



4/16/2019

Proposal for an Undergraduate Major in Esports and Game Studies

B.S. Arts and Sciences



I. Proposed Major

This new major will be a Bachelor of Science degree through the College of Arts and Sciences in Esports and Game Studies (EGS). Initially, the major will focus on three tracks: 1.) Esports and Game Creation, 2.) Esports Management, and 3.) Application of Games in Medicine and Health. Additional concentrations and certificate programs may be proposed once the major becomes well established.

II. Rationale

A. Describe the rationale/purpose of the major.

This new four-year Arts & Sciences major is a true collaboration between five colleges at The Ohio State University: 1) The College of Arts & Sciences, 2) The Fisher College of Business, 3) The College of Education and Human Ecology, 4) The College of Engineering, and 5) The College of Medicine. This new degree is a multidisciplinary collaboration that is driven by industry needs. The Esports and Game industry is growing at an enormous pace over the past few years.

According to Newzoo's 2018 Global Esports Market Report the global esports revenues have grown over 30% for the past three years and this rate is expected to continue beyond 2021. The revenues in the industry were \$250 million in 2015 and expected to reach \$1.65 billion by 2021. This growth has created a dearth of properly trained college graduates to fill industry needs. This new UG major has been created to fill the void in industry.

B. Identify any unique characteristics or resources that make it particularly appropriate for Ohio State to offer the proposed major.

Ohio State is in a unique position to deliver the Esports and Game Studies UG major degree program. First, this program has support from the administration of the University from the Office of Academic Affairs, the College of Medicine, the Office of Student Life, Athletics, the College of Arts and Sciences, the College of Engineering, The Fisher College of Business, and the College of Education and Human Ecology. The Office of Student Life has been supporting the esports community since 2011 with the creation of multiple Student Organizations

centered around creating an esports community for OSU students. In addition, the Office of Student Life is supporting the development of the Esports Arena in Lincoln Tower, which will provide state of the art equipment ranging from desktop units, virtual reality, console units, and a broadcast booth for student use. The space will also provide programming that will create leadership opportunities based on an esports ecosystem that supports inclusivity, good sportsmanship, respect, and competition. In addition, the Office of Student Life will support the Varsity Esports Program through Recreational Sports.

C. Cite the benefits for students, the institution, and the region or state. Ohio State has an ongoing university-wide research program on esports from multiple perspectives, ensuring that this emerging industry is built around evidence-based research to ensure the health, safety, and longevity of its gamers while helping them perform at their best every day. The Wexner Medical Center with The Ohio State University have joined forces to study the convergence of brain, body, and behaviors of elite esports athletes. The new knowledge generated will benefit student success, elite athletes, and even patients.

Last, but not least, The Ohio State University has a unique relationship with industry including MLG which has its headquarters in Columbus and has a firm relationship with the Student Organizations, Esports Initiative and BuckeyeLAN. MLG has been providing micro-internship opportunities for student organization members and coaching for over 7 years. The Student Organizations have also created a rich relationship with Multivarious Games, which also has its headquarters in Columbus, In fact, Multivarious is currently working with investors to make Columbus the Mid-west center of the gaming industry. Multivarious has created multiple communities for game developers in Central Ohio including the Sandbox, the Central Ohio Gamedev Group, AbleGamers, ExtraLife, Global Game Jam, and Franklinton Fridays. This puts OSU in a unique position to partner with these industry experts to create internship opportunities and state-of-the-art lectures for our students.

The world of e-sports is on the rise with games now televised, a radio station dedicated to it and all forms of the industry from sports broadcasters, to event management and marketing, and game development and evaluations. In addition, testing and evaluations of e-sport athletes is currently ongoing to

determine drafts for leagues being formed and to evaluate health status to coaches for teams and support staff which are all part of the full sport related enterprise.

The video game industry reached over \$137 billion in revenue in 2018, eclipsing film and music industries combined. Salaries range from \$44K to over \$185K, with an average of \$111K (\$108K in Columbus). It is expected to climb to \$181 billion by 2021. There are over 2500 companies directly producing video games and many more indie studios and hobbyists.

In addition, video games are being used for therapeutics of all types for neural brain and autism disorders and other type interventions including stress management. The benefits reside in the fact that we are at the cutting edge for both new and yet to be determined careers and jobs related to the industry and its reaches into medicine and other therapeutics. Games That Move You is an OSU spin-off focusing on neuro-rehab with headquarters in Columbus, OH.

D. List similar majors offered in both public and private institutions in Ohio and the U.S. Explain how these majors compare to the one proposed.

Only a few leading universities across the country offer a Bachelor of Science in Esports and/or Game Studies. However, there are at least 63 institutions that have Varsity Esports Teams. This seems to be the current trend with colleges creating a varsity competitive esports team first, then they may move forward with plans to create aligned curriculum. In Ohio, Miami University of Ohio has both a varsity esports program and an UG degree in Interactive Media Studies. Their web page states that students could pursue jobs in the following areas: “e-commerce, computational art, digital humanities, visualization, rapid prototyping, game design, physical computing, web development, game development, game studies, design thinking, interaction design, user experience design, user interface design, usability, Internet and social media marketing, virtual and augmented reality, mobile computing, and mechatronics” to name a few.

Ohio University also has a varsity esports program along with curricula within the School of Media Arts & Studies. The Games & Animation (G&A) emphasis area encourages students to explore the production of computer animation and digital games while also providing an understanding of the management and leadership

roles in these industries. This degree program is offered out of the School of Media Arts & Studies and leads to a B.S.C. degree.

In addition, the University of Akron has recently announced they are building the world's largest esports facility to be home to the university's new varsity, club and recreational competitive online gaming programs. Akron doesn't seem to have any degree programs specific to esports and game studies, but do note on their web page "The program will foster experiential learning opportunities and help participants develop leadership, teambuilding and job skills. Engineering and computer science students have volunteered to build the machines for UA's esports arena; communications students can broadcast games and provide commentary, while also serving as videography and audio experts; graphic designers can create uniforms and logos; and students in various health professions majors can work with the teams as personal trainers, sports psychologists and nutritionists."

The University of Utah has the program that seems to be the most similar to the degree program proposed by Ohio State. Their curriculum includes a B.S. in Games, which is intended for students who want to have a career in the professional games industry or related industry such as simulation, edutainment, or visualization. This degree teaches skills to develop entertainment software, games-based learning for K-12, professional training tools, serious games for health, or scientific collaborations to address compelling societal needs.

The University of Utah also offers a B.S in Computer Science, Entertainment Arts and Engineering Emphasis. This degree is offered out of the School of Computing. It covers "As the digital entertainment industry continuously grows, employers are focusing on students who understand both sides of the industry, whether it is computer science students with additional game arts skills, game artists with computing skills, or game producers with varying specializations. This EAE specialization offers cutting edge courses designed for undergraduate students interested in pursuing careers as video game engineers and expressing themselves using digital media, including courses covering video game design and development, 3D animation, and computer-generated special effects, in addition to the full Computer Science curriculum." Our Computer Science and Engineering Department currently offers a B.S. in CSE with a specialization in Computer Graphics and Game Design. Our proposed degree program is not intended to compete with this program. OSU's Department of Design has partnered with CSE and several other departments in the Arts and Humanities to

offer a Games Studies Minor through the College of Arts and Sciences. Again, the proposed degree program is not intended to compete with this degree program.

The University of Utah also offers a Master of Entertainment Arts and Engineering (MEAE), and a Dual MBA/MEAE degree designed to give students all of the skills necessary to start or run a game-centric business. These are areas that OSU may delve into in the future.

The University of California, Irvine, has a Varsity Esports Program and offers a B.S. in Computer Game Science. From their catalogue this major “combines computer science with a focus on designing, building, and understanding computer games and other forms of interactive media. Students receive a firm foundation in the fundamentals of information and computer science, augmented with courses in film and media studies, mathematics, physics, and game technology.”

E. Cite the enrollment patterns of similar majors in Ohio or in the United States.

The University of Utah is the program that our enrollment numbers have been based upon. The first year of their program, they had approximately 40 students enroll in the program. The next year numbers increased to around 60, and they currently enroll 80+ students each year.

F. Describe career opportunities and/or opportunities for graduate or professional study available to persons who complete the major.

There are many career paths available to the graduates of the proposed B.S. degree. These include game programmer, video game engineers, game programmer, game designer, game writer, and software developer.

Careers and Industries available and/or of interest to students in the eSports Management and Application of Game in Medicine and Health include Event manager, eSports coach, eSports manager, marketing, sales (e.g. VR & Simulation in sports, Simulation and VR in medicine and health), health coaching, health support for eSports teams, simulation with government applications and in the educational setting. In addition, this major may appeal to students interested in graduate degrees, especially in health and medicine, including occupational therapy, physical therapy, and medicine.

This is an evolving field, and therefore, many positions are being created in such fields as PT, OT, medicine, education, professional training, etc.

The University of Utah offers a Master of Entertainment Arts and Engineering (MEAE), and a Dual MBA/MEAE degree designed to give students all of the skills necessary to start or run a game-centric business. This is one opportunity for advanced studies for a graduate of our proposed major.

The University of Pennsylvania, New York University, Rochester Institute of Technology, Savannah College of Art and Design, University of Central Florida, University of California Los Angeles, Worcester Polytechnic Institute, University of California Santa Cruz, Digipen Institute of Technology, and Michigan State University all offer advanced degrees in Game Design.

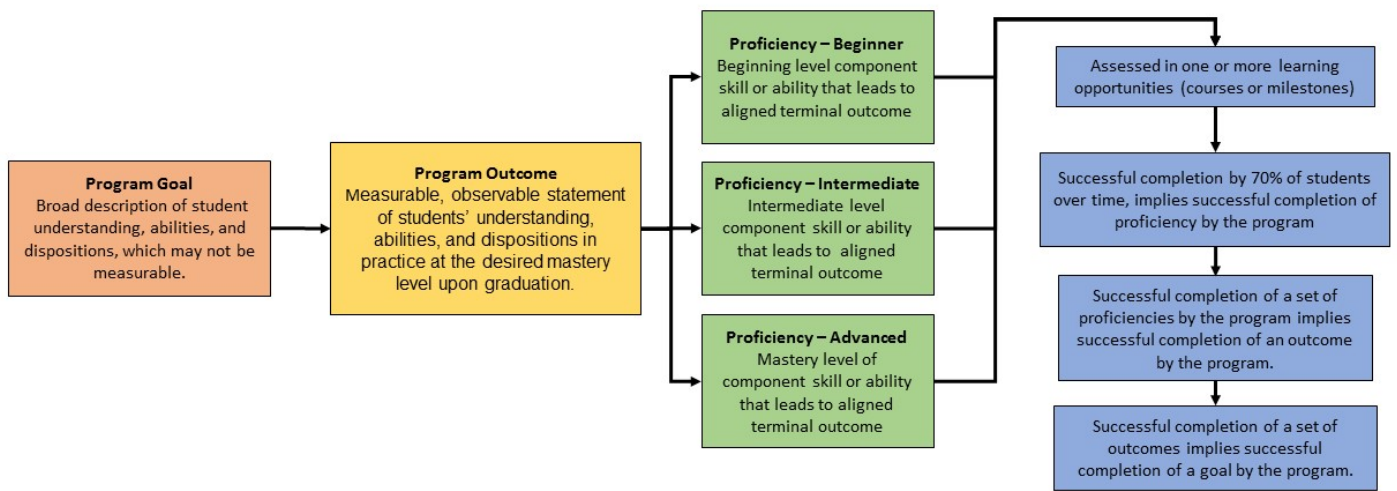
G. Describe any licensure or certification for which this major will prepare students.

There are no licensure or certifications available for this major.

III. Assessment Plan (Goals, Objectives, Evaluation): Provide a learning outcomes assessment plan for the major program.

A. State the general and specific educational goals and objectives of the major.

With substantial help and guidance from the University Institute of Teaching and Learning (UITL), full analysis of the proposed EGS program's learning goals, outcomes, and proficiencies has been completed and mapped to the proposed courses using UCAT's curriculum design process. An explanation of the mapping process is shown in the figure below.



Additionally, a team of faculty, and staff worked closely with a UITL instructional designer to align the curriculum goals to the courses. The program goals are as follows:

A. Systems (Critical) Thinking in Games and eSports: The successful student will be able to understand the scope and interconnections between Games and eSports professions and activities from the perspectives of design, development, deployment, management, and use.

B. Professionalism, Decision Making, and Teamwork: The successful student will be able to understand and demonstrate professional behaviors, collaborative behavior in interdisciplinary and diverse team environments, principles of leadership, and self-development as they relate to specific domains of practice in Games and eSports.

C. Communication: The successful student will be able to identify, interpret, and use oral, written, visual, and nonverbal communication skills that are effective in diverse contexts.

D. Diversity, Inclusion and Equity: The successful student will be able to embrace diversity, equity, and inclusion as critical to the quality, success, cultures, and reach of Games and eSports to attain the attitudes and practices needed to function effectively within, create and perpetuate a just, humane, and democratic society.

E. Ethics and Responsibility: The successful student will be able to examine, appraise, and execute ethical best practices in Games and eSports; including articulating and evaluating ethical dilemmas, solutions, responsibilities, and potential impacts on individual and social behavior in Games and eSports industries and cultures.

F. Influence and Responsibility: The successful student will be able to identify, articulate, appraise, and analyze the impact and responsibility of Games and eSports, including contemporary and historical roles of games in society and implement strategies to minimize any negative impact.

Please see the Appendix A for a complete list of the Expected Goals, Outcomes, and Proficiencies for EGS, which are aligned with the following curriculum outline.

- B. Indicate the methods that will be used to assess whether the educational goals and learning objectives are being met.
- a. Align an evaluation method with each educational objective and expected outcome students should achieve.
 - b. Specify the criteria that will be used to evaluate successful student learning.

PROGRAM ASSESSMENT: CURRICULUM DESIGN AND STUDENT LEARNING OUTCOMES

A. Systems (Critical) Thinking in Games and eSports

Program Objectives for Goal A

Understand the scope and interconnections between Games and eSports professions and activities from the perspectives of design, development, deployment, management, and use.

Student Learning Outcomes for Goal A

Learning Outcome A.1: Identify the gaps and opportunities in which Games and eSports could be developed and applied in entertainment, health, education, and among different applications and purposes of games.

Learning Outcome A.2: Evaluate needs, interdependencies and solutions for effective communication and interaction among different domains of Games and eSports.

<u>Learning Outcome A.1:</u> Identify the gaps and opportunities in which Games and eSports could be developed and applied in entertainment, health, education, and among different applications and purposes of games.	
<u>Assessment Rubric</u>	
Advanced	<ul style="list-style-type: none"> Evaluate the life-cycle of games throughout development, distribution, and use.
Intermediate	<ul style="list-style-type: none"> Identify the gaps and opportunities in which Games and eSports could be developed and applied in entertainment, health, education, and among different applications and purposes of games.
Basic	<ul style="list-style-type: none"> Articulate the distinctions, congruencies, and overlaps among different applications and purposes of games. Articulate the distinctions, congruencies, and overlaps between Games and eSports. Convey specific examples of applications of Games and eSports in the specific industry contexts of entertainment, health, education, among others. Identify fundamental requirements of Game or eSports environments, with regards to user expectations and in the context of contemporary technologies.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

<p><u>Learning Outcome A.2:</u> Evaluate needs, interdependencies and solutions for effective communication and interaction among different domains of Games and eSports.</p>	
<p><u>Assessment Rubric</u></p>	
Advanced	<ul style="list-style-type: none"> Apply approaches to reconciling conflicting performance goals, and developing acceptable compromises across various stakeholders and activities.
Intermediate	<ul style="list-style-type: none"> Analyze performance measures and/or goals throughout Games and eSports processes, products, events, and participants, including time and cost, innovation, market success and longevity, and social and health consequences. Evaluate the challenges in translating and balancing performance measures and goals across various stakeholders and activities.
Basic	<ul style="list-style-type: none"> Outline the processes and key participants (stakeholders) involved from design to production, marketing and distribution, through usage and support.
Insufficient data to assess = 0	
Comments	

Assessed: AUT YR 1 KNSISM 2100 Intro to Esports
 AUT YR 1 CSE 1213 Intro to SW for Game Dev
 SPR YR 1 DSN 3104 Game Design 1
 AUT YR 2 KNSIS xxxx Perform in esports

SPR YR 2 KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
 AUT YR 3 HLTHRSC 3400 Health Promotion & Disease Prevention
 SPR YR 3 KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
 AUT YR 4 Capstone 1
 SPR YR 4 Capstone 2

Learning Outcome 1.2 Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

B. Professionalism, Decision Making, and Teamwork.

Program Objectives for Goal B

Understand and demonstrate professional behaviors, collaborative behavior in interdisciplinary and diverse team environments, principles of leadership, and self-development as they relate to specific domains of practice in Games and eSports.

Student Learning Outcomes for Goal B

Learning Outcome B.1: Demonstrate competence in and apply individual skills within a specific domain of practice in preparation for entry into relevant Game and eSports contexts (e.g. design, marketing, player presentation, health and wellness).

Learning Outcome B.2: Demonstrate the expected and required professional behaviors and competencies relevant to the student's distinct profession in Games and eSports.

Learning Outcome B.3: Articulate and demonstrate the importance of the roles and contributions of professionals in Games and eSports to interdisciplinary teams.

<u>Learning Outcome B.1:</u> Demonstrate competence in and apply individual skills within a specific domain of practice in preparation for entry into relevant Game and eSports contexts (e.g. design, marketing, player presentation, health and wellness).	
<u>Assessment Rubric</u>	
Intermediate	<ul style="list-style-type: none"> • Demonstrate the knowledge and skills necessary and/or required for entry-level professional employment. • Conduct self-assessments and articulate plans for future professional development through written and verbal self-reflection and self-assessment
Basic	<ul style="list-style-type: none"> • Identify and appraise individual aptitudes and skills most beneficial to specific domains in Games and eSports.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60

Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

Learning Outcome B.2: Demonstrate the expected and required professional behaviors and competencies relevant to the student's **distinct profession** in Games and eSports.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> Curate a portfolio that represents the breadth and depth of work, education, and/or products.
Intermediate	<ul style="list-style-type: none"> Demonstrate appropriate professional boundaries and appropriate professional expression, deportment and dress. Demonstrate work behaviors that reflect an understanding of professional standards and code of ethics appropriate to the practice environment.
Basic	<ul style="list-style-type: none"> Demonstrate access and use of research and resources related to the professional standards and behaviors associated with the chosen profession.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40

Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

Learning Outcome B.3: Articulate and demonstrate the importance of the roles and contributions of professionals in Games and eSports to **interdisciplinary teams**.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> Practice effective decision making, problem solving, conflict management, and adjust to team and individual task demands. Evaluate and explain the means (principles and frameworks) by which one organizes collaborative projects to ensure shared goals and outcomes.
Intermediate	<ul style="list-style-type: none"> Explain one's own professional and functional role as a contributor to a team, as well as common limitations therein. Recognize and describe the roles and contributions of other team members in effective collaboration and communication. Exhibit respectful and effective professional behaviors in communications, collaboration and relationship building in team projects.
Basic	<ul style="list-style-type: none"> Explain the benefits, common dynamics and challenges of working in a team to develop innovations and evolve practice Games and eSports. Identify and describe the roles and responsibilities of professionals and consumers involved in specific domains of practice in Games and eSports.
Insufficient data to assess = 0	
Comments	

Assessed: AUT YR 1 KNSISM 2100 Intro to Esports
AUT YR 1 CSE 1213 Intro to SW for Game Dev
SPR YR 1 DSN 3104 Game Design 1
AUT YR 2 KNSIS xxxx Perform in esports

SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

C. Communication

Program Objectives for Goal C

Identify, interpret, and use oral, written, visual, and nonverbal communication skills that are effective in diverse contexts.

Student Learning Outcomes for Goal C

Learning Outcome C.1: Develop written communications effectively and appropriately to a diverse audience leveraging a range of written documentation modalities.

Learning Outcome C.2: Develop oral presentations effectively and appropriately to a diverse audience leveraging a range of oral presentation modalities.

Learning Outcome C.3: Demonstrate approachability and confidence in communication with colleagues, consumers, and clients.

Learning Outcome C.1: Develop written communications effectively and appropriately to a diverse audience leveraging a range of written documentation modalities.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> • Prepare professional documentation. • Synthesize content for use in written documentation.
Intermediate	<ul style="list-style-type: none"> • Exhibit professional writing skills.
Basic	<ul style="list-style-type: none"> • Recognize the most effective principles of good communications.
Insufficient data to assess = 0	
Comments	

Assessed: AUT YR 1 KNSISM 2100 Intro to Esports
 AUT YR 1 CSE 1213 Intro to SW for Game Dev
 SPR YR 1 DSN 3104 Game Design 1
 AUT YR 2 KNSIS xxxx Perform in esports
 SPR YR 2 KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
 AUT YR 3 HLTHRSC 3400 Health Promotion & Disease Prevention
 SPR YR 3 KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
 AUT YR 4 Capstone 1
 SPR YR 4 Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80

Spring YR 4 Target	90	85	80
---------------------------	----	----	----

Learning Outcome C.2: Develop oral presentations effectively and appropriately to a diverse audience leveraging a range of oral presentation modalities.	
Assessment Rubric	
Advanced	<ul style="list-style-type: none"> Prepare effective and appealing visual and oral presentations. Synthesize content for use in presentation.
Intermediate	<ul style="list-style-type: none"> Exhibit professional presentation skills.
Basic	<ul style="list-style-type: none"> Recognize the most effective principles of good communications.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60

Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

Learning Outcome C.3: Demonstrate approachability and confidence in communication with colleagues, consumers, and clients.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> Leverage opportunities and strategies for adapting to the needs of a given audience.
Intermediate	<ul style="list-style-type: none"> Deliver organized, effective, and appealing visual and oral presentations.
Basic	<ul style="list-style-type: none"> Listen and be responsive to communications of others.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHS 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60

Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

D. Diversity, Inclusion and Equity

Program Objectives for Goal D

Embrace diversity, equity, and inclusion as critical to the quality, success, cultures, and reach of Games and eSports to attain the attitudes and practices needed to function effectively within, create and perpetuate a just, humane, and democratic society.

Student Learning Outcomes for Goal D

Learning Outcome D.1: Students will include multiple perspectives, cultures, and demographics across all aspects of Games and eSports.

Learning Outcome D.2: Students will facilitate an equitable and inclusive environment that is respectful and welcoming to a diverse workforce and Games and eSports community.

Learning Outcome D.3: Students will analyze how games can be used to promote a diverse, inclusive, and equitable society.

<u>Learning Outcome D.1</u> : Students will include multiple perspectives, cultures, and demographics across all aspects of Games and eSports.	
<u>Assessment Rubric</u>	
Advanced	<ul style="list-style-type: none"> Devise solutions to complex problems with products and processes by integrating multiple perspectives and demographics.
Intermediate	<ul style="list-style-type: none"> Appraise the impact of diverse, inclusive, and equitable representation and perspectives on Games and eSports products and processes.

	<ul style="list-style-type: none"> Integrate multiple perspectives, cultures, and demographics into game design, development, management, implementation, use, and competition.
Basic	<ul style="list-style-type: none"> Appraise products and processes in Games and eSports to determine the representation of and impact on diverse stakeholder groups. Articulate the importance of multiple perspectives, cultures, and demographics in game design, development, management, implementation, use, and competition.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

Learning Outcome D.2: Students will facilitate an equitable and inclusive environment that is respectful and welcoming to a diverse workforce and Games and eSports community.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> Devise approaches to become an activist for creation of an equitable and inclusive workforce and environment for the Games and eSports community.
Intermediate	<ul style="list-style-type: none"> Advocate for equitable and inclusive workforce and community for the Games and eSports community.
Basic	<ul style="list-style-type: none"> Articulate how to identify an inclusive and welcoming environment and community (online or in-person) for the Games and eSports community.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80

Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

<u>Learning Outcome D.3:</u> Students will analyze how games can be used to promote a diverse, inclusive, and equitable society.	
<u>Assessment Rubric</u>	
Advanced	<ul style="list-style-type: none"> Analyze implementation strategies to use game design, development, performance, and management of Games and eSports to promote a diverse, inclusive, and equitable society.
Intermediate	<ul style="list-style-type: none"> Identify opportunities to use game design, development, performance, and management of Games and eSports to promote a diverse, inclusive, and equitable society.
Basic	<ul style="list-style-type: none"> Articulate how diversity, inclusion, and equity objectives can inform design, development, performance, and management of Games and eSports people and processes, based on established and rigorously validated research findings.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

E. Ethics and Responsibility

Program Objectives for Goal E

Examine and appraise and execute ethical best practices in Games and eSports; including articulating and evaluating ethical dilemmas, solutions, responsibilities, and potential impacts on individual and social behavior in Games and eSports industries and cultures.

Student Learning Outcomes for Goal E

Learning Outcome E.1: Create, design, market or support games, events or engagements that are responsive to the sensitivities of, and potential impact on, all stakeholder groups and individuals.

Learning Outcome E.2: Integrate the needs of multiple stakeholders to ensure veracity, truth, and transparency in appropriate aspects of Games and eSports (e.g personal data, cost, contracts, plagiarism, copyright, intellectual property, Trojan horse, players)

Learning Outcome E.3: Adhere to ethical best practices and legal expectations specific to roles in Games and eSports.

Learning Outcome E.1: Create, design, market or support games, events or engagements that are responsive to the sensitivities of, and potential impact on, all stakeholder groups and individuals.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> Evaluate the importance of maintaining privacy and confidentiality of users, user data, customers, and clients.
Intermediate	<ul style="list-style-type: none"> Demonstrate approaches for monitoring and maintaining beneficence, privacy and confidentiality, in the deployment of Games and eSports. Demonstrate approaches by which sufficiency in beneficence, privacy and confidentiality is evaluated across processes and decision-making in Games and eSports.
Basic	<ul style="list-style-type: none"> Convey how beneficence, privacy and confidentiality factor into processes and decision-making across Games and eSports. Identify and apply the role of beneficence as a standard in Games and eSports (e.g. avoid harm to others; civility; noncoercive work environment; respect and fairness to others).
Insufficient data to assess = 0	
Comments	

Assessed: AUT YR 1 KNSISM 2100 Intro to Esports
 AUT YR 1 CSE 1213 Intro to SW for Game Dev
 SPR YR 1 DSN 3104 Game Design 1, CSE 2xy1 Digital Game Dev 1
 AUT YR 3 DSN 3300 Storytelling & World Building, KNSISM 4607
 SPR YR 3 DSN 4104 Game Design 2, CSE 2501 Social, Ethical, Prof
 Issues
 AUT YR 4 Capstone 1
 SPR YR 4 Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80

Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

<p><u>Learning Outcome E.2:</u> Integrate the needs of multiple stakeholders to ensure veracity, truth, and transparency in appropriate aspects of Games and eSports (e.g personal data, cost, contracts, plagiarism, copyright, intellectual property, Trojan horse, players)</p> <p><u>Assessment Rubric</u></p>	
Intermediate	<ul style="list-style-type: none"> • Demonstrate approaches for monitoring and maintaining veracity, truth and transparency in Games and eSports. • Demonstrate approaches by which veracity, truth and transparency should be applied in Games and eSports.
Basic	<ul style="list-style-type: none"> • Explain the direct and indirect costs to key stakeholders in industry cases when veracity, truth and transparency were not sufficiently addressed or evaluated. • Describe the importance of veracity, truth and transparency across various Games and eSports.
Insufficient data to assess = 0	
Comments	

Assessed: AUT YR 1 KNSISM 2100 Intro to Esports
 AUT YR 1 CSE 1213 Intro to SW for Game Dev
 SPR YR 1 DSN 3104 Game Design 1, CSE 2xy1 Digital Game Dev 1
 AUT YR 3 DSN 3300 Storytelling & World Building, KNSISM 4607
 SPR YR 3 DSN 4104 Game Design 2, CSE 2501 Social, Ethical, Prof
 Issues
 AUT YR 4 Capstone 1
 SPR YR 4 Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 3 Target	80	70	60

Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

Learning Outcome E.3: Adhere to ethical best practices and legal expectations specific to roles in Games and eSports.

Assessment Rubric

Intermediate	<ul style="list-style-type: none"> • Demonstrate approaches for monitoring and maintaining legal adherence in Games and eSports. • Demonstrate approaches to identifying breaches and risks of breaches across Games and eSports professions and processes.
Basic	<ul style="list-style-type: none"> • Articulate legal regulations and frameworks for ethical best practices, specific to the focal professional area studied in Games and eSports. • Articulate legal regulations and frameworks for ethical best practices, which apply broadly across all roles and contexts in Games and eSports.
Insufficient data to assess = 0	
Comments	

Assessed: AUT YR 1 KNSISM 2100 Intro to Esports
AUT YR 1 CSE 1213 Intro to SW for Game Dev
SPR YR 1 DSN 3104 Game Design 1, CSE 2xy1 Digital Game Dev 1
AUT YR 3 DSN 3300 Storytelling & World Building, KNSISM 4607
SPR YR 3 DSN 4104 Game Design 2, CSE 2501 Social, Ethical, Prof Issues
AUT YR 4 Capstone 1
SPR YR 4 Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40

Spring YR 1 Target	75	60	40
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

F. Influence and Responsibility

Program Objectives for Goal F

Identify, articulate, appraise, and analyze the impact and responsibility of Games and eSports, including contemporary and historical roles of games in society and implement strategies to minimize any negative impact.

Student Learning Outcomes for Goal F

Learning Outcome F.1: Articulate how Games and eSports impact human health and behavior, contemporary community standards, social justice, and social change and implement strategies to minimize negative impact.

Learning Outcome F.2: Outline the history and current state of formal research into social impacts of Games and eSports.

Learning Outcome F.3: Articulate how human health and social justice objectives can inform design, development, performance, and management of Games and eSports people and processes, based on established and rigorously validated research findings.

Learning Outcome F.4: Evaluate and apply current scientific, technological, and environmental innovations, evidence, and trends, and their impact on individuals, populations, products and processes in Games and eSports.

Learning Outcome F.1: Articulate how Games and eSports impact human health and behavior, contemporary community standards, social justice, and social change and implement strategies to minimize negative impact.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> Implement strategies in all aspects of Games and eSports to eliminate or minimize negative impacts on human health and behavior, contemporary community standards, social justice, and social change.
Intermediate	<ul style="list-style-type: none"> Analyze the extent to and manner in which Games and eSports influence society. Analyze methods to minimize or mitigate any negative impact that Games and eSports may have on human health and behavior, contemporary community standards, social justice, and social change.
Basic	<ul style="list-style-type: none"> Identify the historical and evolving nature of societal views of Games and eSports, such as generational differences and cultural biases in perspectives. Identify how Games and eSports can impact human health and behavior, contemporary community standards, social justice, and social change in a variety of contexts.
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHS 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80

Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

<u>Learning Outcome F.2:</u> Outline the history and current state of formal research into social impacts of Games and eSports.	
<u>Assessment Rubric</u>	
Advanced	<ul style="list-style-type: none"> Integrate best available and most relevant evidence into project and process decision making and implementation.
Intermediate	<ul style="list-style-type: none"> Distinguish the best available and most relevant evidence from that which is less rigorous or applicable to a specific product or process. Appraise the quality and scope of the body of knowledge related to the impact of Games and eSports on social, educational, behavioral, and health outcomes.
Basic	<ul style="list-style-type: none"> Explain how evidence is collected and used to assess the impact of various levels and types of engagement in Games and eSports, including common flaws in and risk associated with such assessment. Identify critical differences in how the level and type of engagement in Games and eSports are linked to positive and negative social, familial, educational, behavioral, and health outcomes. (want to be as inclusive as possible)
Insufficient data to assess = 0	
Comments	

Assessed:

AUT YR 1	KNSISM 2100 Intro to Esports
AUT YR 1	CSE 1213 Intro to SW for Game Dev
SPR YR 1	DSN 3104 Game Design 1
AUT YR 2	KNSIS xxxx Perform in esports
SPR YR 2	KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
AUT YR 3	HLTHRSC 3400 Health Promotion & Disease Prevention
SPR YR 3	KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
AUT YR 4	Capstone 1
SPR YR 4	Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

Learning Outcome F.3: Articulate how human health and social justice objectives can inform design, development, performance, and management of Games and eSports people and processes, based on established and rigorously validated research findings.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> Integrate knowledge of human health and behavior, contemporary community standards, social justice, and social change into all aspects of Games and eSports to eliminate or minimize negative impacts.
Intermediate	<ul style="list-style-type: none"> Analyze the extent to and manner in which society influences the Games and eSports industries.
Basic	<ul style="list-style-type: none"> Identify the historical and evolving nature of society, and how this influences Games and eSports. Identify how human health and behavior, contemporary community standards, social justice, and social change impact Games and eSports.
Insufficient data to assess = 0	
Comments	

Assessed: AUT YR 1 KNSISM 2100 Intro to Esports
 AUT YR 1 CSE 1213 Intro to SW for Game Dev

SPR YR 1 DSN 3104 Game Design 1
 AUT YR 2 KNSIS xxxx Perform in esports
 SPR YR 2 KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
 AUT YR 3 HLTHRSC 3400 Health Promotion & Disease Prevention
 SPR YR 3 KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
 AUT YR 4 Capstone 1
 SPR YR 4 Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

Learning Outcome F.4: Evaluate and apply current scientific, technological, and environmental innovations, evidence, and trends, and their impact on individuals, populations, products and processes in Games and eSports.

Assessment Rubric

Advanced	<ul style="list-style-type: none"> Integrate evidence into professional decision-making about behaviors, processes, designs, and products.
Intermediate	<ul style="list-style-type: none"> Critically appraise the scientific, technological, and/or environmental research and trends related to Games and eSports.
Basic	<ul style="list-style-type: none"> Explain how Games and eSports can drive scientific discovery, technological advancement and innovation. Demonstrate thorough understanding of scientific, technological, and environmental trends in the design and development of

	processes, products, and plans for individuals, populations, and industry.
Insufficient data to assess = 0	
Comments	

Assessed: AUT YR 1 KNSISM 2100 Intro to Esports
 AUT YR 1 CSE 1213 Intro to SW for Game Dev
 SPR YR 1 DSN 3104 Game Design 1
 AUT YR 2 KNSIS xxxx Perform in esports
 SPR YR 2 KNSIS xxxx Perform in esports, BUS Esports Analytics (3630.08), HTHRHSC 4xxx
 AUT YR 3 HLTHRSC 3400 Health Promotion & Disease Prevention
 SPR YR 3 KNSISM 4509 Sport Marketing & Promotion, HLTHRSC 4xxx Use of Gaming for Health Promotion & Wellness
 AUT YR 4 Capstone 1
 SPR YR 4 Capstone 2

Learning Outcome Targets: Percentage of students earning a 4/5 (80%) on proficiency

Semester	% Students meeting Basic Target	% Students meeting Intermediate Target	% Students meeting Advanced Target
Autumn YR 1 Target	75	60	40
Autumn YR 1 Target	75	60	40
Spring YR 1 Target	75	60	40
Autumn YR 2 Target	80	70	60
Spring YR 2 Target	80	70	60
Autumn YR 3 Target	80	70	60
Spring YR 3 Target	90	85	80
Autumn YR 4 Target	90	85	80
Spring YR 4 Target	90	85	80

C. Provide the time line over which the assessment plan will be implemented.

Initially data for all 6 Goals will be aggregated up into the appropriate Learning Objectives over a 4 year plan since all courses in the program will not be created and implemented until year 4.

After year 4, assessment data will be collected over a 3 year period according to the following plan:

Year	Goals Assessed
2023 – 2024 (Year 1)	A & D
2024 – 2025 (Year 2)	B & F
2025 – 2026 (Year 3)	C & E

D. Describe how outcomes information will be used to improve student learning and program effectiveness.

The curriculum will continuously be improved based on the assessment outcomes and student feedback. Each year after all assessment data have been collected and analyzed, the core teaching team for each tract will meet and convene for an annual “course round-up.” During the round-up meeting, the assessment data will be discussed and an action plan will be developed for improvements to courses. Monthly afterward there will be follow-up meetings to check-up on the progress of all course modifications.

IV. Relationship to Other Programs

A. Describe current major and minor programs in the department(s) and how they relate to the proposed major.

The Game Studies and eSports major is likely to have considerable appeal to students interested in a wide range of existing Arts and Science disciplines, including Design, Computer and Information Science, Communication (particularly their New Media & Communication Technology major), Art, and others. The proposed major maps onto the Arts and Sciences emphasis on interdisciplinary studies, and to our college’s interest in creating stronger ties to industry and strengthening networks for internships and career opportunities.

The Department of Design offers three professional majors in Industrial Design, Interior Design, and Visual Communication Design. We are proposing a new design major in “Digital Experience Design.” This major will focus on using computational skills and emerging technology (animation, game design, AR/VR) to create design solutions for real-world design problems. While experiential game design will be part of the curriculum for these new designers, they will also be encouraged to leverage the principles of game design to a broad range of problems and circumstances. The new design major can contribute students with more advanced design expertise to capstones and other interdisciplinary projects/courses, as appropriate. We do not see them as in conflict.

The Department of Design also supports the interdisciplinary Game Studies minor in the College of Arts and Sciences with its three Game Design courses. This sequence of game design courses that contributes to our new major and the Games Studies minor will also be a requirement for students in the “Making It” track of the eSports and Games major. We see this convergence of interest in design as a guarantee that all of these courses will have strong demand from a broad cohort of students. It extends our reach and impact, which is important since our own majors are limited in number, due to our selective admission process. It also provides a valuable opportunity for us to collaborate with the Computer Science Engineering department to create a computationally-strong game design and development track of study. These types of intra-college cooperation are not common but they are beneficial to students and faculty alike and should be encouraged and rewarded.

The Computer Science and Engineering department

It is critical to note that the “Making It” track will require the hiring of several new faculty members and the provision of an expanded range of computer labs/maker spaces for instruction and prototyping. This can be accomplished as phases over a period of four years, however, as the major fills with students, one year at a time.

In the School of Health and Rehabilitation Sciences, there are seven health-oriented majors that relate to the BS in EGS Medicine and Health track. Of these, six are professional programs in Athletic Training, Health Information Management and Systems, Medical Dietetics, Medical Laboratory Science, Radiologic Sciences and Therapy, and Respiratory Therapy. The seventh, Health Sciences, is a broad undergraduate degree that prepares students for an entry-level career in health care/services. Health Sciences and Athletic Training are the two majors most closely aligned with the BS in EGS through their emphasis on health and health promotion (Health Sciences), and care of athletes and athletic injuries (Athletic Training). It is likely that students in both these majors will seek elective coursework through the EGS Medicine and Health Tract.

B. Identify any overlaps with other programs or departments within the university. Append letters of concurrence or objection from related units.

Letters of concurrence are included in an Appendix C.

- C. Indicate any cooperative arrangements with other institutions and organizations that will be used to offer this major.

None.

- D. Specify any articulation arrangements (direct transfer opportunities) with other institutions that will be in effect for the major.

None.

- E. Provide information on the use of consultants or advisory committees in the development of the major. Describe any continuing consultation.

The EGS Curriculum committee worked with industry experts who advised the committee on the industry needs. The committee also worked with substantial guidance from Teresa Johnson, Assistant Director of Assessment and Curriculum Design of the University Institute of Teaching and Learning, to fully analyze the proposed EGS program learning goals, outcomes, and proficiencies and map them to the proposed courses.

- F. Indicate whether this major or a similar major was submitted for approval previously. Explain at what stage and why that proposal was not approved or was withdrawn.

This major has not been submitted previously.

- G. Indicate where students will be drawn from, e.g., existing academic programs, outside of the university, etc. Estimate the mix of students entering the major internally and externally.

The proposed EGS program will have the potential to enroll students from several sources, initially focusing on current Ohio State main campus students who may find the program to be the best fit for their interests and goals and future applicants who may not have considered Ohio State without the EGS.

Initially, the largest number of students in the program may be current Ohio State main campus students who are enrolled in other major programs but want to transfer into the new EGS major. Based on the number of email from

current Ohio State students requesting further information about the EGS major and what courses to enroll in, there will be an initial migration of students to EGS. The currently available Columbus campus degree programs that are similar to the EGS major are highly competitive due to limited capacity. Enrollment numbers for some of the programs are listed below, and show the numbers of students who are interested in degrees that are similar to EGS but were not accepted due to the limited capacity. Some students may consider transferring to the EGS major once it is available.

V. Student Enrollment

Enrollment in Arts & Sciences, Business, Computer Science, Design, and Health

Term	Human Science Exercise Science		
	Applied	Enrolled	Possible # for EGS
AU16	274	274	20
AU17	249	249	20
AU18	252	252	30

Term	Human Science Sport Industry Sport Management		
	Applied	Enrolled	Possible # for EGS
AU16	549	549	50
AU17	527	527	50
AU18	477	477	50

One area of potential students for the BS-EGS is the Department of Human Sciences, particularly the Sport Industry major. For the past 8 years the Sport Industry major has increased in student enrollment by over 250% and still growing. Interest in jobs related to the industry of sports is at an all-time high. Considering the popularity of esports and game studies and its relationship to the industry of sports, it seems highly likely that some of the SI students will choose the BS-EGS major.

Term	SHRS Applications and Enrollment			
	Health Sciences Applied	Health Sciences Accepted/Enrolled	Athletic Training Applied	Athletic Training Accepted/Enrolled
AU16	216	160	59	30
AU17	283	197	56	29
AU18	287	219	55	30

One important source for the BS-EGS program is the School of Health and Rehabilitation Sciences. With a large Health Sciences undergraduate program of approximately 780 students. Students within this major seek positions working in the community in health promotion and disease prevention as well as continue their education in medical and rehabilitation professions; many of these students would find this program appealing. In the previous three years, 786 students have applied to the Health Sciences program and 576 have been admitted. This means a potential applicant pool of about 70 students per year who were not admitted to health sciences, plus a proportion of those admitted who might be interested in this major. We would anticipate approximately 100 – 150 applicants from the Health Sciences applicant pool would be interested in applying to the BS in EGS.

In addition, students interested in the SHRS Athletic Training program may be interested in the eSports Management and Application of Games in Medicine and Health tracts. In the previous three years, 170 students have applied to the Athletic Training program and 89 have enrolled. This leaves a potential applicant pool of 81 students not admitted to AT who might be interested, in addition (27 per year) to a proportion of students who would choose this over AT. We anticipate a smaller proportion than with HS but perhaps an additional 10 students, resulting in a potential application pool of 137 – 187 from the SHRS. Additionally, we anticipate interest in the Application of Games in Medicine and Health tract among students in psychology and business, students interested in the newly proposed SHRS Assistive Technology and Rehabilitation Certificate, and those interested in pursuing graduate degrees in the COM (Medicine, Occupational Therapy, Physical Therapy, and Dietetics)

Term	Design			
	Applied	Enrolled in Design Foundations	Enrolled in Design Program	Possible # for EGS
AU15	150	90	54	96
AU16	150	90	54	96
AU17	150	90	54	96
AU18	150	90	54	96

One important source for the BS-EGS program is the Department of Computer Science and Engineering (CSE). With an undergraduate program CSE offers a B.S. degree in both the College of Engineering (home college) and College of Arts and Sciences). Students within this major seek positions all across the country in various technical positions and tech companies. CSE has a long and highly ranked tradition in computer graphics with many alumni at various Hollywood studios like Pixar, Dreamworks and Disney. They also have a strong presence in the video game industry (EA, Riot Games, Zynga, Raw Thrills, Wargaming, and many other game studios) as well as Disney and Universal theme parks. Other students are working on games or multimedia at Sony, nVida, Google, Apple and Facebook. CSE also is a world leader in AI and machine learning; data mining and analytics and network security. Many of these students would find this program appealing. In the previous three years, approximately 3,300 students have applied to the CSE program and about 55% get admitted (1800). Many others have not applied due to the high GPA requirement. This means a potential applicant pool of about 600 students per year who were not admitted to computer science, plus a proportion of those admitted who might be interested in this major. We would anticipate approximately 650 applicants from the CSE applicant pool would be interested in applying to the BS in EGS.

Term	Computer Science Engineering Applications & Enrollment					
	CSE Applied (Engineering)	Enrolled	Possible # for EGS	CIS Applied (A&S)	Enrolled	Possible # for EGS
AU16	600	300	300	500	300	200
AU17	600	300	300	500	300	200
AU18	600	300	300	500	300	200

A second source of students are NFY students enrolling at Ohio State because they have heard about this new major. This number may not be large in this first year of the program because of the timing of the approval of the major coming so close to the summer. However, based on the number of email and phone calls I have received from high school students, parents of high school students, and students enrolled at other institutions, I believe that once the program is fully established we will attract a sizeable number of NFY students to Ohio State specifically for this degree program. Once the program has a web page presence with specific information about the major including the bingo sheets, Ohio State will begin to attract a large number of NFY students to the EGS UG major.

Based on the foregoing data, estimated enrollments will be sufficient to achieve the self-sustaining levels detailed below, with approximately 36 students starting in each of the 3 tracts of the program in Rank 1 in years 1 & 2, and 72 students in each of the 3 tracts from year 3 forward.

Year	Esports & Game Studies Expected 1 st year Enrollment		
	Game Creation	Games in Medicine and Health	Management
AU19	36	36	36
AU20	36	36	36
AU21	72	72	72
AU22	72	72	72

VI. Requirements

- A. The courses for each of the 3 tracts are listed below in the form of a NFY bingo sheet. The total degree credit hours are between 121 and 123. Because of the unique nature of this program, which derives from its emphasis of interdisciplinary courses between the three tracts, many of the courses in the curriculum shown below are new to Ohio State (indicated by an **). The courses shaded in blue are the Core Curriculum that students in all 3 tracts must take. In this manner, if students want to double major or even minor in one of the other tracts they can easily do so.

Esports and Game Creation Tract

Autumn Semester			Spring Semester	
Year	Class	Hrs	Class	Hrs
1	KNSISM 2100 Intro to Esports**	3	DSN 3104 Game Design 1	3
	CSE 1213 Intro to SW for Game Dev**	4	CSE 2241 Digital Game Dev 1**	3
	GE 1: Psych 1100	3	GE 3: Bio 1101	4
	GE 2: Math 1151, 1161, or 1181H	5	GE 4: Stats 1450	3
			GE 5: Psych 3310	3
2	CSE 2242 Digital Game Dev 2**	4	DSN 3200 Desiging Play**	3
	CSE 2321 Discrete Data Structures	3	CSE 3902 Design, Dev,Doc,Inter Sys	4
	KNPE 2201 or HLTHRSC 3400 or new KNSIS Perform. in esports	3	GE 7	3
	GE 6: Comm 3513	3	GE 8	3
	Elective	3	Elective	3
3	DSN 3300 Storytelling & World Bldg**	3	ENGR: Esports & Games Seminar**	3
	CSE 3541 Comp. Game & Animation	3	ACCAD 5002 or ART 4401 Computer Animation	3
	GE 9	3	CSE 2501 Social, Ethical, Prof Issues	1
	Elective	3	DSN 4104 Game Design 2	3
	Elective	3	GE 10	3
			Elective	3
4	CSE XXXX or DSN XXXX Capstone 1*	4	ENGR Multidisciplinary Capstone 2**	4
	CSE 5052 or CSE 3521 (CSE 2331 pre-req) Survey of AI	3	DSN 4154 Game Design 3 AR/VR	3
	GE 11	3	GE 13	3
	GE 12	3	GE 14	3
	Elective	3		

Possible Electives for the Esports and Game Creation Tract

Course	Credits	Description
CSE 2331	3	Data Structures & Algorithms ---IS A PRE-REQ FOR CSE 3521
CSE 2421	4	Systems I: Introduction to Low-Level Programming and Computer Organization
CSE 5542	3	Real-time rendering
CSE 5236	3	Mobile Application Development
CSE 5241	3	Intro to Database Systems
CSE 5522	3	Survey of Artificial Intelligence II: Advanced Techniques
CSE 5524	3	Computer Vision for Human-Computer Interaction
CSE 3521	3	Survey of Artificial Intelligence I: Basic Techniques
CSE 5543	3	Geometric Modeling
English 2367.08	3	The U.S. Experience: Writing About Video Games

English 4578	3	When special topic is game specific
English 2463	3	Introduction to Video Games Analysis
ACCAD 5003	3	Computer Animation: Form, Light, and Motion II
ART 5001	3	When focused on video game creation
PHIL 2455	3	Philosophy of Videogames
MUSIC 2254	3	Video Game Music
COMM 3415 (new – AU 2019)	3	Sports, Mass Media & Society
COMM 3554	3	Social Implications of Communication Technology
COMM 3513	3	Video games and the individual
KNHES 4525	3	Promoting Behavior Change in Sport, Leisure, & Exercise
ACSTMIS 2200	3	Intro to Accounting I
BUSMHR 3510	3	New Venture Creation
BUSML 3150	3	Foundations of Marketing (Econ 2001.01 prereq)

Application of Games in Medicine and Health Tract

Autumn Semester			Spring Semester	
Year	Class	Hrs	Class	Hrs
1	KNSISM 2100 Intro to Esports**	3	DSN 3104 Game Design 1	3
	CSE 1213 Intro to SW for Game Dev**	4	GE 3: Bio 1101	4
	GE 1: Psych 1100	3	GE 4: Stats 1450	3
	GE 2: Math 1151, 1161, or 1181H	5	GE 5: Psych 3310	3
			GE 6	3
2	ANAT 2300 General Anatomy	4	KNSIS (new) Perform. in esports**	3
	KNPE 2201 Concepts of Fitness & Wellness**	3	HLTHRSC 4XXX: Health, Gaming and eSports**	4
	GE 6: Comm 3513	3	GE 8	3
	GE 7	3	GE 9	3
	Elective	3	Elective	3
3	HLTHRSC 3400: Health Promotion & Disease Prevention	3	ENGR: Esports & Games Seminar**	3
	GE 10	3	HLTHRSC 4XXX: Use of Gaming for Health Promotion and Wellness	4
	GE 11	3	GE 12	3
	Elective	3	Elective	3
	Elective	3	Elective	3
4	HLTHRSC XXXX Capstone 1**	4	ENGR Multidisciplinary Capstone 2**	4
	GE 13	3	GE 15	3
	GE 14	3	GE 16	3
	Elective	3	Elective	3
			Elective	3

Possible Electives for the Application of Games in Medicine and Health Tract

Course	Credits	Description
English 2367.08	3	The U.S. Experience: Writing About Video Games

AT 5550	3	Survey of Sports Medicine
AT 3600	3	Biomechanics and Pathomechanics
PSYCH 5309	3	Human Motor Control and Learning
HLTHRSC 5XXX	3	Games, Disability, and Accessibility
HLTHRSC 4450	3	Health Promotion in Practice
HLTHRSC 4530	3	Nutrition for Fitness
HLTHRSC 3500	3	Critical Phases in Life
COMM 3554	3	Social Implications of Communication Technologies
PSYCH 5620	3	Technology, Efficiency, and Happiness
COMM 4401	3	Mass Communication and Youth
English 4578	3	When special topic is game specific
English 2463	3	Introduction to Video Games Analysis
ART 5001	3	When focused on video game creation
PHIL 2455	3	Philosophy of Videogames
MUSIC 2254	3	Video Game Music
COMM 3415 (new – AU 2019)	3	Sports, Mass Media & Society
COMM 3554	3	Social Implications of Communication Technology
COMM 3513	3	Video games and the individual
KNHES 4525	3	Promoting Behavior Change in Sport, Leisure, & Exercise
ACSTMIS 2200	3	Intro to Accounting I
BUSMHR 3510	3	New Venture Creation
BUSML 3150	3	Foundations of Marketing (Econ 2001.01 prereq)

Esports Management Tract

Autumn Semester			Spring Semester	
Year	Class	Hrs	Class	Hrs
1	KNSISM 2100 Intro to Esports**	3	DSN 3104 Game Design 1	3
	CSE 1213 Intro to SW for Game Dev**	4	GE 3: Bio 1101	4
	GE 1: Psych 1100	3	GE 4: Stats 1450	3
	GE 2: Math 1151, 1161, or 1181H	5	GE 5: Psych 3310	3
			GE 6	3
2	ANAT 2300 General Anatomy	4	KNSIS (new) Perform. in esports**	3
	KNSIS (new) Perform. in esports**	3	Esports Analytics (based on 3630.08)**	3
	GE 6: Comm 3513	3	GE 8	3
	GE 7	3	GE 9	3
	Elective	3	Elective	3
3	KNSISM 4607 Legal Aspects of Sport	3	ENGR: Esports & Games Seminar**	3
	GE 10	3	KNSISM 4509 - Sport Marketing & Promotion	3
	GE 11	3	GE 12	3
	Elective	3	Elective	3
	Elective	3	Elective	3
4	KNSISM XXXX Capstone 1**	4	ENGR Multidisciplinary Capstone 2**	4
	KNSISM 4245 Leadership & Programming in Sports & Industry	3	GE 15	3
	GE 13	3	Elective	3
	GE 14	3	Elective	3
	Elective	3		

Possible Electives for the Esports Management Tract

Course	Credits	Description
English 2367.08	3	The U.S. Experience: Writing About Video Games
BUSADM 3630.08	3	Business Industry Immersion
BUSADM 3632.08E	3	Business Industry Immersion Project Experience
BUSMGT 3331	3	Building Visual Decision Support Systems
BUSMGT 7258	3	Sports Analytics for Business
BUSMHR 7605	3	Business of College Sports
BUSML 7204.01	3	Customer Management, Pricing, and Analytics II
BUSML 7204.02	3	Customer Management, Pricing, and Analytics II
COMM 3554	3	Social Implications of Communication Technologies
PSYCH 5620	3	Technology, Efficiency, and Happiness
COMM 4401	3	Mass Communication and Youth
English 4578	3	When special topic is game specific
English 2463	3	Introduction to Video Games Analysis
ART 5001	3	When focused on video game creation

PHIL 2455	3	Philosophy of Videogames
MUSIC 2254	3	Video Game Music
COMM 3415 (new – AU 2019)	3	Sports, Mass Media & Society
COMM 3554	3	Social Implications of Communication Technology
COMM 3513	3	Video games and the individual
KNHES 4525	3	Promoting Behavior Change in Sport, Leisure, & Exercise
ACSTMIS 2200	3	Intro to Accounting I
BUSMHR 3510	3	New Venture Creation
BUSML 3150	3	Foundations of Marketing (Econ 2001.01 prereq)
CSFRST 3950	3	Social Media Marketing
BUSMGT 3331	3	Business Analytics: Data Management & Descriptive Analysis
BUSMGT 3910	3	Understanding Service Consumers
BUSMGT 7258	3	Sports Analytics
BUSMHR 7605	3	The Business of College Sport
BUSML 7204.01	3	Customer Management, Pricing, & Analytics
BUS 4202 (adapted)	3	Apply qualitative & quantitative marketing research to games

B. Describe other major requirements in addition to course requirements, e.g., examinations, internships, final projects.

In addition to the required core and major courses, pre-requisites, general educational courses and electives, each student will be required to create a curated portfolio of their works. This is listed in Goal B, Learning Outcome B.2: Curate a portfolio that represents the breadth and depth of work, education, and/or products. This portfolio will be monitored throughout a student's progression through the core courses in the tract. Included in this portfolio will be the students' final capstone product.

C. Identify from which specialized professional association(s) accreditation will be sought. List any additional resources that will be necessary to gain such accreditation.

No special professional accreditation will be sought.

VII. Relationship of Proposed Major to Mission of College/Department

The Arts and Sciences Strategic Plan pledges to provide and support excellent programs and faculty. This includes building and maintaining top programs at both the undergraduate and graduate levels, retaining and recruiting excellent and diverse faculty, increasing research/creative scholarship, and elevating teaching and learning. This major in eSports and Games has the potential to

distinguish the college and the university by supporting and expanding how gaming can contribute to human health, promote the social good, and contribute value to entertainment experiences. There is a significant creative component within the context of game design and development that also represents a valuable contemporary area for research and creative expression. By offering a project-based curricula of game design courses, we anticipate opportunities to distinguish the work of students and faculty alike; particularly works that advance the future of gaming and its applicability to a broad range of experiences in everyday life.

The proposed Bachelor of Science in eSports and Games Studies aligns with the mission of the College of Medicine, “to improve people’s lives through innovation in research, education and patient care” and with the mission of the School of Health and Rehabilitation Sciences, “to prepare future health sciences professionals through the creation and dissemination of knowledge in support of the health and well-being of the people of Ohio and the global community”. The BSEGS major was designed as a highly team oriented, inter-professional major that graduates students able to engage in innovative, creative, professional, and impactful work in a diverse, inclusive, equitable, and ethical environment. These program goals have synergy with the mission, vision, and strategic plans of the COM and SHRS, which emphasize dedication to interprofessional education, diversity and inclusion, ethics and professionalism, and innovation. Student engaged in the major will immerse in coursework that adheres to these ideals, values and goals. For example, students in the major take common, core courses in Esports and game design, which facilitate interprofessional communication, respect and team collaboration throughout their first year. In addition, they engage in an interprofessional Capstone experience in which they learn how interprofessional teams and diversity of experience, background and thought can contribute to innovation and discovery.

For those students who select the Application of Games in Medicine and Health tract, courses align with the COM and SHRS missions of improving health of individuals and of populations. For example, students will engage in coursework designed to protect the health of the Esport athlete or recreational gamer through an understanding of principles of health promotion, fitness, and nutrition, as well as the health-related conditions they may experience (e.g. musculoskeletal injury; addiction, and increased risk of chronic disease). Furthermore, students in this tract will gain knowledge in the application of games as educational

pedagogy that support knowledge attainment and behavior change moving individuals toward optimal health outcomes. For example, the use of games may be used to promote fitness, reduce obesity, or encourage mindfulness for stress reduction in both individuals and populations. Gaming may augment current health management tools to further support achievement of treatment goals.

The Department of Human Sciences is home to several multidisciplinary programs in which faculty teach coursework on social behavior, health, wellness, and the consumer experience. The proposed major fits well with the mission of the department as well as ongoing research by several faculty members.

There are two majors in the Department of Human Sciences, in the College of Education and Human Ecology, which relate to the proposed Esports and Game Studies major: Exercise Science and Sport Industry, both of which are in the Kinesiology Program Area. Faculty in Exercise Science research problems related to exercise training and recovery in men and women, and interventions that can enhance performance. Dr. William Kraemer's research is especially germane as he examines nutritional interventions as an important tool for enhancing performance, health, and recovery. Furthermore his research extends from basic cellular studies examining muscular and endocrine effects of microgravity and pituitary cell function to hypertrophy from exercise training. Faculty in Sport Industry research topics in the sport industry and physical activities organizations. Dr. Brian Turner's research is also germane to the proposed major as he examines organizational behavior, especially employee behavior in sports organizations and general research methods in sport management.

Computer Science and Engineering (CSE) mission is to prepare students for success in the tech industry and graduate education. Game development has been a key part of this, but we have loosely addressed the need. The increase in popularity of eSports and the needed computational resources and infrastructure to successfully carry out large scale data intensive tournaments is a growing tech field with lots of interesting CS-related problems.

VIII. Implementation Date

New courses for the first year of the major are currently being formally proposed to the appropriate units. Students will be admitted into the first year of the EGS

curriculum beginning in Autumn 2019. Annually thereafter new courses will be developed and proposed to the various units until all courses have been approved.

IX. Role of Departments

The key departments that will be hiring lecturers, clinical faculty, graduate teaching assistants, and beginning in year 2, tenure track faculty include the Department of Design (College of Arts & Sciences), Human Sciences (College of Education & Human Ecology), Electrical and Computer Engineering (ECE – College of Engineering), and the School of Health & Rehabilitation Sciences (College of Medicine). As courses for the new major are developed and submitted for approval during the 2019-20 academic year (after the approval of the major, in accordance with Office of Academic Affairs protocol), the relevant department(s) will be consulted and their approval required for each new course. In addition, hiring and annual reviews for EGS faculty will include oversight by the department appropriate to each faculty member's area of specialization.

The program costs outlined below will be borne by the Office of Academic Affairs for the first two years. It is planned that newly enrolled students will support the program for every following year.

X. Describe Major in Catalog Style

Major: Esports and Game Studies

Degree: Bachelor of Science

College: Arts & Sciences

Campus: Columbus

Use a systems approach to integrate knowledge and skills in the gaming and eSports industries in order to support emerging technical needs and manage business objectives in industry.

XI. Impact on Facilities, Support Services, and Faculty

New faculty will need to be hired for the new courses and increased load on current courses. Support services, such as academic advising for each of the 3 tracts will need to be hired. Computer lab facilities need to be provided for both the Department of Design and for the Department of Computer Science & Engineering.

Library resources are the same as current faculty involved in the program below use in their classes and research. Current key faculty CV's are in Appendix B.

Current Faculty

Name	Area of Expertise	Full/Part Time
Amy Darragh	OT & Rehabilitation Science, Serious games, virtual simulation training system focused on injury and illness prevention	Full
Claire Bollinger	Public health, epidemiology, and health promotion	Full
Jimmy Onate	Athletic training, biomechanics and motor learning with particular expertise in sports performance	Full
Roger Crawfis	Game dev, computer science	Full
Matthew Boggus	Game dev, computer science	Full
Scott Mills	Computer Science	Full
Naeem Shareef	Computer Science	Full
Neil Kirby	Computer Science	Full
Scott Swearingen	Game Design	Full
Kyoung Swearingen	Animation	Full
Maria Palazzi	Animation	Full
Matt Lewis	Emerging Technology	Full
Brian Turner	Organizational Behavior	Full
William Kraemer	Expertise in the biological, neurological, and physiological aspects of esports	Full

Deborah Grzybowski	Esports, Curriculum design, High impact practices	Full
Elliot Bendoly	Information Technology and Psychology	Full
Ralph Greco	Business Analytics	Full

Proposed Additional Faculty

Name	Area of Expertise	Full/Part Time
TT Faculty	AI	Full
TT Faculty	Graphics	Full
TT Faculty	Game Dev	Full
TT Faculty	Computer Science	Full
Clinical	Computer Science	Full
Clinical	Computer Science	Full
Clinical	Computer Science	Full
TT Faculty	Engineering Education	Full
TT Faculty	EHE: Human Sciences	Full
Clinical	EHE: Human Sciences	Full
Clinical	EHE: Human Sciences	.85 FTE
Visiting Professor	Design	Full
Lecturer	Design	Full
Lecturer	Design	Full
Lecturer	Design	Full
TT Faculty	Design	Full
TT Faculty	Design	Full
TT Faculty	Design	Full
TT Faculty	Design	Full
TT Faculty	Health Science	Full
TT Faculty	Health Science	Full
TT Faculty	Health Science	Full
Clinical	Health Science	Full
Lecturer	Health Science	Full

XII. Program Costs

Estimate total costs, over and above current levels of operations, associated with the new major during the next four years. Explain how the department/college plans to meet these costs.

The following chart outlines the costs per year of starting the EGS program on the Columbus campus beyond current expenditures for the first 6 years. These estimates are based on the following assumptions: no students will be admitted until Autumn 2019, when students will be admitted only into the first-year curriculum; the following year (2020-21), the first two years of the curriculum will be offered; and in 2021-22, the first three or possibly all four years of the curriculum will be offered if warranted by enrollments. Additionally, the departments will attempt to reduce costs by sharing faculty when possible. If for some reason the tracts are not enrolling the expected number of students in the second year of the program as expected, we will hold enrollment numbers at a maximum of 36

The above costs will be met for the first two years by the Office of Academic Affairs. After that, the program is expected to fund itself primarily through tuition revenue (see chart, below).

The following chart shows a conservative break-even projection of enrollments necessary to make the program fiscally self-sustaining once all four years of the curriculum are offered. The program can begin to sustain itself beginning in year 3.

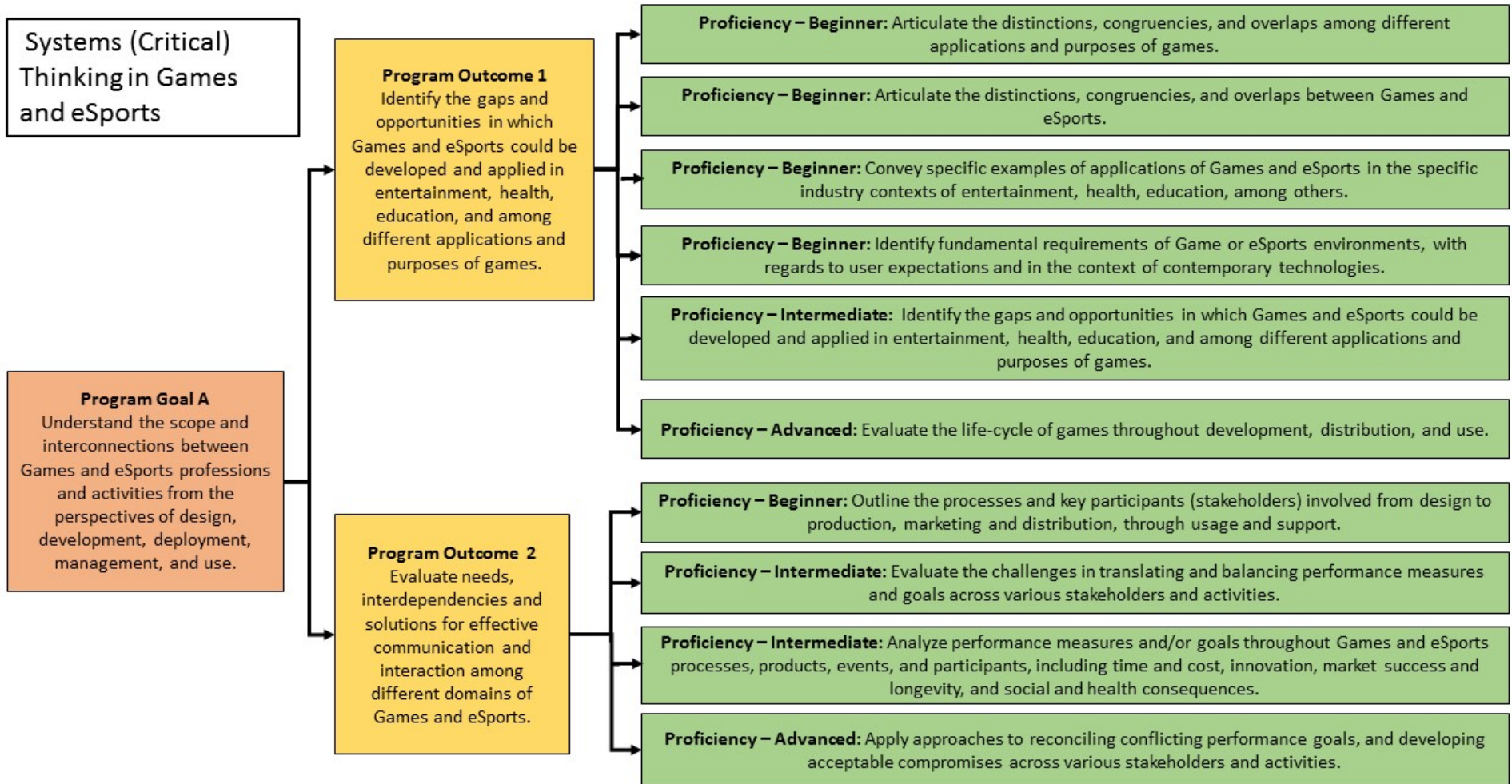
Self-Sustaining EGS Enrollments (Projected)

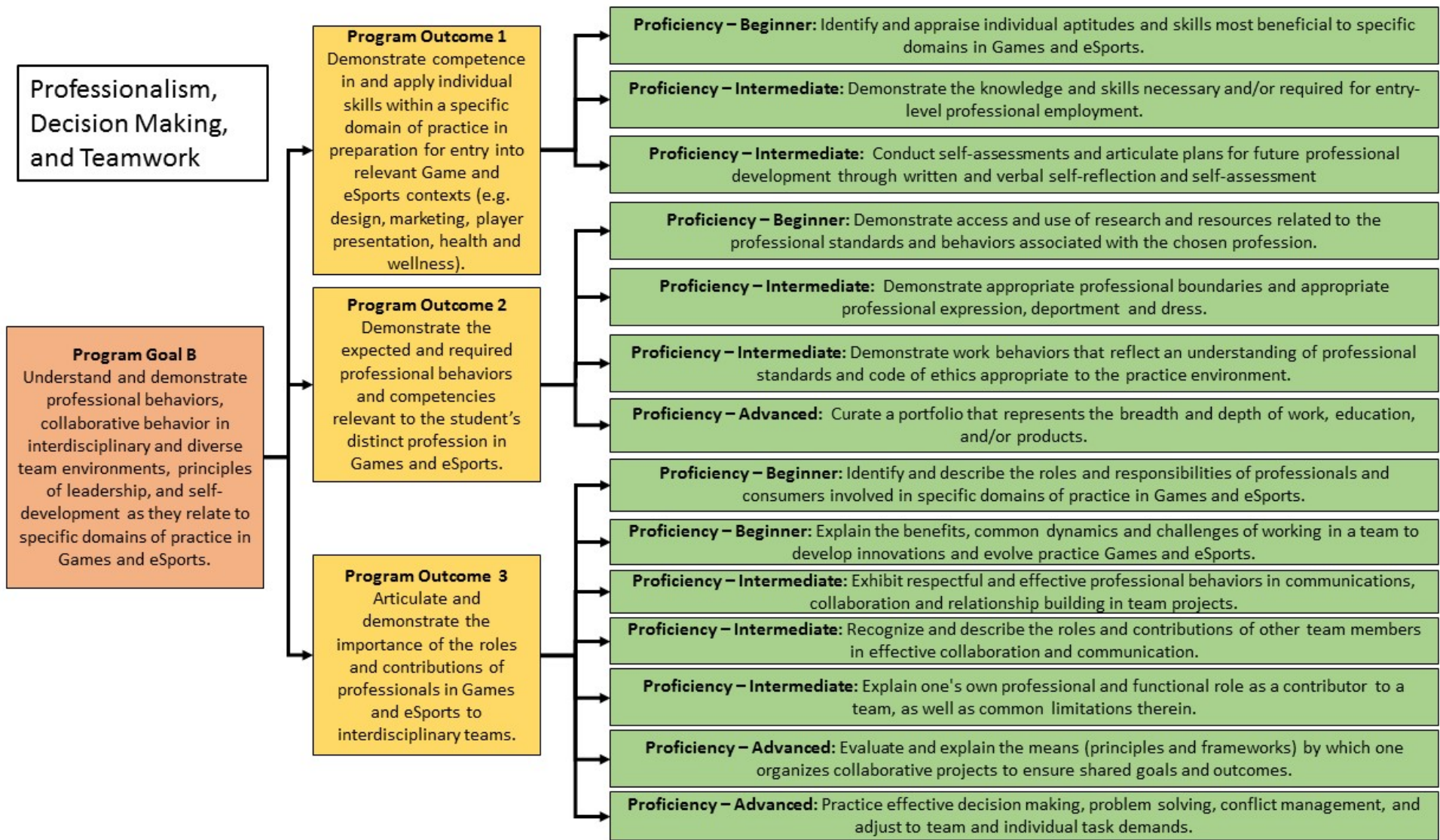
Year of Program	No. of Students	Tuition Revenue*
1	$36 \times 3 = 108$	\$1,158,408
2	$36 \times 6 = 216$	\$2,316,816
3	$3 \times 72 + 6 \times 36 = 432$	\$4,633,632
4	$6 \times 72 + 6 \times 36 = 648$	\$6,950,448
5	$9 \times 72 + 3 \times 36 = 756$	\$8,108,856
6	$12 \times 72 = 864$	\$9,267,264

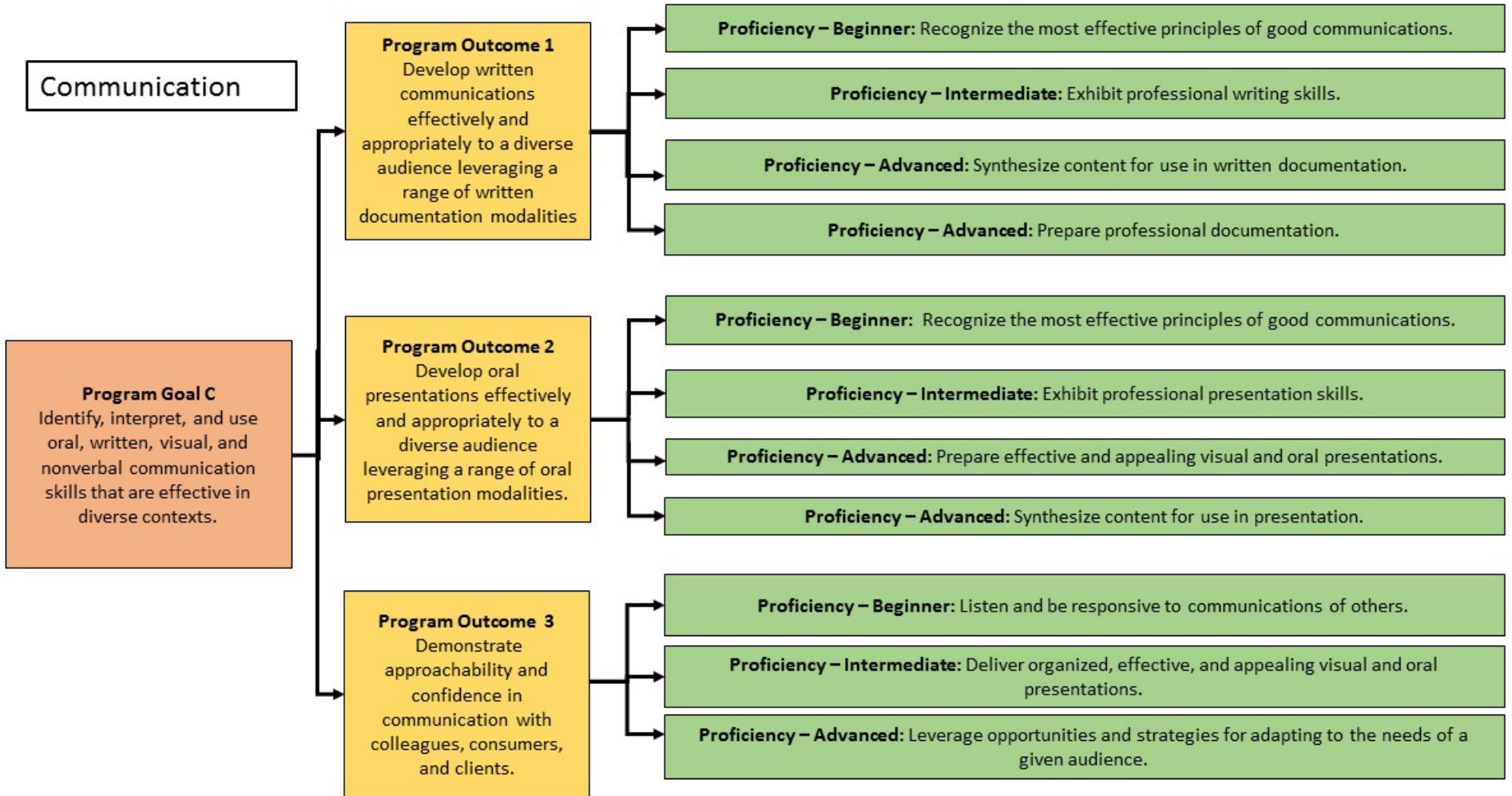
*Based on annual NFYS tuition for 2018-19 of \$10,726 on the Columbus campus. State Share of Instruction (SSI) is not included here because that revenue will cover facilities and administrative costs.

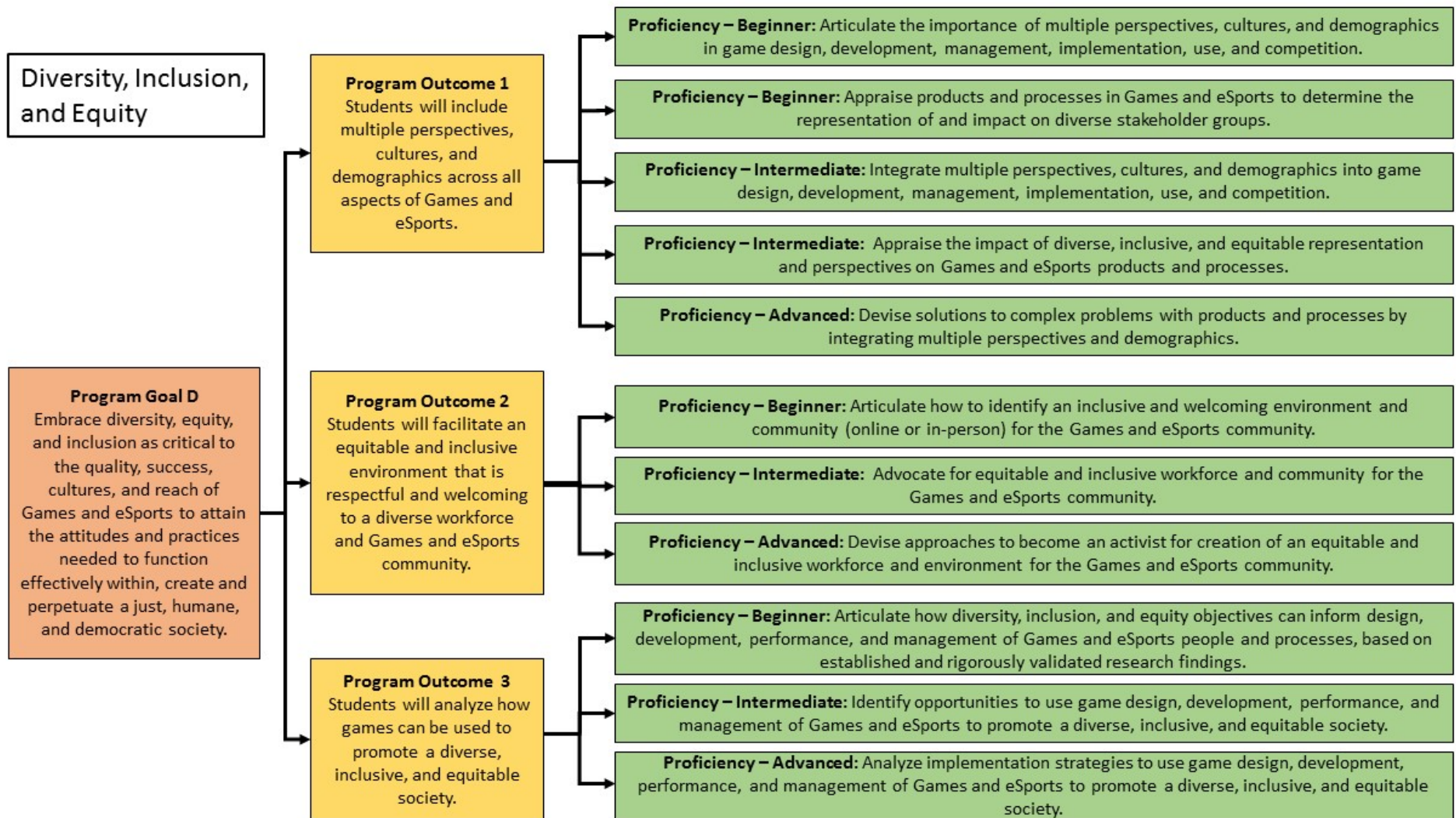
Appendix A: Program Goals, Learning Outcomes, and Proficiencies

APPENDIX A: EGS Expected Goals, Outcomes, and Proficiencies









Ethics and Responsibility

Program Goal E
Examine and appraise and execute ethical best practices in Games and eSports; including articulating and evaluating ethical dilemmas, solutions, responsibilities, and potential impacts on individual and social behavior in Games and eSports industries and cultures.

Program Outcome 1
Create, design, market or support games, events or engagements that are responsive to the sensitivities of, and potential impact on, all stakeholder groups and individuals.

Program Outcome 2
Integrate the needs of multiple stakeholders to ensure veracity, truth, and transparency in appropriate aspects of Games and eSports (e.g personal data, cost, contracts, plagiarism, copyright, intellectual property, Trojan horse, players)

Program Outcome 3
Adhere to ethical best practices and legal expectations specific to roles in Games and eSports.

Proficiency – Beginner: Identify and apply the role of beneficence as a standard in Games and eSports (e.g. avoid harm to others; civility; noncoercive work environment; respect and fairness to others).

Proficiency – Beginner: Convey how beneficence, privacy and confidentiality factor into processes and decision-making across Games and eSports.

Proficiency – Intermediate: Demonstrate approaches by which sufficiency in beneficence, privacy and confidentiality is evaluated across processes and decision-making in Games and eSports.

Proficiency – Intermediate: Demonstrate approaches for monitoring and maintaining beneficence, privacy and confidentiality, in the deployment of Games and eSports.

Proficiency – Advanced: Evaluate the importance of maintaining privacy and confidentiality of users, user data, customers, and clients.

Proficiency – Beginner: Describe the importance of veracity, truth and transparency across various Games and eSports.

Proficiency – Beginner: Explain the direct and indirect costs to key stakeholders in industry cases when veracity, truth and transparency were not sufficiently addressed or evaluated.

Proficiency – Intermediate: Demonstrate approaches by which veracity, truth and transparency should be applied in Games and eSports. .

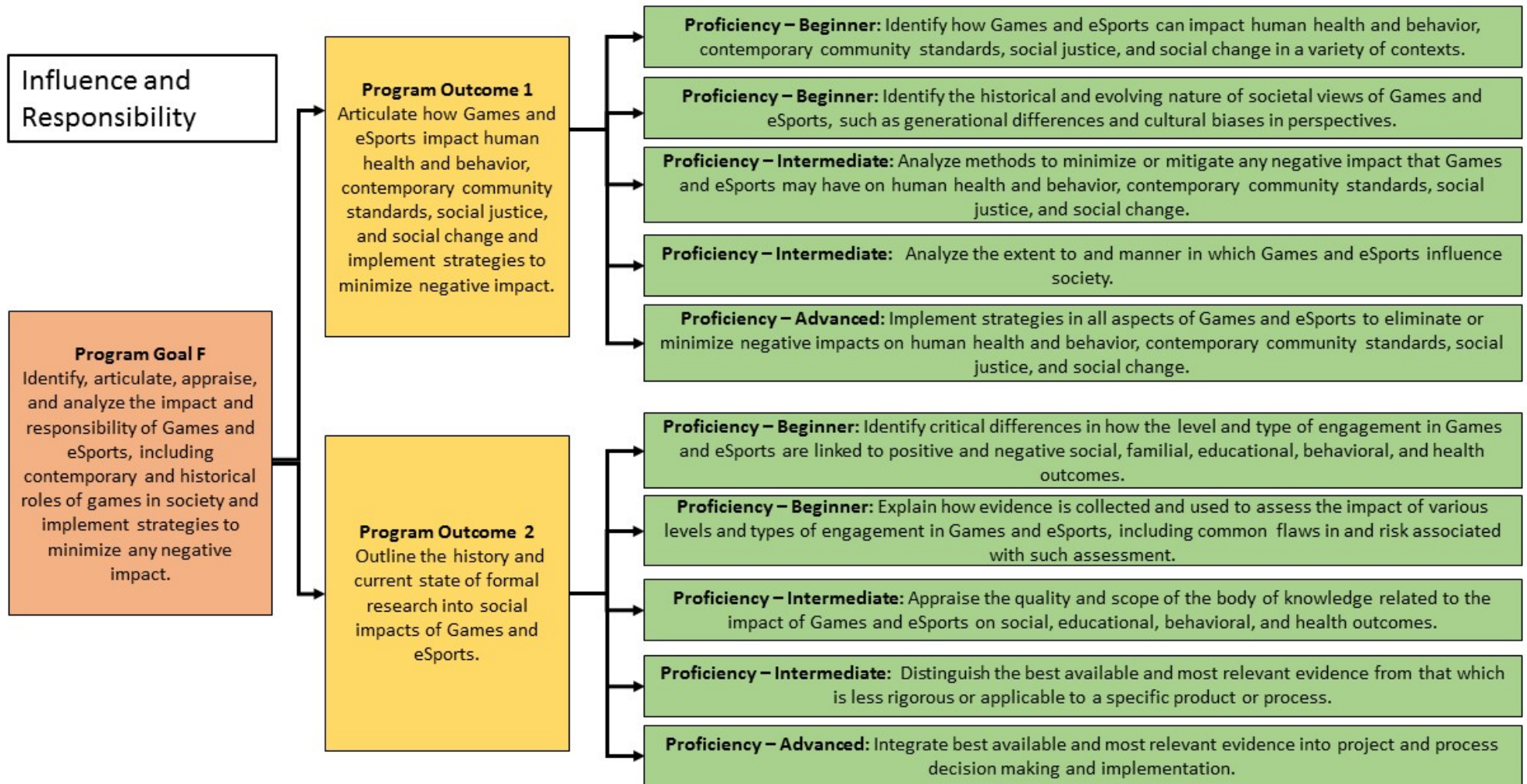
Proficiency – Intermediate: Demonstrate approaches for monitoring and maintaining veracity, truth and transparency in Games and eSports.

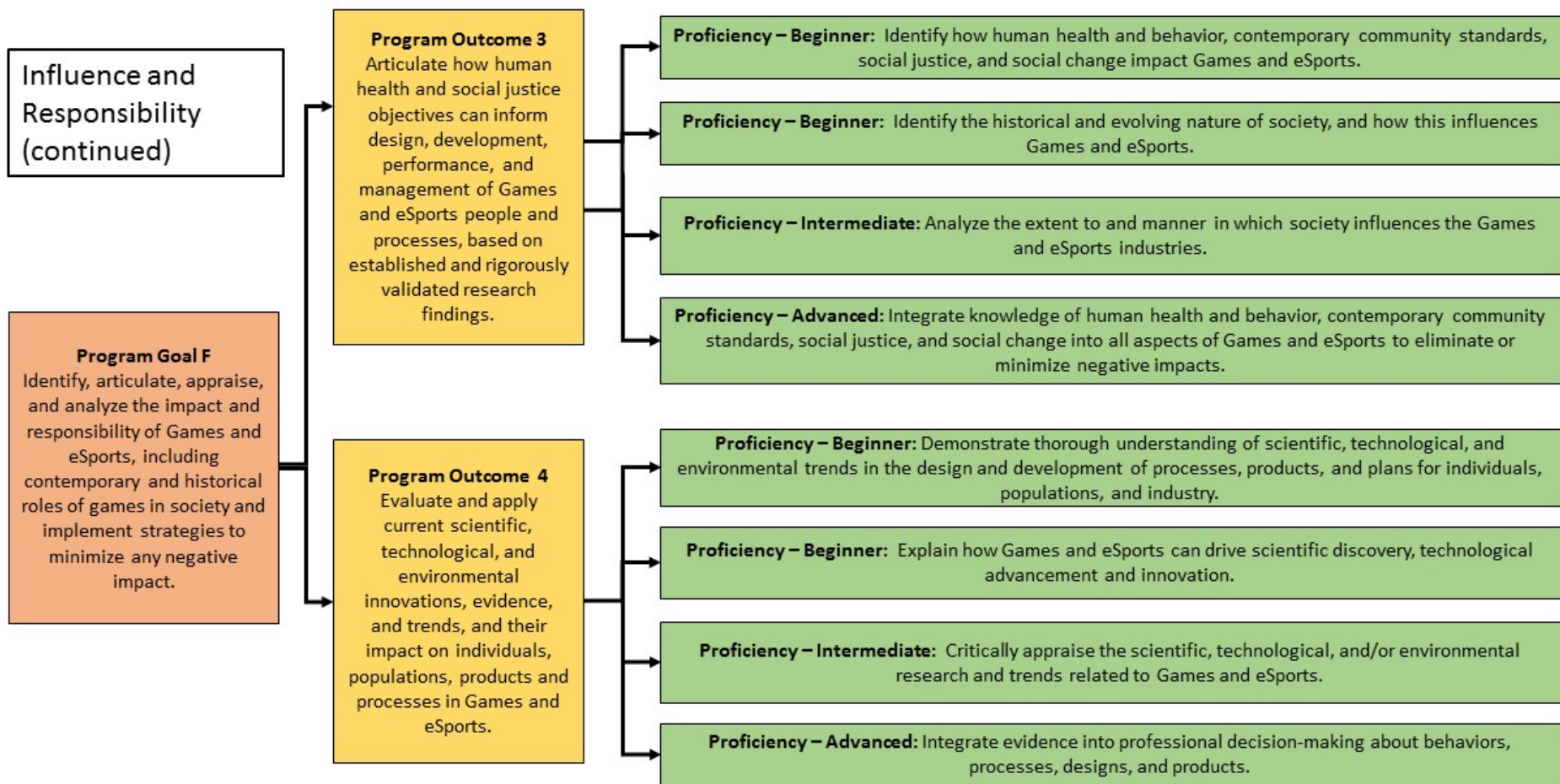
Proficiency – Beginner: Articulate legal regulations and frameworks for ethical best practices, which apply broadly across all roles and contexts in Games and eSports.

Proficiency – Beginner: Articulate legal regulations and frameworks for ethical best practices, specific to the focal professional area studied in Games and eSports.

Proficiency – Intermediate: Demonstrate approaches to identifying breaches and risks of breaches across Games and eSports professions and processes.

Proficiency – Intermediate: Demonstrate approaches for monitoring and maintaining legal adherence in Games and eSports.





Appendix B: Participating Faculty CV's



2015 Operations Management Distinguished Scholar – Academy of Management
2014 Crystal Apple Teaching Award in Undergraduate Teaching - Emory University

ACADEMIC APPOINTMENTS

- 2016 to Present **Fisher College Distinguished Professor, Management Sciences**
The Ohio State University, Fisher College of Business
- 2016 to Present **Associate Dean for Undergraduate Students and Programs**
The Ohio State University, Fisher College of Business
- 2016 **Translational Data Analytics Faculty-in-Residence**, The Ohio State University
- 2014-2016 **Full Professor, Management Sciences**, The Ohio State University, Fisher College of Business
- 2011-2014 **Area Coordinator, Information Systems and Operations Management**
Emory University, Goizueta School of Business
- 2007-2014 **Associate Professor, Information Systems and Operations Management**
Caldwell Research Fellow, Emory University, Goizueta School of Business
- 2010 **Visiting Researcher**, IE Business School, Madrid
- 2001-2007 **Assistant Professor, Decision & Info. Analysis**, Emory University, Goizueta School of Business



AFFILIATED APPOINTMENTS

- 2015 to Present **International Institute for Analytics (IIA) Contributing Faculty Member**

EDUCATION

- Ph.D. Operations and Decision Technologies: Indiana University, Kelley School of Business, 2001
- M.S. Operations and Decision Technologies: Indiana University, Kelley School of Business
- B.A. Economics (Industrial/Developmental): Case Western Reserve University
- B.S. Materials Engineering: Case Western Reserve University

PRE-ACADEMIC INDUSTRY EXPERIENCE

IMVP Researcher for the Center for Regional Economic Issues; Weatherhead School of Mgmt, CWRU; 1997, 1999

Research Assistant – Perception Imaging and Psychology Laboratory, Case Western Reserve University 1997

R&D Technician/Trainer for the Intel Corporation (Polymer Core Competency); Chandler, AZ; 1996-1997

Assistant Editor of ASM International's Materials Phase Transformation Series; Lucerne, Switzerland; 1994

Materials Engineer / Researcher - NASA-Lewis Research Center, Cleveland, OH 1993-1995

CURRENT RESEARCH INTERESTS

The interface between Operations, IT and Psychology (group and individual)






















- **Operational Feedback** - *Visualization, Complexity/Uncertainty* – Effects on resource usage behavior and tactics
- **Operational Coordination** - *Collaboration and Group Dynamics* – Impacts on problem solving, NPD and IT projects
- **Operational IT-Driven Enablement** - *Ops/Strat/IT Alignment* – Implications for buy-in, efficiency and innovation

h-index: 29 (Scopus) 25 (ISI) 36 (Google) **i-10:** 44 (Scopus) 38 (ISI) 53 (Google) **RGscore:** 37.2 (1960 Followers)

56 articles: JOM(11) POM(9) JAP(2) ISR(1) MS(1) MISQ(1) JBL(2) JSCM(2) DSJ(6) IJOPM(5) EJOR(5) DSS(2) IM(2), Other(8)

ORCID: 0000-0002-0158-8403 **Scopus Author ID:** 6602755760 **ResearcherID:** D-7865-2015

ARTICLES IN REFEREED JOURNALS (last 10 years)

- [57] S. Sommer, E. Bendoly, S. Kavadias, Ambiguous problem complexity, group synergy and performance: an experiment. Forthcoming in *Management Science*. 
- [56] B. Fahimnia, M. Pournader, E. Siemsen, E. Bendoly, Wang, C. Behavioral operations and supply chain management – a review and literature mapping. Forthcoming at *Decision Sciences Journal*. 
- [55] N. Craig, N. DeHoratius, A. Raman, E. Bendoly. 2018. Consistency and Recovery in Retail Supply Chains. *Journal of Business Logistics*, 39(1), 26-37. 
- [54] T. Schoenherr, E. Bendoly, D. Bachrach, A. Hood. 2017. Task interdependence impacts on reciprocity in IT implementation teams: Bringing out the worst in us, or driving responsibility? *Production and Operations Management*, 26(4), 667-685. 
- [53] L. Gua, Y. Hu, J. Tobias, E. Bendoly. 2017. Different Departments, Different Drivers: Asymmetry in Antecedents and Outcomes of Voluntary Knowledge Exchange between Sales and Production Functions. *International Journal of Production and Operations Management*, 37(8), 1031-1053. (IJOPM's 2017 Outstanding Paper Award winner) 
- [52] D. Bachrach, E. Bendoly, D. Beu Ammeter, D. Blackburn, K.G. Brown, J. Burke, T. Callahan, K.Y. Chen, V.H. Day, J.A. Gomez, T. Greenlee, A. Ellstrand, H. Erikson, R. Handfield, M. Loudder, M. Malhotra, K. Petroni, A. Sevilla, S. Shafer, M. Shih, D. Voss. 2017. On Academic Rankings, Unacceptable Methods and the Social Obligations of Business Schools. *Decision Sciences Journal*, 48(3), 561-585. 
- [51] R. Hardcopf, P. Goncalves, K. Linderman, E. Bendoly. 2017. Short-term bias and strategic misalignment in operational solutions: perceptions, tendencies and traps. *European Journal of Operational Research*, 258(3), 1004-1021. 
- [50] E. Bendoly, R. Chao. 2016. How excessive stage time reduction in NPD negatively effects market value. *Production and Operations Management*, 25(5), 812-832. 
- [49] A. Hood, D. Bachrach, S. Zivnuska, E. Bendoly. 2016. The mediating effects of psychological safety in the relationship between team affectivity and transactive memory systems. *Journal of Organizational Behavior*, 37(3), 416-435. 
- [48] E. Bendoly. 2016. Fit, bias and enacted sensemaking in data visualization: frameworks for continuous development in operations and supply chain management analytics. *Journal of Business Logistics*, 37(1), 6-17. (Lead Article) 
- [47] J. Sterman, R. Oliva, K. Linderman, E. Bendoly. 2015. System Dynamics perspectives and modeling opportunities for research in Operations Management, *Journal of Operations Management* 39/40, 1-5. (Lead Article) 
- [46] E. Bendoly. 2014. Systems dynamics understanding in project execution: information sharing quality and psychological safety, *Production and Operations Management* 23(8), 1352–1369. 
- [45] E. Bendoly, M. Swink, W. Simpson. 2014. Prioritizing and monitoring concurrent project work: Effects on switching behavior, *Production and Operations Management* 23(5), 847-860. 
- [44] E. Bendoly. 2013. Real-time feedback and booking behavior in the hospitality industry: Moderating the balance between imperfect judgment / imperfect prescription, *Journal of Operations Management* 31(1-2), 62-71. (JOM Best Paper Finalist) 
- [43] E. Bendoly, A. Bharadwaj, S. Bharadwaj. 2012. Complementary drivers of NPD performance: cross-functional coordination, information system capability, and intelligence quality. *Production and Operations Management* 21(4). 653-667. 
- [42] E. Bendoly. 2011. Linking task conditions to physiology and judgment errors in RM systems. *Production and Operations Management* 20(6), 860-876. 
- [41] D. Bachrach, E. Bendoly. 2011. Rigor in behavior experiments: a basic primer for SCM researchers. *Journal of Supply Chain Management* 47(3), 5-8. (Lead Article) 
- [40] A. Nair, R. Narasimhan, E. Bendoly. 2011. Co-opetitive buyer-supplier relationship: an investigation of bargaining power, relational context, and investment strategies. *Decision Sciences Journal*, 42(1), 93-127. 
- [39] E. Bendoly, J. Perry-Smith, D.G. Bachrach. 2010. The perception of difficulty in project-work planning and its impact on resource sharing. *Journal of Operations Management* 28(5), 385-397. 
- [38] E. Bendoly, R. Croson, P. Goncalves, K. Schultz. 2010. Bodies of knowledge for research in Behavioral Operations. *Production and Operations Management* 19(4), 434-452. 
- [37] R. Metters, X. Zhao, E. Bendoly, B. Jiang, S.T. Young. 2010. The Way that can be told of is not an unvarying way: cultural impacts on OM in Asia. *Journal of Operations Management* 28(3), 177-185. (Lead Article) 

- [36] E. Bendoly, M. Capra, D. Thomas. 2010. Project performance and the antecedents and implications of project group member ties: a multi-level analysis. *Decision Sciences Journal* 41(3), 459-490. ☞
- [35] R. Narasimhan, A. Nair, D. Griffith, E. Bendoly, J. Arlbjorn. 2009. Lock-in situations in supply chains: a social exchange theoretic study of sourcing arrangements in power-based buyer-supplier relationships. *Journal of Operations Management* 26(5), 374-389. 👁
- [34] D. Thomas, E. Bendoly. 2009. Limits to effective leadership style and tactics in critical incident interventions. *Project Management Journal* 40(2), 70-80. ↗
- [33] E. Bendoly, E. Rosenzweig, J. Stratman. 2009. The efficient use of enterprise information for strategic advantage: a DEA analysis. *Journal of Operations Management* 26(4), 310-323 ↗

Career Totals by Type (MS / JOM / POM / ISR / MISQ / JAP / JBL , Other) 👁 Lab(11.4) 🔄 2ndry(4.3) ↗ Survey(5.11) 🖨 Model(1.6) 📖 Theory(6.5)

EDITED TEXTBOOKS AND RESEARCH COMPILATIONS

- E. Bendoly and S. Clark, [Visual Analytics for Management: Translational Science and Applications in Practice](#), Taylor & Francis / Routledge, London 2016 (ISBN: 978-1138190726)
- E. Bendoly, W. van Wezel and D.G. Bachrach, [Handbook of Behavioral Operations Management: Social and Psychological Dynamics in Production and Service Settings](#), Oxford University Press, London, 2015 (ISBN: 978-0199357222)
- E. Bendoly, *Excel Basics to Blackbelt: An Accelerated Guide to Decision Support Designs, 2nd Edition*. A resource for developing system integration skills for professionals, Cambridge University Press, London, 2013 (ISBN: 978-1107625525)
- S. Kumar, E. Bendoly and J. Esteves, Eds. *Handbook of Research in Enterprise Systems*, An international multi-author and peer reviewed research compilation – Follow-up to 2005 compilation, Sage Publications, 2011 (ISBN: 978-8132105091)
- E. Bendoly, *Excel Basics to Blackbelt: An Accelerated Guide to Decision Support Designs*, A resource for developing system integration skills for professionals, Cambridge University Press, London, 2008 (ISBN: 978-0521889056)
- E. Bendoly and R.F. Jacobs, Eds. *Strategic ERP Extension and Use*, A multi-author (eg. MIT, IMD, Indiana University, etc.) and peer reviewed research compilation, Stanford University Press, Stanford, CA 2005 (ISBN: 978-080475098X)

RECENT RESEARCH PRESENTATIONS (last 5 years)

- D. Taylor, E. Bendoly, A. Knemeyer, K. Croxton. 2018. "Consumers Response to Stockouts: An Examination of Intended Retailer Retention and Intended Purchase Channel Retention". Council of Supply Chain Management Professionals (CSCMP) Academic Research Symposium, Nashville, TN.
- S. Paul, N. Craig, E. Bendoly. 2018. "Choice and diversification decisions under demand and supply uncertainty". Presented at the following: {1} INFORMS meeting, Phoenix, AS, {2} Decision Sciences Institute meeting, Chicago, IL, {3} 8th International Conference on Operations and Supply Chain Management, Cranfield, UK.
- L. Sharma, A. Chandrasekaran, E. Bendoly. 2018. "Does the Office of Patient Experience Matter in Improving Delivery of Care?", Production and Operations Management Society meeting, Austin, TX
- E. Bendoly. 2017. "Visualizing the Systematic Nature of Systems", Academy of Management Conference, Atlanta, GA
- E. Bendoly. 2017. "Anticipating NPD Speed Traps: An Application of the OUtCoMES Cycle", Center for Operational Excellence Summit, The Ohio State University, Columbus, OH
- E. Bendoly. 2016. Eminent Scholar talk - "Decision-maker Reactions to Visualized Variance II: A Study of Longitudinal Risk Depiction", Iowa State University, Ames, IA
- S. Sommer, S. Kavadias, E. Bendoly. 2016. "Group Structure, Task Complexity, and Search Strategies in Ambiguous Problem Spaces: A Controlled Experiment", Production and Operations Management Society meeting, Orlando, FL
- H.N. Perera, B. Fahimnia, E. Bendoly, N. Craig, M. Reisi. 2016. "The Effects of Judgmental Forecasting On Packaging Operations of Perishable Products", Production and Operations Management Society meeting, Orlando, FL

- S. Paul, N. Craig, E. Bendoly. 2016. "Rewarding Service and Serving Rewards: Complications Emerging from Reciprocity and Responsiveness in Ordering Decisions", Production and Operations Management Society meeting, Orlando, FL
- B. Massimino, J. Hill, E. Bendoly. 2016. "Performance Goals, Procedural Compliance, and Worker Personalities: A Behavioral Investigation", Production and Operations Management Society meeting, Orlando, FL
- J. Hurley, B. Fahimnia, E. Bendoly, N. Craig, M. Reisi. 2016. "Judgmental Forecast Adjustment in Light of Sales Promotions: an Experiment", Production and Operations Management Society meeting, Orlando, FL
- E. Bendoly. 2015. "Decision-maker Reactions to Visualized Variance: A Study of Longitudinal Risk Depiction", Arizona State University, Phoenix, AZ.
- S. Pathak, S. Gavirneni, E. Bendoly, H. Prasad, S. Roychowdhury 2015. "Evolution or Revolution? Sixty Years of Change in Management Science", Decision Sciences Institute
- N. Craig, E. Bendoly, S. Paul. 2015. "Rewarding Service and Serving Rewards: Complications Emerging from Reciprocity and Responsiveness in Ordering Decisions", Production and Operations Management Society meeting, Washington, D.C.
- B. Massimino, J. Hill, J. Gray, E. Bendoly. 2015. "Resource Utilization, Penalty Attribution, and Task Compliance: A Behavioral Investigation", Production and Operations Management Society meeting, Washington, D.C.
- E. Bendoly. 2015. "Visualization as an Analytical Tool among Heterogenous Users: Opportunities, Cavaets and Guidelines", Production and Operations Management Society meeting, Washington, D.C.
- A. Hood, D. Bachrach, S. Zivinuska, E. Bendoly. 2015. "Affect, Psychological Safety, and TMS in Groups", in Workplace Affect: Dynamic and Multilevel Effects in Organizations Symposium of the SIOP Conference, Philadelphia PA

RESEARCH GRANTS and HONORS *(last 10 years)*

- IJOPM's 2017 Outstanding Paper Award Winner ["Different departments, different drivers: asymmetry in antecedents and outcomes of voluntary knowledge exchange between sales and production functions" 37(8)],
- Fisher College of Business Distinguished Professorship, The Ohio State University 2016-19
- Outstanding Senior Editor, Production and Operations Management journal for 2015-16
- 2015 Operations Management Distinguished Scholar – Awarded by the OM Division of the Academy of Management
- Fall 2015 Small Grant Award recipient – Fisher College of Business, The Ohio State University
- Best Associate Editor for the Journal of Operations Management for 2013-14
- Fall 2014 (Academy of Management) – Nominated for Best published JOM paper of 2013 ["Real-time feedback and booking behavior in the hospitality industry: Moderating the balance between imperfect judgment and imperfect prescription", 31(1)]
- Invited research collaborator with the Erasmus Center for Behavioral Operations Management, 2013
- 2014, 2015 Window's Azure Academic Grant (MS Corp. estimated total market value of Azure access: USD \$77,400)
- 2013 Window's Azure Academic Grant (MS Corp. estimated total market value of Azure access: USD \$133,200)
- Spring 2012-2013 Ad hoc Research Grant recipient • Winter 2011-2012 Ad hoc Research Grant recipient
- Spring 2011-2013 Research Grant from Ministry of Science and Innovation of Spain ("Micro-foundations of Org. Cap.s")
- Fall 2009-2011 **Caldwell Research Fellow** - Goizueta Business School, Emory University
- Fall 2009 (Academy of Management) - Best published JOM paper of 2008 ["Understanding behavioral sources of process variation following enterprise system deployment", 26(1)]

TEACHING and PEDAGOGY

Teaching Awards

2014 Crystal Apple Teaching Award – Emory University, Goizueta Business School
Emory Residents Hall Authority – One of 8 to receive the award, among 600 nominated

2000 William Panschar Associate Instructor Teaching Award – Indiana University, KSB
A school-wide award for excellence in innovative teaching. Only one award is given each year.

Coursework Taught/Developed

Data Analysis and Visualization (The Ohio State University)

Spring 2015+ - Instructor and Developer [Junior-IV Undergraduates; 1st / 2nd year FT MBAs / Evening MBAs]

Doctoral Seminar in Scholarship Interfaces with Industry and Pedagogy (The Ohio State University)

Fall 2015 - Instructor and Developer [1st and 2nd year PhD students]

Doctoral Seminar in Behavioral Operations (The Ohio State University)

Fall 2014 - Instructor and Developer [2nd year PhD students]

Data Analytics and Visualization (Emory University)

Spring/Fall 2007-2013 – Instructor and Developer [Predominantly 2nd year FT MBAs / Evening MBAs]

Data Analytics and Visualization (Emory University)

Spring/Fall/Maymester 2006-2014 – Instructor and Developer [Jnr / Snr level business undergraduates]

Global Supply Chain Management (Emory University)

Spring 2003 – Instructor and Developer [Predominantly 2nd year MBAs]

Introduction to Operations Management (Emory University)

Fall 2001 – Instructor (Manufacturing Sector Focus) [Junior / Senior level business undergraduates]

Fall 2002-07 – Instructor and Developer (Service Sector Focus) [Jnr / Snr level business undergraduates]

Enterprise Resource Planning Tools – ABAP/4 Methods (Indiana University)

Spring 2001, Fall 2000 – Co-Instructor [Senior level business undergraduates]

Introduction to Data Mining (Indiana University)

Spring 2000 – Invited Lecturer [Predominantly 2nd year MBAs]

Enterprise Operations Planning – ERP & the E-Business Supply Chain (Indiana University)

Spring 2000, Fall 1999 – Instructor [Senior level business undergraduates]

Spring 1999 – Teaching & Course Development Assistant [Senior level business undergraduates]

Other Teaching Activities:

2002 Spring Lead Week (Emory) – Instructor for Inventory Management section of Operations module

2007 Spring Lead Week (Emory) – Joint Operations and Strategy module

2010 Structured Problem Solving (Emory) – part of Management Practice module of MBA program

2012, 2013 Goizueta Business Institute (Emory) – Operations course to non-business majors

Graduate Student Committee Service

Joycelyn Streater - Emory University – PhD Information Systems – Graduation 2010

Brett Massimino – Ohio State – PhD Management Sciences - Graduation 2014

Luv Sharma – Ohio State – PhD Management Sciences - Graduation 2016

Constantine Alba – IE Madrid – PhD Operations Management - Graduation 2016

Erika Braun – Ohio State – MFA Design - Graduation 2016

Daniel Taylor – Ohio State – PhD Logistics – Graduation 2018

Somak Paul – Ohio State – PhD Management Sciences – Graduation 2019

Amy Rowntree Darragh, PhD, OTR/L, FAOTA

Contact Information: Division of Occupational Therapy
School of Health and Rehabilitation Sciences
The Ohio State University
453 West 10th Avenue
406 Atwell Hall
Columbus, Ohio, 43210
Phone: 614-293-3760
Fax: 614-292-0210
Email: darragh.6@osu.edu

CURRENT ACADEMIC POSITION

06/2015 - present Associate Professor, Division of Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH.
09/2012 – present Affiliate Faculty, Center for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, Columbus, OH

ADMINISTRATIVE APPOINTMENT

11/2015 - present Division Director, Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH
07/2014 - 11/2015 Interim Division Director, Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH

PREVIOUS ACADEMIC APPOINTMENTS

07/2008 - 06/2015 Assistant Professor, Division of Occupational Therapy, School of Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH
07/2006 - 06/2008 Assistant Professor, Department of Occupational Therapy, University of Wisconsin-Milwaukee WI
07/2000-06/2006 Assistant Professor, Program in Occupational Therapy, Sacred Heart University, Fairfield, CT
09/1995 – 06/2000 Research Associate, Dept of Environmental Health, Colorado State University, Fort Collins, CO
02/1990 – 08/1995 Research Associate, Dept of Occupational Therapy, Colorado State University, Fort Collins, CO

EDUCATION

2001 PhD, Department of Environmental Health Epidemiology, Colorado State University
1995 MS, Department of Occupational Therapy, Colorado State University
1988 BA, Barnard College, Columbia University

LICENSURE & CERTIFICATION

10/2008 – present Occupational Therapist: Ohio Occupational Therapy, Physical Therapy, and Athletic Trainers Board

COURSES TAUGHT (selected)

*indicates courses taught currently

OCCTHER 6110 Occupational Therapy Foundations and Theory
OCCTHER 6210 Neuromusculoskeletal and Sensory Function
OCCTHER 6730 Research Methods
OCCTHER 6740 Health Planning for Individuals and Communities*
OCCTHER 7270 Occupational Performance, Environment and Context: Assessment and Intervention*
OCCTHER 7710 Capstone Project I*
OCCTHER 7720 Capstone Project II*
OCCTHER 7730 Capstone Project III*
OCCTHER7620 Occupational Therapy Research Specialization
HTRHSC 7910 Evidence Based Practice II: Critical Analysis of Intervention Research and Systematic Review
HTRHSC 7150 Introduction to Health & Rehabilitation Science II
HTRHSC 8998 PhD Research Practicum*
HTRHSC 8999 PhD Dissertation*
HTRHSC 8289 PhD Teaching Practicum*

AWARDS AND FORMAL RECOGNITION FOR TEACHING

2015 Emerging Service Learning Award, Office of Outreach and Engagement, OSU
2014 School of Health and Rehabilitation Sciences Teaching Award, OSU

PUBLICATIONS

Journal Articles (Peer Reviewed)

1. Koss Schmidt, E., Hand, B.N. Simpson, K.N., Darragh, A.D. (in press). Prevalence of sexually transmitted infections in privately insured adults with intellectual and developmental disabilities. *Journal of Comparative Effectiveness Research*.
2. Lavender, S.A., Polivka, B., Darragh, A.R., Sommerich, C.M., Stredney, D.L., Wills, C.E. (in press). Evaluating home healthcare workers' ability to detect potential safety hazards in client homes using a virtual simulation training system. *Home Healthcare Now*. (RL1).
3. Polivka, B., Anderson, S., Lavender, S., Sommerich, C., Wills, C., Darragh, A.R. (April, 2019). Efficacy and usability of a virtual simulation training system for health and safety hazards encountered by healthcare workers. *Games for Health Journal*, 8(2), 121-128.
4. Watowicz, R. P., Wexler, R.K., Weiss, R., Anderson, S.E., Darragh, A.R., Taylor, C.A. (February, 2019). Nutrition counseling for hypertension within a grocery store: An example of the patient-centered medical neighborhood model. *Journal of Nutrition Education and Behavior*, 51(2), 129-137, e1.
5. Ramey, S.L., DeLuca, S., Stevenson, R., Case-Smith, J., Darragh, A. Conaway, M., CHAMP Network. (January, 2019). Children with Hemiparesis Arm and Movement Project (CHAMP): A multi-site comparative efficacy trial of pediatric Constraint-Induced Movement Therapy (CIMT) testing effects of dosage and type of constraint for 2 to 8 year olds with hemiparetic cerebral palsy. *British Medical Journal Open*, 9(1).
6. Hand, B., Darragh, A.R., Persch, A.C. (September, 2018). A systematic review of thoroughness and psychometrics of fidelity measures in occupational and physical therapy. *American Journal of Occupational Therapy*, 72(5), 7205205050p1-7205205050p10
7. Harwood, KJ, Darragh, AR, Campo, MA, Rockefeller, K, Scalzitti, DA. (April, 2018). A systematic review of safe patient handling and mobility programs to prevent musculoskeletal injuries in occupational and physical therapists and assistants. *International Journal of Safe Patient Handling and Mobility*, 8(1), 46 – 56.
8. Hand, B., Lane, A., DeBoeck, P., Basso, D.M., Larsen, D., Darragh, A.D. (April, 2018). Caregiver burden varies by sensory subtypes and sensory dimension scores of children with autism. *Journal of Autism and Developmental Disorders*, 48 (4), 1133-1146. 1-14. DOI 10.1007/s10803-017-3348-1.
9. Darragh, A.R. & Campo, M. (March, 2017). Health-Related Quality of Life impacted by severity and age in occupational and physical therapists with musculoskeletal disorders. *International Journal of Safe Patient Handling and Mobility*, 7(1).
10. Darragh, A.R., Hines, E., Wengerd, L., & Basso, D.M. (December, 2016). The effect of an overhead gait and balance training device on transfer and balance activities. *American Journal of Safe Patient Handling and Mobility*, 6(4), 152-159.
11. Harwood, K.J. Scalzitti, D., Campo, M.A., Darragh, A.R. (December, 2016). A systematic review of safe patient handling and mobility programs to improve patient outcomes in rehabilitation. *American Journal of Safe Patient Handling and Mobility*, 6(4), 141-150.
12. Darragh, A.R., Lavender, S., Polivka, B., Sommerich, C.M., Wills, C.E., Hittle, B.A., Chen, R. Stredney, D.L. (May, 2016) Gaming simulation as health and safety training for home healthcare workers. *Clinical Simulation in Nursing*, 12(8), 328-335 PMID: 27239244
13. Wills, C., Polivka, B., Darragh, AR., Lavender, S., Sommerich, C., Stredney, D. (March, 2016). 'Making Do' decisions: How home healthcare personnel manage their exposure to home hazards. *Western Journal of Nursing Research*, 38(4), 411-426. DOI: 10.1177/0193945915618950
Winner: MNRS/WJNR Best Faculty Paper Award for 2015 PMID: 26669605
14. Polivka, B.J., Wills, C.E., Darragh, A., Lavender, S., Sommerich, C., Stredney, D (November, 2015). Environmental health and safety hazards experienced by home healthcare providers: A room by room analysis. *Workplace Health & Safety*, 63(11), 512-522. DOI: 10.1177/2165079915595925 PMID: 26268486
15. Tanner, K., Case-Smith, J., Nahikian-Nelms, M., Ratliff-Schaub, K., Spees, C., Darragh, AR. (Nov, 2015). Behavioral and physiological factors associated with selective eating in children with ASD. *American Journal of Occupational Therapy*, 69(6), 69061800301-69061800308. PMID: 26565096
16. Weaver, L & Darragh, AR. (Nov, 2015). Systematic review of yoga interventions for anxiety reduction among children and adolescents. *American Journal of Occupational Therapy*, 69(6), 69061800701-707. PMID: 26565100
17. Persch, A.C., Cleary, D.S., Rutkowski, S., Malone, H., Darragh, A.R. & Case-Smith, J. (October, 2015). Current practices in job matching for individuals with intellectual and developmental disabilities. *Journal of Vocational Rehabilitation*, 43(3), 259-273. DOI: <http://dx.doi.org.proxy.lib.ohio-state.edu/10.3233/JVR-150774> NLM UID: 9200437.

18. Darragh, A.R., Sommerich, C.M., Lavender, S.A., Tanner, K.J., Vogel, K., Campo, M. (Sept 2015). Musculoskeletal discomfort, physical demand and caregiving activities in informal caregivers. *Journal of Applied Gerontology*, 34(6), 734-60. PMID: 24652897
19. Dunn, W., Griffith, J.W., Carey, L., Sabata, D., Morrison, T., MacDiarmid, J., Darragh, A.R., Schaaf, R., Holm, M., Dudgeon, B., Connor, L. (May, 2015). Measuring change in somatosensation across the lifespan. *American Journal of Occupational Therapy*, 69(3), 69032900201-9. PMID: 25871603
20. Spees, C.K., Joseph, A., Darragh, A.R., Lyons, F., Wolf, K.N. (March, 2015). Health behaviors and perceptions of cancer survivors harvesting at an urban garden. *American Journal of Health Behavior*, 39(2):257-66. PMID: 25564838
21. Darragh, A.R., Shiyko, M., Margulis, H., & Campo, M. (September, 2014). The effect of a safe patient handling and mobility program on patient self-care outcomes. *American Journal of Occupational Therapy*, 68(5), 589-596. PMID: 25184472
22. Case-Smith, J., Page, S.J., Darragh, A.R., Rybski, M., & Cleary, D. (March 2014). The professional occupational therapy doctoral degree: Why do it? *American Journal of Occupational Therapy*, 68(2):e55-60. doi: 10.5014/ajot.2014.008805. PMID: 24581414.
23. Campo, M., Shiyko, M.P., Margulis, H., Darragh, A.R. (Jan 2013) Effect of a safe patient handling program on rehabilitation outcomes. *Archives of Physical Medicine and Rehabilitation*, 94(1): 17-22. PMID: 22960275
24. Darragh, A.R., Campo, M.A., Frost, L., Miller, M., Pentico, M., Margulis, H. (Jan 2013). Safe-patient- handling equipment in therapy practice: implications for rehabilitation. *American Journal of Occupational Therapy*, 67(1): 45-53. PMID: 23245782
25. Darragh, A.R., Campo, M., King, P. (July 2012). Work-related activities associated with injury in occupational and physical therapists. *Work: A Journal of Prevention, Assessment, and Rehabilitation*, 42(3): 373-384. PMID: 22523031.
26. Campo, M. & Darragh, A.R. (Jan 2012). Work-related musculoskeletal disorders are associated with impaired presenteeism in allied health care professionals. *Journal of Occupational and Environmental Medicine*, 54(1): 64-70. PMID: 20735198
27. Pizur-Barnekow, K., Darragh, A.R., Johnston, M. (Oct, 2011). I cried because I didn't know if I could take care of him": Toward a taxonomy of interactive and critical health literacy as portrayed by caregivers of children with special health care needs. *Journal of Health Communication*, 16(S3): 205-211. <http://dx.doi.org/10.1080/10810730.2011.604386>. PMID: 21951253
28. Rizk, S., Pizur-Barnekow, K., Darragh, A.R. (Sept, 2011). Leisure and social participation and health-related quality of life in caregivers of children with autism. *Occupational Therapy Journal of Research*, 31(4): 164-71. <http://www.slackjournals.com/article.aspx?rid=82893>.
29. Kuhaneck, H.M., Cianciolo, J., Burroughs, T., Lemanczyk, T., Darragh, A.R. (Nov 2010). A qualitative study of coping strategies in mothers of children with an autism spectrum disorder. *Physical and Occupational Therapy in Pediatrics*, 30(4): 340-350. <http://informahealthcare.com/potp>. PMID: 20735198
30. Campo, M. & Darragh, A.R. (Jun, 2010). Impact of work-related pain on physical therapists and occupational therapists. *Physical Therapy Journal*, 90(6): 905-920. PMID: 20378677
31. King, P., Huddleston, W., Darragh, A.R. (Sept, 2009). Work-related musculoskeletal disorders and injuries: Differences among older and younger occupational and physical therapists. *Journal of Occupational Rehabilitation*, 19(3): 274-283. PMID: 19504176
32. Darragh, A.R., Huddleston, W., King, P. (May, 2009). Work-related musculoskeletal injuries and disorders among occupational and physical therapists. *American Journal of Occupational Therapy*, 63(3): 351-362. PMID: 19522144
33. Darragh, A.R., Campo, M., Olson, D. (Jan, 2009). Therapy practice within a minimal lift environment: Perceptions of therapy staff. *Work-A Journal of Prevention Assessment & Rehabilitation*, 33(3): 241-253. PMID: 19759423
34. Boynton, T. & Darragh, A.R. (Jan, 2008). Participatory ergonomics intervention in a sterile processing center: A case study. *Work-A Journal of Prevention Assessment & Rehabilitation*, 31(1): 95-99. PMID: 18820424
35. Darragh, A.R., Harrison, H., Kenny, S. (Jan, 2008). Effect of an ergonomics intervention on workstations of microscope workers. *American Journal of Occupational Therapy*, 62 (1): 61-69. PMID: 18254432
36. Darragh, A.R., Stallones, L., Bigelow, P.L., Keefe, T.J. (Feb, 2004). Effectiveness of the HomeSafe Pilot Program in reducing injury rates among residential construction workers, 1994-1998. *American Journal of Industrial Medicine*, 45(2): 210-217. PMID: 14748052
37. Cooper, S.P., Darragh, A.R., Vernon, S.W., Stallones, L., MacNaughton, N., Robison, T., Hanis, C., Zahm, S.H. (Nov, 2001). Ascertainment of pesticide exposures of migrant and seasonal farmworker children: Findings from focus groups. *American Journal of Industrial Medicine*, 40(5): 531-537. PMID: 11675622
38. Darragh, A.R., Sample, P.L., Krieger, S.R. (Mar, 2001). Tears in my eyes 'cause somebody finally understood: Client perceptions of practitioners following brain injury. *American Journal of Occupational Therapy*, 55(2): 191-199. PMID: 11761135
39. Xiang, H., Stallones, L., Hariri, S., Darragh, A., Chiu, Y., Gibbs-Long, J. (May, 1999). Back pain among persons working on small or family farms - Eight Colorado counties, 1993-1996 (Reprinted from MMWR, Vol. 48, pg 301-304, 1999. PMID: 10227797). *JAMA-Journal of the American Medical Association*, 281(20): 1885-1886. doi:10.1001/jama.281.20.1885-JWR0526-4-1 PMID: 10349883

40. Sample, P.L. & Darragh, A.R. (Oct, 1998). Perceptions of care access: the experience of rural and urban women following brain injury. *Brain Injury*, 12(10): 855-874. PMID: 9783084
41. Darragh, A.R., Sample, P.L., Fisher, AG. (April, 1998). Environment effect on functional task performance in adults with acquired brain injuries: Use of the assessment of motor and process skills. *Archives of Physical Medicine and Rehabilitation*, 79(4): 418-423. PMID: 9552108
42. Darragh, A.R., Stallones, L., Sample, P., Sweitzer, K. (Jan, 1998). Perceptions of farm hazards and personal safety behavior among adolescent farmworkers. *Journal of Agricultural Safety and Health*. Special Issue (1): 159-169.
43. Sample, P. & Rowntree, A. (Jan, 1995). "Employment intervention strategies for individuals with brain injury. *Occupational Therapy in Health Care*, 9, 45-56. PMID: 23931562

Journal Articles (Editor-Reviewed)

1. Darragh, A.R. Safe patient handling and movement to mobility. (April, 2014) *American Journal of Safe Patient Handling and Movement*, 4(1).
2. Roll, S.C. Darragh, A.R., O'Brien, J.C., Fisher, T.F. (2014). In Memoriam: Jane Douglas Case-Smith. Guest Editorial. *Occupational Therapy Journal of Research*, 34(4), 171 – 175. PMID: 25347754
- Persch, A. C., Cleary, D. S., Tanner, K. DiGiovine, C. Rybski, M., Teaford, M., Page, S. J., & Darragh, A. R. (2014). In Memoriam: Jane Case-Smith: Servant-Leader and Scholar. *American Journal of Occupational Therapy*, 68, 649-652. PMID: 25397757

List of Published Journal Articles in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/amy.darragh.1/bibliography/46236861/public/?sort=date&direction=ascending>

Abstracts and Short Entries

1. Koss, E., Darragh, AR., Brown, C. (October, 2018). A scoping review of the effectiveness of comprehensive sexual education programs for individuals with intellectual and developmental disabilities. *Developmental Medicine and Child Neurology*, 60(S3), 9-13. doi:10.1111/dmcn.116_14017.
2. Gaerke, L., Darragh, A., Hock, K., Vicary, K. (January, 2018). Home intervention for chemotherapy induced peripheral neuropathy, sensorimotor program. *Journal of Hand Therapy*, 31(1), 163. Peer-reviewed poster presentation at the American Society for Hand Therapist 40th Annual Meeting, Anaheim, CA, October 12 – 15, 2017. DOI: 10.1016/j.ht.2017.11.033.
3. Persch, A & Darragh, AR. (August, 2017). Keys to effective job matching for individuals with intellectual disabilities. *Developmental Medicine and Child Neurology*, 59(53), 118. DOI.1111/dmcn.64_13512. Peer-reviewed poster presentation at the Annual Meeting of the American Academy of Cerebral Palsy and Developmental Medicine (AACPDM).
4. Persch, A., Pfeiffer, B., Weisshaar, R., Darragh, A., & Cleary, D. (August, 2017). Supports and barriers to effective job matching for persons with intellectual disabilities [Abstract]. *American Journal of Occupational Therapy*, 71(4_Supplement_1). DOI: 10.5014/ajot.2017.71S1-PO4080. Peer-reviewed poster presentation at the Annual Meeting of the 97th Annual AOTA Conference and Expo.
5. Persch, A & Darragh, AR. (August, 2017). Keys to effective job matching for individuals with intellectual disabilities. *Developmental Medicine and Child Neurology*, 59(53), 118. DOI.1111/dmcn.64_13512. Peer-reviewed poster presentation at the Annual Meeting of the American Academy of Cerebral Palsy and Developmental Medicine (AACPDM).
6. Basobas, B., Page, S.J., Darragh, A., Persch, A. (October, 2016). The NIH stroke scale lacks sensitivity to change in chronic, minimally impaired stroke survivors. *Archives of Physical Medicine and Rehabilitation*, 97(10), e111-e113.
7. Darragh, A.R., Sommerich, C.M., Lavender, S., Polivka, B., Wills, C., Stredney. (August, 2016). Slips, trips, and falls in homes: Home healthcare workers at risk. *American Journal of Occupational Therapy*, 70(4), s1, 1.
8. Hand, B.A., Darragh, A.R., Persch, A.C. (August, 2016). Intervention Fidelity Measures in Rehabilitation: A Systematic Review. *American Journal of Occupational Therapy*, 70(4), s1, 1.
9. Persch, A. C., Cleary, D. S., Darragh, A. R., & Grooms, A. (August, 2016). A novel decision support system for systematic job matching of individuals with developmental disabilities. *American Journal of Occupational Therapy*, 70, 7011500043p1. doi:10.5014/ajot.2016.70S1-PO4100.
10. Spees, C, Hart, H, Darragh, A, Taylor, C, Dunevy, C, Schmitt, L, Page, S, Onate, J, Kloos, A, Kegelmeyer, D, Rybski, M. (July, 2016). Differences in glucemic control of food pantry clients by food security status and health. *Journal of Nutrition Education and Behavior*, 48(7), S47.
11. Polivka, B, Wills, C, Sommerich, C, Lavender, S, Darragh, A. (July, 2015). Virtual simulation training in home health care. *American Journal of Occupational Therapy*, 69(S1), 6911515068p1-6911515068p1
12. Persch, A. C., Darragh, A. R., Cleary, D. S., Tanner, K. (2015) Job matching practices of professionals supporting individuals with disabilities in transition to employment. AACPDM Abstracts. *Developmental Medicine and Child Neurology*, 57, 85-86. doi: 10.1111/dmcn.18_12886
13. Darragh, AR, Ratcliff-Schaub, K, Nahikian-Nelms, M, Spees, C, Case-Smith, J, Tanner, KJ. (July, 2015). Selective eating in Autism Spectrum Disorder (ASD): A between-groups comparison and associational study. *American Journal of Occupational Therapy*, 69(S1), 6911505199p1-6911505199p1

14. Flinn, S., Couch, K., Darragh, A. (2012). Symptoms of cumulative trauma in hand therapy professionals, a descriptive study. *Journal of Hand Therapy*. 25 ed. V.4. New York: Hanley and Belfus Medical Publishers.
15. Sample, L., Darragh, A.R., & Stallones, L. (Jan 1998). Adolescent work practices on northeastern Colorado farms. *Injury Prevention and Control: 4th World Conference*. Vol. Two. Amsterdam: World Health Organization. 962.
16. Darragh, A.R. & Sample, P. (Jan 1997). Clinic versus home functional performance: Use of the assessment of motor and process skills (AMPS) with adults with acquired brain injuries. *Advances in Neurotrauma: From Research to Community Living. 2nd World Congress on Brain Injury*. Seville: Editorial Kronos.108.
17. Darragh, A.R., Dettmer, J., Sample, P. (Jan 1997). Vocational/Community reintegration following brain injury: A service model." [Abstract]. *Advances in Neurotrauma: From Research to Community Living. 2nd World Congress on Brain Injury*. Seville: Editorial Kronos. 221.
18. Sample, P. & Darragh, A.R. (Jan 1997). Perceptions of intervention efficacy: A qualitative care access study. [Abstract]. *Advances in Neurotrauma: From Research to Community Living. 2nd World Congress on Brain Injury*. Seville: Editorial Kronos.151.

Papers in Proceedings

1. Lavender, S., Sommerich, C.M., Polivka, B., Darragh, A.R., Wills, C., Stredney, D. (September, 2018). Furthering recognition of lift, slip, and trip hazards in home healthcare environments: Opportunities for virtual simulation training. Proceedings of the Human Factors and Ergonomics Society 2018 Annual Meeting, 62(1), 945-947. <https://doi.org/10.1177/2F1541931218621217>
2. Palmer, D., Sommerich, C.M., Darragh, A.R. (September, 2017). Patient care and electronic record entry demands on physical therapists. Proceedings of the Human Factors and Ergonomics Society 2017 Annual Meeting, 61(1), 1351-1355. DOI:10.1177/1541931213601821.
3. DiGiovine CP, Darragh A, Berner TB and Duncan T. (June, 2015). The Effect of Whole Body Vibration on Power Wheelchair Mobility: A Focus Group, Proceedings of the RESNA 2015 Annual Conference, June 11-14, 2015: Denver, CO.
4. McCrory, B.M., Burnfield, J.M., Darragh, A.R., Meza, J.L. Irons, S.L., Link, A.M., Brusola, G. (in press – Oct 2014). Work injuries among therapists in physical rehabilitation. Proceedings of the Human Factors and Ergonomic Society International Annual meeting. Chicago, IL.

Chapters in Edited Books

1. Cosgrove, J.R., Simon, R.L. & Darragh, A.R. Education. In *Occupational therapy interventions: Function and occupations*. Edited by C. Meriano & D. Latella. Thorofare: Slack Incorporated, 2008.
2. Rizk, S., Pizur-Barnekow, K., Darragh, A.R. (Jan 2014). Quality of life in caregivers of children with autism spectrum disorders. In *The Comprehensive Guide to Autism*. Edited by: Patel, VB, Preedy, VR, Martin, CR. New York: Springer. [Editor-Review] (Published)

Bulletins, Tech Reports, Fact Sheets

1. American Nurses Association, "Safe patient handling and mobility: Inter-professional standards across the care continuum". Silver Springs: Nursebooks. (06/2013).
2. Pizur-Barnekow, K., Darragh, A.R. & Miller, C. (Apr 2011; rev 2016). AOTA's Societal Statement on Health Literacy". American Occupational Therapy Association. (Published)

PRESENTATIONS

Invited Presentations

National

1. Keli, M.U., Darragh, A.R., Kemp, EK, Domina, A., (April, 2019). Understanding the Capstone Project and Capstone Experience. Academic Leadership Council Presentation, New Orleans, LA, April 2, 2019.
2. Darragh, AR. Polivka, B., Wills, C.E., Lavender, S., Sommerich, C., & Stredney, D. (September, 2018). Virtual Simulation as a Training Tool in Home Healthcare: Using Technology to Meets the Needs of a Unique Workforce. Keynote Address. Puget Sound Human Factors and Ergonomics Symposium, Seattle, WA *Keynote Speaker*
3. Darragh, AR & Campo, M. (June, 2017). Health-Related Quality of Life is Impacted by Severity and Age in Occupational and Physical Therapists with Musculoskeletal Disorders. OT Summit of Scholars, Boston University, Boston, MA, June 2 – 3, 2017.

4. Darragh, AR, Persch, AC, Koss, E, Deluca, S, Ramey, SL. (June, 2017). Facilitating Parent Participation in Intensive Therapies: the Parents as Partners Approach. Occupational Therapy Summit of Scholars, Boston University, Boston, MA, June 2 -3, 2017.
5. Navarro-Walker, L., Cleary, D., Darragh, AR., DeAngelis, T., Ellington, A., Foidel, S., Herz, N., & Winz, Gregory. (March, 2017). EDSIS Annual Program: The doctoral experiential-cultivating & sustaining relationships that support OT education, community, & OTD student outcomes. 2017 American Occupational Therapy Association Annual Conference and Centennial Celebration on March 31, 2017, Philadelphia, PA.
6. Darragh, AR, Mechan, PL, Frost, L, White, L, Eason, M. (September, 2016) Safe Patient Handling and Mobility Technologies: Facilitating Patient Rehabilitation. St. Ambrose University, Davenport, IA
7. Darragh, A.R., Polivka, B., Lavender, S., Sommerich, C., Stredney, D., Wills, C. (May, 2015). Home Healthcare Hazard Training through Virtual Simulation. Occupational Therapy Summit of Scholars, University of Southern California, Los Angeles, CA, 2015.
8. Darragh, A.R. (Aug 2014) Presenter. "Safe patient handling and mobility in rehabilitation." Presented at Association of Safe Patient Handling Professionals Monthly Webinar Series.
9. Darragh, A.R. (May, 2014) Poster. "Effects of a safe patient handling and mobility program on patient self-care outcomes." Occupational Therapy Summit of Scholars, Philadelphia, PA.
10. Darragh, A.R. & Campo, M. (Mar 2012). Lecturer. "The Bernice Owen Research Award Lecture: Safe patient handling and rehabilitation: How did we get here and where are we going?" Presented at 12th Annual Safe Patient Handling and Movement Conference Rosen Center, Orlando, Florida, US.
11. Persch, A.C., Darragh, A.R., Pizur-Barnekow, K, Johnston, M.V. (Mar 2012). Poster. "Caregiver perceived effectiveness of care coordination. Poster presentation presented at the 1st Annual OT Summit of Scholars, Washington University, St. Louis, MO.
12. Radawiec, S., Mechan, P., Whipple, K., Darragh, A.R., Moderator. "Technologies & practical techniques: Hands-on use of equipment for therapists." Presented at 9th Annual Safe Patient Handling & Movement Conference Buena Vista Palace Hotel and Spa, Lake Buena Vista, Florida, United States. (Mar 2009)
13. Darragh, A.R., (Oct 2008) Lecturer. "Safe patient handling policy development." Presented at Safe Movement and Handling: Application in the School Setting. Wintergreen Resort and Conference Center, Wisconsin Dells, Wisconsin, United States.
14. Darragh, A.R. (Oct 2008) Lecturer. "Work-related musculoskeletal injuries in occupational and physical therapists in pediatrics." Presented at Safe Movement and Handling: Application in the School Setting. Wintergreen Resort and Conference Center, Wisconsin Dells, Wisconsin, United States.
15. Radawiec, S., Rockefeller, K., Whipple, K., Harwood, K., Darragh, A.R. (Mar 2008) Moderator. "Technologies & practical techniques: Hands-on use of equipment for therapists." Presented at 8th Annual Safe Patient Handling & Movement Conference Buena Vista Palace Hotel and Spa, Lake Buena Vista, Florida, United States.

Other Presentations

International

1. Darragh, AR & DiGiovine, C. (May, 2018). Holistic Admissions: Diversity in the OT Workforce Starts with OT Education. Paper presented at the World Federation of Occupational Therapy, Capetown, South Africa, May 21-25, 2018
2. Darragh, AR & DiGiovine, C. (May, 2018). Holistic Review in Admissions. Poster presented at the World Federation of Occupational Therapy, Capetown, South Africa, May 21-25, 2018
3. Darragh, AR, Koss, L, Persch, A, DeLuca, S, Ramey, S. (September, 2017). Facilitating Parent Participation in Intensive Therapies: the Parents as Partners Approach. AACPD, Montreal, Canada.
4. Persch, A. C., Darragh, A. R., & Cleary, D. S. (September, 2017). SP66: Keys to effective job matching for individuals with intellectual disabilities. *Developmental Medicine & Child Neurology*, 59: 118. doi:10.1111/dmcn.64_13512. Peer-reviewed poster presentation at the Annual Meeting of the American Academy of Cerebral Palsy and Developmental Medicine (AACPD).
5. Reifenberg, G., Eismann, M. M., Cleary, D. S., Malone, H. C., Rutkowski, S., Darragh, A. R., & Persch, A.C. (November 2015). Job matching practices of Project SEARCH professionals. Poster session presented at the Division of Career Development and Transition annual conference. Portland, OR. Refereed
6. Wills, C., Polivka, B., Darragh, AR., Lavender, S., Sommerich, C., Stredney, D. (October, 2015) Decision quality and educational needs of healthcare personnel to improve decision-making about managing home homecare hazards. 37th Annual North American Society for Medical Decision Making Meeting, St. Louis, MO. Poser presentation
7. McCrory, B.M., Burnfield, J.M., Darragh, A.R., Meza, J.L., Irons, S.L., Link, A.M., Brusola, G. (Oct 2014). Work injuries among therapists in physical rehabilitation. Human Factors and Ergonomic Society International Annual meeting. Chicago, IL. Poster presentation.
8. Sample, L., Darragh, A.R., & Stallones, L. (Jan 1998) Adolescent work practices on northeastern Colorado farms. Injury Prevention and Control: 4th World Conference. Amsterdam, Netherlands

9. Darragh, A.R. & Sample, P. (Jan 1997) Clinic versus home functional performance: Use of the assessment of motor and process skills (AMPS) with adults with acquired brain injuries. *Advances in Neurotrauma: From Research to Community Living*. 2nd World Congress on Brain Injury. Seville, Spain.
10. Darragh, A.R., Dettmer, J., Sample, P. (Jan 1997). Vocational/Community reintegration following brain injury: A service model." *Advances in Neurotrauma: From Research to Community Living*. 2nd World Congress on Brain Injury. Seville: Spain.
11. Sample, P. & Darragh, A.R. (Jan 1997). Perceptions of intervention efficacy: A qualitative care access study. *Advances in Neurotrauma: From Research to Community Living*. 2nd World Congress on Brain Injury. Seville, Spain.

National

1. Schmidt, EK., Hand, BN, Darragh, A, Simpson, K. (April, 2019). The Need for OT in Promoting Sexual Health Education for Individuals with Intellectual and Developmental Disabilities. Scientific Research Panel presentation at the American Occupational Therapy Association Annual Conference and Expo, New Orleans, LA, April 4, 2019
2. Boyd, M., Grace, A., Kelly, L., Omiatek, J., Darragh, A., Anderson, S., Flinn, S. (April, 2019). Conservative Hand Arthritis Management Program. Poster presentation at the American Occupational Therapy Association Annual Conference and Expo, New Orleans, LA, April 5, 2019.
3. The OTD Capstone Project and Doctoral Experience: Implementation and Integration. Darragh, AR., Kemp, EK, Robinson, M, Cleary, D, Reifenberg, G, Walter, J. Poster presentation at the American Occupational Therapy Association Annual Conference and Expo, New Orleans, LA, April 6, 2019
4. Schmidt, E.K., Hand, B.N., Simpson, K., Darragh, A., (2018, November). Comparison of the Prevalence of STIs and STI Screening for Individuals with Intellectual and Developmental Disabilities and those without Disabilities, Oral Presentation at the American Public Health Association Annual Meeting, San Diego, CA November 12, 2018.
5. Polivka, B., Darragh, A., Lavender, S., Sommerich, C., Stredney, D. & Wills, C. (Nov. 2018). Virtual Simulation Training for Home Healthcare workers (HH-VSTS). Paper presented at the 2018 American Public Health Association Annual Conference, San Diego, CA, November 13, 2018.
6. Darragh, AR & DiGiovine, CP. (October, 2018). Holistic Review in OT Admissions: Diversity in the OT Workforce Starts with OT Education. AOTA Education Summit, Louisville, KY. October 13-14, 2018.
7. Henzi, D., Darragh, AR., Doherty, B., Gordon-Hickey, S., Piernik-Yoder, B., Roden, A. (October, 2018). Students' Perspectives About Occupational Therapy Education and the Occupational Therapy Program Learning Environment. Presented at Association of Schools of Allied Health Professions annual meeting, St Petersburg, FL, October 9 – 13, 2018.
8. DeLuca, S., Ramey, S., Nitkin, R., Darragh, AR., Conaway, M. (October, 2018) Design and Conduct of Comparative Effectiveness Trials and Practice Based Research in Cerebral Palsy. Pre-Conference Workshop at the American Academy of Cerebral Palsy and Developmental Medicine Annual Meeting, Cincinnati, OH, October 10 – 13, 2018.
9. Koss, E & Darragh, AR. (April, 2018). Occupational Therapy; A solution for safe sexual practices for individuals with intellectual and developmental disabilities. American Occupational Therapy Association Annual Conference and Expo, April 19 – 22, 2018 Salt Lake City Utah.
10. Future of the Profession Town Hall Meeting. (April, 2018). Served a panelist for a moderated discussion with AOTA members about the OTD educational requirements being put forth by ACOTE®. American Occupational Therapy Association Annual Conference and Expo, April 19 – 22, 2018 Salt Lake City Utah
11. Wills, C.E., Polivka, B., Sommerich, C.M., Stredney, D., Darragh, A.D., Lavender, S. (April, 2018). Accuracy of home healthcare worker risk perceptions and decision making following a virtual simulation training for managing home health hazards. 42nd Annual Midwest Nursing Research Conference, April 12 – 15, 2018, Cleveland, OH.
12. Koss, E., Darragh, A, Brown, C. (November, 2017). A review of the evidence on the effectiveness of sexual education programs for individuals with intellectual and developmental disabilities. Roundtable presentation at American Public Health Association Annual Meeting, Atlanta, GA. Author; Koss presented the paper.
13. Larsen, D & Darragh, AR. (October, 2017). Holistic Review in Admissions. Association of Schools of Allied Health Professions Annual Meeting. San Antonio, TX.
14. Stredney, D, Darragh, AR, Wills, C., Lavender, S, Sommerich, C, & Polivka, B. (June, 2017). Virtual Simulation Training System (VSTS). NIOSH 2017 Expanding Research Partnerships: State Of The Science Conference. Aurora, CO. Ignite Session.
15. Polivka, B., Wills, C., Darragh, AR, Lavender, S, Sommerich, C, Stredney, D. (June, 2017). Virtual Simulation Training in Home Healthcare. NIOSH 2017 Expanding Research Partnerships: State Of The Science Conference. Aurora, CO. Concurrent Presentation
16. Darragh, A.R. Vicary, K., Hock, K., Gaerke, L., Flinn, S. (March 2017). Home-based intervention for chemotherapy-induced peripheral neuropathy. 2017 American Occupational Therapy Association Annual Conference and Centennial Celebration on March 31, 2017, Philadelphia, PA. Poster
17. Darragh, AR & Rich, A. (March 2017). Integrating safe patient handling with rehabilitation paradigms. 2017 American Occupational Therapy Association Annual Conference and Centennial Celebration on March 31, 2017, Philadelphia, PA. Poster

18. Ramey, S, Stevenson, RD, DeLuca, S, Darragh, AR. (September, 2016). Constraint induced movement therapy (CIMT): A new era of comparative effectiveness research and documentation of fidelity of treatment. AACPD 70th Annual Meeting, Hollywood, FL.
19. Polivka, B. Wills, C., Darragh, A., Lavender, S., Sommerich, C., & Stredney, D. (2016, June). Usefulness, usability, and desirability of a virtual simulation training for home healthcare workers. Poster presented at the 2016 Association for Community Health Nurses Educators and Association of Public Health Nurses Combined Conference, Indianapolis, Indiana.
20. Polivka, B. Wills, C., Darragh, A., Lavender, S., Sommerich, C., Stredney, D. (March, 2016). Methods for assessing the usefulness, usability, and desirability of virtual simulation training. Paper presented at the 2016 Midwest Nursing Research Society, Milwaukee, Wisconsin.
21. Fischer, J.V., Ramey, S.L., DeLuca, S., Stevenson, R.D., Darragh, A.R. (September 2016). High dosage pediatric therapy: does it cause stress for parents of patients with cerebral palsy? AACPD 70th Annual Meeting, Hollywood, FL.
22. Darragh, AR, Lavender, S., Sommerich, C., Wills, C., Polivka, B., Stredney, D. (April, 2016). Slips, Trips and Falls in Homes: Home Healthcare Workers at Risk. American Occupational Therapy Association Conference, Chicago, IL.
23. Wills, C.E., Polivka, B., Darragh, A., Lavender, S., Sommerich, C., & Stredney, D. (2015, Oct). Decision Quality and Educational Needs of Healthcare Personnel to Improve Decision-Making about Managing Home Healthcare Hazards. Poster presented at the 37th Annual Meeting of the Society for Shared Medical Decision Making (SMDM), St. Louis, MO.
24. Tanner, K., Cleary, D. S., Malone, H. C., Rutkowski, S., Darragh, A. R., & Persch, A. C. (October, 2015). Job matching practices of professionals supporting individuals with disabilities in transition to employment. Poster session presented at the American Academy of Cerebral Palsy and Developmental Medicine. Austin, TX. Refereed.
25. Ramey, S., DeLuca, S., Darragh, AR. (October, 2015) Fidelity measures for intervention integrity: An innovative approach to training. Oral presentation presented at the American Academy of Cerebral Palsy and Developmental Medicine. Austin, TX. Refereed.
26. Polivka, B., Wills, C.E., Darragh, A., Lavender, S., Sommerich, C., & Stredney, D. (2015, July). Environmental Hazards Encountered by Home Health Care Personnel. Paper presented at the International Home Care Nurses Organization (IHCNO), Chicago, IL.
27. DiGiovine, C., Darragh, A., Berner, T., Duncan, T. (June, 2015). The Effect of Whole Body Vibration on Power Wheelchair Mobility: A Focus Group. Poster presented at RESNA, Denver, CO.
28. Wills, C.E., Polivka, B., Darragh, A., Lavender, S., Sommerich, C., & Stredney, D. (April, 2015). Engaging Home Healthcare Personnel in Understanding "Making Do" Decision-making about Managing Home Healthcare Hazards. Paper presented at the annual meeting of the Midwest Nursing Research Society, Indianapolis, Indiana.
29. Polivka, B., Wills, C.E., Darragh, A., Lavender, S., Sommerich, C., & Stredney, D. (2015, April). Environmental Hazards Encountered by Home Health Care Personnel. Paper presented at the annual meeting of the Midwest Nursing Research Society, Indianapolis, Indiana.
30. Sommerich, C., Lavender, S., Polivka, B., Darragh, A., Wills, C.E., & Stredney, D. (April, 2015) Room by Room Assessment of Hazards in Home Health Care. Poster presented at the annual Human Factors in Health Care: Improving the Outcomes conference. Baltimore, Maryland.
31. Darragh, AR., Polivka, B, Lavender, S, Sommerich, C.M., Wills, C. Stredney, D. (April, 2015). Virtual Simulation Training in Home Health Care. Poster presented at The 2015 American Occupational Therapy Association Annual Conference & Expo, Nashville, TN.
32. Frost, L., Darragh, AR, Duncan, A. (April, 2015). Safe Patient Handling Programs – How to become your workplace champion. Short course presented at the 2015 American Occupational Therapy Association Annual Conference & Expo, Nashville, TN.
33. Wills, C., Polivka, B., Darragh, A.R., Lavender, S.A., Sommerich, C.M., Stredney, D. (September, 2014). "Making Do" Decision-making among home healthcare personnel: Implications for designing a virtual simulation training for assessing and managing home health hazards. 2014 Council for the Advancement of Nursing Science.
34. Darragh, A.R. (May, 2014) Poster. "Effects of a safe patient handling and mobility program on patient self-care outcomes." Occupational Therapy Summit of Scholars, Philadelphia, PA.
35. Darragh, A.R, Duncan, A, Frost, L, Rich, A, Mehan, P. (April, 2014). Lecturer. "Putting the fun in functional: Safe patient handling and rehabilitation." Hite Symposium, Columbus, OH,
36. McCrory B, Burnfield, J.M., Meza, J.L., Darragh, A.R., Irons, S.L. (October, 2014) "The impact of patient lifts on work injuries among physical rehabilitation therapists in Nebraska." *Public Health Association of Nebraska 2014 Annual Conference*, October 8-9, 2014, Grand Island, NE, USA.
37. Duncan, A.D., Frost, L, Mehan, P, Rich, A, Darragh, A.R. (April, 2014) Lecturer. "Safe patient handling in rehabilitation." Pre-conference Institute, American Occupational Therapy Association, Peers Within Field, Baltimore, MD,
38. Campo, M & Darragh, A.R. (Nov, 2013). Lecturer. "Safe patient handling in rehabilitation." American Congress of Rehabilitation, Annual Meeting. Orlando, FL
39. Darragh, A.R. (Apr 2013) Lecturer. "The effect of a safe patient handling program on functional mobility outcomes." Presented at 2013 AOTA Annual Conference and Expo, Peers within Field, San Diego, California, United States.

40. Darragh, A.R., Pentico, M., Rice, M. (Apr 2013) Lecturer. "Occupational therapy and safe patient handling: Strategies for program design & implementation and equipment use in practice." Presented at 2013 AOTA Annual Conference and Expo, Peers within Field, San Diego, CA, United States.
41. Frost, L.D., Duncan, A.D., Darragh, A.R. (Apr 2013) Lecturer. "Evidence-based safe patient handling and movement for therapists and students." Presented at 2013 AOTA Annual Conference and Expo, Peers within Field, San Diego, Ohio, United States.
42. Pizur-Barnekow, K, Darragh, A.R. (Dec 2012) Poster Presenter. "Health literacy: Application to early intervention and early childhood practice." Presented at AUCD 2012, Peers within Field., Washington D.C., United States.
43. Darragh, A.R. (Apr 2012) Lecturer. "Safe patient handling and movement equipment as assistive devices for use in OT practice." Presented at American Occupational Therapy Association 2012 Annual Conference and Expo, Indianapolis
44. Pizur-Barnekow, K., Darragh, A.R., Schubert, L. (Apr 2012), Poster. "Integrating health literacy concepts into pediatric settings: Innovative tools for occupation-centered practice." Presented at American Occupational Therapy Association 2012 Annual Conference and Expo Indiana Convention Center, Indianapolis, Indiana, United States
45. Flinn, S, Couch, K, Darragh, A.R. (2012) "Symptoms of cumulative trauma in hand therapy professionals, a descriptive study." Presented at 35th Annual Meeting of the American Society of Hand Therapists. San Diego, California, United States. [Peer-Review]
46. Campo, M. & Darragh, A.R. (Mar 2012), Lecturer. "The effect of a safe patient handling and movement program on rehabilitation outcomes." Presented at 12th Annual Safe Patient Handling and Movement Conference Rosen Center, Orlando, Florida, United States.
47. Darragh, A.R. & Campo, M. (Mar 2012), Lecturer. "Productivity, career longevity and quality of life in therapists working with pain." Presented at 12th Annual Safe Patient Handling and Movement Conference Rosen Center, Orlando, Florida, United States.
48. Darragh, A.R., Campo, M., Sommerich, C.M., Lavender, S.A. (Mar 2012), Lecturer. "Care activities that place family caregivers at risk." Presented at 12th Annual Safe Patient Handling and Movement Conference Rosen Center, Orlando, Florida, United States.
49. Campo, M, Shiyko, M; Margulis, H; Darragh, A.R. (Feb 2012), Poster. "The effect of a safe patient handling program on rehabilitation outcomes for patients with stroke." Presented at APTA Combined Sections Meeting, Peers within Field, Chicago, United States.
50. Darragh, A.R. & Campo, M. (Mar 2011), Lecturer. "Preventing patient handling injuries in informal caregivers." Presented at 11th Annual Safe Patient Handling and Movement Conference, Orlando, Florida
51. Darragh, A.R. & Campo, M. (Mar 2011), Lecturer. "Productivity, career longevity, and quality of life in therapists working with pain." Presented at 11th Annual Safe Patient Handling and Movement Conference, Orlando, Florida, United States.
52. Darragh, A.R. (May 2010), Lecturer. "The hidden costs of working injured." Presented at American Occupational Therapy Association 2010 Annual Conference and Expo, Orlando, Florida, United States.
53. Darragh, A.R. (May 2010), Lecturer. "Work-related injuries in OT: Activities that place us at risk." Presented at American Occupational Therapy Association 2010 Annual Conference and Expo, Orlando, Florida, United States.
54. Frost, L & Darragh, A.R. (May 2010). Lecturer. "Safe patient handling for occupational therapists." Presented at American Occupational Therapy Association 2010 Annual Conference and Expo, Orlando, Florida, United States.
55. Darragh, A.R. and Campo, M. (Apr 2010), Lecturer. "Hidden costs of working injured." Presented at 10th Annual Safe Patient Handling and Movement Conference Buena Vista Palace, Orlando, Florida, US.
56. Campo, M. & Darragh, A.R. (Apr 2009), Lecturer. "Consequences of working injured." Presented at 9th Annual Safe Patient Handling and Movement Conference Buena Vista Palace Hotel and Spa, Lake Buena Vista, Florida, United States.
57. Darragh, A.R. & Campo, M. (Apr 2009), Lecturer. "Therapists DO get injured." Presented at 9th Annual Safe Patient Handling and Movement Conference Buena Vista Palace Hotel and Spa, Lake Buena Vista, Florida, United States.
58. Darragh, A.R. (Mar 2008) Lecturer. "Risks associated with patient handling in OTs." Presented at 8th Annual Safe Patient Handling & Movement Conference Buena Vista Palace Hotel and Spa, Lake Buena Vista, Florida, United States.
59. King, P., Darragh, A.R., Lintner, J. (Jan 2008) Poster. "Development and delivery of a safe patient handling curriculum in the University of Wisconsin-Milwaukee occupational therapy and physical therapy programs (Poster)." Presented at 8th Annual Safe Patient Handling & Movement Conference Buena Vista Palace Hotel and Spa, Lake Buena Vista, Florida, United States.
60. Poglitsch, L.A., Emery, M., Darragh, A.R. (Jun 2005). Poster. "A qualitative study of the determinants of successful discharge for older adult inpatients." Poster presentation Annual 2005 Physical Therapy Conference.
61. Darragh, A.R. & Sample, P. (Jan 1997) Lecturer. "Clinic vs. home functional performance." Presented at Braintree Hospital Rehabilitation Network NeuroRehabilitation Conference, Braintree, Massachusetts, United States.
62. Darragh, A.R. (Jan 1996) Lecturer. "Clinic vs home functional performance in adults with acquired brain injury." Presented at Medical College of Virginia 21st Annual Postgraduate Course on Rehabilitation of the Brain Injured Adult and Child, Williamsburg, Virginia, United States.
63. Darragh, A.R. & Sample, P. (Jan 1996) Lecturer. "Perceptions of intervention efficacy: The experiences of rural and urban women with brain injuries." Presented at Medical College of Virginia 21st Annual Postgraduate Course on Rehabilitation of the Brain Injured Adult and Child, Williamsburg, Virginia, United States.

64. Rowntree, A. & Dettmer, J.L. (Jan 1993) Lecturer. "The functional community-referenced assessment: A tool for assessing adults with traumatic brain injuries." Presented at One Day Training Workshop Laradon Hall Society for Exceptional Children and Adults, Denver, Colorado, United States.

CURRENT and RECENTLY COMPLETED RESEARCH FUNDING

Funded Research

1. 02/01/2019 – 1/31/2023. Perinatal Arterial Stroke: A Multi-site RCT of Intensive Infant Rehabilitation (I-ACQUIRE). Funding Agency: National Institutes of Health, National Institute of Neurological Disorders and Stroke (Stroke Net). Grant/Contract Number: 1U01NS106655-01A1
PI: Ramey, S; Lo, W
OSU Site-PI: Darragh, AR and Heathcock, J.
2. 05/01/2014 – 06/30/2019. Multisite RCT of 3 neurorehabilitation therapies for infants with asymmetrical CP. National Institutes of Health, Eunice Kennedy Shriver National Institute of Child Health and Human Development. Research Grant. Grant/Contract Number: 1R01HD074574-01A1.
PI: Ramey, S.
Site-PI: Darragh, AR
3. 09/2013 – 12/31/2017. Home Healthcare Hazard Training through Virtual Simulation. Centers for Disease Control, National Institute for Occupational Safety and Health. (\$884,074, Total Award) Research Grant.
Grant/Contract Number: 1R01OH010425A-01
PI: Polivka, B
Site-PI: Darragh, AR
4. 09/27/2012-02/28/2019. Multi-site RCT of Pediatric Constraint-Induced Movement Therapy (CIMT), NIH-NICHD (3,741,545)
Research Grant.
Grant/Contract Number: 5R01HD068345-03
PI: Ramey, DeLuca, Stevenson
Site PI: Darragh, AR

AWARDS FOR RESEARCH, SCHOLARLY, CREATIVE WORK

- 2013 Fellow, American Occupational Therapy Association.
- 2012 Bernice Owen Award for Research in Safe Patient Handling, VISN 8 Patient Safety Center of Inquiry, VA, Tampa, FL
- 2009 Virginia Scardina Lectureship Award, Ohio Occupational Therapy Association, Ohio Occupational Therapy Association, OH

Deborah M. Grzybowski, Ph.D.
Associate Professor Clinical
Department of Engineering Education
Department of Chemical and Biomolecular Engineering
The Ohio State University, 244 Hitchcock Hall, 2070 Neil Ave., Columbus, Ohio 43210-1057
Telephone: 614-292-1563, Fax: 614-247-6255, E-mail: Grzybowski.3@osu.edu

Short Bio

Dr. Deborah Grzybowski is an Associate Professor of Practice in the Department of Engineering Education at The Ohio State University. Deb is Co-Director of the curriculum development of the Game Studies and Esports undergraduate major. This major is a collaboration of 5 colleges including Arts & Sciences, Education and Human Ecology, Engineering, Fisher College of Business, and Medicine. The comprehensive major will provide students to fill roles in industry ranging from game design and creation, production of gaming events including streaming and broadcasting, and coaching, rehabilitation, and training of esports athletes. Deb has been the Advisor of the Esports Initiative student organization since its creation in 2011.

Her engineering education research focuses on making engineering accessible to all students, including under-represented and under-resourced students, through the use of art-infused curriculum and 3-D models. Her role has given her many opportunities to develop curriculum both for K-12 and for higher education, including bio-engineering curriculum and associated models for the State School for the Blind. She holds degrees in Chemical and Biomolecular Engineering (B.S. & M.S.) and a Ph.D. in Biomedical Engineering.

Education

Ph.D. Biomedical Engineering, 2000. The Ohio State University, Columbus, OH.
M.S. Chemical Engineering, 1982. The Ohio State University, Columbus, OH.
B.S. Chemical Engineering, 1979. The Ohio State University, Columbus, OH.

Employment History

Associate Professor Clinical, Department of Engineering Education, The Ohio State University, Columbus, OH (2016-present).
Associate Professor Clinical, Department of Chemical and Biomolecular Engineering (CBE), The Ohio State University, Columbus, OH (2012-present).
Scientific Advisor, Executive Board of Directors member, The Ohio Lions Eye Research Foundation, Columbus, OH (2011-present).
Assistant Professor Clinical, Engineering Education Innovation Center, College of Engineering, The Ohio State University, Columbus, OH (2012-2015).
Assistant Professor, The Department of Ophthalmology, The Ohio State University, College of Medicine, Columbus, OH (2003-2012).
Director Ohio Lions Eye Research Facility, The Department of Ophthalmology, The Ohio State University, College of Medicine, Columbus, OH (2003-2012).
Research Scientist, The Department of Ophthalmology, The Ohio State University, College of Medicine, Columbus, OH (2002-2003).
Post-Doctoral Fellow, The Department of Biomedical Engineering, The Ohio State University, College of Engineering, Columbus, OH (2000-2002).

French Fellow, Department of Engineering Graphics, The Ohio State University, College of Engineering, Columbus, OH (1992-1999).

Principal Research Scientist, Battelle Memorial Institute, Columbus, OH (1982-1992).

Courses Taught at the Ohio State University (OSU), Columbus, Ohio

1. TEK 8, Translating Engineering to K-12 (ENGR 4850S, ENGR 6850S)
2. Fundamentals of Engineering II for Honors – Robot Option (ENGR 1282.01H)
3. Fundamentals of Engineering II for Honors – Nanotechnology Option (Course Director) (ENGR 1282.02H)
4. Bio-Engineering for students with Visual Impairments I (Developed Course) (EDUTL 5992)
5. Fundamentals of Engineering I for Honors (ENGR 1281.01H)
6. Bio-Engineering for students with Visual Impairments II (Developed Course) (EDUTL 5992)
7. Engineering Fundamental and Laboratory I for Honors (ENGR 191)
8. Engineering Fundamental and Laboratory II for Honors (ENGR 192)
9. Introduction to Engineering I (ENGR 181)
10. Graphics 167 MATLAB (ENGR 167)
11. Engineering Fundamental and Laboratory III for Honors – Robot Option (ENGR 193, previously ENGR 168)
12. Engineering Fundamental and Laboratory III for Honors - Nanotechnology Option (ENGR 193A)

Graduate student advising:

- PhD students advised: 3 graduated (2 BME, 1 CBE)
- Masters students advised: 2 graduated (2 BME)
- Post-Doctoral students advised: 2
- Medical Student research programs advised: 52
- Ophthalmology Resident student research programs advised: 26
- Undergraduate Research programs advised: 24

Graduate Student Committees:

- PhD students: 1 graduated (CEGE), 1 current (CEGE)
- Masters students: 2 graduated (CEGE)
- Undergrad Honors Thesis: 1 graduated (BME)

Publications (Summary):

- Peer-reviewed journal articles: 19
- Proceedings and abstracts: 115 (115 peer-reviewed)
- Chapters in edited books: 2
- Bulletins, tech reports, and fact sheets: 2
- Invited speaker at workshops, conferences, and symposiums: 26

Selected recent publications (Engineering education related):

1. Grzybowski, D.M., Yang, S.J., Wild, T. “ The Understanding of the Structure of the Animal Cell Through Tactile Diagrams and 3-D Printed Models by Students with Visual Impairments”, Journal of Visual Impairments and Blindness, in review.

2. Grzybowski, D.M., Yang, S.J., Wild, T. "Using the Engineering Problem Solving Process to Increase Scientific Conceptual Understanding by Students with Visual Impairments", *The Journal of Women and Minorities in Science and Engineering*, in review.
3. Dixon, K., Grzybowski, D.M., Le, J.V., Castro, C.E. "Engaging Adolescent Girls in Engineering by Integrating Visual Art into DNA Origami Content", *International Journal of Engineering Education*, in review.
4. Bowyer, T., Larson, J.R., Grzybowski, D.M. "Individualized, assessment-based manual therapy to reduce chronic pain and increase function: Case study of a patient with fibromyalgia and diabetes," *Journal of Family Medicine and Disease Prevention*, accepted.
5. Grzybowski, D.M., Wild, T., Koehler, K. "Using 3-D Printed Materials to Support Learning in the Biological Sciences." *The Science Education Council of Ohio Symposium*, Columbus, OH, January 30, 2018.
6. Wild, T., Grzybowski, D.M., Koehler, K. "Making Science Education Accessible for Students with Visual Impairments." *OCALICON 2017*, Columbus, OH, November 16, 2017.
7. Dixon, K., Barton, M., Le, J.V., Castro, C.E., Richardson, O.R., **Grzybowski, D.M.** "Making Meaning through Art-Integrated Engineering." *2017 American Society for Engineering Education Annual Conference*, Columbus, OH, June 2017.
8. **Grzybowski, D.M.**, Wild, T., Yang, S.J. "Engineering Education for Students with Visual Impairments." *2017 American Society for Engineering Education Annual Conference*, Columbus, OH, June 2017.
9. Wild, T., **Grzybowski, D.M.**, Yang, S.J. "EEVI: Engineering Education for Students with Visual Impairments." *Council for Exceptional Children*, Boston, MA, April 20, 2017.
10. **Grzybowski, D.M.**, Wild, T. "EEVI: Engineering Education for Students with Visual Impairments." *National Science Teachers Association*, Columbus, OH, December 1, 2016.
11. Bannerman, R., Theiss, A. & **Grzybowski, D.M.** "MAKER: Utilizing 3D Printing of Nanotechnology Design Project Prototypes to Enhance Undergraduate Learning." *2016 American Society for Engineering Education Annual Conference*, New Orleans, LA, June 2016.
12. Dixon, K. & **Grzybowski, D.M.** "Design as the Practice of Probability: Engaging Adolescent Girls in Art-Infused Engineering." *2016 American Society for Engineering Education Annual Conference*, New Orleans, LA, June 2016.
13. Cohen, W., Freuler, R.J., & **Grzybowski, D.M.** "MAKER: Applications of 3D Printing and Laser Cutting in Development of Autonomous Robotics." *2016 American Society for Engineering Education Annual Conference*, New Orleans, LA, June 2016.
14. **Grzybowski, D.M.** and J.T. Demel. "Assessment of Inverted Classroom Success Based on Felder's Index of Learning Styles." *2015 American Society for Engineering Education Annual Conference*, Seattle, WA, June 2015.
15. **Grzybowski, D.M.**, Stavrdis, O., Sorby, S.A., Merrill, J., Thomas, J.G., Barclay, L., Abrams, L. "Impact of Optional Supplemental Course to Enhance Spatial Visualization Skills in First-Year Engineering Students." *2014 American Society for Engineering Education Annual Conference*, Indianapolis, IN, June 2014.
16. Spang, M.T., **Grzybowski, D.M.**, Strickland, A. A. "Works in Progress: Impact of First-Year Micro-/Nano-Technology Research Project Course on Future Research and Graduate/Professional School Involvement." *2014 American Society for Engineering Education Annual Conference*, Indianapolis, IN, June 2014.
17. Kecskemety, K., **Grzybowski, D.M.** "Student Perceptions of Inverted Classroom Benefits in a First-Year Engineering Course." *2014 American Society for Engineering Education Annual Conference*, Indianapolis, IN, June 2014.

18. Hird, N.L. and **Grzybowski, D.M.** “Impact of Computational Fluid Dynamics use in a First-Year Engineering Research Design Project on Future Performance in Fluid Mechanics.” 2014 American Society for Engineering Education Annual Conference, Indianapolis, IN, June 2014.
19. Harper, K.A., Baker, G.R, and **Grzybowski, D.M.** “First Steps in Strengthening the Connections Between Mathematics and Engineering.” 2013 American Society for Engineering Education Annual Conference, Atlanta, GA, June 25, 2013.
20. Tague, J., Czocher, J.A., Baker, G.R., Harper, K.A., **Grzybowski, D.M.**, and Freuler, R. “Engineering Faculty Perspectives on Mathematical Preparation of Students.” International Conference on Engineering Education and Research 2013, Marrakech, Morocco, July 2013.
21. **Grzybowski, D.M.**, Abernathy, S., Boyd, A.C., Cain, D., Hird, N.L., Madhavan, R.R., Shi, Y., Spang, M.T., Strickland, A.A., and Clingan, P.A. “Student Assisted Approach to Curriculum Changes to Facilitate a Flipped Classroom for First-Year Engineering Micro-/Nano-technology 'Lab-on-a-chip' Research Project.” International Conference on Engineering Education and Research 2013, Marrakech, Morocco, July 2013.

Honors and Awards

- College of Engineering Dean’s Award for Distinguished Outreach Achievements (2019)
- Outstanding Service to the Department of Engineering Education Award (2018)
- Recipient Sphinx/Mortar Board Faculty Award (2014)
- STEP Faculty Member (2013 – present)
- Recipient of Faculty Award for Outstanding Commitment to Student Education, Panhellenic Association (2012)
- Member Executive Board, Scientific Advisor, The Ohio Lions Eye Research Foundation (2011 – present)
- ISTAART ICAD Travel Fellowship (2008)
- Society for Research in Hydrocephalus and Spinal Bifida Travel Award (2008)
- Intracranial Hypertension Research Foundation Scientific Advisory Panel (2006 – present)
- The BrainChild Steering Committee (2006 – present)
- Recipient Landacre Faculty Teaching Award (2005)
- Association for Research in Vision and Ophthalmology Travel Award (2004)
- CIC Women in Science and Engineering Travel Grant (1998)
- French Fellowship Recipient (1992 – 1999)
- Graduate Fellow; Tau Beta Pi; Sigma Delta Epsilon; Texnikoi; Outstanding Senior in Chemical Engineering Award, The American Institute of Chemists; Outstanding Freshman Award, Outstanding Freshman Chemistry Award, CRC. (1976-1982)

Panel Member

- NSF Biomedical Engineering Panel 2013 & 2014 NSF Graduate Research Fellowship Program (GRFP)
- National Sciences and Engineering Research Council of Canada, Collaborative Health Research Projects, 2011.
- Alzheimer’s Association, 2009, 2010, 2011
- NIH Neurotransporters, Receptors, Channels, and Calcium Signaling Study Section; 2/2011
- NIH ZRG1 ETTN-K (10) B - Small Business: Clinical Neurophysiology, Devices, Auditory Devices and Neuroprosthesis; 10/2011

Selected Sponsored Research (Approximate Total Funding Received \$1,290,000)

1. “Engineering Education for Students with Visual Impairments (EEVI) Project,” Principal Investigator, Ohio Department of Education, MSP Program, \$598,335; 2015-2017.
2. “Exploring the Impacts of Entrepreneurial Minded Learning (EML) on Student Motivation and Identity from Pilot to Scale in a First-Year Engineering Course,” Co-Principal Investigator, Kern Family Foundation, \$293,707; Jan. 2018 – Aug. 2019.
3. “Designing Together: Diversifying Participation in Engineering Education with High-Need Urban Schools,” Principal Investigator, Connect and Collaborate Implementation Grant, \$85,793; 2017-2018.
4. “smART::ART Integrated Formal and Informal STEM Education,” Principal Investigator, OSU Engagement Impact Grant, \$45,000; 2015-2017.
5. “smART: Spatial Visualization and Creativity in Middle School Engineering,” Co-Investigator, Battelle Community STEM Challenge Grant, \$53,000; 2015-2017.
6. “1282.02H OSU Library Course Enhancement Grant,” Principal Investigator, \$2,000; 2012-2013.

Inter-institutional collaborations

- Manchester University (co-author)
- Brown University (co-author)
- Duke University (co-author, co-PI)
- ETH Zurich (co-author)

Roger Crawfis
Associate Professor
Computer Science and Engineering Department
The Ohio State University
crawfis.3@osu.edu

Short Bio

Roger Crawfis is CEO for Games That Move You, Pbc. and an Associate Professor with tenure at The Ohio State University in the Department of Computer Science and Engineering. He holds adjunct positions in the Biomedical Engineering Department, and the Advanced Computing Center for Art and Design (ACCAD). Dr. Crawfis received his BS degree in computer science, as well as a BS degree in Applied Mathematics from Purdue University in 1984. He received his MS and PhD in Computer Science from the University of California, Davis in 1989 and 1995, respectively. From 1984 to 1996, he was a researcher at the Lawrence Livermore National Laboratories, where he developed complex simulation codes and associated visualizations. He later led the research efforts in scientific visualization, with over \$2 million in funding. His research interests lie in the areas of computer graphics, game technologies, serious games, games for health, real-time rendering, scientific visualization and medical imaging. He serves or has previously served on the Editorial Board for the IEEE Transactions on Visualization and Computer Graphics, the IEEE Visualization conference series, the Eurographics/ACM visualization conference series and many smaller workshops. Roger has authored over 100 scientific publications, and is actively involved in the graphics community. He is a member of the IEEE Computer Society. Through his own consulting company, Crawfis Software, LLC, Dr. Crawfis also regularly consults on legal cases including patents and copyrights, general programming issues, and .NET technologies.

Education:

Ph.D. Computer Science. September 1995, University of California, Davis, CA.
M.S. Computer Science. June 1989, University of California, Davis, CA.
B.S. Computer Science. May 1984, Purdue University, West Lafayette, IN.
B.S. Applied Mathematics. May 1984, Purdue University, West Lafayette, IN.

Professional Experience:

February 2015 – *present*: CEO, Games That Move You, PBC.
September 2001 – *present*, Associate Professor, The Ohio State University.
November 2014 – *present*: CTO, Games That Move You, PBC.
March 2014 – *present*: President and Founder, Crawfis Software, LLC.
June 2012 – August 2012, Electronic Arts, Inc. NBA Live product
Adjunct Professor, The Advanced Computing Center for the Arts and Design (ACCAD), Sept. 1997 – present.
December 2004 – 2011, Chief Architect, VISION platform, DSCI, Inc.
Adjunct Graduate Faculty, Biomedical Engineering, The Ohio State University, September 2001 – present.
September 1996 - 2001: Assistant Professor, The Ohio State University.
May 1993 - September 1996: Graphics Technology Group Leader, Lawrence Livermore National Lab.
June 1984 - May 1993: Computer Scientist, Lawrence Livermore National Lab.
May 1983 - June 1984: Research Assistant, Purdue University.

Publications

Books

1. Ramnath, Rajiv, **Roger Crawfis** and Paolo Sivilotti, [Android 3 SDK Programming for Dummies](#), 2011, John Wiley & Sons, Inc., Hoboken, NJ

Chapters in Edited Books

2. Lining Yang and **Roger Crawfis**, *A Practical System for Constrained Interactive Walkthroughs of Arbitrarily Complex Scenes*, in *Scientific Visualization: The Visual Extraction of Knowledge from Data*. G.-P. Bonneau, T. Ertl, G. Nielson editors, Springer 2006, pp. 345-366.
3. **Crawfis, Roger**, Daqing Xue, Caixia Zhang, *Volume Rendering Using Splatting*, [Visualization Handbook](#), eds.

Charles Hansen, Christopher Johnson, Elsevier Academic Press, 2004, pp. 175-188.

4. **Crawfis, Roger**, Jian Huang, *High-Quality Splatting and Volume Synthesis*, in Data Visualization: The State of the Art, eds. Frits H. Post, Gregory M. Nielson, Georges-Pierre Bonneau, Kluwer Academic Publishers (Boston), 2003. pp. 127-140.
5. Huang, Jian, Roger Crawfis, *Adaptively Represented Complete Distance Fields*, in Geometric Modelling for Scientific Visualization, Guido Brunnet, Bernd Hamann, Heinrich Mueller eds., Springer
6. King, Scott A., **Roger A. Crawfis**, and Wayland Reid, *Fast Volume Rendering and Animation of Amorphous Phenomena*, in Volume Graphics, Ch. 13, Editors Arie Kaufman, Roni Yagel and Min Chen. Springer-Verlag (London) 1999.
7. **Crawfis, Roger** and Nelson Max, *Vector Field Visualization Techniques*, in Data Visualization, edited by C. Bajaj, Wiley and Sons, Ltd, 1999, pp. 75-86.
8. Max, Nelson, **Roger Crawfis** and Barry Becker, *Applications of Texture Mapping to Volume and Flow Visualization*, in Data Visualization, edited by C. Bajaj, Wiley and Sons, Ltd, 1999, pp. 87-105.
9. **Crawfis, Roger** and Michael Allison, *Multiple visualization techniques allow correlation of three scalar fields, one vector field and mesh topology*, in Visual Cues, edited by Peter Keller and Mary Keller, IEEE CS Press, 1993, p. 59-59.
10. **Crawfis, Roger**, Nelson Max and Dean Williams, *Depth cues and position correlate 3-D to 2-D*, in Visual Cues, edited by Peter Keller and Mary Keller, IEEE CS Press, 1993, p. 93-93.
11. **Crawfis, Roger** and Michael Allison, *Color and textures correlate variables*, in Visual Cues, edited by Peter Keller and Mary Keller, IEEE CS Press, 1993, p. 85-85.

Bulletins and Technical Reports

12. Matt Boggus and Roger Crawfis, "Procedural Creation of 3D Solution Cave Models," 6 pp. OSU-CISRC-5/09-TR19. Electronic report under TR19.pdf [OSU-CISRC-5/09--TR19](#).
13. Matt Boggus and Roger Crawfis, "Explicit Generation of 3D Models of Solution Caves for Virtual Environments," 6 pp. OSU-CISRC-5/09-TR18. Electronic report under TR18.pdf [OSU-CISRC-5/09--TR18](#).
14. Matt Boggus and Roger Crawfis, "Modeling Dynamic 3D Caves," 7 pp. OSU-CISRC-8/08-TR43. Electronic report under 2008/TR43.pdf [OSU-CISRC-08/08--TR43](#).
15. Oleg Mischenko, Sundaresan Raman and Roger Crawfis, "Distributed Visualization Framework Architecture," 8 pp. OSU-CISRC-5/08-TR20. Electronic report under 2008/TR20.pdf [OSU-CISRC-05/08--TR20](#).
16. Crawfis, Roger, "Dynamic Code Integration with CodeDom", posted on The Code Project, May 23, 2008, <http://www.codeproject.com/KB/dotnet/CodeDomDelegates.aspx>.
17. Sundaresan Raman, Oleg Mishchenko, and Roger Crawfis, "Layers for Effective Volume Rendering," 6 pp. OSU-CISRC-4/07-TR25. Electronic report under 2007/TR25.pdf [OSU-CISRC-4/07--TR25](#).
18. Roger Crawfis, Eric Noble, Michael Ford, Frederic Kuck, and Eric Wagner, "Clipmapping on the GPU," 9 pp. OSU-CISRC-4/07-TR24. Electronic report under 2007/TR24.pdf [OSU-CISRC-4/07--TR24](#).
19. Caixia Zhang, Daqing Xue, Roger Crawfis and Rephael Wenger, "Extending Interval Volumes into Four Dimensions," 9 pp. OSU-CISRC-1/05-TR06. Electronic report under 2005/TR06.pdf [OSU-CISRC-1/05--TR06](#).
20. Daqing Xue, Darrell Wallace, **Roger Crawfis**, *Tile-Based 3D Display Using A Reconfigurable Display Matrix*, Technical Report, OSU-CISRC-12/04-TR70, The Ohio State University, 2004.
21. Zhang, Caixia, **Roger Crawfis**, *Light transport for mixed polygonal and volumetric data using splatting*, OSU Technical Report OSU-CISRC-10/04-TR53, October 2004.
22. Ming Jiang, Naeem Shareef, Caixia Zhang, Roger Crawfis, Raghu Machiraju and Han-Wei Shen, "Visualization

Fusion: Hurricane Isabel Dataset," 2 pp. OSU-CISRC-10/04-TR59. Electronic report under 2004/TR59.pdf [OSU-CISRC-10/04--TR59](#).

23. Caixia Zhang and Roger Crawfis, "Light Propagation for Mixed Polygonal and Volumetric Data Using Splatting," 8 pp. OSU-CISRC-10/4-TR53. Electronic report under 2004/TR53.pdf [OSU-CISRC-10/04--TR53](#).
24. Ramakrishnan Kazhiyur-Mannar, Rephael Wenger, Roger Crawfis, and Tamal K. Dey, "Adaptive Resolution Isosurface Construction in Three and Four Dimensions," 8 pp. OSU-CISRC-7/03-TR38. Electronic report under 2003/TR38.pdf [OSU-CISRC-7/03--TR38](#).
25. **Crawfis, Roger**, *Report on the DOE Workshop on Tera-Scale Visualization*, LLNL Tech Report, UCRL-JC-123623, (March 1998)
26. **Crawfis, Roger**, and Nelson Max, *Multivariate Volume Rendering*, LLNL Tech Report, UCRL-JC-123623, 1996.
27. **Crawfis, Roger**, *Vector Field Visualization Course Notes*, LLNL Tech Report, UCRL-MI-120622, 1994.
28. **Crawfis, Roger A.**, *Futures: MPP Visualization*, Lawrence Livermore National Laboratory UCRL-MI-120642, 1994, presented at the DOE Graphics Forum, Aspen, CO, April 26, 1997.

Peer Reviewed Journal Articles

29. Jesse Fox, Ph.D.; Jessica McKnight, M.A.; Yilu Sun, M.S.; David Maung, Ph.D.; **Roger Crawfis, Ph.D** *Using a Serious Game to Communicate Risk and Minimize Psychological Distance Regarding Environmental Pollution*. Computers in Human Behavior (submitted).
30. Alexandra Borstad; **Roger Crawfis**, PhD; Kala Phillips, MS; Linda Pax Lowes, PhD; Lise Worthen-Chaudhari, MFA; David Maung, MS; Ryan McPherson, PhD; Amelia Siles, MS, DPT; Lynne V Gauthier, PhD; "In-home delivery of constraint induced movement therapy via virtual reality gaming", in *Journal of Patient-Centered Research and Reviews*.
31. Alexandra Borstad; **Roger Crawfis**, PhD; Kala Phillips, MS; Linda Pax Lowes, PhD; Lise Worthen-Chaudhari, MFA; David Maung, MS; Ryan McPherson, PhD; Amelia Siles, MS, DPT; Lynne V Gauthier, PhD; "In-home delivery of constraint induced movement therapy via virtual reality gaming is safe and feasible: a pilot study", in *Archives of Physical Medicine and Rehabilitation*.
32. Gauthier, LV, Borstad, A, Luong, E, Phillips, K, Lowes, L, Worthen-Chaudhari, L, **Crawfis, R**, Maung, D. Upper extremity recovery following gamified Constraint-Induced Movement therapy: a case study in dense amnesic TBI. *Brain Injury Professional*. Vol. 12, No. 4.
33. Linda P Lowes, Lindsay N Alfano, Roger Crawfis, Katherine Berry, Han Yin, Igor Dvorchik, Kevin M Flanigan, Jerry R Mendell. **Reliability and validity of ACTIVE-seated: An outcome in dystrophinopathy**. *Muscle & Nerve*, 2014; DOI: [10.1002/mus.24557](#)
34. Oleg Mishchenko, **Roger Crawfis**, On Perception of Semi-Transparent Streamlines for Three Dimensional Flow Visualization, *Computer Graphics Forum*, to appear.
35. Praveen Bhaniramka, R. Wenger and **Roger Crawfis**, *Isosurface Construction in Any Dimension Using Convex Hulls*, *IEEE Transactions on Visualization and Computer Graphics*, Volume 10, Number 2 (March/April 2004), pp. 130-141.
36. Daqing Xue and **Roger Crawfis**, *A Modern Implementation of Textured Splats*, *Journal of Graphics Tools*, ACM Press, Volume 8, Number 3, pp. 1-21.
37. Caixia Zhang and **Roger Crawfis**, *Shadows and Soft Shadows with Participating Media Using Splatting*, *IEEE Transactions on Visualization and Computer Graphics*, Volume 9, Number 2 (April-June 2003), pp. 139-149.
38. Klaus Mueller, Jian Huang, Naeem Shareef, and **Roger Crawfis**, *High-Quality Splatting on Rectilinear Grids With Efficient Culling of Occluded Voxels*, *IEEE Transactions on Visualization and Computer Graphics*, Volume 5, Number 2, (June 1999), pp. 116-143.

39. Rudman, David T., Don Stredney, Dennis Sessanna, Roni Yagel, **Roger Crawfis**, David Heskamp, Charles V. Edmond, Jr., and Gregory J. Wiet, *Functional Endoscopic Sinus Surgery Training Simulator*, The Laryngoscope Journal, Volume 108, November 1998, pp. 1643-1647.
40. Mueller, Klaus, Torsten Moeller, Swan, J. Edward II, **Roger Crawfis**, Naeem Shareef and Roni Yagel, *Splatting Errors and Anti-Aliasing*, IEEE Transactions on Visualization and Computer Graphics, Volume 4, Number 2, (June 1998), pp. 178-191. (Winner of Naval Notable Achievement Award).
41. **Crawfis, Roger**, Nelson Max and Barry Becker, *Vector Field Visualization*, IEEE Computer Graphics & Applications (September 1994) pp. 50-56.
42. Max, Nelson, **Roger Crawfis** and Dean Williams, *Visualization for Climate Modeling*, IEEE Computer Graphics and Applications (July 1993), pp. 34-40.
43. Max, Nelson, Pat Hanrahan and **Roger Crawfis**, *Area and Volume Coherence for Efficient Visualization of 3D Scalar Functions*, Computer Graphics Vol. 24 No. 5, pp. 27-33.

Reviews and Abstracts

44. Jiabin Shen PhD, Jennifer Lundine PhD, Jonathan Groner MD, Keith Yeates PhD, **Roger Crawfis, PhD**, En-Ju D. Lin PhD, Joseph Rausch, PhD, H. Gerry Taylor, PhD. *A pilot RCT on the application of virtual reality to rehabilitation of executive functions among children with TBI*, American Psychological Association Technology, Mind & Society Conference 2019
45. Jiabin Shen PhD, Jennifer Lundine PhD, Jonathan Groner MD, Keith O. Yeates PhD, **Roger Crawfis, PhD**, En-Ju D. Lin PhD, Henry Xiang PhD. *Virtual Reality as a Tertiary Prevention Strategy for Reducing Executive Function Impairment Following Pediatric TBI: A Pilot Study* 2019 Society of Pediatric Psychology Annual Conference (SPPAC)
46. **Crawfis, Roger**, *Looking Forward: Procedural Content for Games and Lessons Learned From Visualization*, Keynote talk, CGVCVIP 2012, Lisbon, Portugal, July 21, 2012 (**Keynote Talk**) (http://iadisportal.org/previouseditions/CGV_2012.pdf).
47. Bhaniramka, P., **Crawfis, R.**, Kang, H.S., Liang, D., Wenger R., Yao, Z. (1999). Marching Cubes in Four and Higher Dimensions: Extended Abstract. 4th CGC Workshop on Computational Geometry.
48. **Crawfis, Roger**, *Parallel Rendering and Image-based Rendering*, Large Data Visualization Workshop 1999, Salt Lake City, Utah.

Creative Works

Patents

1. Crawfis, Roger, F. C. Kuck, E. Noble, E. Wagner, Patent # 7626591 (2009) for *Obelisk Textures: A Multi-texturing Approach to Clip-maps*.
2. Becker, Barry and Roger Crawfis, Patent #6,373,483 (2002) for *Method System and Computer Program for Visually Approximating Data Using Color to Represent Values of a Categorical Variable*.

Software

3. Recovery Rapids – Commercial product of Games That Move You that offers game-based rehabilitation, exercise and customized therapy.
4. Canyon Run – A procedural content generation of a river for gamified rehab.
5. Programmer's Distributed Visualization Framework – A graphics and visualization framework in C# complete with user interface controls and asset management and remoting capabilities. Open sourced at <http://www.codeplex.com/OSUvolumeRenderer>.
6. Tornado Data set generator – A simple C function to generate vector fields used for comparison in the visualization and flow visualization communities. Open-sourced at www.cse.ohio-state.edu/~crawfis/Data/Tornado.
7. Textured Splats – C++ software for texture splatting. Open-sourced at www.llnl.gov/graphics.
8. Volume Renderer for IRIS Explorer. Open-sourced at www.llnl.gov/graphics.

Films / Videos

7. *A Scientific Visualization Synthesizer*, Lawrence Livermore National Laboratory R&R-25, 3:55 min, silent, 10-17-91.

8. *Visualization Research for Global Climate Modeling*, Lawrence Livermore National Laboratory CS-5644, 8:29 min, silent, 2-12-92.
9. *Global Climate Visualization*, SIGGRAPH '92 Film and Video Show, July 26-31, 1992 (Chicago), HDTV format, 1:34 min, silent, 6-11-92.
10. *Global Climate Visualization*, NICOGRAPH '92 Film and Video Show (Japan), 5:25 min, music and narration, 8-28-92.
11. *Texture Splats for 3-D Vector and Scalar Field Visualization*, Lawrence Livermore National Laboratory, 5:28 min, silent, 3-29-93.
12. *New Techniques in 3D Scalar and Vector Field Visualization*, Lawrence Livermore National Laboratory, 5:00 min, silent, 8-23-93.
13. *FY '94 LDRD Visualization Proposal*, Lawrence Livermore National Laboratory PR-16558, 8:58 min, narration and music, 5-15-94.

Cover Images

14. Front Cover Image, IEEE Transactions on Visualization and Computer Graphics, Volume 10, Number 2.
15. Front Cover, IEEE Transactions on Visualization and Computer Graphics (April-June 1998)
16. Back Cover Image, Proceedings of Visualization '93
17. Cover Image, Proceedings of Visualization '93
18. Cover Image, Energy & Technology Review (August 1993)
19. Centerpiece Image, Computation's 40th Anniversary Poster (1992)
20. Cover Image, Proceedings of the 1992 Workshop on Volume Visualization
21. Back Cover Image, Proceedings of Visualization '91

Prizes and Awards

- IEEE Visualization 25 year Test of Time award, 2018.
- Best paper award for Applying Formal Picture Languages to Procedural Content Generation, in (CGAMES), 2015
- Moon Rush game demo. People's Choice award. Games for Change, SpaceX competition, 2014
- Best paper award for Optimal Cover Placement against Static Enemy Positions, in FDG 2013
- Best paper nomination for Procedural Textures Using Tilings With Perlin Noise in CGAMES 2012
 - Best paper award for *Effective Texture Models for Three Dimensional Flow Visualization*, SCCG 2012.
 - Best paper award for *Volume Interval Segmentation and Rendering* at the IEEE Volume Visualization 2004 Workshop.
 - Best panel award for the panel *Do I Really See a Bone?* at the IEEE Visualization 2003 conference.
 - 2000 College of Engineering Lumley Award.
 - Best Hot Topics Paper, IEEE Visualization '99.
 - 1999 College of Engineering Annual Research Accomplishment Award
 - Naval Notable Achievement Award for IEEE Transactions on Visualization and Computer Graphics paper, *Splatting Errors and Anti-Aliasing*, (June 1998)
 - Best panel award for *Terascale Visualization: Approaches, Pitfalls, and Issues* at the IEEE Visualization '97 conference.
 - Best paper award for *An Anti-Aliasing Technique for Splatting* at the IEEE Visualization '97 conference.
 - Best paper award for *Texture Splats for 3D Vector and Scalar Field Visualization* at the IEEE Visualization '93 conference.
- Grand Prix in the category of Scientific Visualization for the video *Global Climate Visualization* at the NICOGRAPH '92 conference.

Matthew J. Boggus, Ph.D.

Dept. of Computer Science and Engineering
395 Drees Labs
2015 Neil Avenue
Columbus, Ohio 43210
(614)-247-7338
boggus.2@osu.edu

Interests: Computer Science education and pedagogy, computer game development, computer graphics (modeling, animation, illumination, and rendering), procedural world creation and evaluation, automated and computer assisted level design, human computer interaction, artificial intelligence.

Education:

Ph.D. Computer Science and Engineering, 2012.
The Ohio State University

B.A. Computer Science, Mathematics, 2006.
Hiram College

Teaching Experience:

Senior Lecturer

Fall 2012 – present

CSE 1223 Instructor

CSE 2451 Instructor and Course Material Developer

CSE 3541/5541 Instructor, Course Developer, and Course Coordinator

CSE 3902 Instructor, Course Developer, and Course Coordinator

CSE 5912 Instructor

The Ohio State University, Department of Computer Science and Engineering

- Independently design and develop all content (lectures, homework, labs, and exams) for an upper level undergraduate course: “Computer Game and Animation Techniques”.
- Coordinate with other faculty in design and development of content for a junior project course: “Project: Design, Development, and Documentation of Interactive Systems”.
- Instruct 3-4 classes (approximately 30-45 students each) each semester.
- Mentor and train new graders.
- Maintain contact with students via office hours, email contact, and Carmen.
- Continue professional development through research on effective teaching and course design methodology.
- Create reference materials for CSE 3541 and CSE 3902 as part of the CSE Department’s ABET accreditation review.
- Participate in the CSE Curriculum and Undergraduate Studies Committees.
- Collaborate with a diverse group of faculty and staff across multiple departments in development of a new University program on Game Design and eSports.
- Attend University workshops and events on a broad amount of topics, including teaching processes, mental health and wellness, and diversity and inclusion.
- Assist in building of local community and business opportunities in game design and development, such as by promotion of events like GDEX, the annual game developers expo held in Columbus.
- Maintain mentoring relationships with alumni of the CSE Computer Graphics and Game Design Specialization.

Visiting Instructor**Spring 2012 – Summer 2012****CSCI 356 Instructor and Course Coordinator** – Visualization and Interactive Applications**CSCI 150 and 151 Lab Instructor** – Principles of Computer Science I, II*Oberlin College & Conservatory, Computer Science Department*

- Independently design and develop all content (lectures, homework, labs, and exams) for an upper level undergraduate course: “Visualization and Interactive Applications”.
- Lecture and manage classes for approximately twenty students in the new course.
- Run two lab sections (approximately twenty five students each) on introductory computer science topics including loop iteration, methods, and object oriented programming.
- Run two lab sections (approximately fifteen students each) on data structures topics including doubly linked lists using generics, AVL trees, and graphs.
- Mentor and train new lab helpers.
- Hold office hours and respond to student questions via email and Blackboard.

Teaching Assistant**CSE 101 Instructor** – Computer Assisted Problem Solving**Fall 2009 – Fall 2011****CSE 200 Lab Instructor** – Computer Assisted Problem Solving for Business**Summer 2009***The Ohio State University, Department of Computer Science and Engineering*

- Lecture classes and run in-class activities for approximately forty students on topics such as binary searches in database tables, calculating compound interest, and Boolean logic.
- Run lab activities including setting up a spreadsheet for yearly budgeting and introductions to Excel formula writing and Access tables, queries, forms, and reports.
- Grade homeworks, labs, projects, and exams.
- Answer student questions via email and Carmen.
- Coordinate makeup assignments with students and teaching assistants.
- Train lab consultants in methods to assist students in lab and grading processes.
- Train new instructors in classroom and lab management, grading, and addressing student concerns and questions.
- Assist in development and review of course materials including homework, labs, exams, projects, and lecture notes.

Computer Graphics Junior Project Lead Course Designer**Summer 2009 – Fall 2011***The Ohio State University, Department of Computer Science and Engineering*

- Responsible for selecting reading and reference materials, programming language and toolsets, and class format.
- Coordinate with faculty designing other junior project courses to establish standard learning objectives and outcomes such as maturity in programming.
- Develop course materials including the syllabus, schedule, project guidelines, and software documentation.
- Attend Ohio State University events on teaching such as The Academy of Teaching: Fourth Annual Mini-Conference on Teaching in Fall 2010.

Preparing Future Faculty Fellow**Fall 2010 – Spring 2011***The Ohio State University, Graduate School*

- Participated in peer discussions and workshops with thirty OSU graduate students in multiple disciplines on preparing for a career in academia.
- Attended the Kenyon faculty panel on faculty roles and responsibilities: teaching at undergraduate institutions.
- Attended a Denison faculty conference on integrating research into teaching.
- Attended the OSU University Center for the Advancement of Teaching (UCAT) Course Design Institute (Winter 2011) and worked on development of a computer game project course in addition to reviewing new and redesigned courses by faculty and graduate students.
- Mentored by Dr. Joan Krone of Denison University.

Teaching Assistant**Fall 2007 – Spring 2009****CSE 221 Instructor** – Software Component Engineering*The Ohio State University, Department of Computer Science and Engineering*

- Lectured classes and ran in-class activities for forty students on topics such as arrays, linked lists, and binary trees.
- Ran lab activities on topics including debugging, encryption, and file input and output.
- Graded homework and exams.
- Trained graders in working with students in lab and grading activity worksheets.
- Mentored new instructors by giving teaching advice and performing teaching observations.
- Assisted in writing and review of exams.

Writing Assistant**Fall 2003 – Spring 2006***Hiram College Writing Center*

- Proofread and performed peer review of undergraduate level academic papers in many different fields of study including the sciences, social sciences, arts, and humanities.
- Mentored new Writing Assistants by demonstrating peer reviews, discussing the peer review process, and observing and providing feedback on their peer reviews.

Professional Activities and Service:

Columbus Area Boardgaming Society – Board of Directors – 2018-current

Member: ACM

Graduate representative on Faculty Meetings committee (2009)

Graduate student panel member for prospective graduate student visits

"Stereo Graphics at Ohio State" – demonstration for COSI Student Camp's OSU Visit (2008)

Reviewer, *International Symposium on Visual Computing (ISVC)* 2011

Reviewer, *Computer Animation and Social Agents (CASA)* 2007

Reviewer, *Computer Graphics International (CGI)* 2007

Guest Lectures: Analysis of Algorithms, Intermediate Studies in Computer and Information Science: Computer Graphics (Procedural World & Data Creation), Elementary Computer Programming, Denison University Faculty and Student (FaSt) talk

Awards and Honors:

2017 – Nominated for Provost's Award for Distinguished Teaching by a Lecturer

2016 – CSE Department Outstanding Teaching Award

2013 – Microsoft Imagine Cup Kinect Course Award

2010 – Upsilon Pi Epsilon honor society

2006 – Computer Science Outstanding Senior Award

B.A. Magna cum laude and Computer Science departmental honors

BRIAN ALLEN TURNER, PH.D.

*Associate Professor • Sport Management The
Ohio State University*

*College of Education & Human Ecology • Department of Human Sciences
A250 PAES Building • 305 Annie & John Glenn Ave. • Columbus, OH 43210*

Work: 614-247-8374 • Cell: 614-921-8585

Email: turner.409@osu.edu

Website: u.osu.edu/turner.409

EDUCATION

Ph.D. in Sport Management, The Ohio State University, Columbus, Ohio, June, 2001.
Advisor: Dr. Packianathan Chelladurai. Cognate: Industrial and Organizational
Psychology. DISSERTATION: *Commitment among intercollegiate athletic coaches.*

Master of Education in Physical Education, Tarleton State University, Stephenville,
Texas, August, 1997.

Bachelor of Science in Secondary Education, Baylor University, Waco, Texas,
December, 1988. Certified Teaching Fields: Physical Education; Computer Science.

RESEARCH INTERESTS

My primary research focus is in the general area of Organizational Behavior. My primary interest can be broken into two separate foci: 1) employee behavior in sport organizations; and 2) how marketing practices affect both sport organizations and consumers. An ancillary area touches on an area that affects a major portion of all research conducted in Sport Management – survey methods.

AWARDS

Distinguished Sport Management Educator Award, North American Society for Sport Management, 2017

Awarded to recognize exceptional contributions to teaching and learning. The award signifies (a) distinction in classroom, and/or field, and/or on-line teaching; (b) excellence in pedagogical innovations in teaching methods, and/or course design, and/or curricular design, and/or assessment; (c) sustained commitment to the improvement and quality of teaching and learning in the sport management disciplines; and (d) sustained commitment

to one's own professional learning.

Distinguished Teaching Award, College of Education and Human Ecology, 2017

Outstanding Article, *Journal of Issues in Intercollegiate Athletics*, 2015

Runner-Up, Outstanding Article, *Journal of Issues in Intercollegiate Athletics*, 2014

Research Fellow, North American Society for Sport Management, 2007

Awarded to recognize NASSM's scholars by honoring their achievement in sport-related scholarship disseminated through NASSM. The Research Fellow designation is intended to: (a) be one of distinction within NASSM and Fellows' own academic communities, and (b) encourage high standards of research and other forms of scholarship among NASSM's members.

Who's Who in America, 2003, 2005

Phi Kappa Phi Honor Society, 2000

Delbert Oberteuffer Scholarship, The Ohio State University College of Education, 2000

Awarded for outstanding demonstrated potential in research

Who's Who Among American Teachers, 1992, 1995, and 1997

ACADEMIC/TEACHING EXPERIENCE

Associate Professor, Sport Management, The Ohio State University, College of Education & Human Ecology, Department of Human Sciences, Columbus, OH, 2009 – present.

- Courses taught include Sport Marketing (graduate and undergraduate), Sport Consumer Behavior, and Theoretical Approaches to Sport Organizations
- Supervise graduate internship experiences
- Faculty Affiliate – Sport & Society Initiative
- Advise approximately 6 doctoral and 15-20 master's students per year

Assistant Professor, Sport Management, The Ohio State University, School of Physical Activity and Educational Services, Columbus, OH, 2004 – 2009.

- Courses taught included Sport Marketing (graduate and undergraduate), Topics in Organizational Behavior, Applied Research Methods and Statistics in Sport Management, Professional Writing and Publishing in Sport Management
- Supervise graduate internship experiences
- Advise approximately 4 doctoral and 15-20 master's students per year

Assistant Professor, Sport Management, DeSales University, Division of Business, Center Valley, PA, 2001 – 2004.

- Courses taught included Sport Marketing & Promotions, Facility Planning & Event Management, History & Philosophy of Sport, Governance of Sport & Athletics, Ethics in Sport, Sociological and Psychological Issues in Sport, Principles of Coaching and Sport Administration
- Business courses taught included Introduction to Business and Principles of Management
- Supervised student internship experiences
- Advised approximately 30 students per year
- Served on the Academic Advising Advisory Board and the Enrollment Services committees

Visiting Assistant Professor, Sport Management, University of Oklahoma, College of Arts & Sciences, Health & Exercise Science, Norman, OK, 2000 – 2001.

- Courses taught included Sport Marketing (both undergraduate and graduate levels), Sports Psychology (graduate level), and a current topics graduate seminar class
- Supervised 2 master's theses and served on 3 other master's theses committees in sport management
- Served on department graduate committee

Graduate Teaching Assistant, The Ohio State University, College of Education, School of Physical Activity & Educational Services, 1998 – 2001.

- Courses taught included two coaching theory classes (Coaching Baseball and Coaching Track & Field), American Red Cross First Aid - Responding to Emergencies, Adult CPR, Golf I, Basketball I, and Softball II
- Supervised undergraduate coaching internships

Math and Computer Science Teacher, University High School, Waco Independent School District, Waco, TX, 1993 – 1998.

- Courses taught included Algebra I, Geometry I, Remedial Math, Computer Science I and Computer Science II.
- Served as Junior Class advisor and as a committee advisor for the National Honor Society
- Supervised student-teacher and student volunteers from Baylor University

Math Teacher, University Middle School, Waco Independent School District, Waco, TX, 1988 – 1992.

- Courses taught included 8th Grade Math and Algebra I. Also responsible for instructing Gifted and Talented students.
- Supervised student-teachers from Baylor University

\PUBLICATIONS

Peer-Reviewed Research Articles (55)

- 55) Lott, G., & **Turner, B. A.** (2019). Collegiate sport participation and student-athlete development through the lens of emotional intelligence. *Journal of Amateur Sport*, 4, 1-28.
- 54) Jensen, J. A., & **Turner, B.** (2018). Event history analysis of longitudinal data: A methodological application to sport sponsorship. *Sport in Society*, 21, 376-393.
- 53) Jensen, J. A., & **Turner, B.** (2017). Advances in sport sponsorship revenue forecasting: An event history analysis approach. *Sport Marketing Quarterly*, 26, 6-19.
- 52) Jensen, J. A., Cobbs, J. B., & **Turner, B. A.** (2016). Evaluating sponsorship through the lens of the resource-based view: The potential for sustainable competitive advantage. *Business Horizons*, 59, 163-173.
- 51) Jensen, J. A., **Turner, B. A.**, Delia, E., James, J., Greenwell, C., McEvoy, C., Ross, S., Seifried, C., & Walsh, P. (2016). 40 years of BIRGing: New perspectives on Cialdini's seminal studies. *Journal of Sport Management*, 30, 149-161.
- 50) Jensen, J. A., Wakefield, L., Cobbs, J. B., & **Turner, B. A.** (2016). Forecasting sponsorship costs: Marketing intelligence in the athletic apparel industry. *Marketing Intelligence and Planning*, 34, 281-298.
- 49) Lower, L. M., & **Turner, B. A.** (2016). Examination of the 3x2 achievement goal model in collegiate recreation: Comparison across sport programs. *Journal of Amateur Sport*, 2(2), 75-102.
- 48) Park, M., **Turner, B. A.**, Pastore, D. L., Chitiyo, M., & Yoh, T. (2016). The information processing of audiences exposed to public service advertising messages for the Special Olympics: A cognitive response approach. *International Journal of Sports Marketing and Sponsorship*, 17, 277-298.
- 47) Barnhill, C. R., & **Turner, B. A.** (2015). The impact of psychological contract breach on student-athlete satisfaction, perceived in-role performance, and organizational citizenship behaviors. *Journal of Applied Sport Management*, 7(4), 37-53.
- 46) Czekanski, W. A., & **Turner, B. A.** (2015). Just exchange in intercollegiate athletics. *Journal of Issues in Intercollegiate Athletics*, 8, 139-161.
- 45) Jensen, J. A., **Turner, B. A.**, & McEvoy, C. (2015). Resource valuation of non-profit organizations: The case of the intercollegiate athletics industry. *International Review of Public and Nonprofit Marketing*, 12, 169-187.
- 44) Jensen, J. A., Walsh, P., Cobbs, J. B., & **Turner, B. A.** (2015). The effects of second screen use on sponsor brand awareness: A dual coding theory perspective. *Journal of Consumer Marketing*, 32, 71-84.
- 43) Jordan, J. S., Kerwin, S., & **Turner, B. A.** (2015). Organizational justice and conflict: Do perceptions of fairness influence disagreement. *Sport Management Review*, 18, 384-395.

- 42) Lyons, V., & **Turner, B. A.** (2015). Examining the influence of gender on athletes' levels of moral reasoning: A comparison of intercollegiate athletes and students. *Journal of Issues in Intercollegiate Athletics*, 8, 28-49.
- 41) Lower, L. M., **Turner, B. A.**, & Petersen, J. C. (2015). Does greater opportunity for recreational sport involvement translate to greater degree of involvement? *International Journal of Sport Management*, 16, 62-76.
- 40) Barnhill, C. R., & **Turner, B. A.** (2014). Psychological contract breach between coaches and student-athletes: The impact on team commitment. *Journal of Issues in Intercollegiate Athletics*, 7, 245-262.
- 39) Czekanski, W. A., & **Turner, B. A.** (2014). Social exchange and performance in intercollegiate athletics. *Journal of Issues in Intercollegiate Athletics*, 7, 367-389.
- 38) Jensen, J. A., & **Turner, B. A.** (2014). What if statisticians ran college football? A reconceptualization of the Football Bowl Subdivision. *Journal of Quantitative Analysis of Sports*, 10, 37-48.
- 37) Lower, L. M., **Turner, B. A.**, & Petersen, J. C. (2014). Achievement goal orientation as a predictor of sport involvement and perceived benefits of sport involvement: Examination of a mixture model. *Journal of SPORT*, 3(1), 63-101.
- 36) **Turner, B. A.**, Jordan, J. S., & Kent, R. A. W. (2013). A demonstration of methods to identify the presence of nonresponse error in survey research. *International Journal of Sport Management*, 14(4), 425 – 440.
- 35) Barnhill, C. R., & **Turner, B. A.** (2013). Broken promises: The effect of psychological contract violation on student-athlete trust and intentions to leave their team. *Journal of Intercollegiate Sport*, 6, 179 – 195.
- 34) Farneti, C., & **Turner, B. A.** (2013). Student-athletes' perceptions of leadership styles of Division III basketball coaches. *Journal for the Study of Sports & Athletes in Education*, 7(3), 210–228.
- 33) Barnhill, C. R., Czekanski, W. A., & **Turner, B. A.** (2013). Psychological contracts and student-athlete retention. *Journal for the Study of Sports & Athletes in Education*, 7(1), 20-40.
- 32) Lower, L. M., **Turner, B. A.**, & Petersen, J. C. (2013). A comparative analysis of perceived benefits of participation between recreational sport programs. *Recreational Sports Journal*, 37, 66-83.
- 31) Seifried, C. S., & **Turner, B. A.** (2012). Student-athlete perceptions on the NCAA Division I Football Bowl Subdivision (FBS) postseason arrangement: A forced-choice certainty method survey approach. *The Journal of Sport*, 1, 108-139.
- 30) Won, D., Park, M., & **Turner, B. A.** (2010). Motivations for participating in health related charity sports events. *Journal of Venue & Event Management*, 1(2), 17-44.
- 29) Farneti, C., Christy, K., & **Turner, B. A.** (2009). Examining role conflict among Division III head men's and women's basketball coaches. *International Journal of Sport Management*, 10(1), 68-81.

- 28) Jordan, J. S., **Turner, B. A.**, & Pack, S. M. (2009). The influence of organisational justice on perceived organisational support in a university recreational sports setting. *International Journal of Sports Management and Marketing*, 6, 106-123.
- 27) Seifried, C., Farneti, C., **Turner, B. A.**, Brett, M., & Davis, J. (2009). Investigating fantasy sport participation among college students. *Journal of Contemporary Athletics*, 3(2), 173-186.
- 26) Seifried, C.S., Krenzelok, A., **Turner, B. A.**, & Brett, M. (2009). The prevalence of gambling in college: A review of literature, convenience sample, and recommendations. *ICHPER-SD Journal of Research*, 4(1), 13-20.
- 25) Jordan, J. S., & **Turner, B. A.** (2008). The feasibility of single-item measures for organizational justice. *Measurement in Physical Education and Exercise Science*, 12, 237-257.
- 24) Jordan, J. S., **Turner, B. A.**, Fink, J. S., & Pastore, D. L. (2008). Organizational justice as a predictor of job satisfaction: An examination of head basketball coaches. *Journal for the Study of Sports and Athletes in Education*, 1, 321-343.
- 23) Kwon, H. H., **Turner, B. A.**, & Lee, C. (2008). Duration of mood maintenance in spectating sport: A losing game case. *International Journal of Sport Management*, 9, 273-285.
- 22) Park, M., **Turner, B. A.**, & Pastore, D. L. (2008). Effective public service advertisements to attract volunteers for the Special Olympics: An elaboration likelihood perspective. *Sport Management Review*, 11, 165-192.
- 21) Rocha, C., & **Turner, B. A.** (2008). Organizational effectiveness of athletic departments and coaches' extra-role behaviors. *Journal of Issues in Intercollegiate Athletics*, 1, 124-144.
- 20) Seifried, C., **Turner, B. A.**, Christy, K., Mahony, D. F., & Pastore, D. L. (2008). An examination of television coverage in U.S. high school athletics. *ICHPER-SD Journal of Research*, 3(2), 71-77.
- 19) **Turner, B. A.** (2008). Does commitment develop in the same manner for male and female coaches? An examination of personal and job characteristic antecedents. *Women in Sport and Physical Activity Journal*, 17(1), 15-28.
- 18) Dick, R. J., & **Turner, B. A.** (2007). Are fans and NBA marketing directors on the same page? A comparison of value of marketing techniques. *Sport Marketing Quarterly*, 16, 82-92.
- 17) Jordan, J. S., **Turner, B. A.**, & DuBord, R. (2007). Organizational justice as a predictor of job satisfaction: An examination of university recreation department student employees. *International Journal of Sport Management*, 8, 32-54.
- 16) Pack, S., Jordan, J. S., **Turner, B. A.**, & Haines, D. (2007). Perceived organizational support and employee satisfaction and retention. *Recreational Sports Journal*, 31, 95-106.
- 15) Seifried, C., **Turner, B. A.**, Christy, K., Mahony, D. F., & Pastore, D. L. (2007). Investigating the diverse landscape of championship and playoff site selection

procedures across high school athletics. *ICHPER-SD Journal of Research*, 2, 37- 42.

- 14) **Turner, B. A.** (2007). An examination of intercollegiate coaches' commitment to their athletic director. *International Journal of Sport Management*, 8, 180-192.
- 13) **Turner, B. A., & Pack, S.** (2007). Multidimensional commitment of intercollegiate student-athletes: Its effects on intention to leave and satisfaction. *Journal for the Study of Sports and Athletes in Education*, 1(2), 141-156.
- 12) Seifried, C., **Turner, B. A.**, Christy, K., Mahony, D. F., & Pastore, D. L. (2006). Examining high school athletic rule violations: A five-year follow-up to Turner, Mahony and Pastore. *Journal of Contemporary Athletics*, 2(2), 175-186.
- 11) **Turner, B. A., & Jordan, J. S.** (2006). Commitment and satisfaction of coaches: Which is more important in the retention and performance of coaches? *Journal of ICHPER-SD*, 43(4), 42-48.
- 10) **Turner, B. A., Jordan, J. S., & Sagas, M.** (2006). Factors affecting response rates in survey research: The case of intercollegiate coaches. *Applied Research in Coaching & Athletics Annual*, 21, 211-237.
- 9) **Turner, B. A., Jordan, J. S., & DuBord, R.** (2005). Retaining student workers: The importance of organizational commitment. *Recreational Sports Journal*, 29, 117-126.
- 8) Cunningham, G. B., Sagas, M., Dixon, M. A., Kent, A., & **Turner, B. A.** (2005). Anticipated career satisfaction, affective occupational commitment, and intentions to enter the sport management profession. *Journal of Sport Management*, 19, 43- 57.
- 7) Daprano, C. M., Bruening, J. E., Pastore, D. L., Greenwell, T. C., Dixon, M. A., Ko, Y. J., Jordan, J. S., Lilienthal, S. J., & **Turner, B. A.** (2005). Collaboration in sport research: A case from the field. *Quest*, 57, 300-314.
- 6) Dixon, M. A., Cunningham, G. B., **Turner, B. A.**, Sagas, M., & Kent, A. (2005). Challenge is key: An investigation of organizational commitment in interns. *Journal of Education for Business*, 80, 172-180.
- 5) **Turner, B. A. & Chelladurai, P.** (2005). Organizational and occupational commitment, intention to leave and perceived performance of intercollegiate coaches. *Journal of Sport Management*, 19, 193-211.
- 4) **Turner, B. A., Mahony, D. F., & Pastore, D.** (2005). An exploratory investigation of rules violations and penalties at the high school level. *International Journal of Sport Management*, 6, 289-303.
- 3) Dixon, M. A., **Turner, B. A.**, Miller, L., Harrison, T., & Pace, D. (2004). Coaches' perceptions of rule violations in intercollegiate athletics: An empirical investigation. *Journal of Contemporary Athletics*, 1(3), 257-279.
- 2) Dixon, M. A., **Turner, B. A.**, Mahony, D., & Pastore, D. L. (2003). Rule violations in intercollegiate athletics: A qualitative investigation utilizing an organizational justice framework. *Journal of Academic Ethics*, 1, 59-90.
- 1) Kent, R. A. W. & **Turner, B. A.** (2002). Increasing response rates among coaches: The

role of prenotification methods. *Journal of Sport Management*, 16, 209-217.

Book Chapters

- 8) **Turner, B. A.**, Jensen, J. A., & Parkhouse, B. L. (2017). Sport marketing: Definition, evolution, uniqueness, and importance. In B. A. Turner & K. Miloch (Eds.), *Marketing for sport business success* (2nd ed., pp. 1-37). Dubuque: Kendall-Hunt Publishing.
- 7) **Turner, B. A.**, Miloch, K., & Parkhouse, B. L. (2017). Future of sport marketing. In B. A. Turner & K. Miloch (Eds.), *Marketing for sport business success* (2nd ed., pp. 337-356). Dubuque: Kendall-Hunt Publishing.
- 6) **Turner, B. A.** (2013). Ohio Stadium. In M. R. Nelson (Ed.), *American sports: A history of icons, idols, and ideas* (Vol. 3, pp. 971-973). Westport, CT: Greenwood Publishing.
- 5) **Turner, B. A.**, Parkhouse, B. L., & Miloch, K. (2012). Future of sport marketing. In B. L. Parkhouse, B. A. Turner, & K. Miloch (Eds.), *Marketing for sport business success* (pp. 309-324). Dubuque: Kendall-Hunt Publishing.
- 4) Parkhouse, B. L., & **Turner, B. A.** (2012). Sport marketing: Definition, evolution, uniqueness, and importance. In B. L. Parkhouse, B. A. Turner, & K. Miloch (Eds.), *Marketing for sport business success* (pp. 1-28). Dubuque: Kendall-Hunt Publishing.
- 3) Parkhouse, B. L., & **Turner, B. A.** (2012). Take the field! Career decisions for success. In B. L. Parkhouse, B. A. Turner, & K. Miloch (Eds.), *Marketing for sport business success* (pp. 283-307). Dubuque: Kendall-Hunt Publishing.
- 2) Chelladurai, P., & **Turner, B. A.** (2006). Styles of decision making in coaching. In J. M. Williams (Ed.), *Applied sport psychology*, 5th ed. (pp. 140-154). New York, NY: McGraw-Hill.
- 1) Chelladurai, P. & **Turner, B. A.** (2005). Management. In D. Levinson & K. Christensen (Eds.), *Berkshire encyclopedia of world sport* (pp. 954-961). Great Barrington, MA: Berkshire Publishing Group.

GRANTS

Funded

Sport & Society Initiative Research Grant (2018). Sports apparel, voting ballots, and search engines: Consumer responses to athletes' political expressions. **Turner, B. A.**, Beattie, M., & Evans. J. - \$1,500.

College of Education and Human Ecology: Signature Course Development (2017). Used to develop a study abroad course ("The European Sports Model") for The Sport Industry major - \$4,000.

Food Innovation Center (FIC): Team Award, New Collaborative Project in Obesity (2011). Buckworth, J. (principal investigator), Kindrik, S., Schuster, D., Needleman, B.,

Feister, K., Balks, E., Emery, C., Wolf, K., Pastore, D., & **Turner, B. A.** - \$2,500.

National Collegiate Athletic Association (NCAA) Faculty Athletics Representative Grant (2002). Used to attend Faculty Athletics Representative Association annual conference in Long Beach, CA - \$1,100.

Pennsylvania Link-to-Learn mini-grant (2002). Used to incorporate technology into the class SS 330 Sport Marketing & Promotions - \$2,000.

LICENSURES

Texas Teaching Licenses

- Secondary Physical Education; Secondary Computer Information Systems; Secondary Mathematics

Claire E. Bollinger, PhD, MS

The Ohio State University – Division of Health Sciences, Medical Dietetics, and Injury Biomechanics – School of Health and Rehabilitation Sciences
243D Atwell Hall, 453 W. 10th Ave, Columbus, OH 43210
614.366.9554 – claire.bollinger@osumc.edu

Education

PH.D. | 2017 | THE OHIO STATE UNIVERSITY, COLLEGE OF PUBLIC HEALTH

- Specialization: Environmental Health Sciences
- Minor Cognate Field: Epidemiology
- University Fellow 2011-2012
- OSU Board of Trustees Student Recognition Award Recipient, 2016
- OSU College of Public Health Student Choice Award Recipient, 2016/2017

M.S. | 2016 | THE OHIO STATE UNIVERSITY, COLLEGE OF PUBLIC HEALTH

- Specialization: Environmental Health Sciences

B.S. | 2009 | UNIVERSITY OF VERMONT, BURLINGTON, VT

- Major: Psychology
- Minor: Chemistry

Academic Achievements: Summa Cum Laude, Phi Beta Kappa, Psi Chi, Honors College, Dean's List (8 semesters), STAR Award 2006, 2007, 2008 (GPA in top 5% of on-campus students)

Professional Experience

○ **Clinical Instructor**

College of Medicine, School of Health and Rehabilitation Sciences
Present

August 2016 –

- Courses taught: Health Promotion & Disease Prevention, Individual Differences in Patient/Client Populations, Case Studies in Health Sciences, Community and Policy Influence in Health Care
- Course development: Case Studies in Health Sciences online; Individual Differences in Patient/Client Populations online

○ **Lecturer**

College of Public Health
Summer 2016

- Development and delivery of course materials and assignments for 6-week version of Introduction to Global Public Health (PUBHLTH 2010)

○ **Instructor**

Hubei Visiting Scholar Program
August 2015

Introduction to Public Health for Health Sciences Majors

- Designed and delivered 8 lectures for visiting scholars from the Hubei Outstanding University Students Program.

○ **Graduate Teaching Associate**

August 2012-

May 2016

College of Public Health, Division of Environmental Health Sciences

- Assistance in course material development, Carmen course website management, and scoring for graduate and undergraduate-level courses.

Courses assisted: Current Topics in Global Environmental Health (PUBHEHS 3310), Fundamentals of Environmental Risk Assessment (PUBHEH 3320), Principles of Environmental Health Sciences (PUBHEHS 6305/6310/6315), Principles of Toxicology (PUBHEHS 5315) Principles of Occupational Health (PUBHEHS 5325), Molecular Techniques for Environmental Health Sciences (PUBHEHS 8340), Exposure Science Monitoring Techniques (PUBHEHS 7380), Global Environmental Microbiology (PUBHEHS 6320)z

- Development and delivery of lectures for Current Topics in Global Environmental Health (PUBHEHS 3310)

Topics/ Modules covered: Introduction to Global Environmental Health Sciences, The Global Burden of Disease and Role of the Environment, Global Big Tobacco, Population Growth & Urbanization, Global Population Control, Global Poverty, Biological Agents- Pests, Emerging and Re-emerging Diseases, Chemical Agents, Radiation, Radioactive Waste, Global Indoor Air Quality, Global Outdoor Air Quality, Food Safety and Security.

○ **Resident Advisor and Guest Lecturer**

May 2014

College of Public Health, Division of Environmental Health Sciences

Field Experience in Global Public Health: China (PUBHLTH 3189)

- Traveled to China with students from Ohio State as part of study abroad experience and served as a basic academic resource.
- Prepared and delivered lectures to OSU and Dalian Medical University students.

Topics/ Modules covered: The Changing Nature of Infectious and Non-infectious Disease; Food Safety, Security, & The Global Rise of Obesity

Peer-Reviewed Publications

Oghumu, S., Casto, B. C., Ahn-Jarvis, J., Weghorst, L. C., Maloney, J., Geuy, P., Horvath, K. Z., **Bollinger, C. E.**, Warner, B. M., Summersgill, K. F., Weghorst, C.M., & Knobloch, T. J. (2017). Biomarkers and mechanisms of experimental rat oral cancer chemoprevention by dietary administration of black raspberries. *Cancer Prevention Research. In submission.*

Bower, J. K., **Bollinger, C. E.**, Foraker, R. E., Hood, D. B., Shoben, A. B., & Lai, A. M. (2017). Active Use of Electronic Health Records (EHRs) and Personal Health Records (PHRs) for Epidemiologic Research: Sample Representativeness and Nonresponse Bias in a Study of Women During Pregnancy. *eGEMs*, 5(1).
<https://doi.org/10.13063/2327-9214.1263>

Oghumu, S., Knobloch, T.J., Terrazas, C., Varikuti, S., Ahn-Jarvis, J., **Bollinger, C.E.**, Iwenofu, H., Weghorst, C.M., and Satoskar, A.R. (2016). Deletion of macrophage migration inhibitory factor inhibits murine oral carcinogenesis: Potential role for chronic pro-inflammatory immune mediators. *Int. J. Cancer*.
<https://doi.org/10.1002/ijc.30177>

Jiao, Y., Bower, J.K., Im, W., Basta, N., Obrycki, J., Al-Hamdan, M.Z., Wilder, A., **Bollinger, C.E.**, Zhang, T., Hatten, L., and Hood, D.B. (2016). Application of Citizen Science Risk Communication Tools in a Vulnerable Urban Community. *Int. J. Environ. Res. Public. Health* 13, ijerph13010011.

Zivich, P.N., Tatham, L., Lung, K., Tien, J., **Bollinger, C.E.**, and Bower, J.K. (2016) The association of influenza vaccine status and timing with outcomes among hospitalized patients in Columbus, Ohio (2012-2015). *Clinical Infectious Diseases*. *In submission*.

Invited Book Chapter

Bollinger, C.E., McCallister, M., Clark, R., Rhoades, R., Maguire, M., Savage, R.E., Jiao, Y., Ramesh, A., and Hood, D.B. (2015). Chapter 20 - Polycyclic Aromatic Hydrocarbons: Implications for Developmental, Molecular, and Behavioral Neurotoxicity. Gupta, Ramesh C. In *Handbook of Toxicology of Chemical Warfare Agents* (Second Edition), (Boston: Academic Press), pp. 249–265.

Invited Lectures

Epidemiological Considerations in Gestational Diabetes. March 1, 2019. The Ohio State University School of Health and Rehabilitation Sciences: Division of Health Sciences, Medical Dietetics, and Injury Biomechanics. MEDDIET 4925: Nutrition Care Process VI.

The Global Burden of Non-communicable Diseases. October 4, 2017. The Ohio State University College of Public Health. PUBHLTH 6000: Introduction to Global Health.

Abstracts & Presentations

Abstract: **Bollinger, C. E.**, Patel, S., Hood, D. B., & Bower, J. K. (2017). Abstract P317: Area Traffic Density Contributes to the Risk of Gestational Diabetes in a Sample of Central Ohio Pregnancies. *Circulation*, 135(Suppl 1), AP317-AP317.

Poster: **Bollinger, C. E.**, Patel, S., Hood, D. B., & Bower, J. K. (2017). Abstract P317: Area Traffic Density Contributes to the Risk of Gestational Diabetes in a Sample of Central Ohio Pregnancies. *American Heart Association EPI/Lifestyle Scientific Session*, Portland, OR, March 7-10, 2017.

Abstract: Oghumu, S., Knobloch, T., Terrazas, C., Varikuti, S., **Bollinger, C.**, Iwenofu, H., ... Satoskar, A. (2016). Abstract 3234: Genetic deletion of macrophage migration inhibitory factor reduces oral carcinogenesis. *Cancer Research*, 76(14 Supplement), 3234–3234. <https://doi.org/10.1158/1538-7445.AM2016-3234>

Poster: Oghumu, S., Knobloch, T., Terrazas, C., Varikuti, S., **Bollinger, C.**, Iwenofu, H., ... Satoskar, A. (2016). Abstract 3234: Genetic deletion of macrophage migration inhibitory factor reduces oral carcinogenesis. *AACR 107th annual Meeting 2016*, New Orleans, LA, April 16-20, 2016.

Abstract: **Bollinger, C.E.**, Hood, D.B., and Bower, J.K. (2016). Abstract P123: The Physical Activity Built Environment: Evaluation of the Concordance of Perceived versus Measured Access to Parks and Bike Paths. *Circulation* 133, AP123-AP123.

Poster: **Bollinger, C.E.**, Hood, D.B., and Bower, J.K. (2016). Abstract P123: The Physical Activity Built Environment: Evaluation of the Concordance of Perceived versus Measured Access to Parks and Bike Paths. *American Heart Association EPI/Lifestyle Scientific Session*, Phoenix, AZ, April 1-4, 2016.

Abstract: Bower, J.K., **Bollinger, C.E.**, Foraker, R.E., and Hood, D.B. (2016). Abstract MP13: Perceived Environmental Supports and Barriers are Associated with Physical Activity Behaviors During Pregnancy. *Circulation* 133, AMP13-AMP13.

Poster: Bower, J.K., **Bollinger, C.E.**, Foraker, R.E., and Hood, D.B. (2016). Abstract MP13: Perceived Environmental Supports and Barriers are Associated with Physical Activity Behaviors During Pregnancy. *American Heart Association EPI/Lifestyle Scientific Session*, Phoenix, AZ, April 1-4, 2016.

Poster: **Bollinger, C.E.** & Ellsworth, D.W. Risk Assessment of Reported Arsenic Contamination in Protein Supplements. *Indiana Joint National Public Health Week Conference*, 2012, Indianapolis, IN.

Mentorship

- **Research Mentorship**, Brianna VanNoy, BSPH 2016, The Ohio State University August 2015-
May 2016
 - Assistance in the development of research project *Characterization of the glucose tolerance in the Diversity Outbred (DO) strain across generations*.
 - Presented at 2016 Denman Undergraduate Research Forum
 - Training in animal handling, glucose tolerance testing, and presentation of data.
- **Research Mentorship**, Caroline Liu, Junior, Johns Hopkins University May 2015-
August 2015
 - Facilitated summer research experience learning skills in reviewing literature, cleaning data, working in ArcGIS, and animal handling.

Other Experience and Professional Memberships

- Reviewer, *PLOS 1* 2013-
Present
- Student Member, *Society of Toxicology* 2014-
Present
- Student Member, *American Heart Association* 2016-
Present

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME William J. Kraemer	POSITION TITLE		
eRA COMMONS USER NAME (credential, e.g., agency login) WILLIAMKRAEMER	Professor		
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
University of Wisconsin-LaCrosse, WI	B.S.	1975	Health Education and Physical Education
University of Wyoming, Laramie, WY	M.S.	1978	Exercise Physiology
University of Wyoming, Laramie, WY	Ph.D.	1984	Physiology and Biochemistry; Minor: Biostatistics
University of Jyväskylä, Jyväskylä Finland	Honorary Ph.D.	2016	Health Sciences

A. Personal Statement

My laboratory and research collaborations have an extensive history of research into exercise and exercise training focusing on various mechanisms that mediate function and performance including the study of endocrine mechanisms, neuromuscular physiology, cellular biochemical responses, nutrition, across the life span. As noted by the university overview of my career thus far, "with over 480 peer reviewed scientific publications, 12 books and a Google scholar H rating of 129 and with over 54,000 citations on Harzing's Publish or Perish lists and an honorary doctorate from the University of Jyväskylä in Finland in 2016 he has demonstrated the worldwide influence of his research.

B. Positions and Honors

1975-1976 Health/Teacher/Coordinator, Marshfield Public Schools, Marshfield, WI

1976-1977 Research Fellow, Human Energy Research Laboratory, Univ. of Wyoming, Laramie, WY.

1977-1980 Assistant Professor Departments of Physical Education & Biology, Athletics: Head Wrestling Coach, Assistant Football Coach, Head Strength Coach, Carroll College, Waukesha, WI.

1980-1984 Graduate Doctoral Research Fellow, Department Zoology & Physiology, College of Medicine, University of Wyoming, Laramie, WY.

1984-1987 Senior Physiologist, Commissioned Officer U.S. Army, (CPT), Head- Exercise Biochemistry. U.S. Army Research Institute of Environmental Medicine, Natick, MA.

1986-1991 Adjunct Assistant Professor, Boston University, Department of Health Sciences, Boston, MA

1987-1989 Assistant Professor, Director Exercise Biochemistry, Departments of Exercise Science/ Physiology and Neurobiology, University of Connecticut, Storrs, CT.

1989-1998. Professor of Applied Physiology (1996 to 1998) Associate Professor of Applied Physiology, (1989-1996), Administrative Apts: Director of Research School of Medicine, Dept. Orthopaedics – Milton S. Hershey Medical Center (1989 to 1998), Associate Director, Center for Cell Research-Inter-college Research Program (1994-1998) University Appointments: Department of Kinesiology, Noll Physiological Research Center, & Gerontology Center. The Pennsylvania State University, University Park, PA.

1998-2001 John and Janice Fisher Endowed Chair in Exercise Physiology, Professor of Physical Education, Biology, Physiology and Health Sciences, Director – The Human Performance Laboratory, Director Graduate and Undergraduate Programs in Exercise Science, Ball State University, Muncie, IN, Professor Physiology and Biophysics, Indiana University Medical School, Indianapolis, IN.

2001-2014. Professor of Kinesiology, Professor of Physiology and Neurobiology, Professor of Medicine, *Human Performance Laboratory*, Department of Kinesiology, Department of Physiology and Neurobiology, University of Connecticut, Storrs, CT. Director of Research –Dean’s Office, Neag School of Education, 2001-2005, Professor, University of Connecticut’s School of Medicine/UCONN Health Center, Farmington, CT.

2014-present Professor, Department of Human Sciences, College of Education and Human Ecology, Head, Neuroscience/Neuromuscular Research Laboratory
Member – Recovery, Injury Prevention and Performance Group, Jameson Crane Sports Medicine Institute, Senior Scientific Advisor - Stanley D. and Joan H. Ross Center for Brain Health and Performance, OSU Wexner Medical Center Sports Medicine Research Institute.
The Ohio State University, Columbus, OH.

Selected Honors and Awards

2019 45 Year American College of Sports Medicine Award
2018 – Alumni of the Year Award – College of Health Sciences, Division of Kinesiology and Health Sciences, University of Wyoming, Sept.
•2018- President’s Honor Award - Historical Contributions to the Field. National Strength and Conditioning Association July
•2018 - Special Editorial Excellence Award – 30 years as Editor-In-Chief and Founder of the Journal of Strength and Conditioning Research, National Strength and Conditioning Association, July
2016 Honorary Doctorate – Health Sciences, University of Jyväskylä, Jyväskylä Finland.
2015 American College of Sports Medicine New England Chapter Honor Award
2014 Based on “*Expertscape’s*” objective, past 10 years, top expert in field of resistance training research
2009 University of Connecticut Alumni Association – Outstanding Faculty Excellence in Research Award
2009 University Medallion – University of Jyväskylä, Jyväskylä, Finland (1st non-Finish Award winner)
2009 Neag School of Education - Outstanding Research Award
2006 Named Award – William J. Kraemer Outstanding Sport Scientist Award, NSCA
2005 Provost’s Research Excellence Award Medal – University of Connecticut, Storrs, CT
2004 World Scientist Forum - Eminent Scientist Award
2002 National Aeronautics Space Administration Certificate of Appreciation Award
2002 Educator of the Year, National Strength and Conditioning Association,
1997 Maurice O. Graff Distinguished Alumni Award - University of Wisconsin - LaCrosse
1996 College Alumni Excellence Award - University of Wisconsin - LaCrosse
1994 Lifetime Achievement Award, National Strength and Conditioning Association,
1992 Outstanding Sport Scientist Award, National Strength and Conditioning Association

C. Selected Peer-reviewed Publications (selected from over 480)

<https://www.ncbi.nlm.nih.gov.proxy.lib.ohio-state.edu/pubmed/?term=Kraemer+WJ>

- Flanagan SD, Beethe AZ, Eagle SR, Proessl F, Connaboy C, Dunn-Lewis C, Kraemer WJ. Blinding success of sham-controlled motor cortex intermittent theta burst stimulation based on participant perceptions. *Brain Stimul.* 2019 Mar 6. pii: S1935-861X(19)30083-XIlves OE,
- Borden EC, Kraemer WJ, Walrod BJ, Post EM, Caldwell LK, Beeler MK, DuPont WH, Anders JP, Martini ER, Volek JS, Maresh CM. Changes of Hydration Measures in Elite National Collegiate Athletic Association Division I Wrestlers. *Int J Sports Physiol Perform.* 2019 Apr 8:1-16. doi: 10.1123/ijsp.2019-0059. [Epub ahead of print]
- Neva MH, Häkkinen K, Dekker J, Kraemer WJ, Tarnanen S, Kyrölä K, Ylinen J, Piitulainen K, Järvenpää S, Kaistila T, Häkkinen A. Trunk Muscle Strength After Lumbar Spine Fusion: A 12-Month Follow-up. *Neurospine.* 2018 Oct 15. doi: 10.14245/ns.1836136.068. [Epub ahead of print]
- Szivak TK, Lee EC, Saenz C, Flanagan SD, Focht BC, Volek JS, Maresh CM, Kraemer WJ. Adrenal Stress and Physical Performance During Military Survival Training. *Aerosp Med Hum Perform.* Feb 1;89(2):99-107, 2018
- McGrath RP, Vincent BM, Lee IM, Kraemer WJ, Peterson MD. Handgrip Strength, Function, and Mortality in Older Adults: A Time-varying Approach. *Med Sci Sports Exerc.* Nov;50(11):2259-2266, 2018.
- Hooper DR, Kraemer WJ, Stearns RL, Kupchak BR, Volk BM, DuPont WH, Maresh CM, Casa DJ. Evidence of the Exercise Hypogonadal Male Condition at the 2011 Kona Ironman World Championships. *Int J Sports Physiol Perform.* Jun 28:1-22, 2018.
- McGrath RP, Kraemer WJ, Snih SA, Peterson MD. Handgrip Strength and Health in Aging Adults. *Sports Med.* Sep;48(9):1993-2000, 2018.

- Creighton BC, Hyde PN, Maresh CM, Kraemer WJ, Phinney SD, Volek JS. Paradox of hypercholesterolaemia in highly trained, keto-adapted athletes. *BMJ Open Sport Exerc Med.* Oct 4;4(1):e000429, 2018.
- Caldwell LK, DuPont WH, Beeler MK, Post EM, Barnhart EC, Hardesty VH, Anders JP, Borden EC, Volek JS, Kraemer WJ. The Effects of a Korean Ginseng, GINST15, on Perceptual Effort, Psychomotor Performance, and Physical Performance in Men and Women. *J Sports Sci Med.* 2018 Mar 1;17(1):92-100.
- Flanagan SD, DuPont WH, Caldwell LK, Hardesty VH, Barnhart EC, Beeler MK, Post EM, Volek JS, Kraemer WJ The Effects of a Korean Ginseng, GINST15, on Hypo-Pituitary-Adrenal and Oxidative Activity Induced by Intense Work Stress. *J Med Food.* Jan;21(1):104-112, 2018
- DuPont WH, Meuris BJ, Hardesty VH, Barnhart EC, Tompkins LH, Golden MJP, Usher CJ, Spence PA, Caldwell LK, Post EM, Beeler MK, Kraemer WJ. The Effects Combining Cryocompression Therapy following an Acute Bout of Resistance Exercise on Performance and Recovery. *J Sports Sci Med.* Aug 8;16(3):333-342, 2017.
- Lee EC, Muñoz CX, McDermott BP, Beasley KN, Yamamoto LM, Hom LL, Casa DJ, Armstrong LE, Kraemer WJ, Anderson JM, Maresh CM. Extracellular and cellular Hsp72 differ as biomarkers in acute exercise/environmental stress and recovery. *Scand J Med Sci Sports.* Jan;27(1):66-74, 2017.
- Kraemer WJ, Ratamess NA, Nindl BC. Recovery responses of testosterone, growth hormone, and IGF-1 after resistance exercise. *J Appl Physiol* (1985). Mar 1;122(3):549-558, 2017.
- Kraemer WJ, Kennett MJ, Mastro AM, McCarter RJ, Rogers CJ, DuPont WH, Flanagan SD, Turbitt WJ, Fragala MS, Post EM, Hymer WC. Bioactive growth hormone in older men and women: It's relationship to immune markers and healthspan. *Growth Horm IGF Res.* Jun;34:45-54, 2017.
- Kraemer WJ, Ratamess NA, Flanagan SD, Shurley JP, Todd JS, Todd TC. Understanding the Science of Resistance Training: An Evolutionary Perspective. *Sports Med.* Dec;47(12):2415-2435, 2017.
- Grindeland RE, Kraemer WJ, Hymer WC. Two types of rat pituitary somatotrophs secrete growth hormone with different biological and immunological profiles. *Growth Horm IGF Res.* Oct;36:52-56, 2017.
- Hooper DR, Kraemer WJ, Saenz C, Schill KE, Focht BC, Volek JS, Maresh CM. The presence of symptoms of testosterone deficiency in the exercise-hypogonadal male condition and the role of nutrition. *Eur J Appl Physiol.* Jul;117(7):1349-1357, 2017.
- DuPont WH, Kraemer WJ, Nindl BC, Lee EC, Fragala MS, Hatfield DL, Caldwell LK, Post EM, Beeler MK, Volek JS, Maresh CM. The effects of different exercise training modalities on plasma proenkephalin Peptide F in women. *Peptides.* May;91:26-32,2017.
- Hooper DR, Kraemer WJ, Focht BC, Volek JS, DuPont WH, Caldwell LK, Maresh CM. Endocrinological Roles for Testosterone in Resistance Exercise Responses and Adaptations. *Sports Med.* Sep;47(9):1709-1720, 2017.
- Ash GI, Taylor BA, Thompson PD, MacDonald HV, Lamberti L, Chen MH, Farinatti P, Kraemer WJ, Panza GA, Zaleski AL, Deshpande V, Ballard KD, Mujtaba M, White CM, Pescatello LS. The antihypertensive effects of aerobic versus isometric handgrip resistance exercise. *J Hypertens.* Feb;35(2):291-299, 2017.
- Kupchak BR, Kraemer WJ, Hooper DR, Saenz C, Dulkis LL, Secola PJ, Brown LE, Galpin AJ, Coburn JW, DuPont WH, Caldwell LK, Volek JS, Maresh CM. The effects of a transcontinental flight on markers of coagulation and fibrinolysis in healthy men after vigorous physical activity. *Chronobiol Int.*;34(2):148-161, 2017.
- Hatfield DL, Nicoll JX, Kraemer WJ. Effects of Circadian Rhythm on Power, Force, and Hormonal Response in Young Men. *J Strength Cond Res.* Mar;30(3):725-32, 2016.
- Volek JS, Freidenreich DJ, Saenz C, Kunces LJ, Creighton BC, Bartley JM, Davitt PM, Munoz CX, Anderson JM, Maresh CM, Lee EC, Schuenke MD, Aerni G, Kraemer WJ, Phinney SD. Metabolic characteristics of keto-adapted ultra-endurance runners. *Metabolism.* Mar;65(3):100-10, 2016.
- Kraemer WJ, Hooper DR, Kupchak BR, Saenz C, Brown LE, Vingren JL, Luk HY, DuPont WH, Szivak TK, Flanagan SD, Caldwell LK, Eklund D, Lee EC, Häkkinen K, Volek JS, Fleck SJ, Maresh CM. The effects of a roundtrip trans-American jet travel on physiological stress, neuromuscular performance, and recovery. *J Appl Physiol* (1985). Aug 1;121(2):438-48, 2016.
- MacDonald HV, Johnson BT, Huedo-Medina TB, Livingston J, Forsyth KC, Kraemer WJ, Farinatti PT, Pescatello LS. Dynamic Resistance Training as Stand-Alone Antihypertensive Lifestyle Therapy: A Meta-Analysis. *J Am Heart Assoc.* Sep 28;5(10). pii: e003231., 2016
- Kraemer WJ, Hooper DR, Kupchak BR, Saenz C, Brown LE, Vingren JL, Luk HY, DuPont WH, Szivak TK, Flanagan SD, Caldwell LK, Eklund D, Lee EC, Häkkinen K, Volek JS, Fleck SJ, Maresh CM. The effects of a roundtrip trans-American jet travel on physiological stress, neuromuscular performance, and recovery. *J Appl Physiol* (1985). Aug 1;121(2):438-48, 2016.
- Szivak TK, Kraemer WJ. Physiological Readiness and Resilience: Pillars of Military Preparedness. *J Strength Cond Res.* Nov;29 Suppl 11:S34-9, 2015.
- Nindl BC, Alvar BA, R Dudley J, Favre MW, Martin GJ, Sharp MA, Warr BJ, Stephenson MD, Kraemer WJ. Executive Summary From the National Strength and Conditioning Association's Second Blue Ribbon Panel on Military Physical Readiness: Military Physical Performance Testing. *J Strength Cond Res.* Nov;29 Suppl 11:S216-20, 2015.

- Friedl KE, Knapik JJ, Häkkinen K, Baumgartner N, Groeller H, Taylor NA, Duarte AF, Kyröläinen H, Jones BH, Kraemer WJ, Nindl BC. Perspectives on Aerobic and Strength Influences on Military Physical Readiness: Report of an International Military Physiology Roundtable. *J Strength Cond Res.* Nov;29 Suppl 11:S10-23, 2015.
- Kraemer WJ, Gordon SE, Fragala MS, Bush JA, Szivak TK, Flanagan SD, Hooper DR, Looney DP, Triplett NT, DuPont WH, Dziados JE, Marchitelli LJ, Patton JF. The effects of exercise training programs on plasma concentrations of proenkephalin Peptide F and catecholamines. *Peptides.* Feb; 64:74-81, 2015.
- Luk HY, Kraemer WJ, Szivak TK, Flanagan SD, Hooper DR, Kupchak BR, Comstock BA, Dunn-Lewis C, Vingren JL, DuPont WH, Hymer WC. Acute resistance exercise stimulates sex-specific dimeric immunoreactive growth hormone responses. *Growth Horm IGF Res.* Jun; 25(3):136-40, 2015.
- Gordon SE, Kraemer WJ, Looney DP, Flanagan SD, Comstock BA, Hymer WC. The influence of age and exercise modality on growth hormone bioactivity in women *Growth Horm IGF Res.* Apr-Jun;24(2-3):95-103, 2014.
- Kraemer WJ, Flanagan SD, Volek JS, Nindl BC, Vingren JL, Dunn-Lewis C, Comstock BA, Hooper DR, Szivak TK, Looney DP, Maresh CM, Hymer WC. Resistance exercise induces region-specific adaptations in anterior pituitary gland structure and function in rats. *J Appl Physiol (1985).* Dec;115(11):1641-7, 2013.
- Thomas GA, Kraemer WJ, Kennett MJ, Comstock BA, Maresh CM, Denegar CR, Volek JS, Hymer WC. Immunoreactive and bioactive growth hormone responses to resistance exercise in men who are lean or obese. *J Appl Physiol (1985).* Aug;111(2):465-72, 2011.
- Kraemer WJ, Dunn-Lewis C, Comstock BA, Thomas GA, Clark JE, Nindl BC. Growth hormone, exercise, and athletic performance: a continued evolution of complexity. *Curr Sports Med Rep.* Jul-Aug;9(4):242-52, 2010.
- Kraemer WJ, Vingren JL, Schuenke MD, Kopchick JJ, Volek JS, Fragala MS, Häkkinen K, Jen-Ho, Thomas GA, Staron RS. Effect of circulating growth hormone on muscle IGF-I protein concentration in female mice with growth hormone receptor gene disruption. *Growth Horm IGF Res.* Jun;19(3):242-4, 2009.
- Kraemer WJ, Nindl BC, Volek JS, Marx JO, Gotshalk LA, Bush JA, Welsch JR, Vingren JL, Spiering BA, Fragala MS, Hatfield DL, Ho JY, Maresh CM, Mastro AM, Hymer WC. Influence of oral contraceptive use on growth hormone in vivo bioactivity following resistance exercise: responses of molecular mass variants. *Growth Horm IGF Res.* 2008 Jun;18(3):238-44, 2008.
- Kraemer WJ, Nindl BC, Marx JO, Gotshalk LA, Bush JA, Welsch JR, Volek JS, Spiering BA, Maresh CM, Mastro AM, Hymer WC. Chronic resistance training in women potentiates growth hormone in vivo bioactivity: characterization of molecular mass variants. *Am J Physiol Endocrinol Metab.* Dec;291(6):E1177-87, 2006.
- French DN, Gómez AL, Volek JS, Rubin MR, Ratamess NA, Sharman MJ, Gotshalk LA, Sebastianelli WJ, Putukian M, Newton RU, Häkkinen K, Fleck SJ, Kraemer WJ. Longitudinal tracking of muscular power changes of NCAA Division I collegiate women gymnasts. *J Strength Cond Res.* Feb;18(1):101-7, 2004.
- Kraemer WJ, Nindl BC, Ratamess NA, Gotshalk LA, Volek JS, Fleck SJ, Newton RU, Häkkinen K. Changes in muscle hypertrophy in women with periodized resistance training. *Med Sci Sports Exerc.* 2004 Apr;36(4):697-708, 2004.
- Marx JO, Kraemer WJ, Nindl BC, Larsson L. Effects of aging on human skeletal muscle myosin heavy-chain mRNA content and protein isoform expression. *J Gerontol A Biol Sci Med Sci.* Jun;57(6):B232-8, 2002.
- Hymer WC, Kraemer WJ, Nindl BC, Marx JO, Benson DE, Welsch JR, Mazzetti SA, Volek JS, Deaver DR. Characteristics of circulating growth hormone in women after acute heavy resistance exercise. *Am J Physiol Endocrinol Metab.* Oct;281(4):E878-87, 2001.
- Kraemer WJ, Mazzetti SA, Nindl BC, Gotshalk LA, Volek JS, Bush JA, Marx JO, Dohi K, Gómez AL, Miles M, Fleck SJ, Newton RU, Häkkinen K. Effect of resistance training on women's strength/power and occupational performances. *Med Sci Sports Exerc.* Jun;33(6):1011-25, 2001.
- Kraemer WJ, Staron RS, Gordon SE, Volek JS, Koziris LP, Duncan ND, Nindl BC, Gómez AL, Marx JO, Fry AC, Murray JD. The effects of 10 days of spaceflight on the shuttle Endeavor on predominantly fast-twitch muscles in the rat. *Histochem Cell Biol.* Nov;114(5):349-55, 2000.
- Kraemer WJ, Marchitelli L, Gordon SE, Harman E, Dziados JE, Mello R, Frykman P, McCurry D, Fleck SJ. Hormonal and growth factor responses to heavy resistance exercise protocols. *J Appl Physiol (1985).* Oct;69(4):1442-50, 1990.
- Kraemer, W.J., L.E. Armstrong, L.J. Marchitelli, R.W. Hubbard, and B. N. Leva. Plasma opioid peptide responses during heat acclimation in humans. *Peptides*, 8:715-719, 1987.
- Kraemer WJ, Noble B, Culver B, Lewis RV. Changes in plasma proenkephalin peptide F and catecholamine levels during graded exercise in men. *Proc Natl Acad Sci U S A.* Sep;82(18):6349-51, 1985.

CV | Scott Swearingen

Educational History:

M.F.A., May 2004, The Ohio State University, College of Arts and Sciences, Department of Art (258 Hopkins Hall, 128 N. Oval Mall, Columbus, OH 43210-1363), Art & Technology

B.F.A., December 1998, The Ohio State University, College of Arts and Sciences, Department of Art (258 Hopkins Hall, 128 N. Oval Mall, Columbus, OH 43210-1363), Art & Technology

Employment History:

Assistant Professor, 2016-present, The Ohio State University, College of Arts and Sciences, Department of Design, 100 Hayes Hall, 108 North Oval Mall, Columbus, Ohio 43210

Assistant Professor, 2013-2016, The University of Texas at Dallas, School of Arts, Technology, and Emerging Communication, 800 West Campbell Rd, AT 10, Richardson, TX 75080

Game Designer, 2010-2012, MAXIS/Electronic Arts Inc., 209 Redwood Shores Pkwy, Redwood City, CA 94065

Level Designer, 2006-2010, Electronic Arts Inc., 209 Redwood Shores Pkwy, Redwood City, CA 94065

Assistant Professor, 2005-2006, The University of Texas at Dallas, School of Arts and Humanities, Art & Technology, 800 West Campbell Rd, AT 10, Richardson, TX 75080

Level Designer, 2005, Gearbox Software, 101 E. Park Blvd. #1200, Plano, TX 75074

Level Designer, 2003-2004, TKO-Software, 2161 Delaware Ave., Santa Cruz, CA 95060

Awards:

1. Scott Swearingen and Kyoung Lee Swearingen. *Wall-Mounted Level*. Award for 'Special Recognition for Poster and Demo'. IFIP-ICEC 2018. Poznan, Poland. August 2018.
2. Scott Swearingen and Kyoung Lee Swearingen. *Wall-Mounted Level*. Award for 'Innovation'. Montreal Independent Games Festival. Montreal, Quebec. November 2017.
3. Scott Swearingen and Kyoung Lee Swearingen. *Wall-Mounted Level*. Award for 'Social Impact'. Montreal Independent Games Festival. Montreal, Quebec. November 2017.

Exhibitions, Workshops, Presentations, Posters:

4. Scott Swearingen and Kyoung Lee Swearingen, *Wall-Mounted Level*. IFIP-ICEC 2018. Poznan, Poland. August 2018. [exhibition]
5. Scott Swearingen and Kyoung Lee Swearingen, *Designing a Cooperative Mixed-Reality Game About Reconciliation*. IFIP-ICEC 2018. Poznan, Poland. August 2018. [poster]
6. Scott Swearingen and Kyoung Lee Swearingen, *Designing a Cooperative Mixed-Reality Game About Reconciliation*. IEEE GEM. Galway, Ireland. August 2018 [presentation]
7. Scott Swearingen and Kyoung Lee Swearingen, *Wall-Mounted Level: A Cooperative Mixed Reality Game About Reconciliation*. SIGGRAPH 2018. August 2018. [poster]
8. Scott Swearingen and Kyoung Lee Swearingen, *Wall-Mounted Level*. North Texas Digital Fabrication Symposium. Denton, TX. April 2018. [exhibition]
9. Scott Swearingen and Kyoung Lee Swearingen. *Games and Storytelling for Design Foundations*. National Conference on the Beginning Design Student. Cincinnati, OH. March 2018. [presentation]
10. Scott Swearingen and Kyoung Lee Swearingen. *Games and Storytelling for Design Foundations*. The CUNY Games Conference 4.0. New York City, NY. January 2018. [presentation]
11. Scott Swearingen and Kyoung Lee Swearingen. *Wall-Mounted Level*. The CUNY Games Conference 4.0. New York City, NY. January 2018. [exhibition]
12. Scott Swearingen and Kyoung Lee Swearingen. *Wall-Mounted Level*. Montreal Independent Games Festival. Montreal, Quebec. November 2017. [exhibition]
13. Scott Swearingen and Kyoung Lee Swearingen. *Wall-Mounted Level*. HASTAC. Orlando, FL. November 2017. [exhibition]
14. Scott Swearingen and Kyoung Lee Swearingen. *Combining Digital & Physical Methods Through 3D Printing, Photogrammetry, and Projection Mapping*. GLITCHCON. Minneapolis, MN. May 2017. [presentation]
15. *Physical Scroller*. Humane Technologies Pop-Up. Columbus, OH. March 2017. [exhibition]
16. Scott Swearingen and Kyoung Lee Swearingen. *Creating Virtual Environments with 3D Printing and Photogrammetry*. SIGGRAPH ASIA 2016 Creating Virtual Environments. Macao, China. December 2016. [workshop, presentation]

Published Titles:

1. "The Sims 4", Maxis, Electronic Arts, 2014
2. "Dead Space 2", Visceral Games, Electronic Arts Inc., 2011.
3. "Dante's Inferno", Visceral Game, Electronic Arts Inc., 2010.
4. "The Godfather II", EA Redwood Shores, Electronic Arts Inc., 2009.
5. "Dead Space", EA Redwood Shores, Electronic Arts Inc., 2008.
6. "The Simpsons Game", EA Redwood Shores, Electronic Arts., 2007.
7. "Brothers in Arms: Earned in Blood", Gearbox Software, Ubisoft, 2005.
8. "Medal of Honor: Pacific Assault", TKO Software, 2004.
9. "Medal of Honor: Allied Assault - Breakthrough", TKO Software, 2003.

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: James Onate

eRA COMMONS USER NAME (credential, e.g., agency login): onatejames

POSITION TITLE: Associate Professor and Chair, Graduate Studies Health and Rehabilitation Sciences at The Ohio State University

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Florida, Gainesville, FL	BS	05/1994	Exercise & Sport Science
University of North Carolina, Chapel Hill, NC	MA	05/1997	Exercise & Sport Science
University of North Carolina, Chapel Hill, NC	PhD	12/2002	Human Movement Science

A. Personal Statement

I am excited to lend my expertise to lead the Human Performance Collaborative effort at The Ohio State University. I am excited to aid with the scientific and academic approach of clinical research focused on human performance optimization and sustainment. I look forward to contributing to the effort through my expertise in musculoskeletal injury assessment and human performance optimization of physically active individuals. I am confident that I can contribute to the leadership of this outstanding team as my experience as Director of the Movement Optimization preVention for Exercise Sustainment (MOvES) research laboratory at The Ohio State University, in addition to my academic leadership background as the Chair of the Graduate Studies Committee at The Ohio State University's College of Medicine School of Health and Rehabilitation Sciences graduate programs and the Director of the PhD program in Health and Rehabilitation Sciences. I have successfully led and been a part of several National Institutes of Health (NIH), Department of Defense, and various foundation and agency sponsored grants. My role as an international, national, and community leader in injury prevention and performance enhancement as a certified athletic trainer and human performance expert will aid in the clinical integration of research to optimize and sustain human performance potential.

Selected Peer-Reviewed Manuscripts

1. **Onate JA**, Guskiewicz KM, Marshall SW, Giuliani C, Yu B, Garrett W. Instruction of jump-landing technique utilizing videotape feedback: altering lower extremity movement patterns. *American Journal of Sports Medicine*. 2005; 33(6): 831-842. PMID: 15827359 [PubMed - indexed for MEDLINE]
2. Benjaminse A, Gokeler A, Dowling AV, Faigenbaum A, Ford KR, Hewett TE, **Onate JA**, Otten B, Myer GD. Optimization of the anterior cruciate ligament injury prevention paradigm: novel feedback techniques to enhance motor learning and reduce injury risk. *Journal of Orthopedic & Sports Physical Therapy*. 2015; Mar, 45(3):170-182. PMID: 25627151 [PubMed - indexed for MEDLINE]
3. Grooms D, Appelbaum G, **Onate J**. Neuroplasticity following anterior cruciate ligament injury: a framework for visual-motor training approaches in rehabilitation. *Journal of Orthopedic & Sports Physical Therapy*. 2015; May, 45(5):381-393. PMID: 25579692 [PubMed - indexed for MEDLINE]
4. Grooms D, Page S, **Onate J**. Brain activation for knee movement measured days before second anterior cruciate ligament injury: neuroimaging in musculoskeletal medicine. *Journal of Athletic Training*. 2015;50(10):1005-1010.

B. Positions

Employment

- 2002-2003 Boston University Department of Rehabilitation Sciences, Boston, MA
Assistant Professor
- 2003-2009 Old Dominion University Department of Human Movement Science: Norfolk, VA
Assistant Professor
- 2003-2009 Old Dominion University Sports Medicine Research Laboratory: Norfolk, VA
Director
- 2010-present The Ohio State University School of Health & Rehabilitation Sciences: Columbus, OH
Associate Professor
- 2014-2018 The Ohio State University School of Health & Rehabilitation Sciences: Columbus, OH
Chair, Graduate Studies Committee
Director, PhD Program in Health and Rehabilitation Sciences
- 2010-present The Ohio State University MOvES Laboratory: Columbus, OH
Director
- 2018-present The Ohio State University: Columbus, OH
Member, Sports Medicine Research Institute
- 2018-present The Ohio State University: Columbus, OH
Senior Scientific Advisor, Stanley D and Joan H Ross Center for Brain Health and Performance
- 2019-present The Ohio State University: Columbus, OH
Faculty Lead, Human Performance Collaborative in Office of Research

Other Experience and Professional Memberships:

- 2005-2007 Member, U.S. Department of Defense Joint Services Physical Training Injury Prevention
- 2005-2017 Research Consultant, Research Advisory Council, BTE Technologies, Inc,
- 1993-present Member, National Athletic Trainers' Association
- 2003-present Member, American College of Sports Medicine
- 2004-present Editorial Board, Journal of Athletic Training
- 2006-present Research Consultant, Naval Special Warfare Development Group
- 2013-present Associate Editor, Journal of Athletic Training

C. Contribution to Science

1. My initial primary contribution to science revolves around the use of motor learning paradigms relative to altering biomechanical movement patterns. My research focused on jump-landing movement mechanics relative to anterior cruciate ligament (ACL) injury prevention has focused on developing methodologies to aid in altering theorized lower extremity movement patterns as a primary and secondary injury prevention model. By providing evidence and simple clinical approaches to influencing movement pattern alteration, this body of work has helped to shape the primary prevention and secondary rehabilitation relative to ACL injury for physically active individuals.
 - a) Benjaminse A, Gokeler A, Dowling AV, Faigenbaum A, Ford KR, Hewett TE, **Onate JA**, Otten B, Myer GD. Optimization of the anterior cruciate ligament injury prevention paradigm: novel feedback techniques to enhance motor learning and reduce injury risk. *Journal of Orthopedic & Sports Physical Therapy*. 2015; Mar, 45(3):170-182. PMID: 25627151 [PubMed - indexed for MEDLINE]
 - b) Grooms D, Appelbaum G, **Onate J**. Neuroplasticity following anterior cruciate ligament injury: a framework for visual-motor training approaches in rehabilitation. *Journal of Orthopedic & Sports Physical Therapy*. 2015; May, 45(5):381-393. PMID: 25579692 [PubMed - indexed for MEDLINE]
 - c) Grooms DR, Page SJ, Nichols-Larsen DS, Chaudhari AM, White SE, **Onate JA**. Neuroplasticity associated with anterior cruciate ligament reconstruction. *J Orthop Sports Phys Ther*. 2017; 47(3): 180-189.
2. My secondary contributions to science have been focused on clinical biomechanical movement screening relative to contributing to primary and secondary models of musculoskeletal injury prevention. Efforts focused on movement screening prior to participation and biomechanical assessments has been the recent thrust towards developing primary and secondary injury prevention paradigms for musculoskeletal injury in

physically active individuals. Biomechanical assessments including postural control, kinematics, kinetics, and functional motion assessment have been the primary methods utilized for developing parsimonious clinical approaches to pre-participation assessments intent on decreasing the risk for musculoskeletal injury primarily in the lower extremity of various types of physically active individuals and shoulder/elbow injuries in baseball players.

- a) **Onate JA**, Beck BC, Van Lunen BL. On-field testing environment impairs balance error scoring system performance during pre-season screening of healthy collegiate baseball players. *Journal of Athletic Training*. 2007; 42(4): 446-451. PMID: 18174931 [PubMed - indexed for MEDLINE] PMID: PMC2140068
- b) **Onate J**, Cortes N, Welch C, Van Lunen B. Expert vs. Novice Inter-rater Reliability and Criterion Validity of the Landing Error Scoring Systems. *Journal of Sport Rehabilitation*. 2010; 19(1):41-56. PMID: 20231744 [PubMed - indexed for MEDLINE]
- c) **Onate JA**, Dewey T, Kollock R, Thomas K, Van Lunen B, Ringleb S. Real-Time Inter-Session and Inter-Rater Reliability of the Functional Movement Screen. *Journal of Strength and Conditioning Research*. 2012; 26(2):408-15. PMID: 22266547 [PubMed – indexed for MEDLINE]

D. Research Support

Current Research Support (relevant to current project)

Grooms (PI) 9/2018-9/2021

Department of Defense

Peer Reviewed Orthopaedic Research Program – Applied Research Award

OR170266: “Rehabilitation 2.0: Addressing Neuroplasticity in the Musculoskeletal Rehabilitation Model”

Role: Co-Investigator

The role of neuroplasticity following musculoskeletal injury will be explored following Anterior Cruciate Ligament reconstruction in post-surgical military and civilian populations to examine the optimal rehabilitation protocols for enhanced neuromotor recovery following injury rehabilitation.

Completed Research Support (relevant to current project)

Onate (PI) 1/2013-10/2018

National Institute of Health R01

National Institute of Arthritis Musculoskeletal and Skin Diseases

5R01AR062578-02: “Functional Evaluation to Predict Lower Extremity Musculoskeletal Injury”.

Role: Principal investigator

The National Federation of State High School Associations considers the preparticipation physical evaluations (PPE) a prerequisite to athletics participation, yet despite this recommendation there are no large-scale controlled trials confirming the effectiveness of the PPE. As a first step towards addressing this limitation, our preliminary data demonstrates that deficits in functional performance (i.e., balance, strength, and movement control) are able to predict lower extremity injury.

Onate (PI) 3/2010 – 7/2015

United States Special Operations Command: SORDAC Project Number MEDTECH-R495371-10 “Naval Special Warfare Combatant Crewmen Peak Health and Performance Sustainment Model

Role: Principal Investigator

The main objective of this research project is to implement an evidence-based on-site assessment process to evaluate the physical and biogenetic markers of Navy Special Warfare Combatant Crewmen (SWCC) operators for attaining and sustaining peak performance throughout their careers and lives. The goal of this project is to evaluate the sustainment of SWCC operators’ peak health and performance pre- and post-deployment by evaluating markers of performance throughout their training-deployment cycle to create a personalized performance sustainment model to maintain optimal operational readiness.

CURRICULLUM VITAE

March 1, 2019
Kyoung Lee Swearingen

Educational History:

M.F.A., May 2004, The Ohio State University, College of Arts and Sciences, Department of Art (258 Hopkins Hall, 128 N. Oval Mall, Columbus, OH 43210-1363), Art & Technology

Thesis: Visualizing Subjective Perception through Illustrations of Polarized Concept: entry vs. exit Master's Examination Committee: Dr. Midori Kitagawa (Adviser), Tony Mendoza, Dr. Wayne Carlson, Amy Youngs

B.F.A, March 2001, Savannah College of Art and Design (342 Bull Street, Savannah, GA 31402), Computer Art

B.S., February 1995, Sungshin Women's University, College of Natural Science (249-1, Dongseon-dong 3-ga, Seongbuk-gu, Seoul, 136-742, South Korea), Chemistry

Employment History:

Assistant Professor, Aug 2016- Present, Department of Design, The Ohio State University, 155 Oval Dr. S, Columbus, OH 43210

Assistant Professor, Aug 2013- Aug 2016, School of Arts, Technology, and Emerging Communication, The University of Texas at Dallas, 800 West Campbell Rd, AT 10, Richardson, TX 75080

Lighting Technical Director, July 2006- August 2013, Pixar Animation Studios, 1200 Park Ave. Emeryville, CA 94608

Lighting Artist, January 2005- July 2006, DNA Productions, Irving, TX

Lecturer, September 2005- May 2006, Arts and Technology, School of Arts and Humanities, The University of Texas at Dallas, 800 West Campbell Rd, Richardson, TX 75080

Graduate Research Associate, September 2003- May 2004, The Ohio State University, Advanced Computing Center for the Arts and Design (ACCAD), 331 Sullivant Hall 1813 N. High Street Columbus, OH 43210

Graduate Teaching Associate, September 2001- May 2003, The Ohio State University, Department of Art, 258 Hopkins Hall, 128 N. Oval Mall, Columbus, OH 43210-1363

Published Article:

1. **Kyoung Lee Swearingen** and Scott Swearingen. 2016. Creating virtual environments with 3D printing and photogrammetry. In *SIGGRAPH ASIA 2016 Creating Virtual Environments* (SA '16). ACM, New York, NY, USA, Article 1, 4 pages. DOI: <https://doi.org/10.1145/2992133.3002169>

Achievements in original investigation:

Games:

1. Kyoung Lee Swearingen, Scott Swearingen, Susan Thrane, and Rohin Dasari, *Circle*, May 2018 - current
2. Kyoung Lee Swearingen, Scott Swearingen, Marc Ainger, Rosalie Yu, and Skylar Wurster. *The Woods*, September 2017- current
3. Kyoung Lee Swearingen and Scott Swearingen. *Wall Mounted Level*, completed in November 2017
4. Kyoung Lee Swearingen and Scott Swearingen. *Beacon*, Completed in December 2016

Films:

1. Swearingen, Kyoung Lee, Lighting Technical Director, Sonder. Directed by Neth Nom, A teaser for short animation, 'Sonder'. Soba Studios, May, 2018
2. Swearingen, Kyoung Lee, Lighting Technical Director, Sonder-teaser. Directed by Neth Nom, A teaser for short animation, 'Sonder'. Soba Studios, November, 2016
3. Swearingen, Kyoung Lee, Lighting Technical Director, Toy Story of Terror. Directed by Angus MacLane, 22 minutes TV short for ABC channel. Pixar Animation Studios, Walt Disney Pictures, October, 2013.
4. Swearingen, Kyoung Lee, Lighting Technical Director, Monsters University. Directed by Dan Scanlon, Feature Film, Pixar Animation Studios, Walt Disney Pictures, June, 2013.
5. Swearingen, Kyoung Lee, Lighting Technical Director, The Blue Umbrella. Directed by Saschka Unseld, Short Film, Pixar Animation Studios, Walt Disney Pictures, June, 2013.
6. Swearingen, Kyoung Lee, Lighting Technical Director, Brave. Directed by Mark Andrews, Brenda Chapman Feature Film, Pixar Animation Studios, Walt Disney Pictures, June, 2012.

7. Swearingen, Kyoung Lee, Lighting Technical Director, Cars2. Directed by John Lasseter, Brad Lewis, Feature Film, Pixar Animation Studios, Walt Disney Pictures, June, 2011.
8. Swearingen, Kyoung Lee, Lighting Technical Director, La Luna. Directed by Enrico Casarosa, Short Film, Pixar Animation Studios, Walt Disney Pictures, June, 2011.
9. Swearingen, Kyoung Lee, Lighting Technical Director, Mater's Tall Tales- Tokyo Mater. Directed by John Lasseter, Short Film, Pixar Animation Studios, Walt Disney Pictures. March, 2010.
10. Swearingen, Kyoung Lee, Lighting Technical Director, Mater's Tall Tales- Monster Truck Mater. Directed by John Lasseter, Rob Gibbs, Short Film, Pixar Animation Studios, Walt Disney Pictures. July, 2010.
11. Swearingen, Kyoung Lee, Lighting Technical Director, Mater's Tall Tales- Heavy Metal Mater. Directed by John Lasseter, Rob Gibbs, Short Film, Pixar Animation Studios, Walt Disney Pictures. July, 2010.
12. Swearingen, Kyoung Lee, Lighting Technical Director, Toy Story 3. Directed by Lee Unkrich, Feature Film, Pixar Animation Studios, Walt Disney Pictures, June, 2010.
13. Swearingen, Kyoung Lee, Lighting Technical Director, Mater's Tall Tales- Unidentified Flying Mater. Directed by John Lasseter, Rob Gibbs, Short Film, Pixar Animation Studios, Walt Disney Pictures. November, 2009.
14. Swearingen, Kyoung Lee, Pre-Production Technical Director, Partly Cloudy. Directed by Peter Sohn, Short Film, Pixar Animation Studios, Walt Disney Pictures, May, 2009.
15. Swearingen, Kyoung Lee, Key Lighting Artist, Up. Directed by Pete Doctor, Feature Film, Pixar Animation Studios, Walt Disney Pictures, May, 2009.
16. Swearingen, Kyoung Lee, Lighting Technical Director, WALL-E. Directed by Andrew Stanton, Feature Film, Pixar Animation Studios, Walt Disney Pictures, June, 2008.
17. Swearingen, Kyoung Lee, Lighting Technical Director, Presto. Directed by Doug Sweetland, Short Film, Pixar Animation Studios, Walt Disney Pictures, June, 2008.
18. Swearingen, Kyoung Lee, Lighting Technical Director, Ratatouille. Directed by Brad Bird, Jan Pinkava, Feature Film, Pixar Animation Studios, Walt Disney Pictures, June, 2007.
19. Swearingen, Kyoung Lee, Lighting Artist, The Ant Bully. Directed by John A. Davis, Feature Film, DNA Productions, Warner Bros. Pictures, July 2006.

20. Swearingen, Kyoung Lee, Lighting Artist, *The Jimmy Timmy Power Hour 2: When Nerds Collide* (TV Movie). Directed by Keith Alcorn, Mike Gasaway, Butch Hartman, TV show, DNA Productions, Nickelodeon Network, January 2006.

Workshop:

1. Kyoung Lee Swearingen and Scott Swearingen. 2016. Creating virtual environments with 3D printing and photogrammetry. In *SIGGRAPH ASIA 2016 Creating Virtual Environments* (SA '16).

Poster:

1. Kyoung Lee Swearingen and Scott Swearingen. August 12, [SIGGRAPH 2018](#), Vancouver, Canada, poster session "Wall Mounted Level: A Cooperative Mixed Reality Game About Reconciliation"
2. Kyoung Lee Swearingen and Scott Swearingen. September 16, [IFIP-ICEC 2018](#), Poznan, Poland, poster session "Designing a Cooperative Mixed-Reality Game about Reconciliation"

Invited Talks/Presentations:

1. Kyoung Lee Swearingen and Scott Swearingen. 2019, February. *From Industry to Academia; Collaborative games and storytelling Through Humane Technology*, University of South Florida, Tampa, FL
2. Kyoung Lee Swearingen and Scott Swearingen. 2018, March. *Games and Storytelling for Design Foundations*, 2018 National Conference on the Beginning Design Student, University of Cincinnati, Cincinnati, OH
3. Kyoung Lee Swearingen and Scott Swearingen. 2018, January. *Games and Storytelling for Design Foundations*, CUNY games conference, 04, City University of New York, New York City, NY
4. Kyoung Lee Swearingen and Scott Swearingen. *HASTAC 2017. Wall-Mounted Level*. Orlando, FL. November 2-4, 2017
5. Kyoung Lee Swearingen and Scott Swearingen. *Glitchcon 2017*. Minneapolis, MN. Creating Games with 3D Printing, Photogrammetry, and Projection Mapping Techniques. May 5, 2017.
6. Swearingen, Kyoung Lee, December, 2016, Creating virtual environments with 3D printing and photogrammetry – Part 2. In *SIGGRAPH ASIA 2016 Creating Virtual*

Environments (SA '16).

7. *Research through Making*, August 23 – September 24, 2016. Urban Arts Space, Columbus, Ohio.
8. Swearingen, Kyoung Lee, October, 2015 University of the Incarnate Word, San Antonio, Texas. Animation Industry Seminar, Topics: Visual Storytelling through Lighting
9. Swearingen, Kyoung Lee, Sean McComber, Eric Farrar, Todd Fechter, September 2015, 2nd International Conference and Expo on Computer Graphics & Animation, San Antonio, USA, Topic: Building an Animation Production Course for University Animation Students
10. Swearingen, Kyoung Lee, Scott Swearingen, September 2015, 2nd International Conference and Expo on Computer Graphics & Animation, San Antonio, USA, Topic: Pushing the Physical Arts Deeper into Real-Time Rendering
11. Swearingen, Kyoung Lee, September 2015, 2nd International Conference and Expo on Computer Graphics & Animation, San Antonio, USA, Topic: Story Telling Through Lighting in Animated Films
12. Swearingen, Kyoung Lee, April 2011, Fort Worth Museum Science and History, What's Up Doc Exhibition, Topic: Sticky, Part 2: Creating a Computer Animated Short Film
13. Swearingen, Kyoung Lee, October, 2014 UT Dallas Animation Guild, Topics: Visual Storytelling through Lighting

Awards and Fellowships:

1. Wall- Mounted Level, "Special recognition: Poster and Demo" [IFIP-ICEC 2018](#), Poznan, Poland, August 16, 2018
2. *Sonder*, California Independent Film Festival, Moraga, CA August 24- September 1, 2018
3. *Sonder*, Canberra Short Film Festival, Canberra, Australia September 9-16,
4. *Sonder*, Sioux City International Film Festival, Sioux City, Iowa September 12-16, 2018
5. *Sonder*, San Jose International Short Film Festival, San Jose, California October 11-14, 2018
6. *Sonder*, Bucheon International Animation Festival, Bucheon, Korea October 19-23, 2018

7. *Sonder*, Orlando Film Festival, Orlando, Florida October 18-25, 2018
8. *Sonder*, Spark Animation Film Festival, Vancouver, Canada October 25-28
9. *Sonder*, Edinburgh Short Film Festival, Edinburgh, Scotland October 26-November 10, 2018
10. *Sonder*, Short Sounds Film Festival, Bournemouth, UK November 1-2, 2018
11. *Sonder*, San Diego Asian Film Festival, San Diego, CA November 8-17, 2018
12. *Sonder*, Foyle Film Festival, Derry, Northern Ireland November 16-25, 2018
13. *Sonder*, Anchorage International Film Festival Anchorage, Alaska , November 30-December 9, 2018
14. Wall- Mounted Level, Best Innovative game award, Montreal Independent Games Festival, 11/19/2017
15. Wall- Mounted Level, Best Social Impact game award, Montreal Independent Games Festival, 11/19/2017
16. Faculty Fellowships, Co- recipient: Scott Swearingen, University of Texas at Dallas, Richardson TX 2013-2015
17. "Toy Story of Terror", Annie Awards, Best Animated Special Production (Nominated), Pixar Animation Studios, October 2013.
18. "Toy Story of Terror", PGA Awards, Outstanding Children's program (Nominated), Pixar Animation Studios, October 2013.
19. "The Blue Umbrella", Opening Premier at Berlin Film Festival, Pixar Animation Studios, June 2013.
20. "Monsters University", Annie Awards, Best Animated Feature (Nominated), Pixar Animation Studios, June 2013.
21. "Monsters University", BAFTA Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2013.
22. "Monsters University", Broadcast Film Critics Association Critics Choice Movie Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2013.
23. "Monsters University", Hollywood Film Festival Awards, Hollywood Animation Award, Pixar Animation Studios, June 2013.

24. "Monsters University", San Francisco Film Critics Circle Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2013.
25. "Monsters University", Saturn Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2013.
26. "Monsters University", Washington DC area Film Critics Association Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2013.
27. "Monsters University", International 3D Society, Motion Picture, Animated or Mixed Media (Nominated), Pixar Animation Studios, June 2013.
28. "Monsters University", International Press Academy Satellite Awards, Animated 3D Feature(Nominated), Pixar Animation Studios, June 2013.
29. "Monsters University", St. Louis Film Critic Association Awards, Best Animated Feature (Nominated), Pixar Animation Studios, June 2013.
30. "Monsters University", New York Film Critics Circle Awards, Best Animated Film (3rd Place), Pixar Animation Studios, June 2013.
31. "Monsters University", Seattle International Film Festival, Best Film (3rd Place), Pixar Animation Studios, June 2013.
32. "Brave", Saturn Award Best Animated Film (Nominated), Pixar Animation Studios, June 2012.
33. "Brave", Annie Awards, Best Animated Feature (Nominated), Pixar Animation Studios, June 2012.
34. "Brave", BAFTA Awards, Best Animated Film, Pixar Animation Studios, June 2012.
35. "Brave", Broadcast Film Critics Association Critics Choice Movie Awards, Best Animated Film, Pixar Animation Studios, June 2012.
36. "Brave", Chicago Film Critics Association Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2012.
37. "Brave", Phoenix Film Critics Association Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2012.
38. "Brave", San Diego Film Critics Association Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2012.
39. "Brave", Iowa Film Critics Association Awards, Best Animated Film (Nominated), Pixar Animation Studios, June 2012.

40. "Brave", International 3D Society, Motion Picture, Animated or Mixed Media (Nominated), Pixar Animation Studios, June 2012.
41. "Brave", International Press Academy Satellite Awards, Animated 3D Feature, Pixar Animation Studios, June 2012.
42. "Brave", Toronto Film Critics Association Awards, Best Animated Feature (Runner-Up) Pixar Animation Studios, June 2012.
43. "Brave", Golden Globe Award for Best Animated Feature Film, Pixar Animation Studios, June 2012.
44. "La Luna", Academy Award, Best Short Film - Animated (Nominated), Pixar Animation Studios, June 2012.
45. "La Luna", Annie Award, Best Animated Short Subject (Nominated), Pixar Animation Studios, June 2012.
46. "La Luna", Annecy International Animated Film Festival, Pixar Animation Studios, June 2011.
47. "Cars 2", Annie Award, Best Animated Feature (Nominated), Pixar Animation Studios, June 2011.
48. "Cars 2", Golden Globe Award, Best Animated Feature Film (Nominated), Pixar Animation Studios, June 2011.
49. "Toy Story 3", Academy Award, Best Picture (Nominated), Pixar Animation Studios, June 2010.
50. "Toy Story 3", Academy Award, Best Animated Feature, Pixar Animation Studios, June 2010.
51. "Toy Story 3", Excellent Dynamic Activism Award, Best Animated Film, Pixar Animation Studios, June 2010.
52. "Toy Story 3", American Film Institute, AFI Movies of the Year, Pixar Animation Studios, June 2010.
53. "Toy Story 3", AFCA Award, Best Animated Feature, Pixar Animation Studios, June 2010.
54. "Toy Story 3", BSFC Award, Best Animated Film, Pixar Animation Studios, June 2010.

55. "Toy Story 3", BSFC Award, Best Picture (Runner-up), Pixar Animation Studios, June 2010.
56. "Toy Story 3", BAFTA, Special Visual Effects, Pixar Animation Studios, June 2010.
57. "Toy Story 3", BAFTA, Animated Film, Pixar Animation Studios, June 2010.
58. "Toy Story 3", Broadcast Film Critics Association, Best Picture (Nominated), Pixar Animation Studios, June 2010.
59. "Toy Story 3", Broadcast Film Critics Association, Best Animated Feature, Pixar Animation Studios, June 2010.
60. "Toy Story 3", COFCA Awards, Best Animated Film, Pixar Animation Studios, June 2010.
61. "Toy Story 3", CFCA Award, Best Animated Feature, Pixar Animation Studios, June 2010.
62. "Toy Story 3", DFWFCA Award, Best Animated Film, Pixar Animation Studios, June 2010.
63. "Toy Story 3", FFCC Award, Best Animated Film, Pixar Animation Studios, June 2010.
64. "Toy Story 3", Hollywood Award, Hollywood Animation Award, Pixar Animation Studios, June 2010.
65. "Toy Story 3", Hollywood Award, Hollywood Movie of the Year Award (Nominated), Pixar Animation Studios, June 2010.
66. "Toy Story 3", HFCS Award, Best Picture (Nominated), Pixar Animation Studios, June 2010.
67. "Toy Story 3", HFCS Award, Best Animated Film, Pixar Animation Studios, June 2010.
68. "Toy Story 3", International 3D Society, 3D Animated Feature, Pixar Animation Studios, June 2010.
69. "Toy Story 3", International 3D Society, People's Choice - Favorite 3D Animated Movie, Pixar Animation Studios, June 2010.
70. "Toy Story 3", IFC Award, Best Animated Film, Pixar Animation Studios, June 2010.
71. "Toy Story 3", KCFCC Award, Best Animated Film, Pixar Animation Studios, June 2010.

72. "Toy Story 3", Sierra Award, Best Family Film, Pixar Animation Studios, June 2010.
73. "Toy Story 3", Sierra Award, Best Animated Film, Pixar Animation Studios, June 2010.
74. "Toy Story 3", LCC Award, Sky 3D Award: Film of the Year (Nominated), Pixar Animation Studios, June 2010.
75. "Toy Story 3", LAFCA Award, Best Animation, Pixar Animation Studios, June 2010.
76. "Toy Story 3", National Board of Review, Best Animated Feature, Pixar Animation Studios, June 2010.
77. "Toy Story 3", NYFCO Award, Best Animated Film, Pixar Animation Studios, June 2010.
78. "Toy Story 3", NTFCA Award, Best Animated, Pixar Animation Studios, June 2010.
79. "Toy Story 3", OFCC Award, Best Animated Film, Pixar Animation Studios, June 2010.
80. "Toy Story 3", People's Choice Award, Favorite Movie (Nominated), Pixar Animation Studios, June 2010.
81. "Toy Story 3", People's Choice Award, Favorite Family Movie, Pixar Animation Studios, June 2010.
82. "Toy Story 3", Golden Tomato Award, Best Reviewed Film, Pixar Animation Studios, June 2010.
83. "Toy Story 3", SDFCS Award, Best Animated Film, Pixar Animation Studios, June 2010.
84. "Toy Story 3", SFFCC Award, Best Animated Feature, Pixar Animation Studios, June 2010.
85. "Toy Story 3", UFCA Award, Best Picture (Nominated), Pixar Animation Studios, June 2010.
86. "Toy Story 3", UFCA Award, Best Animated Feature, Pixar Animation Studios, June 2010.
87. "Toy Story 3", Visual Effects Society, Outstanding Effects Animation in an Animated Feature Motion Picture (Nominated), Pixar Animation Studios, June 2010.
88. "Toy Story 3", WAFCA Award, Best Animated Feature, Pixar Animation Studios, June 2010.

89. "Up", Cannes Film Festival, Pixar Animation Studios, May 2009.
90. "Up", Academy Award, Best Picture (Nominated), Pixar Animation Studios, May 2009.
91. "Up", Academy Award, Best Animated Feature, Pixar Animation Studios, May 2009.
92. "Up", The 3D Society, Stereoscopic 3D Lumiere Award, Pixar Animation Studios, May 2009.
93. "Up", American Film Institute, AFI Top Ten Movies of the Year, Pixar Animation Studios, May 2009.
94. "Up", Attenborough Award, Best Film, Pixar Animation Studios, May 2009.
95. "Up", AFCA Award, Best Animated Feature, Pixar Animation Studios, May 2009.
96. "Up", BAFTA, Animated Film, Pixar Animation Studios, May 2009.
97. "Up", BSFC Award, Animation, Pixar Animation Studios, May 2009.
98. "Up", CFCA Award, Best Animated Feature, Pixar Animation Studios, May 2009.
99. "Up", Broadcast Film Critics Association, Best Animated Feature, Pixar Animation Studios, May 2009.
100. "Up", Broadcast Film Critics Association, Best Picture (Nominated), Pixar Animation Studios, May 2009.
101. "Up", Golden Tomato Award, Best-Reviewed Wide Release Film, Pixar Animation Studios, May 2009.
102. "Up", HFCS Award, Best Animated Feature, Pixar Animation Studios, May 2009.
103. "Up", Hollywood Award, Hollywood Animation Award, Pixar Animation Studios, May 2009.
104. "Up", LAFCA Award, Animation, Pixar Animation Studios, May 2009.
105. "Up", National Board of Review, Best Animated Feature, Pixar Animation Studios, May 2009.
106. "Up", NIFFA, The Audience Award, Pixar Animation Studios, May 2009.
107. "Up", People's Choice Award, Favorite Family Movie, Pixar Animation Studios, May 2009.

108. "Up", PFCS Award, Best Animated Film, Pixar Animation Studios, May 2009.
109. "Up", Visual Effects Society, Outstanding Effects Animation in an Animated Feature Motion Picture, Pixar Animation Studios, May 2009.
110. "Up", WAFCA Award, Best Animated Film, Pixar Animation Studios, May 2009.
111. "Partly Cloudy", The 3D Society, Stereoscopic 3D Lumiere Award, Pixar Animation Studios, May 2009.
112. "WALL-E", Academy Award, Best Animated Feature, Pixar Animation Studios, June 2008.
113. "WALL-E", BAFTA, Animated Film, Pixar Animation Studios, June 2008.
114. "WALL-E", BAFTA Children's Awards, Feature Film, Pixar Animation Studios, June 2008.
115. "WALL-E", BSFC Award, Best Picture (Tie), Pixar Animation Studios, June 2008.
116. "WALL-E", BSFC Award, Best Animated Film, Pixar Animation Studios, June 2008.
117. "WALL-E", CFCA Award, Best Picture, Pixar Animation Studios, June 2008.
118. "WALL-E", CFCA Award, Best Animated Feature, Pixar Animation Studios, June 2008.
119. "WALL-E", Broadcast Film Critics Association, Best Animated Feature, Pixar Animation Studios, June 2008.
120. "WALL-E", London Critics' Circle, Film of the Year (Nominated), Pixar Animation Studios, June 2008.
121. "WALL-E", Academy Award, Best Animated Feature, Pixar Animation Studios, June 2008.
122. "WALL-E", Hollywood Award, Animation of the Year, Pixar Animation Studios, June 2008.
123. "WALL-E", LAFCA Award, Best Picture, Pixar Animation Studios, June 2008.
124. "WALL-E", Loutzenhiser Award, Best Animated Film, Pixar Animation Studios, June 2008.
125. "WALL-E", National Board of Review, Best Animated Feature, Pixar Animation Studios, June 2008.

126. "WALL-E", National Board of Review, Top Ten Films of the Year, Pixar Animation Studios, June 2008.
127. "WALL-E", National Movie Awards, Best Family Film, Pixar Animation Studios, June 2008.
128. "WALL-E", NYFCC Award, Best Animated Film, Pixar Animation Studios, June 2008.
129. "WALL-E", OFCC Award, Best Animated Film, Pixar Animation Studios, June 2008.
130. "WALL-E", International Press Academy, Motion Picture, Animated, or Mixed Media, Pixar Animation Studios, June 2008.
131. "WALL-E", Saturn Awards, Best Animated Film, Pixar Animation Studios, June 2008.
132. "WALL-E", SLFCA Award, Best Picture (Nominated), Pixar Animation Studios, June 2008.
133. "WALL-E", SLFCA Award, Best Animated Film, Pixar Animation Studios, June 2008.
134. "WALL-E", SLFCA Award, Most Original, Innovative, or Creative Film, Pixar Animation Studios, June 2008.
135. "WALL-E", UFCA Award, Best Animated Feature, Pixar Animation Studios, June 2008.
136. "WALL-E", Visual Effects Society, Outstanding Effects Animation in an Animated Feature Motion Picture, Pixar Animation Studios, June 2008.
137. "WALL-E", VFCC Award, Best Film (Nominated), Pixar Animation Studios, June 2008.
138. "WALL-E", American Film Institute, AFI Movies of the Year, Pixar Animation Studios, June 2008.
139. "Presto", Academy Award, Best Short Film - Animated (Nominated), Pixar Animation Studios, June 2008.
140. "Presto", Annie Award, Best Animated Short Subject (Nominated), Pixar Animation Studios, June 2008.
141. "Ratatouille", Academy Award, Best Animated Feature, Pixar Animation Studios, June 2007.
142. "Ratatouille", Broadcast Film Critics Association, Best Animated Feature, Pixar Animation Studios, June 2007.

143. "Ratatouille", American Film Institute, AFI Movies of the Year, Pixar Animation Studios, June 2007.
144. "Ratatouille", National Board of Review, Best Animated Feature, Pixar Animation Studios, June 2007.
145. "Ratatouille", Hollywood Award, Animation of the Year, Pixar Animation Studios, June 2007.
146. "Ratatouille", LAFCA Award, Best Animation, Pixar Animation Studios, June 2007.
147. "Ratatouille", BAFTA, Animation Film, Pixar Animation Studios, June 2007.
148. "Ratatouille", Visual Effects Society, Outstanding Supporting Visual Effects in a Motion Picture, Pixar Animation Studios, June 2007.
149. "Ratatouille", Visual Effects Society, Outstanding Effects Animation in an Animated Feature Motion Picture (Food), Pixar Animation Studios, June 2007.
150. "Enclosure #2", Zlinksky Pes - The Student Film Competition, Czech Republic, Animated Film, May 2004.
151. "Enclosure #2", Wexner Center Student Film and Video Showcase, Columbus, OH, Animated Film, September 2003.
152. "Enclosure #2", MFA Thesis Show "FOURSEEN", Drexel Theatre, Columbus, OH, Animated Film, September 2003.
153. "Communication", Art and Technology Group Show "Digerati", Hopkins Gallery, Columbus, OH, Robotic Sculpture, May 2003

Appendix C: Letters of Concurrence



April 14, 2019

To: The Office of Academic Affairs:
From: Mary Anne Beecher, Chairperson, Department of Design
RE: Concurrence for interdisciplinary eSports and Games major

The Department of Design is pleased to provide concurrence for the new interdisciplinary eSports and Games major. We look forward to contributing to the provision of the track of study that will focus on making in the form of the design and development of games. With five required courses from Design, this interdisciplinary major provides a very valuable opportunity for our department to collaborate with Computer Science Engineering to support a track of study that is focused on game design and development.

Although we provide courses in support of ASC's interdisciplinary Game Studies minor program, we see this new major as distinctive from the minor and are pleased that it has a structure that takes advantage of efficiencies that include using existing courses from multiple departments. Students studying in the minor will benefit from taking courses with eSports and Games majors who have more advanced understanding of games as an academic subject.

Likewise, we do not see this new major as a redundancy with any of our current design majors or a new design major in Interactive Media Design that we are proposing to start in 2020. Instead, eSports and Games expands the efficiency of extending student interest and expertise in game making and it provides an opportunity to reinforce needed faculty expertise and facilities that can serve multiple populations in the spirit of multidisciplinary teaching and research.

Sincerely,

Dr. Mary Anne Beecher, Professor and Chairperson
Department of Design
100 Hayes Hall
108 North Oval Mall
Columbus, OH 43210



THE OHIO STATE UNIVERSITY

COLLEGE OF
EDUCATION AND HUMAN ECOLOGY

Office of Academic Affairs

College of Education and Human Ecology
172 Arps Hall
1945 North High Street
Columbus, OH 43210
614-292-8212 Phone

W. Randy Smith
Vice Provost for Academic Programs
Office of Academic Affairs
203 Bricker Hall
190 North Oval Mall
Columbus, OH 43210

Dear Randy,

On behalf of the College of Education and Human Ecology, I am pleased to offer our enthusiastic support for the new Esports and Game Studies major. We believe this major represents an important collaborative initiative within the university, that it will serve a new population of students, and that it will build bridges to the larger community. We stand ready to contribute to the further development and implementation of this new major.

Please contact me if I can be of further assistance (warnick.11@osu.edu).

Sincerely,

Bryan Warnick
Associate Dean for Academic Affairs

April 12, 2019



Dear Randy,

I am writing to express my support of the proposed eSports and Gaming Curriculum designed for use at The Ohio State University. This new program will offer students a wide range of opportunities through which to contribute positively to the burgeoning eSports and Gaming industries. In particular the focus on ethical behavior, and issues such as the assurance of beneficence, are crucial in setting the program apart and preparing students for the challenges that these industries are faced with today and into the future. I have every hope that our OSU students will lead a virtuous path for the evolution of activity in these domains.

On behalf of Fisher College of Business, I concur with the program proposal.

Sincerely,

Professor Elliot Bendoly, PhD

Associate Dean of Undergraduate Students and Programs
& Fisher College of Business Distinguished Professor
Management Sciences, The Ohio State University



THE OHIO STATE UNIVERSITY

Daniel M. Clinchot, MD
College of Medicine

Vice Dean for Education
Associate Vice President for Health Sciences Education

260 Meiling Hall
370 West 9th Ave
Columbus, OH 43210-1238

614-688-3104 Office
614-292-4499 Fax

Dan.Clinchot@osumc.edu

April 15, 2019

W. Randy Smith, Ph.D.
Vice Provost, Academic Programs
Office of Academic Affairs
203 Bricker Hall
190 North Oval Mall

Dear Randy,

The College of Medicine fully endorses the proposed new undergraduate major: **Esports and Game Studies**. The College of Medicine has been involved in the development of this major through the Application of Games in Medicine track. This new major will serve to broaden our ability to develop workforce-ready graduates in the expanding field of gaming science in health and health professions education. We anticipate that this new major and the health track specifically will be well subscribed.

Please do not hesitate to contact me if I can provide further information in support of this proposed new major.

Sincerely,

Daniel M. Clinchot, MD
Vice Dean for Education
Associate Vice President for Health Sciences Education
Chair, Department of Biomedical Education & Anatomy
College of Medicine

DMC:sl

April 15, 2019

Re: BS in Esports and Game Studies

To Whom It May Concern:

I am writing this letter in enthusiastic support of the proposed undergraduate degree in Esports and Game Studies. Faculty from the School of Health and Rehabilitation Studies have been integrally involved in the creation of this major, and we are excited about the potential of this major and especially the “Application of Games in Medicine and Health” track to attract new students to the University or provide existing students with a novel new major. We are preparing to develop the three courses (HLTHRSC designation) and will be hiring an associated faculty member to teach these courses initially. We also have the capacity to enroll students in the HLTHRSC 3400 course, which is taught each semester.

I appreciate the opportunity to provide this letter of support and am available to answer any questions related to the School’s involvement in the major, if they should arise.

Sincerely,



Deborah S. Larsen, PhD, FASAHP, FAPTA
Professor and Director, School of Health and Rehabilitation Sciences
Associate Dean, College of Medicine
Associate Vice President, Health Sciences