

Dear Provost Schutten,

As you have requested, the Budget Priorities Committee has completed its review of the 20 program prioritization documents that you provided to us. Committee members independently reviewed each of the documents and the committee spent approximately four hours of meeting time to discuss the programs. Following those discussions, the committee was asked to identify up to four programs for each of the following five questions:

- 1) Which undergraduate programs do you feel have the strongest appeal to degree completers (non-traditional students with some college credit who are typically working full-time)?
- 2) Which undergraduate programs do you believe could best attract UG's if marketed directly to high school students?
- 3) Which graduate programs do you believe could best attract UG's if marketed directly to high school students?
- 4) Which are strong niche programs that can help CMU promote and reinforce brand awareness?
- 5) Which program areas have strong potential for credential / certificate / professional development offerings, short of formal degree programs?

The results of this task were summarized and shared back to the committee for additional discussion. Five members of the committee volunteered to provide a summary of the programs identified through this process for each question. These summaries were shared with the committee for additional comment. The final written products are attached for your review.

On behalf of the Budget Priorities Committee we want to thank you for this opportunity to provide input on this important process. We look forward to discussing this with you at our meeting on April 28.

With kindest regards,

Mark Lehman, co-chair representing faculty

Ray Christie, co-chair representing administration

Budget Priorities Committee Program Prioritization Review Summary

Question 1: Strongest appeal to degree completing (nontraditional student with some college credit who are typically work full time)

The comments seemed to organize around three issues for this question: Interest in the program (market demand and majors), ease of completion (online courses, graduation in 4 years without hidden barriers), and cost effectiveness of the program. These issues were then applied to each of the 5 programs.

1. Communication

Interest

Offers classes that are important for managerial advancement

“Go to any site offering special training in skills needed for advancement to become a manager and you see the same five or six skills listed: interpersonal or leadership (including cross-cultural) skills, communication, collaboration, critical thinking, and finance. If these skills are vital for promotion in the workforce, we should not be eliminating from our curriculums the courses that teach them” (p. 140 ; The New Education: How to Revolutionize the University to Prepare Students for a World in Flux, 2017)

Percentage of New Freshman choosing COM as a major has increased in percentage relative to declining enrollments overall (from 5% to 6.5%); the average number of majors over the past 5 years has been 174.

Ease of completion:

The Communication major has few required classes, **making it easy for majors or minors to complete in a timely manner; the department continues to increase the number of courses that are online.**

The department hopes to offer an undergraduate certificate in Professional Communication Skills and Presentational Excellence. The certificate is aimed at undergraduate students interested in developing and refining their presentation skills across various contexts in professional settings. The curriculum encompasses the study of different types of presentations delivered in virtual and face-to-face modalities to improve one’s capacity to deliver complex messages in artful and effective ways. The certificate is planned to be 12 credit hours and delivered both face-to-face and online.

Cost Effectiveness:

The courses are taught by faculty members who are recognized for their teaching and research skills and are delivered in a **cost effective manner**. In FY 18, and FY 19, the Communication Department came in under planned expenses by 2.67% and 3.18% respectively.

2. Integrative Public Relations is an interdisciplinary program, where students take classes in three primary departments (Journalism, Broadcast and Cinematic Arts, and Communication)

Interest:

Not only is this a popular major (average number of majors 267), but the Bureau of Labor Statistic outlook shows a higher than average growth rate of 7-9% projected through 2029”.

Alumni interest and internship placement are high in this program.

Ease of completion

Students typically finish the degree in 4 years plus one summer internship; transfer student data show a concerted effort to graduate students in a timely fashion. Advisors work with students providing a major map with the goal of a 2 year completion rate with a 1 summer internship.

Cost Effectiveness

Strong reputation, will need money for certification if the program chooses to pursue accreditation

Because it is an interdisciplinary program, accommodations for growth are constrained by each of the three departments (Journalism, Broadcast and Cinematic Arts, and Communication). However, all three departments have been able to handle growth in enrollment in the past.

3. Marketing and Professional Sales

Interest

The Marketing major is a professional degree program that aims to make marketing students career ready and to help them get placed in a starting position in industry. The main outreach of the marketing program is through two popular minors around campus -**Marketing and Professional Sales - which can only be signed by non-marketing students. While the Marketing major is decreasing in the number of majors (612 to 360), the number of minors in the Professional Sales program has increased (107 to 127)**

Ease of Completion

Students are able to complete their degrees in a little over 4 years; many students are able to pick up a second major (most often in Logistics Management) without significantly lengthening their years to graduate.

“The Marketing faculty have expressed a desire to put our majors online and offer at least one online section of our core classes and popular electives each semester. They are now in the process of getting formal curricular approval to offer all our courses online. “

Cost effectiveness

The courses are taught by faculty members who are recognized for their teaching skills and are delivered in a **cost effective manner**.

4. Business Information Systems offers two undergraduate programs: Information Systems (IS) and General Business Administration: Applied Business Communication (GBA:ABC)

Interest

To address the challenges stemming from online programs and industry career certifications being proposed by companies such as Google, **The BIS Department has developed tracks in Cybersecurity and Business Data Analytics.**

Their program (GBA:ABC) is offered fully online and the department hopes to offer the BSBA in Information Systems online as well.

Student enrollment for IS majors has decreased 22% (185 to 145) since 2015-16, but the number of GBA:ABC majors has increased from 15 to 98 during that same timeline.

The BIS department is partnering with Academic and Professional Programs to offer non-credit professional development programs and badges in the following areas:

Data Analytics: Informed Decisions with Data, Digital Business Development, Artificial Intelligence for SME's, Six Sigma: Green Belt, Six Sigma: Yellow Belt

Ease of Completion

Average student completion rate data indicate that undergraduate students enrolled in programs offered by the BIS Department have a better completion rate when compared to CBA and the university.

Cost Effectiveness

The program has sufficient FTE for the program and is taking several measures to reduce cost for the department. These measures include the following:

- Retraining and reassigning existing faculty to teach courses in new areas such as Cybersecurity. It is very difficult and expensive to hire new faculty in such areas.
- Focusing on recruiting experienced industry experts as clinical faculty (fixed-term) to teach in areas such as Business Data Analytics. The cost of regular faculty is high for Business Data Analytics and we have good contacts with businesses, which helps us hire industry experts, who are considering retirement in the future, at reasonable costs.

5. Data Science. This program, which will be delivered face-to-face on CMU's main campus, is planned to be a 56-hour major that is comprised of the core skills and knowledge needed in the field of data science.

Interest

In the Great Lakes region, the number of data science/analytics majors has increased by 550% in eight years. This growth translates to the addition of six programs annually, on average.

Job demand data substantiates there is a need for individuals with data science/analysis skills at the bachelor's level.

A 2016 Society of Human Resource Management (SHRM) survey, sponsored by the American Statistical Association (ASA), concluded that organizations experience difficulty recruiting for positions that require data analysis skills and it is expected that the demand for these positions will continue over the next five to 10 years (2021-2026)

CMU's program would be the only one in the Great Lakes Region to utilize a minor to focus students' studies in various application areas.

However, there are currently three programs (University of Michigan, Western Michigan University, and Michigan State) who have programs and have established a research center.

Ease of Completion

Unclear, as this program is just being proposed.

Cost Effectiveness

Unclear, as this program is just being proposed.

Question 2: Which undergraduate programs do you believe could best attract UG's if marketed directly to high school students?

Engineering & Technology + Engineering

- Strong job growth and industry demand.
- Opportunity to collaborative with industry partners.
- Nationally ranked program.
- Students have a variety of engineering branches to choose from.
- Demand for students with STEM background continues to grow.
- Engineering careers available in Michigan.

Broadcast & Cinematic Arts

- Media industry is continually growing & changing, creating new job opportunities for graduates.
- CMU offers two radio stations, Division I sports programs, student-produced TV programs & films, etc. for students to obtain valuable hands-on experience.
- Program offers networking & professional development opportunities.
- a well-respected program with notable alumni, networking opportunities.
- Video content creation has become a vital component of marketing strategy.
- Degree leads to a wide variety of career paths.
- Students develop literacy and other transferable skills.
- BLS: Jobs are expected to decline 11% from 2019 to 2029.

Data Science

- Skills and knowledge needed in many fields and professions.
- High market demand & current shortage.
- BLS: Jobs are expected to grow 16% from 2019 to 2029.
- Students would have a variety of career paths to choose from.
- Starting salaries = \$75,000+
- On average, an annual salary of \$80,265—a premium of \$8,736 relative to all bachelor's and graduate-level jobs.
- Compounding the skill shortage is the hybrid nature of most data science jobs, which require a mix of disparate analytical skills and domain-specific expertise that are difficult to develop in a traditional academic major program.

Neuroscience

- Attracts top high school students.
- Good pre-major for graduate programs.
- Demand for students with STEM background continues to grow.
- Students can collaborate with faculty on research projects.
- Major is interdisciplinary would be attractive to students with a broad range of science-focused interests.

- Good expected job growth as demand for health care professionals is expected to increase.

Fashion Merchandising & Design

- Currently a well branded and destination program.
- Partnerships & collaborations with industry partners attractive.
- Outreach programs to attract high school students – dual enrollment, WCCCD partnership, joint programming for Detroit Month of Design, Fashion Camp, Fashion Industry Career Week, etc.
- Courses offered in a variety of modalities to accommodate lifestyle.
- Detroit is working to become a fashion center and apparel manufacturing hub creating a demand for a skilled and professional workforce.
- Student engagement opportunities including internships and collaborative research opportunities with faculty.
- A technology focused program.

Earth & Atmospheric Sciences

- Environmental Sciences
 - Environmental science relevance continues to grow.
 - Can be marketed as a “green” job.
 - Robust program.
 - Due to the interdisciplinary nature of the degree, and the range of transferable skills developed, there is a wide range of career opportunities outside the environmental science field.
 - BLS: Jobs are expected to grow 8% from 2019-2029.
- Meteorology
 - Unique program that attracts students from across the state.
 - Bundling courses to create certificates or badges with specific focuses would be attractive.
 - BLS job outlook predicted to grow 6% from 2019 through 2029.

Professional Sales

- Good job potential.
- Pairs well with other majors/minors.
- Provides career opportunities in a wide variety of industries.
- Offered in a variety of modalities.
- Student internships provide very strong CMU representation externally.
- Good exposure for CMU with the Sales Competition event.
- Bundling courses to create certificates or badges with specific focuses would be attractive.

Business Information Systems

- High market demand – data economy.
- Certification & badging opportunities.
- The ERPsim competition includes high schools, developing name recognition.
- BLS job outlook predicted to grow 10% from 2019 through 2029.
- Offered in a variety of modalities.

Question 3: Which graduate programs do you believe could best attract UG's if marketed directly to highschool students?

Business Information Systems (MSIS)

- Offers tracks in Cybersecurity and Business Data Analytics that are high-demand areas that are projected for faster than average job growth.
- Offers an undergraduate major in Information Systems that could provide a pathway to the graduate program (although there is a tremendous overlap in the courses for both programs).
- Partnerships with Fortune 500 companies provide opportunities for internships.
- Undergraduate/graduate certificate in Cybersecurity could appeal to students interested in other majors.

Entrepreneurship (MEV)

- Offers an accelerated program that could allow students to complete the undergraduate major/minor in Entrepreneurship and the MEV in nine semesters.
- New Venture Competition provides opportunities for students to explore and develop business ideas and has expanded the program's relationship with the entrepreneurial and business communities.

Master of Public Health

- Timeliness of this program in light of current events.
- Accelerated 3+2 option could attract undergraduate students to the university.
- The possibility of a face-to-face program in Atlanta (CDC headquarters) could be attractive to undergraduate students.
- Prospective students may value the opportunities for community service and outreach.

Neuroscience

- Offers an undergraduate major that can provide a pathway to the graduate program.
- Provides opportunities for graduate education to students from a variety of disciplines (chemistry, biology, psychology) as long as minimum requirements in biology, chemistry, and statistics are met.
- Undergraduate research opportunities may attract students with that interest.

Question 4: What are the strong niche programs that can help promote CMU brand awareness?

MA in Entrepreneurial Ventures (1)

- While we reviewed the graduate program (MA in Entrepreneurial Ventures), the undergraduate major is also gaining a reputation around Michigan. The program on campus has created outreach opportunities that could provide synergies with the MA.
- Fully online program is flexible, with the opportunity for an accelerated master's degree and potential collaborations with other programs on campus.
- Visibility of the program is growing and differentiates CMU (niche)—while the MA will never be large, it is innovative and attracts positive attention from business, industry, and government.

Fashion Merchandising and Design (2)

- This is a “destination program,” so it has high value in terms of recruiting and public relations.
- Strong faculty/student research and creative endeavors increases the reputation of the program and the engagement of students in real-world application that leads to employment. This could become a true differentiator program.
- Online offerings extend the reach to cohorts outside of CMU.
- Threads Fashion Show and Fashion Camp offer exposure to CMU, as do the program's impressive affiliations with industry partners.

Communication Science and Disorders (tie-3)

- This program has tremendous longevity and reputation in the state/community.
- The gated admissions process ensures high-quality students who successfully go on to graduate school.
- Health professions are in demand, and this program is likely to grow, especially post-COVID.
- Many reviewers noted the community impact as a great strength of the program.
- Enrollment remained relatively steady despite declines to CMU as a whole.

Earth and Atmospheric Sciences (tie-3)

- Interest in environmental science is growing, and this may attract interest in CMU (relevance); interest in Geology is waning, however, but the third major, Meteorology, is truly unique in Michigan. While a small major, it is visible and would be attractive to a certain kind of high-achieving student.
- Grant and research activity have increased, including that which involves undergraduates.
- There is great potential here to create a 2-plus-2 or 2-plus-3 pathway programs with community

college partners in addition to new online offerings and certificates.

Museum Studies/Museum of Cultural and Natural History (tie-4)

- The museum has undertaken a major shift in mission to consolidate collections and focus on hybrid education and outreach.
- They are positioned to serve a strong niche market of working museum professionals who require additional certification in their field to advance; they also plan to put the museum studies minor online to attract potential degree completers.
- The museum houses collections for the entire university (CSE, Athletics, Alumni, President's office) and is a major outreach entity to both schools and diverse communities in Michigan. It is visible in the region and serves as a cultural "front porch" for the university.
- The museum studies program has a strong record of securing paid internships for their students and placing them as museum professionals after graduation.

Engineering and Technology (tie-4)

- Ranked 52 in *US News and World Report* (mechanical engineering is described as a "marquee" program in the department's report). CMU's program is quickly growing in reputation for being a relatively new program.
- Engineering is a high-demand program due to such a positive jobs outlook; their freshman numbers actually *increased* this year by 20% even as the university as a whole declined. (Note: Many students come to CMU thinking they want to be engineers, but the rigors of the curriculum or a lack of fit causes them to switch majors. The good news is that they tend to stay at CMU).
- Strong industry connections lead to successful academic and job placement outcomes.
- Collaboration with the MSA program to integrate management and engineering has great potential for growth.

Neuroscience (tie-4)

- Undergraduate program grew by 14% in FY20. It has a strong brand recognition in the region and is particularly appealing because of the opportunities for undergraduate research.
- External grant funding has increased.
- The College of Medicine is now the administrative home of this interdisciplinary program, and it is an area of strategic priority there.
- They have revised their undergraduate curriculum and are looking to roll out a new program with two concentrations that could bring in new students.

Question 5: Which program areas have strong potential for credential / certificate / professional development offerings, short of formal degree programs?

Data Science

- Great opportunity to connect with industry in meaningful relationships such as course, credential, certificate or program offerings, student internships, faculty/student research engagements, career placement, etc.
- The wide selection of minors can serve as a baseline for credentialing, micro credentialing, or certificate programs. Offerings should be online and bundled at award levels that are appealing to industry and working professionals.
- Market/occupational demand is strong, and the underlying skill set will have broad appeal across many industries and occupations.

Business Information Systems

- Strong programs that have achieved high levels of international diversity.
- Department already offers TS410 Academy, an extremely successful certificate program.
- Applied Business Communication (ABC) program has achieved strong growth.
- There are several additional opportunities for credentialing in the ABC, Cybersecurity, SAP and data analytics fields, provided the department continues to embrace online program and courses offerings.

Professional Sales

- Unique program that offers good public messaging opportunities through internships, Sales Competition events and other outreach initiatives.
- Professional Sales is on the Hot Jobs list.
- Program appears to have capacity to handle increased enrollment with existing funds.

Entrepreneurship

- Unique program, with capacity to grow.
- Program is gaining recognition, and outreach / public relations opportunities.
- Their business model (fully online, hiring industry experts in the field) has them well-positioned and flexible to pursue additional credentialing opportunities.
- Subject matter is attractive to working professionals and complements other disciplines.

Table 1. Relative frequency distribution of Committee Members' Responses

Program	UG/Grad	Undergraduate programs strongest appeal to non-traditional degree completing students	Undergraduate programs best attract UG's if marketed to high school students	Graduate programs best attract UG's if marketed directly to high school students	Strong niche programs to promote and reinforce CMU brand awareness	Program areas with credential/certificate/professional development potential
Business Information Systems-Grad: MS-Information Systems	Grad	NA	NA	21.4%	2.2%	19.5%
Counseling-Grad-MA Counseling-3 concentrations	Grad	NA	NA	9.5%		
Entrepreneurship-Graduate, Master of Entrepreneurial Ventures	Grad	NA	NA		19.6%	14.6%
Neuroscience: Grad	Grad	NA	NA	14.3%		
Nutrition and Dietetics-Grad	Grad	NA	NA	2.4%		2.4%
Public Health-Grad	Grad	NA	NA	19.0%		2.4%
Broadcast and Cinematic Arts-UG	UG		12.5%	NA	4.3%	
Business Information Systems-UG-Information Systems; General Bus Admin major.	UG	25.0%	6.3%	NA		
Communication (UG)	UG	25.0%		NA		7.3%
Communication Science and Disorders-UG	UG	5.0%	4.2%	NA	10.9%	
Data Science: Does not yet exist. Innovation grant app and Market feasibility.-UG	UG	2.5%	12.5%	NA	6.5%	22.0%
Earth and Atmospheric Sciences-Three UG majors	UG		6.3%	NA	10.9%	7.3%
Engineering and Technology-Multiple UG programs	UG	5.0%	25.0%	NA	8.7%	2.4%
Fashion Merchandising Design-UG, multiple concentrations	UG	2.5%	8.3%	NA	15.2%	4.9%
Integrated Public Relations-UG	UG	17.5%	4.2%	NA		
Museum Studies-UG minor	UG			NA		2.4%
Neuroscience: UG	UG		12.5%	NA		
Philosophy and Religion-UG	UG	2.5%		NA		
Professional Sales (Marketing)-UG: Marketing major-Professional Sales concentration	UG	12.5%	6.3%	NA		14.6%
Social Work-UG	UG	2.5%	2.1%	NA		