

Intersections and The Interdisciplinary Programs Project

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PROJECT GOALS

The purpose of the interdisciplinary project is to increase opportunities for students to individualize their Alfred education. While our some of best students have built their own path and pursued individually structured majors, most students have not taken advantage of this intersectional possibility. Therefore, the specific aims of this project will be to **identify and build new interdisciplinary majors** from the intersections of existing majors, to **enable more students to earn double majors or additional minors** by identifying and removing challenges that prevent students from doing so within the traditional four-year completion timeframe, and to **improve inter-college course access** to increase opportunities for experiences outside a students' discipline.

BACKGROUND

Over the next three years, Alfred University will engage in interdisciplinary work that will build new academic opportunities and intersections for our students while setting Alfred University apart from its competitors. We are uniquely positioned with an extraordinary breadth of programs and an administrative structure that will permit intersections across disciplines, colleges, and programs. National focus on the link between diverse thinkers and career preparation, career opportunities for students who double major, and experiential learning suggests that the number of undergraduates graduates seeking interdisciplinary majors will continue to increase. It is expected that the development of new interdisciplinary majors that take advantage of and build off current resources have a strong potential to attract prospective students, help build revenues, and advantage Alfred University into the next decade or more^a. Additionally, our students will benefit with additional degree options that are aligned to provide future career success.

Alfred University has a long history of interdisciplinarity and promoting the idea of intersectional pathways for our students (long before we had these words). The original AU curriculum offered three courses of study: classical, philosophical, and scientific. Each of these three courses required a mostly common first two years with courses in math, natural sciences, modern and classical languages, the humanities, and social sciences. At the turn of the century, juniors and seniors were required to select one major and two minor courses of study from groups of courses that ensured the continuation of breadth of their degree, while allowing the traditional depth of a major course of study. When the NYS School of Clay Working and Ceramics as established in 1900, the curriculum continued this multidisciplinary focus, with required courses in all four years in classic subjects: rhetoric, geometry, chemistry, German, mechanics, ethics, and English in addition to ceramics-based courses. By 1950, degree curricula were starting to resemble current degree requirement but still included a strong multi-disciplinary focus, especially in the first two years. The 1975 catalog defines disciplinary,

^a The protocols section outlines the research and data collection that will accompany each program proposal, to ensure that the proposed programs have the potential to meet this expectation.

divided, and interdisciplinary majors in the College of Liberal Arts and Sciences, based on the subject designation of courses required. The Individually Structured Major and Track II are also introduced as opportunities, while the general education curriculum showed evolution towards the current requirements. The Business College's required core courses were designated as professional or liberal arts, and together covered six subject areas. When combined with specific Business degree programs, students were earning an interdisciplinary degree. Majors for engineering, however, adopted a more technical aspect with only six courses over 4 years required outside the STEM fields, which continues to the present. By 1979, the College of Liberal Arts and Sciences' multidisciplinary general education curriculum was established with required competencies and areas of knowledge. Together with the School of Art and Design and the Business College, most Alfred University students continue to graduate with courses from a wide range of subjects, in addition to their focused major. Multi- and Interdisciplinary study is embedded in the history of Alfred University.

It is probably because of this vibrant history of multi- and interdisciplinary studies that Intersections became a focus for the current strategic plan. Intersections are more than a crossroads that demands choice. Intersections may be where ideas / disciplines merge to define a new or wider path of opportunity, or where disciplines influence and change each other. Intersections may be unexpected, and present new opportunities that had previously been hidden.

Academic intersections and interdisciplinarity have a strong potential to provide added value to our undergraduate degrees. Ausburg describes five characteristics relevant to interdisciplinary study¹:

- (1) Involves process for addressing questions or solving complex problems
- (2) Draws on multiple disciplinary perspectives
- (3) Works toward integration of multiple disciplinary insights through construction of more comprehensive perspective
- (4) Construct a more comprehensive perspective in answering questions or addressing complex problems by producing a greater understanding, advancing existing knowledge, or creating a new product that could not have been created by drawing from a single discipline.
- (5) Results in correcting, complementing, and supplementing the limits of disciplinary approaches.¹

Interdisciplinary training and the development of the ability to answer questions of increasing complexity is essential for the future success of our graduates. Brandenburg and Kelly identified that disciplinary siloing limits the perspectives needed to solve future complex problems² – what Brown et al. described as “wicked” problems³. They further elaborated that the most critical imperatives of the 21st century require broad-based multi-faceted approaches, and which are best served by individuals capable of integration of multiple perspectives and insights². The AACU 2021 report, *How College Contributes to Workforce Success*, summarizes online survey results from employers hiring college graduates⁴. While the highest ranked outcomes included skills that may be acquired in traditional disciplinary study (ability to work in

teams, critical thinking, ability to analyze and interpret data, application of knowledge in real-world settings, and digital literacy), more than half of the employers reported that it was “very important” for potential employees to possess “a range of mindsets and aptitudes”.

Additionally, employers believed that a college education that provided both breadth and depth of learning were critical for the long-term career success of their employees⁴. These more recent publications on the value on interdisciplinary study and perspectives only reinforce a growing chorus on the need for interdisciplinary thinking to solve today’s most pressing questions in areas such as health, technology, the environment, global security, and others⁵⁻⁸.

An alternative way to promote the development of complex and multi-faceted perspectives among our students is to promote opportunities for double majors and/or additional minors. Several studies have shown that individuals who earned a double major at the bachelors level had a statistically significant earnings benefit over time⁹⁻¹². Others have identified that the opportunities to double major may alleviate external pressures, such as family pressures to major in one area, when that effort is balanced with an interest and progress towards a second major in another area¹³. Linderman et al., when studying the portability of “creative” identity, found that arts graduates who worked in contexts other than their major curricular focus were better able to deploy skills and creativity in new contexts¹⁴. A disconcerting trend among studies examining double majoring students is that underrepresented minorities do not take advantage of double major opportunities to the same extent that others do^{15,16} thereby promoting inequity. However other studies have shown that over time, double majors for underrepresented minorities may result in even greater returns in their educational investments, and alleviate racial earnings gaps¹⁷. Finally, while there has been a steady increase in students earning double majors across all colleges and universities, there has been significantly steeper growth at selective colleges (greater than 10%)¹⁶. Understanding and working to eliminate challenges that prevent Alfred University from obtaining double majors may have important and significant impacts on both intrinsic satisfaction and marketability of our students’ AU degrees.

The development of interdisciplinary majors combined with the improved opportunity to earn double majors will have an immediate and lasting impact. Not only will these provide more degree options for our students, any student in a new or traditional major may enhance their marketability and future career options by taking advantage of these opportunities. Incoming students may be attracted to new interdisciplinary options, or simply like the fact that they may not have to choose one major over another. Together, the development of new majors and improved opportunities to double major will help build and strengthen Alfred University.

NEW PROPOSAL PLANNING PROTOCOL

This interdisciplinary work project arose to fulfill the need for tangible and specific outcomes for the upcoming strategic plan, which includes Transformational, Inclusive, and Intersections foci. The initial development of the strategic plan was the result of a yearlong process of conversations among academic affairs, with the provost and president seeking further inputs from additional stakeholders across the university. The deans of each college worked directly with the provost to winnow the focus. New interdisciplinary programs directly align with the Intersections focus and builds off important insights from alumni of the meaningfulness of the opportunity to intersect diverse aspects of the university during their time at Alfred. Further analysis of the literature supports the strong potential to enrich not only the four-year window that students are at Alfred University but enriches their future career potentials.

Jean Cardinale was recruited during Summer of 2022 to serve as project manager for interdisciplinary programs development, due to her experience in evidence based curricular and program design. Initial responsibilities were to shepherd the replacement for Athletic Training and to establish a working procedure for the establishment of new majors. That protocol is divided into 5 stages, which are outline below.

1. Planning: preliminary tasks prior to developing a new program proposal. The tasks consist of a series of necessary research into existing programs, and definition of the unique goals and purposes of the new program. The answers to these questions will be foundational for further development of objectives and program goals.
 - a. Why should AU offer the new program?
 - b. What's the need for a program in this area?
 - c. Are there any peer universities that are offering this or a similar program?
 - d. What would make the AU program unique?
 - e. Are there AU programs with similar names?
 - f. What makes this one different?
 - g. What is the proposed delivery model?
 - h. Who is the target audience, what type of student would be attracted to this program?
 - i. What resources will be needed?
 - j. What are the target fields and potential career opportunities?
 - k. What are the program's learning outcomes and assessment strategies?
 - l. What is the projected contribution to enrollment and retention?
2. Program Design
 - a. Develop a plan of study
 - b. New course design
 - c. Faculty load planning
 - d. Identify required resources
 - e. Align with college and university graduation requirements
 - f. Campus consultations, include libraries and related departments
 - g. Write catalog description, including learning outcomes

- h. Describe desired end state
- 3. Approval and Accreditation
 - a. Submit preliminary program proposal to the provost and the college dean
 - b. Follow college guidelines to obtain Curriculum and Teaching, and/or College Faculty approvals
 - c. Complete NYS Education application for new academic programs
 - d. Complete steps necessary for relevant external accreditations
- 4. Marketing and Admissions recruitment (after NYS Ed approval received)
 - a. Complete and submit new course paperwork for C&T approvals
 - b. Provide registrar's office with materials for catalog, Bannerweb, and Degreeworks inclusion
 - c. Meet with Admissions
 - d. Program advertisement and marketing, Website inclusion
- 5. Assessment and follow-up
 - a. Build a 3- or 4-year plan for assessment of program learning objectives
 - b. Work with provosts' office to obtain the following data
 - i. Inquiries from prospective students
 - ii. Number of students entering program, first year and transfer
 - iii. Retention in program
 - iv. Retention at AU
 - v. Graduation rates
 - vi. Placement (employment or graduate school)
 - c. Develop means for assessing alumni

Each new major that is proposed over the next three years will follow this established procedure to ensure that we are proposing a new major that will attract prospective students to Alfred thus increasing enrollment, contribute to student experiences while they are here thus increasing retention, and provide students with marketable skills and career opportunities, resulting in satisfied alumni. Additionally, it ensures that new programs developed will align with the AU mission and vision, align with institutional strategic aims, build on current resources and the AU brand, will rise to the top of regional competition, and result in revenue generation. A master plan for follow-up and assessment was also developed and is described below (pg. 11-12).

SPECIFIC PROJECT TASKS TO BE COMPLETED

Specific task #1: Identify and build new interdisciplinary majors from the intersections of existing majors.

This section will outline those responsible for each new major, the timeline for implementation of the new major, and preliminary projections for these new programs. The addendum includes a more detailed synopsis of each of these programs. Finally, we will introduce potential new major ideas that arose from focus group discussions over the past month.

Responsibility and oversight

Jean Cardinale will be overseeing the new interdisciplinary majors through the provost's office, with the following individuals directly responsible for planning and design stages:

New Program	Responsible Individual	Department and College
Sports Medicine	Jason Honeck	Human Health and Performance, CLAS
Data Analytics	Mark Lewis	Business College
Sustainability	Fred Beaudry	Environmental Studies, CLAS
Interdepartmental Major	Bob Stein	Dean's Office, CLAS

Timeline

Sports medicine planning and design is completed, and the program proposal has been submitted to the CLAS faculty for consideration. Data Analytics is already an approved major but will go through the planning and design stages of the new program proposal process to direct curricular revisions and build enrollments in the program.

	Fall 22	Spring 23	Fall 23	Spring 24	Fall 24
Sports Medicine					
• Planning					
• Design					
• Approvals					
• First Entering class			XXX		
Data Analytics					
• Planning					
• Design					
• Approvals					
• First Entering class			XXX		

	Fall 22	Spring 23	Fall 23	Spring 24	Fall 24
Sustainability					
• Planning					
• Design					
• Approvals					
• First Entering class					XXX
Interdepartmental Major					
• Planning					
• Design					
• Approvals					
• First Entering class					XXX

Sustainability is in the very early stages of planning and design, which will take a full year before approvals and subsequent enrollment of students. The Interdepartmental Major is current in the College of Liberal Arts and Science, and Bob Stein will be leading an effort to potentially turn this degree program into a true interdisciplinary studies major.

New Program Ideas from focus groups:

During the fall 2023 semester, Jean Cardinale held focus groups with key stakeholders: the Dean’s Council, Enrollment Management, and Student Engagement, to understand how the Interdisciplinary Programs project intersected with each of their areas. These focus groups were the beginning of a multi-year process to ensure that we are moving forward and building tangible programs that align with the strategic plan initiatives. A key idea that arose from these focus groups were intersectional academic programs built from existing programs.

The participants from the Enrollment Management focus group on interdisciplinary programs shared majors they are most asked about by prospective students. These suggestions rose to the top, as they align with our goals to establish new programs that build on current resources, environment, and Alfred University brand.

- Forensics, which builds on Criminal Justice, Chemistry, and Molecular Biology.
- Carbon Engineering, to further intersect material engineering and Sustainability.
- Entrepreneurship, which may be feasible by updating Family Business and Entrepreneurship, or by establishing a stand-alone Entrepreneurship major and minor that can serve as a potential second major for students across the university.
- Cybersecurity, an intersection of computer science and data science

Specific Task #2 Enable more students to earn double majors or additional minors

Recommend guidelines that allow students to earn double majors across college structures

In 2022, 19 Alfred graduates earned double majors, and 5 earned double degrees. This equates to roughly 6 percent of our graduates, a value below national averages, and far below selective colleges^{9,18}. All AU double majors were intra-college majors, while most that earned double degrees earned them from the Inamori School, SOAD, and the Business College. This is in line with Alfred University's academic regulations¹⁹, which permits double majors only within the college a student is enrolled within. Insights from the interdisciplinary study focus groups identified that the requirement to complete the CLAS General Education requirements on top of major program requirements precluded many students in colleges other than CLAS from earning double degrees. Some of these students completed minors, however completion of a major would have greater benefit to the students. Preliminary research into the practices of some regional colleges suggest that some award double majors when the student satisfies major requirements for two majors, while satisfying one set of university graduation requirements (for example, University at Buffalo, one of the institutions that we regularly lose prospective students to.)

To address this clear need for revision, during the fall 2022 semester, Jean Cardinale, in consultation with the provost, will write a proposal to be sent to the AU Senate. The proposal will outline revisions for the undergraduate academic regulations and establish clear guidelines for students to earn intra- and inter-college double majors. Success will be measured for this action by a change to the academic regulations that establishes pathways for inter-college double majors for the incoming fall 23 class.

Specific Task #3: Improve course access

Evaluate the course scheduling grid to improve inter-college access to courses

A second existing challenge to student's attainment of double majors and double degrees is course scheduling. This challenge was identified in multiple focus groups and is a long-standing challenge to students attempting to diversify their academic course selections. Many courses are offered as single sections, sometimes only once a year, or once every other year. There are numerous cases where course conflicts have prevented our students from being able to take courses outside their major area. Our grid structure has been examined in the past but remained unchanged – a search of the faculty senate meeting minutes for the word 'grid' had 31 hits, however most of the debate in the past has focused on finding time for faculty meetings, and not on alleviating scheduling challenges for students. Given the new University focus on intersections and generating interdisciplinary opportunities for our students, it's clearly time to revisit this topic. At the current time, we need to develop further understanding of this challenge.

Evaluate other issues related to course accessibility

Focus group discussions raised the possibility that students were simply not able to enroll in courses outside their major for a range of other reasons, including but not limited to scheduling conflicts, a need for prerequisites, space in their major plan of study to allow for free electives, or advising and knowledge of available course. As with issues related to the scheduling grid, we need to understand the extent to which these and other barriers that limit student access to courses. What courses do students wish they could take, and are not able to? How do we improve internal communications or advising so that students are aware of courses or minors outside their major field of study?

HOW TO DETERMINE SUCCESS

Data Collection

Perhaps the most important parameter to consider as we undertake this interdisciplinary project is to understand what makes this endeavor successful. To that end, we will collect the following data, which will be maintained in the provost's office and be accessible via the COO's dashboard.

For specific task #1, Identify and build new interdisciplinary majors, the most important data to understand initially is if the program is effective in attracting and retaining new students to the institution. For long term institutional health, students in the major should find meaningful placement post-Alfred. To accomplish this evaluation, we will collect and maintain the following data:

- 1) Prospective student interest. We will track the number of inquiries, applicants, and visits specific to each new major. This will allow us to evaluate marketing and communication of the new major to prospective students.
- 2) Enrolled students. Enrolled student numbers will be broken down into first year, internal transfers, incoming transfers, and retention in the program. When programs have more than one concentration area, enrolled students will be considered for each individual concentration area.
- 3) Student engagement, belonging, and well being²⁰. We will work with Student Experience to determine tools to understand student belonging, which can be a powerful indicator of retention and success in a program.
- 4) Attrition, both from the program, and from the institution.
- 5) Career Readiness, in collaboration with the Career Development Center²¹.
- 6) Graduation, and number of years to graduation.
- 7) Career or graduate program placement, including job satisfaction²¹. Are students ending up in careers or graduate programs aligned with the program? Do graduates recognize the value of their degree in preparing them for their careers. Do graduates find their careers meaningful?

Additionally, each program will be conducting an annual assessment, to ensure that the program is attaining programmatic learning objectives. Annual assessment reports are collected within each college. Finally, programs will be expected to participate in university assessment efforts.

Immediate success would be measured by the new program's direct contribution to students on campus. This immediate success alone, however, is not sufficient for long term institutional viability, which depends on alumni for future recruitment of students, word of mouth institutional promotion, and the success of future capital campaigns. Therefore, we also will track belonging and engagement with each program, and job satisfaction and meaning,

For Specific Task #2, Enable more students to earn double majors or additional minors, we will measure success by tracking inter- and intra-college double majors, double degrees, and minors earned.

Master Annual Plan

For all data described above, a master annual plan will be generated by Jean Cardinale and maintained by the provost's office. This annual plan will encompass all tasks of the interdisciplinary programs project and will allow both tracking of outcomes as well as accurate and reliable report generation. The annual plan will enable tracking exactly what will be collected and when, who is responsible for providing the data, and how the data will be handled and stored. Once data is obtained by the provost's office, the plan will outline how it should be processed and communicated, including but not limited to inclusion on the COO dashboard, reports to relevant divisions and colleges, and presentation to faculty and trustees.

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ADDENDUM A: SPORTS MEDICINE

Overview

The BS in Sports Medicine is first major to be designed and built under the umbrella of the Interdisciplinary Work focus of the strategic plan. This program is presented in greater detail here, as it will serve as a model for future major development.

The Sports Medicine major will serve as a pre-professional course of study for students interested in a broad field of healthcare, dealing specifically with the physically active or athletic populations. The program is designed to create a well-rounded experience which includes specialized courses targeting the injury care and management, as well as performance enhancement aspects of sports medicine.

The major offers five concentration tracks which are designed to be intellectually challenging and practically relevant to prepare students to enter a wide variety of healthcare job settings or to continue their education towards advanced degrees in healthcare related fields. The concentration tracks within the Sports Medicine major (General, Rehabilitation Sciences, Pre-Athletic Training, Pre-Physician Assistant, and Performance Enhancement) are also designed to provide enduring value as a program offering in a health-related field within the College of Liberal Arts and Sciences. Incorporating evidence-based learning, hands-on laboratory experiences, and actual patient care and community engagement through clinical education, students will have the resources to meet pre-requisite coursework prior to enrolling in specialized and advanced allied health graduate programs. The Sports Medicine major is focused on creating a learning environment and community that supports transformational experiences for our students that will allow them to live lives of continuous personal growth and service to others.

Rationale

- This proposed major will enhance the program offerings in a health-related field within the College of Liberal Arts and Sciences. The program has been designed to meet the mission of the CLAS and will help recruit qualified students to meet enrollment goals.
- Sports medicine is a searchable major by prospective students and we anticipate that it will be popular amongst those seeking careers in health and medical professions.
- This proposed Sports Medicine major will serve as a pre-professional course of study for professions which include, but are not limited to, the following: athletic trainer, physical therapist, occupational therapist, physician assistant, worksite injury intervention specialist, orthopedic physician extender, EMT, massage therapist, performance enhancement specialist, chiropractor, and medical sales representative.
- The pre-professional concentration areas (Rehabilitation Sciences, Pre-Athletic Training, and Pre-Physician Assistant) allow students to complete the most common admissions

requirements for graduate programs in a 300-mile radius from Alfred, as well as requirements for admission to the top 10-15 ranking schools for each of these areas.

- The General and Performance Enhancement concentrations prepare students for a range of employment opportunities.
- The Sports Medicine major includes hands-on clinical rotations that will help students gain valuable experience and professional confidence before entering their chosen career or graduate professional program. Students may also elect to complete the proposed EMT courses and become certified and state licensed EMT's. Because students in this major will also become engaged with the campus and local communities, providing services through their clinical rotations, they will develop a higher perceived value of their education.
- The Sports Medicine major sets us apart from many New York institutions that offer programs in Exercise Science, Health Science, Fitness Science and other health and fitness related degrees.
- Greater flexibility in the plan of study allows recruitment of transfer students or undecided students, as well as opportunities for students in the major to earn minors outside of sports medicine. The added flexibility will also allow students who struggle in first year courses an opportunity for future success in the major, thereby improving retention.

Timeline and Responsibility

- Preliminary research into need (on campus and regional), competitiveness, fit to university vision and mission, target audience, potential career opportunities, and resources needed: Completed by Jason Honeck, Human Health and Performance Chair
- Program design, including curriculum and course design, faculty load planning, 3- and 4-year plans of study, identification of required resources, tie-in to general education requirements: Completed by Jason Honeck, and Jean Cardinale, Interdisciplinary Program Manager
- Approval and accreditation: Program proposal has been submitted to the provost's office and the CLAS Dean's office for preliminary approvals, to the CLAS Curriculum and Teaching for college considerations, and has been submitted to the CLAS faculty. The proposal will be initially discussed at the Oct 21 CLAS faculty meeting and will be put to a vote for approval at the November meeting. Pending approval, the NYS Ed application will be submitted by Dec 1. Jason Honeck and Jean Cardinale will prepare the NYS Ed application for new programs prior to Nov 18 CLAS meeting, in anticipation of a positive outcome.
- Marketing and Recruitment: pending NYS Ed approval, admissions and marketing will be able to promote the new program during Spring 2023, with new student recruits entering Fall 2023.
- Assessment and follow-up will begin with the first entering class.

Projections

A cost-revenue projection was made for the anticipated growth of the new major. Values used for the projection are provided in table 1, while figure 1 shows the annual cost, annual revenue, and net revenues. Currently the Athletic Training major recruits an average of 15 students per year but sees a high rate of attrition (60-70% by junior year), with an average graduate rate of 5-6 students per year. Sports Medicine costs include fixed startup costs of \$38K, necessary for equipment required for accreditation of EMT credentialed courses and upgrade of classroom spaces. Annual contracts for EMT lecture and lab instruction are built into support costs. These costs are based on a fixed cost of \$6,600/year for lecture instruction, and variable costs for EMT laboratory instruction: New York State requires one lab instructor per 6 students enrolled. Program growth will require the addition of one faculty member in year three. Revenue projections consider retention rates in CLAS (Yr 1-2 of 70%) and successful major retention rates for year 2-3 (e.g., Biology and Engineering show retention greater than 90% once students are embedded in their majors.)

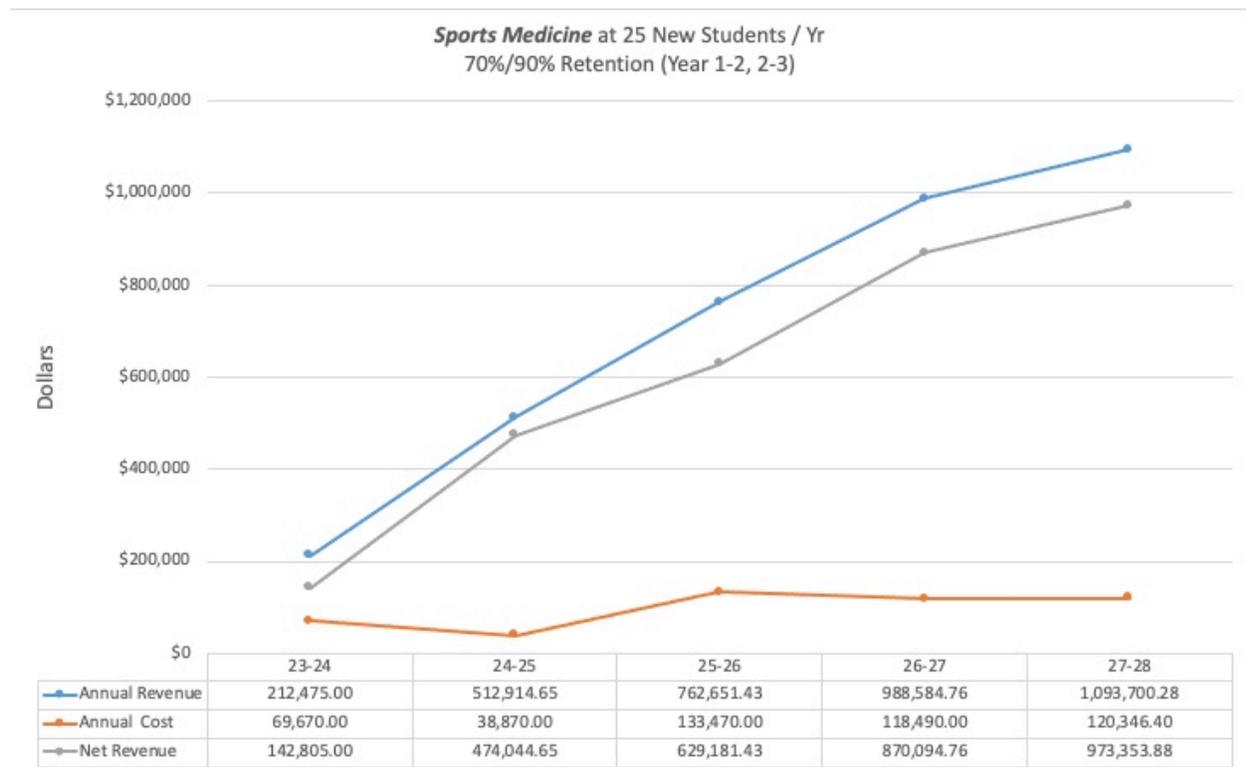


Figure 1. Cost-Revenue projections for the Sports Medicine Major

Table 1. Values used to calculate cost-revenue projections for the Sports Medicine major

Item	Value	Explanation
Year 1-3 Fixed Cost	\$12,000	10-12 overload hours/year to teach out ATHT students (through yr 3)
New Faculty Cost	\$65,000	1 new faculty member to be added in year three
Annual Salary Increase	2.0%	
Benefits as % of Salary	40.0%	
Initial added enrollment	15	
Ongoing added enrollment	25	
Tuition Revenue / Student	\$8,165	
Tuition Revenue Growth	2%	
Room&Board Revenue / Student	\$6,000	
Room&Board Revenue Growth	2%	
Startup Costs	\$38,000	\$28K for required equipment for accreditation of EMT courses, 10K for classroom renovations
Support costs - fixed	\$14,870	\$8270/ year supply budget (HHP), plus EMT lecture instruction (\$6600)
Support costs - variable	\$3,600	\$3,600 EMT laboratory instruction per 6 students in the sophomore year
Retention Yr 1 - 2	70%	
Retention Yr 2 - 3	90%	
% On campus housing Yr 1&2	100%	
% On campus housing Yr 3	95%	
% On campus housing Yr 4	60%	

ADDENDUM B: DATA ANALYTICS

Overview

The Data Analytics major is a uniquely interdisciplinary program utilizing the expertise of academic departments throughout the university. This program provides students with the ability to learn how to work with quantitative and qualitative data of every size. Students will gain a broad knowledge of the applications and techniques of using data from compiling, cleaning, and analyzing data to ultimately providing valuable insights for data-driven solutions for employers. Beyond these skills, students will also learn how to effectively communicate data-driven answers to address organizational problems and identify strategic opportunities.

Rationale

- The Data Analytics major was established two years ago as a natural intersection of the new Computer Science major and the business major, and at the same time as the Business Analytics major. While the Business Analytics and Computer Science majors have had success in recruiting students, to date there have not been any students enrolled in Data Analytics, either in the major or minor.
- Initial discussions have identified perceptual challenges that students may have to envisioning the fit of Data Analytics major or minor courses to their primary major.

Timeline and Responsibility

- Planning and Program Revision: Early Nov '22. The Data Analytics Working group will meet to revisit and reassess our data analytics programs. Initial focus will be on the Data Analytics minor, with expansion to reassessment of the major in Spring '23. Mark Lewis chairs the Data Analytics Working group, which includes Jean Cardinale as a member, along with Jean Ellefson, Harpreet Bedi, Fred Beaudry, Desmond Wallace, Yavuz Keceli, and Amit Maha.
- Over the next year, the working group will identify any resources needed, program goals, and will develop the tools/approach/strategy for evaluating if the program revision is successfully meeting those goals.

ADDENDUM C: ENVIRONMENTAL SUSTAINABILITY

Overview

The Environmental Protection Agency identifies sustainability as based on one principle: “Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations.”²² The 2014 UN report on sustainable development called on educational institutions at all levels, from K12 through undergraduate and graduate programs, to integrate the practices and principles of sustainable development in all aspects of the institution²³. The report highlights important actions achieved around the world and identified that deeper innovations including curricular innovations are needed. The Association for the Advancement of Sustainability in Higher Education has titled their 2022 Global Conference on Sustainability in Higher Education, “The Urgency of Now!”²⁴ highlighting the global call for higher education to take an active role in promoting sustainability.

Rationale

- Alfred University is well positioned to build an interdisciplinary major in sustainability, building on top of existing programs in Environmental Studies while intersecting with a range of topical opportunities across curricula already considering sustainability.
- A sustainability major may be designed as a second major, compatible with a variety of majors across colleges. This may be especially attractive to incoming students, who collectively have a strong interest in sustainability²⁵⁻²⁷
- A double major between an area of interest and Sustainability has the potential to advance our graduates future success, while also promoting greater meaning and career satisfaction.

Timeline and Responsibility

- This project is in the planning stage. Fred Beaudry has taken on responsibility of program design, while Jean Cardinale will help shepherd the program through the new program proposal protocols. It is anticipated that program research, design, development of program objectives and goals, development of timelines, identification of resources needed, and development of tools/approach/strategy for evaluating if the project successful in achieving its goals will take place during spring '23. Program proposals will be presented for campus approval and NY State Ed approval in fall '23, and recruitment of the first incoming class in fall '24.
- When we are successful in designing a major that functions best as a second major, the first sustainability dual majors could potential graduate in spring '25 or '26.