Media Arts and Science Graduate Program Review Report
Fall 2020

Prepared by Media Arts and Science Program

Table of Contents

General Information, Institutional Data

Purposes, Reputation, and Goals of the Media Arts and Science Graduate Program

Preface

To the reader/reviewer…

We deem the purpose of the PRAC report to be a review of a program and assessment of processes and evidence used to reflect the health, potential, and goals of that program, (This includes the evidence of learning outcomes from students throughout.)

A quote from the Program Review and Assessment Committee's Mission states "…T*he committee establishes guidelines for **comprehensive** program review for academic and administrative units **and** provides guidance for student outcomes assessment throughout the institution."*

We ascertain from a statement made during a recent PRAC meeting regarding the unwillingness to review PRAC reports that contain 'program' outcomes and evidence as mis-guided in the intent of the PRAC report. We have made every effort to construct a report that adheres to the guidelines set forth in the September 14, 2020 document.

1. Program Introduction

The Media Arts and Science (MAS) Graduate Program under the IUPUI School of Informatics and Computing PRAC Report 2020.

a. A Brief Review of the Past

MAS Graduate Program is housed under the Department of Human-Centered Computing (HCC). The Program was established in 1999 and was a stand-alone program at IUPUI. Although the MAS undergraduate program has been one of the largest programs at IUPUI the MAS graduate program has struggled to increase and maintain a substantive headcount. Faculty have made several efforts over the years to 'get a pulse' on the identity and purpose of the program. They made stringent efforts in course re-design, collaboration and outreach with minimal results in program expansion.

b. Revised Program Philosophy and Direction

For our most recent efforts, moving into 2021, we completed a revision of the program and its collaboration and relation to industry. An application to extend the program to online delivery was submitted to the Academic Leadership Council. (The application was approved by the GAC and moving toward final approval). The Media Arts and Science (MAS) graduate program has an overarching goal; the student's success and future employment: The Program works to achieve this goal through a combination of core curricula, in-depth interactions with working industry professionals, and the student's own commitment.

We understand that the professional fields of media technology are evolving rapidly. Thus, students must have a clear but flexible sense of direction, drive, focus to acquire new knowledge and skills, and the ability to work in a professional culture. At the heart of our program are the beliefs that 1) graduate school should be far more than an extension of the undergraduate experience, requiring self-defined learning; and 2) the best learning can occur beyond the classroom, and the best introduction to professional practice often comes from working professionals. A program built on these beliefs requires that students possess independent ambition. Students who understand the opportunities and the responsibilities of such an approach will thrive in our program.

The MAS graduate program stands on a solid foundation of a required 4-course core offering an introductory experience working with academic teachers as well as professional mentors, and also requires students to thoughtfully define their career ambitions. The program also offers students the chance to expand or refine their knowledge and skill sets by taking a wide range of *student negotiated* elective courses. Then, the student will complete a professional practice experience immersed in an industry context and guided by working professionals. This professional experience (whether we call it a practicum or an internship) should provide the springboard into a meaningful career.

What general outcome are you seeking?

The general outcome we are seeking is to increase and sustain enrollment in the program.

How will you know it (the outcome) **if you see it?** (What does the student know? Or what is the student able to do?)

We will know the outcome of the program by evidence of degrees conferred and employment success in the students specialized field.

How will you help students learn it? (in class or out of class)

Faculty help students learn through constant updates in course content (in-class), mentoring, and advising (out-of-class).

How will you measure each of the desired behaviors/attributes listed in #2?

The data recorded each in each academic semester will be analyzed for future PRAC Reports. Our Career Services department will monitor and record student employment successes. This will also be included in future PRAC reports.

What are the assessment findings?

The assessment finding are recorded in this report.

What improvements will be made based on assessment findings?

The improvements made based on the assessment findings are also discussed in this report. The improvements are both program and curricular.

c.   Program Learning Outcomes

In the Fall of 2021, the MAS Graduate Program will be reorganized into both FTF and online with a redesigned curriculum that focuses on professional practice. We believe opening the door for students to return or begin anew with a MS degree in their field or discipline will provide the impetus to increase headcount and enrollments in the future. Graduate level education is the process of learning specialized knowledge about a field or discipline.
        Program learning outcomes were redesigned and organized to address a professional model. The Professional Model encourages independent critical thinking, effective communication, team building and mature responsibility in career focus. Our revised learning outcomes (hyperlink and listing) developed by Assoc. Prof. Joseph Defazio.

https://soic.iupui.edu/hcc/graduate/media-arts-masters/learning-outcomes/

Students will be able to demonstrate and achieve the following learning outcomes:

1.   **Evaluate and create** media-rich digital applications through research, examination, and reflection of digital design and management techniques.
2.   **Apply** media design, psychological and cognitive principles and theories to the digital content review in diverse fields and industry.
3.   **Design and demonstrate** novel forms and applications of media technologies, including those possible through the use of advanced and future digital technologies.
4.   **Apply principles and theories** of quantitative analysis, qualitative analysis, design research, information visualization, and visual analytics.
5.   **Design** effective, usable, and human-centered media-rich applications using prototypes and proof of concepts.

6. **Effectively communicate** in digital, oral, and written form the processes, ideas, outcomes, and implications of digital media content.
7. **Articulate decisions and reasoning** behind decisions made related to digital media research efforts.
8. **Exhibit sound judgment, ethical behavior**, and professionalism in applying MAS and HCI concepts and value-sensitive design to serve stakeholders and society, especially in ethically challenging situations.
9. **Collaborate in teams** fairly, effectively, and creatively, applying group decision-making and negotiation skills.

d. Curricular Changes

We preface our curricular efforts with the following:
The MAS Graduate Program had experienced several iterations of curricular re-design. Restructuring and marketing the new MAS Graduate Program was in process when the pandemic surfaced. Prior to the pandemic, we saw and increase in student applications, both nationally and internationally. However, a revised U.S. policy on international student admittance into the country reduced our applicant numbers.

Several faculty meetings continued from Spring 2020 through the present to restructure curriculum for the MAS Graduate Program. We conducted a needs analysis with corporate executives and industry leaders to determine job-related and task-related needs. Using feedback from these meetings, we re-designed core coursework requirements (see Learning Outcomes) and aligned specific learning objectives and outcomes for new and existing courses.
Our focus is three-fold; 1) identify current courses that would align with the new learning outcomes and 2) identify new courses that would complete alignment with the learning outcomes and 3) align course content toward industry expectations. In summary, our program is now based on a 4 course (12 credit core, 4 course (12) credit electives and a (6) credit Masters Project, Thesis, Internship, or Practicum course.

e. Assessment Cycle – Overview

If we understand the term 'Assessment Cycle' we interpret it to mean the frequency of assessment reporting on a sustainable and routine basis. Our question is: is it very 3 years, 5 years, etc. ?

Feedback from students suggests confusion about the purpose and platform of the MAS Graduate Program. Many students somehow receive the message that the Graduate program is an extension and continuation of their undergraduate work. (This could not be further from the truth and the goal of the program.) We recognize this is a systemic issue in the School/Program (e.g., from MAS faculty, advisors and career administrators). As part of MAS Program Restructuring, we have initiated the following:
- o Revision of the website to reflect the newly revised Program
- o Updated Program Learning Outcomes
- o Student Success Stories
- o Job Title and Placement Data

We will deliver the course/instructor evaluation twice per semester (mid and final). This will help us glean student attitude and provide feedback for any adjustments needed.

f. Assessment Methods and Approaches

In the MAS Graduate Program, (5) core courses are used to assess program outcomes.

Table 1 Direct Methods of Assessment

Course Title	Method	Approach
N501 – Foundations of Digital Media Production	Project, papers, presentations	Student peer review, formal presentation and peer review
N503 – Digital Media App and Design Processes	Assignments, projects, formal paper	Student peer review, video presentation, academic writing
N505 – Advanced Issues in Emerging Media Environments	Exploratory research, weekly class presentations, student partnerships, formal research paper	Student peer reviews, peer review on formal presentations, academic writing
N585 – Experiential Innovation II – Living Laboratory	Project, papers, presentations, Research on existing literature	Student peer review, video presentation, academic writing
N585 – Experiential Innovation I – Advanced Visualization	Solo and team projects, papers, presentations,	Team dynamics, student peer review, formal presentation, academic writing

Table 2 Indirect Methods of Assessment

Course Title	Method	Approach
N501 – Foundations of Digital Media Production	Course and instructor evaluations and course grades	End of semester evaluation; grades published in the Canvas CMS
N503 – Digital Media App and Design Processes	Course and instructor evaluations, student peer-reviews and course grades	End of semester evaluation; grades published in the Canvas CMS
N505 – Advanced Issues in Emerging Media Environments	Course and instructor evaluations, student peer-reviews and course grades	Mid and end semester evaluations, Grades publishing in Canvas, Feedback on weekly writing, final academic writing
N585 – Experiential Innovation II – Living Laboratory	Course and instructor evaluations, student peer-reviews and course grades	End of semester evaluation; grades published in the Canvas CMS
N585 – Experiential Innovation I – Advanced Visualization	Course and instructor evaluations, student peer-reviews and course grades	Team dynamics, student peer review, formal presentation, academic writing

Examples of Course Learning Outcomes are presented in (2) courses; NEWM N501 and NEWM N505.

Table 3 – NEWM N501 Course Learning Outcome Example

Upon completion of this course, the student will	RBT*	PGPL	Assessment
1. Engage in high-level analytical and conceptual thinking	5. Evaluate 6. Create	K&S CT EC	Project and Presentation

2. Examine published literature	5. Evaluate	CT	Literature Review
3. Observe examples of process and practice as it relates to a professional workflow and business environment	5. Evaluate	K&S CT	Identify, Determine, and Plan Designs using a Backwards Design Model
4. Engage in hands-on activities relatable to "real-world" projects	5. Evaluate	CT K&S	Demonstrate the ability to put learned methods into action
5. Present	4. Analyze 5. Evaluate	K&S CT EC	Project and Evaluation

*RBT: Revised Bloom's Taxonomy

Table 4 – NEWM N505 Course Learning Outcome example

Upon completion of this course, the student will	RBT*	PGPL	Assessment
1. Engage in empirical exploratory research methods needed to review, analyze, evaluate, and report on issues in emerging media technology	5. Evaluate 6. Create	K&S CT EC	Writing, Discourse, and Presentation
2. Examine and demonstrate knowledge gained from published literature on research and emerging media technology topics	5. Evaluate	CT	Exhaustive Literature Review
3. Engage in high-level critical thinking skills and the design of research methods.	5. Evaluate	CT EC	Demonstrate a high-order research design process
4. Analyze and present findings and examples of the potential impact in emergent media technology environments.	4. Analyze 5. Evaluate	K&S CT EC	Research Paper

*RBT: Revised Bloom's Taxonomy

f.   Key findings from assessments of learning during the reporting year (2019-2020)
Overview of key findings from assessments of learning

The most significant change in the 2019-2020 academic year was the sudden move to online due to the pandemic. Many faculty members found themselves in a 'new world' of instructional delivery. The time-commitment, learning-curve for online teaching, and attempts to keep students motivated were substantive. We have yet to see the course/instructor evaluation results from this paradigm-shift and eagerly await the results.

Key findings from assessments of learning during 2019-2020 are currently in review and will affect the delivery of courses in 2021. Findings indicated a few issues. They are: 1) students need timely feedback on assignment and project grades, 2) faculty should hold regular office hours, and 3) advocate for additional action learning in course work.

g. Discussion of areas of concern about student learning based on assessment results, especially persistent concerns.

A critical assessment technique faculty must demonstrate is keep the lines of communication (verbal and written) open between student and instructor. Faculty expressed concern at the Graduate level stating "…many students demonstrate a lack of effective communication and listening skills. We are reviewing potential action learning exercises that will help students improve these skills.

An example of an action learning exercise is titled: Reflection in Action. This exercise requires students to reflect and report on learning, its importance and relevance, and its relation to their goals in the graduate program. This will be completed in each course in the graduate program. The grades and scores from each assignment will be reviewed, analyzed and recorded for evidence.

h. Description of improvement initiatives
Significant improvements and changes began in fall 2019 and are ongoing at this time. A list of improvement initiatives are as follows:

Revised Learning Outcomes and uploaded to the MAS Graduate Website	Completed
Revised the format and content expectations in the Personal Statement Application	Completed
Increase the marketing message for the Program and Accelerated Students	In progress
Restructure the Plan of Study to 12 credit core, 12 credit elective and 6 credit project/thesis/practicum	Completed
Continue developing industry contacts and partnerships	In progress
Add student success stories to the MAS Graduate Website	In progress
Apply for online program approval	Completed
Apply for certificate program approval	In progress

Our assessment will be increased to (2) course/instructor surveys per semester. The information gleaned from these surveys will help improve instruction and student learning outcomes.

i. Graduate Data: 2019-2020

2019 – 2020 MAS Graduate Students Population (n=11)
Gender: Female = 3 (27%), Male   = 8 (73%)

5 graduates are employed in their field
1 graduate is self-employed
1 graduate is employed outside of their field
4 graduates are either unemployed or have not found work in their field

MAS Graduates currently employed have secured positions in the following companies:

Company	Job Title
• vistorX	Hardware Design Engineer
• USIC	Instructional Designer

- Walmart   UX/UI Designer
- IUPUI   Data Analyst
- Techability Inc.   Game Designer

Historical graduate data: 2016-2019

Year	Total count	Placeable	Placed	Knowledge Rate(%)	Median Salary
2016-'17	5	5	5	100	43,000
2017-'18	14	14	11	79	55,000
2018-'19	6	6	6	100	80,000
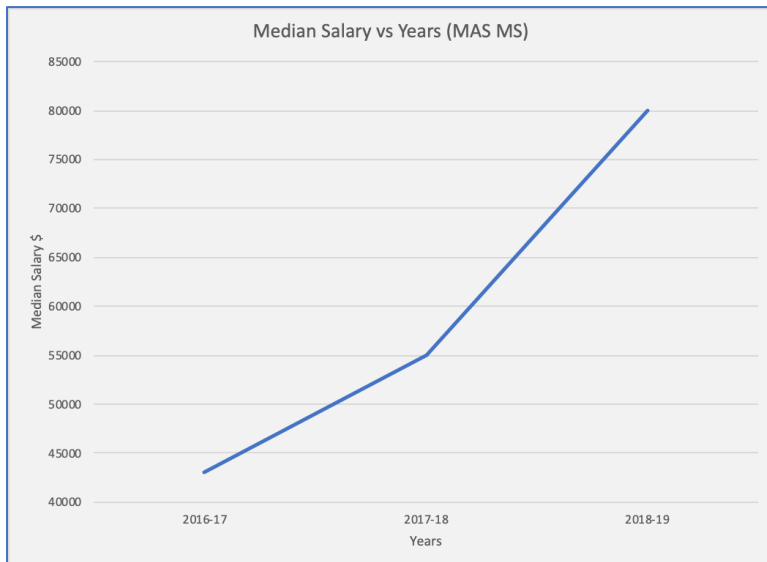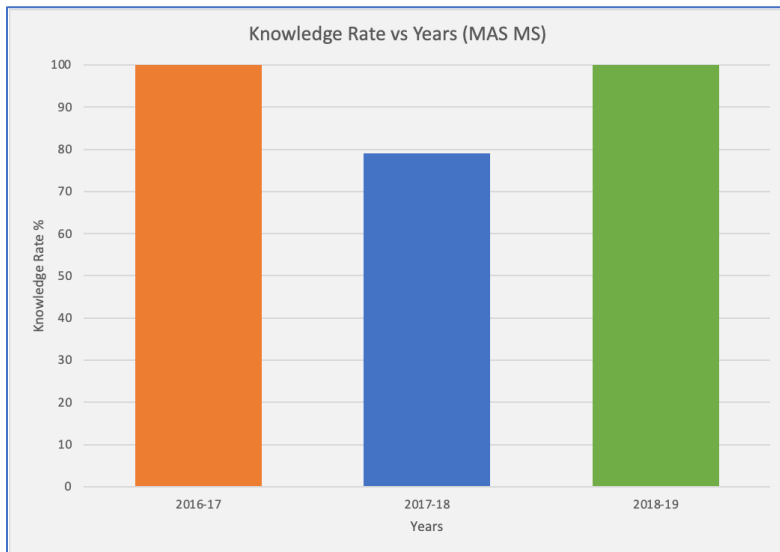
Positions
["Unity Developer", "Graphic Designer", "Digital Communication", "Motion Graphic Artist ", "Video Editor", "Video Consultant "Applications Systems Analyst", "Rigger"]

MAS Graduate Success Stories

1. Sam Miro (aka Sam Mirpoorian) is an award-winning filmmaker based in the Midwest. During his undergrad + grad studies at Indiana University, he produced a feature [documentary on homelessness](#) that screened with President Obama's staff from the [Department of Justice](#) + HUD.

Student filmmaker wins accolades for documentary
Sam Mirpoorian, a graduate from the Media Arts and Science (MAS) graduate program at the IU School of Informatics at IUPUI, won the Best of Hoosier Lens award at the 2016 Indy Film Fest for the documentary film Under the Bridge: The Criminalization of Homelessness.
https://soic.iupui.edu/news/student-film-under-the-bridge/
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2. Xiaochen Yu

[MAS graduate student creates seamless online experiences for Walmart shoppers](#)

In the summer of 2019, media arts and science grad student Xiaochen Yu interned at Walmart Design as a UX designer, working with a cross-functional team to re-envision creation of a seamless user experience for the Search and Browse space on Walmart apps. As a junior designer, Yu collaborated with domain experts in design, research, and analysis to iteratively finalize design decisions.

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j. COVID19 – Review of Course Delivery

In October 2020, a student survey was administered to students regarding Hybrid Courses in the School of Informatics and Computing, Human-Centered Computing (HCC) Department. "The purpose of the survey was designed to gauge the plans and concerns of HCC students regarding their hybrid learning experience in place due to COVID-19 as they look ahead to taking courses in the Spring 2021 semester."

The survey asked five basic questions:

- Student's major and level
- What are your concerns about having Hybrid-Distance (HD) classes in the Spring?
- What are your concerns about having Hybrid-Traditional (HY) classes in the Spring?
- My preference for the Spring semester would be taking mostly HD; taking mostly HY; taking only HD; taking only HY; other options.
- Are there ways in which the department can better support your hybrid learning?

312 students completed the survey (39% response rate), distributed across the programs in HCC. 12 students from the MAS Graduate program participated in the survey.

For Hybrid-Distance Classes:
Students cited : Classes "Work well, no issues." However, students expressed concern regarding "Lack of rapport with students and peers."

For Hybrid-Traditional Classes:
Students expressed: Concern about safety and preferred online learning. Students cited difficulty managing a personal schedule at times.

Overall, MAS Graduate students prefer the Hybrid-Distance class format. Faculty will devote additional effort in developing effective classes with attention to positive learning outcomes.

k. Interdisciplinary program and industry initiatives.

As part of the restructuring of the MAS Graduate Program faculty have communicated with industry professionals with the intent on bring their expertise and experience into the classroom. This is a major part of our graduate student's learning outcome as it provides evidence of potential links from the classroom to a career in industry.

Our first step was to hire (3) industry leaders as adjunct faculty. This has been a successful part of program restructuring.

l. Summary and Future Work Needed

In summary, we acknowledge the vast amount of work to be done. Much of the work involves effective marketing to increase enrollment in the program. This is currently in progress as we are publishing student success stories and reaching out to industry leaders for partnerships and avenues for careers and employment for our students.

We must do a better job at recoding learning outcome evidence in assessment. We must review course evaluations for each class with a critical eye and open discussions among faculty on how to continually improve their courses.