff issue and the comment was out of place.

Exhibit 8: Curriculum, Courses, and Faculty

Mean response = 4.3 (where, 5 = Very Satisfied, 1 = Very Dissatisfied)

Please rate your satisfaction with MEM Curriculum, Courses, and Faculty

Examples of factors to consider in your rating:

Delivery of content and instructional methods are appropriate for non-traditional students; Caring and courteous faculty; Timeliness and usefulness of response to questions; Course expectations and assignments are appropriate for students who are working professionals, etc.

Very Satisfied	24 respondents	41 %	
Satisfied	26 respondents	45 %	
Neutral	4 respondents	7 %	
Dissatisfied	3 respondents	5 %	
Very Dissatisfied		0 %	
No Answer	1 respondent	2 %	

One of those who said dissatisfied commented to say there is inconsistency in expectations from faculty and some are too demanding. Three who said neutral commented. One did not like vague instructions and group assignments (started in Spring 2020). One acknowledged and appreciated more MEM courses are being developed and offered in recent years. One did not comment due to being new and starting in Spring 2021spring.

Exhibit 9: Consistency in Course and Program Design

Mean response = 4.3 (where, 5 = Very Satisfied, 1 = Very Dissatisfied)

Please rate your satisfaction with **MEM Consistency in Course and Program Design**

Examples of factors to consider in your rating:

Design of syllabi, Design of courses, Administration and policies of MEM program and its courses are consistent and familiar, which helps transitioning from one course to the next.

Very Satisfied	25 respondents	43 %
Satisfied	25 respondents	43 %
Neutral	6 respondents	10 %
Dissatisfied	1 respondent	2 %
Very Dissatisfied		0 %
No Answer	1 respondent	2 %

Dissatisfied did not provide a comment, and left these blank: admission term, # of courses completed, and Years of work experience. Of the six who marked neutral, one person said course design is consistent, but workload across various courses is not consistent.

Exhibit 10: Engagement & Participation at Course and Program Levels

Mean response = 4.4 (where, 5 = Very Satisfied, 1 = Very Dissatisfied)

Please rate your satisfaction with **Engagement and Participation at Course and Program levels**

Examples of factors to consider in your rating:

Interactions in courses with faculty and students through Team assignments, course discussions, assignments, etc.

Interactions with program director and staff: emails, announcements, messages, reminders, etc.

Very Satisfied	30 respondents	52 %
Satisfied	21 respondents	36 %
Neutral	5 respondents	9 %
Dissatisfied	1 respondent	2 %
Very Dissatisfied		0 %
No Answer	1 respondent	2 %

Two neutrals commented. One likes Yellowdig discussion and prefers it to Canvas Discussions. The other one does not like group projects and mentioned it more than once in open comments.

Exhibit 11: I am Valued & Have a Sense of Belonging

Mean response = 4.3 (where, 5 = Strongly Agree, 1 = Strongly Disagree)

As a result of my interactions with MEM faculty and staff, I feel valued and have a sense of belonging to a community.

Those who disagreed provided no comments.

One person who said Neutral commented and said this is tough to accomplish online.