

July 22, 2015

MEMORANDUM

TO: State Board of Regents

FROM: David L. Buhler

SUBJECT: Utah State University – Bachelor of Science (BS) in Outdoor Product Design and Development

Issue

Utah State University (USU) School of Applied Sciences, Technology and Education requests approval to offer a Bachelor of Science (BS) Degree in Outdoor Product Design and Development. The request was approved by the Utah State University Board of Trustees on May 1, 2015, and, if approved, will become effective Fall 2015.

Background

The primary purpose of this degree program is to prepare future technical designers of outdoor products who can integrate business, environmental and technological considerations into the development of innovative products for the outdoors. The proposed degree program will meet the need of preparing future employees for this sector of Utah's economy. The industry is experiencing a shortage of qualified technical designers with specific skills required of design and developing products to be used in the outdoors.

There is not a similar program offered at other Utah Institutions or in the region. Students interested in being a technical designer for the outdoor product industry must currently choose from a two-year Associates Degree in Fashion Design option (Salt Lake Community College or Bridgerland Applied Technology College) or an Interdisciplinary Studies degree from Utah State University with an emphasis on fashion design and art. None of these programs meets the demand of the industry for a future workforce that has a bachelor's degree in Outdoor Product Design and Development.

In Utah, a new career pathway program is being developed for secondary students. The pathway will transition from Fashion Design, Merchandising and Manufacturing to Design Entrepreneurship. In 2011, the enrollment for courses within the pathway was approximately 34,730 students (according to data collected by Pearl Hart, Family and Consumer Sciences Specialist at the Utah State Office of Education). Further, eighth grade students receive initial experiences in apparel/clothing design and product development in an exploratory family and consumer sciences course. Total enrollment in 2011 was approximately 21,000 students out of a total of 41,435 enrolled eighth graders in the state. Since 2011, a

new course titled "Design Entrepreneurship" has been developed and implemented. Data is not currently available on the total number of students enrolled. For the 2016-2017 academic year, two new courses will be available to high school students titled "Sports and Outdoor Products 1" and "Advanced Sports and Outdoor Products." These courses have been developed to respond to the identification of outdoor products and recreation as one of Utah's key economic clusters by the Governor's Office of Economic Development. Students can follow a career pathway from these courses into the degree for Outdoor Product Design and Development.

Faculty currently exist at USU to offer this degree. All costs will be covered in existing budgets. No new faculty or staff FTE, library, or other operational funds will be required.

Policy Issues

The proposed program has been developed through established institutional procedures and Board of Regents policy. Chief academic officers as well as faculty in related departments from the Utah System of Higher Education institutions have reviewed the proposal and have provided input. There are no additional policy issues that need to be addressed relative to approval of the program.

Staff Recommendation

The Commissioner recommends the Board of Regents approve Utah State University's Bachelor of Science in Outdoor Product Design and Development.

David L. Buhler
Commissioner of Higher Education

DLB/EJH
Attachment

Executive Summary – Full Template
Utah State University
Bachelor of Sciences Degree in Outdoor Product Design & Development
12/4/2014

Program Description

The School of Applied Sciences, Technology and Education (ASTE) at Utah State University (USU) is developing a Outdoor Product Design and Development degree with plans, if approved, to begin fall of 2015. The program will be offered on the Logan campus.

Role and Mission Fit

The proposed Bachelor of Science in Outdoor Product Design and Development will contribute to Utah State University's mission "to be one of the nation's premier student-centered land-grant universities". Developed based on student and industry demand, the degree program will provide a rigorous academic experience, cultivate diversity of thought and culture; and serve the public through learning, discovery, and engagement. Overall, the proposed program will enhance the visibility of the university across the nation and internationally; strengthen recruitment, retention, graduation, and placement of students in industry. It will help build new partnerships with an industry that depends on the economic and natural resources of Utah. The Bachelor of Science in Outdoor Product Design and Development will help prepare students for successful careers and add to the knowledge, skills and abilities required of a vibrant sector of the outdoor industry. These are all part of the University, College of Agriculture and Applied Sciences and School of Applied Sciences, Technology and Education mission and goals.

Faculty

The faculty in the School of Applied Sciences, Technology and Education can accommodate the proposed program. The faculty in Family and Consumer Sciences Education can facilitate the technical clothing production skills and professional seminar/studio experiences. Faculty in Technology and Engineering Education currently offer the computer-aided design courses needed and materials processing content and skills. Further, the faculty member in Agricultural Communications and Journalism can teach the skills required for digital technologies. The students in these programs take similar technical skill courses. The interdisciplinary nature of the program utilizes courses that are currently offered on the Logan campus. As the program grows, graduate student teaching and reallocation can support the addition of a faculty member to support additional courses or advising for the students.

Market Demand

Utah State University is responding to the demand for a trained workforce by the outdoor product design and development industry by creating an innovative and industry-inspired degree program. Not only is the industry calling for a trained workforce, but the demand for new and innovative outdoor products continues to rise. According to the Outdoor Industry Association (2012), more than 140 million Americans make outdoor recreation a priority. This fact is illustrated by the over \$646 billion that was spent on outdoor products in 2012 (Outdoor Industry Association, 2012). Outdoor recreation is a growing and diverse economic super sector that is a vital cornerstone of successful communities that cannot be ignored (OIA, 2012). Outdoor recreation is no longer a "nice to have", but it is a "must have" that provides a strong outlook for employment opportunities for future graduates (Outdoor Industry Association, 2012, p. 2). This degree program connects students to industry leaders and has been developed with assistance from the world's leading technical designers, world's largest fabric manufacturer and heads of outdoor product companies.

Student Demand

There are three specific factors that contribute to student demand for the study of Outdoor Product Design and Development in Utah. First, there are still a large number of secondary education programs facilitatiting clothing production courses and even outdoor clothing design. This would be a direct feeder to the post-secondary program. Currently, there is not an opporutnity for students to major in clothing production with an outdoor apparel emphasis in Utah or in the region. Second, there has been an increase in the number of students majoring in Interdisciplinary Studies (ITDS) in the College of Agriculture and Applied Sciences with an emphasis on clothing production, sewing and fashion design. The new OPDD program would be a specific program that would meet ITDS student needs. Third, there are currently two Associate of Applied Science degrees offered in Utah that would be a direct feeder for the program. With industry demand for employees, the new program would continue the AAS student’s education in Utah instead of requiring them to transfer to an institution in another state to complete the required education for employment.

Statement of Financial Support

None required.

Appropriated Fund.....	<input type="checkbox"/>
Special Legislative Appropriation.....	<input type="checkbox"/>
Grants and Contracts.....	<input type="checkbox"/>
Special Fees	<input type="checkbox"/>
Differential Tuition (must be approved by the Regents).....	<input type="checkbox"/>
Other (please describe).....	<input type="checkbox"/>

Similar Programs Already Offered in the USHE

There is not a similar program offered at other Utah Institutions or in the region. The closest programs recognized by the industry as appropriate for preparation to work in the outdoor product design and development field are located in Canada and Europe. Two-year fashion design programs are offered in Utah, but the industry demands an interdisciplinary program that integrates technical clothing design with engineering, considerations of the environment and sustainability, business skills, and advanced technology applications.

Program Description – Full Template
Utah State University
Bachelor of Science Degree in Outdoor Product Design & Development
12/4/2014

Section I: The Request

Utah State University requests approval to offer a bachelor's degree in Outdoor Product Design and Development effective Fall 2015. This program has been approved by the institutional Board of Trustees on May 1, 2015.

Section II: Program Description

Complete Program Description

The Bachelor of Science in Outdoor Product Design and Development prepares students to become professionals in the outdoor product industry (a \$646 billion industry that is continuing to grow according to the Outdoor Industry Association, 2012). Graduates of the program will be able to contribute to the design and development of a variety of soft goods (clothing and apparel-related accessories) for the outdoor product industry. This degree can also be used as a foundation to pursue advanced degrees in product design and development or other disciplines.

The primary focus of the degree will be on technical product design and development skills required by industry with a few courses integrated to connect to the business, environmental and technological side of the outdoor product industry. The industry is experiencing a shortage of qualified technical designers with specific skills required of design and developing products to be used in the outdoors. The proposed degree program will meet the need of preparing future employees for this super sector (according to the Outdoor Industry Association, 2012) in a state that is the premiere place for outdoor recreation (as quoted by the State of Utah Outdoor Recreation Vision, 2013). A degree in Outdoor Product Design & Development from Utah State University is the first step to a high skill, high wage, and high demand career opportunity. Many of the skills needed for success are included in the goals guiding the course curriculum and assessments. Complex 21st century skills (communication, problem solving, and critical thinking to name a few) are integrated into the program courses to ensure that graduates are well rounded and prepared for working in a complex industry and environment. Student learning will be facilitated through hands-on educational and studio-based experiences that integrate developmentally appropriate theory and research-based teaching strategies. A consortium of outdoor product industry representatives contributed to the development of specific learning outcomes for the program. Representatives from Black Diamond, Prana, W.L. Gore & Associates, Smartwool, Patagonia, Simm's Fishing, and the Office of Outdoor Recreation in the Governor's Office of Economic Development have been instrumental in the development of the program.

Purpose of Degree

The primary purpose of this degree program is to prepare future technical designers of outdoor products that can integrate business, environmental and technological considerations into the development of innovative products for the outdoors. The BS in Outdoor Product Design and Development provides excellent technical design and production-related learning experiences, meets the needs of students and the outdoor product industry, and matches the goals of the University, College, and Department. The degree will prepare students for careers in a wide range of outdoor product development sectors by providing a broad foundational education combined with practical "real world" experiences created with

assistance from leaders in the industry. The degree not only prepares the student for a future career, but also contributes to the economic development in Utah, the premiere place for outdoor recreation.

Institutional Readiness

As the land-grant institution in Utah, Utah State University has a unique opportunity to respond to a demand of industry that depends on the state economic and natural resources. The biggest assets that USU has for the Outdoor Product Design and Development degree will be the components of the degree and faculty already available at USU. In addition to the support from faculty in the School of Applied Sciences, Technology and Education (Family and Consumer Sciences Education, Technology and Engineering Education, and Agricultural Communications and Journalism), this degree program will bring together existing faculty in the College and University community to offer a degree that is innovative and cutting edge. The new program offers 13 new courses with the OPDD designation. The collaboration and support of faculty in other program areas within the department, college and university will assist in the development of the new courses (Family and Consumer Sciences Education for the clothing production and design courses; Technology and Engineering Education for the digital technologies and design-related courses; Landscape Architecture and Environmental Planning and Interior Design faculty to inform the development of studio-related experiences). Overall, this program provides Utah State University the opportunity to develop an interdisciplinary program that meets the current demand of students and the industry.

Departmental Faculty

Department Faculty Category	Department Faculty Headcount – Prior to Program Implementation	Faculty Additions to Support Program	Department Faculty Headcount at Full Program Implementation
With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)			
Full-time Tenured	13		13
Full-time Non-Tenured	1		2
Part-time Tenured			
Part-time Non-Tenured			
With Master’s Degrees			
Full-time Tenured	5		5
Full-time Non-Tenured	7		7
Part-time Tenured			
Part-time Non-Tenured			
With Bachelor’s Degrees			
Full-time Tenured	2		2
Full-time Non-Tenured	6		6
Part-time Tenured			
Part-time Non-Tenured			
Other			
Full-time Tenured	4		4
Full-time Non-Tenured	5		5
Part-time Tenured			
Part-time Non-Tenured	1		1

Total Headcount Faculty in the Department			
Full-time Tenured	19		19
Full-time Non-Tenured	19		19
Part-time Tenured			
Part-time Non-Tenured	1		1
Total Department Faculty FTE (As reported in the most recent A-1/S-11 Institutional Cost Study for "prior to program implementation" and using the A-1/S-11 Cost Study Definition for the projected "at full program implementation.")	31.42	X	32.42

Staff

Current faculty workloads will be adjusted to allow for the additional courses required of the proposed program. Faculty with the required education, experience and background are already involved with other programs within the department. Additional faculty will be considered as the enrollment in the program grows or the industry sponsors such additions. A new support staff position will assist with student recruitment, student advising, field experience coordination and facilitation and other program coordination duties as needed. This position and a faculty position to support the teaching responsibilities required by the degree program would be funded through university and/or department reallocation of funds. As stated previously, the 13 new courses with the OPDD designation will be developed in collaboration with faculty from across the department, college and university.

Library and Information Resources

Clothing production, design, and fashion studies-related holdings will be adequate for the Outdoor Product Design and Development program. Additional resources will not be needed. USU's current undergraduate resources include all software needed for this degree program.

Admission Requirements

The admission requirements will be consistent with the existing USU undergraduate admission requirements.

Student Advisement

The School of Applied Sciences, Technology and Education has a designated advisor in the College of Agriculture and Applied Sciences Student Services Center. The new program will accommodate the students who were majoring in Interdisciplinary Studies with an emphasis in fashion-related studies. The use of a faculty mentor/advisor will assist the Advisor with the increased number of students.

Justification for Graduation Standards and Number of Credits

The proposed program aligns with the standards and number of credits of other programs granting the bachelors of Science degree at USU. A graduating senior who has followed the four-year plan will have earned a minimum of 120 credits including general education, University Studies and courses in the major.

External Review and Accreditation

There is currently no national accreditation process for a degree in Outdoor Product Design and Development. To evaluate the program, an advisory board of the world's leading technical designers, the world's largest fabric manufacturing company and heads of outdoor product companies will be established.

Projected Program Enrollment and Graduates; Projected Departmental Faculty/Students

Data Category	Current – Prior to New Program Implementation	PROJ YR 1	PROJ YR 2	PROJ YR 3	PROJ YR 4	PROJ YR 5
Data for Proposed Program						
Number of Graduates in Proposed Program	X	0	0	5	15	15
Total # of Declared Majors in Proposed Program	X	15	30	60	80	100
Departmental Data – For All Programs Within the Department						
Total Department Faculty FTE (<i>as reported in Faculty table above</i>)	31.42	31.42	32.42	32.42	32.42	32.42
Total Department Student FTE (<i>Based on Fall Third Week</i>)	656.74	676	696	716	736	736
Student FTE per Faculty FTE (<i>ratio of Total Department Faculty FTE and Total Department Student FTE above</i>)	20.9	21.5	21.5	21.6	22.7	22.7
Program accreditation-required ratio of Student FTE/Faculty FTE, if applicable: (Provide ratio here: _____)						

Expansion of Existing Program

The Bachelor of Science in Outdoor Product Development is a new degree program and not an expansion of an existing program.

Section III: Need

Program Need

Utah leads the nation in outdoor recreation (The State of Utah Outdoor Recreation Vision, 2013, p. 2). According to the “State of Utah Outdoor Recreation Vision” (2013), Utah’s outdoor recreation industry is a significant and growing part of the state’s economy, contributing to well-paying jobs for highly skilled workers. One specific area that needs a trained workforce is the outdoor product design and development industry. A program does not exist in the United States to train outdoor product design and development professionals with the specific skill set required by the innovative and rapidly growing industry. Fashion design programs and other industrial design programs have fallen short of the demand for an interdisciplinary program that Utah State University can provide as the land-grant university in the state that is referred to as “the premiere place for outdoor recreation”. There is a need for a technical design program that considers the economic, sustainability, and technological factors associated with this growing and diverse economic super sector that is vital to the Utah community. Additionally, the program will help supply professionals to the growing number of outdoor industry companies that are based in Utah and beyond, which currently have difficulty filling the growing number of open positions.

Labor Market Demand

Between 2005 and 2011 (an economic recession), the outdoor recreation economy grew approximately five percent annually (Outdoor Industry Association, 2012). The outdoor recreation economy includes companies and firms that contribute to product development across the supply chain. Specifically, manufacturers, vendors, wholesalers, and service providers are included in the data that has been collected and analyzed by The Utah Governor's Office of Economic Development, the University of Utah's Bureau of Economic and Business Research (BEBR), and the Outdoor Industry Association (OIA). Graduates of the proposed outdoor product design and development degree program will be prepared to work in this growing industry that relies on technical skills associated with design, engineering, technology, and other fields of study. According to the report "An Analysis of Utah's Recreation Industry", many industries have seen a decrease in employment opportunities due to the national economic recession, but employment in the outdoor industry has recovered and reached record levels (BEBR, 2014). The report provides specific data gathered from the Bureau of Labor Statistics, Utah State Tax Commission, and the Department of Workforce Services. Overall, it was found that average employment in the outdoor recreation sector has increased over 30 percent since 2002 with 67 percent increase in annual wages and salaries (BEBR, 2014, p. 7). Advancements in apparel, footwear and equipment for outdoor activities are driving innovation and entrepreneurship, while creating a demand for highly skilled workers that integrate technology, product design, manufacturing, sustainability and global commerce (OIA, 2012). The industry depends on product designers and developers to move the industry forward and lead the innovation of new products. This is evident by the increase in sales of outdoor products by consumers in Utah (\$1.9 billion in 2013) and across the nation (a total of over \$646 billion spent in 2012).

As the first state to create an economic development cluster focusing on the outdoor product industry, Utah has seen an increased number of outdoor recreation product companies relocating to the state. With immediate access to high-quality outdoor recreation experiences, Utah allows for hands-on product research, development and testing. The world's leading technical designers, the world's largest fabric manufacturer and heads of outdoor product companies have requested a new degree program to train their workforce be developed at Utah State University. Specifically, the closest innovative and interdisciplinary program to train future employees for the industry is located in Canada. It has been difficult for the industry to relocate designers from Canada to the United States. As the land-grant university, Utah State University is strategically positioned to support an industry that makes up a significant portion of the state's economy. Utah ranks first among the states in the concentration of outdoor/sporting goods jobs as a percentage of total state jobs. Today, there are over 1,000 outdoor product companies in Utah (Utah Governor's Office of Economic Development, Outdoor Products and Recreation Cluster, 2013). The following companies are currently headquartered in Utah and demand a trained workforce: Amer Sports (brands including Atomic, Salomon, Suunto, Arc'teryx, etc.), Backcountry.com, Black Diamond, Easton, ENVE Composites, Fezzari, Flat-Attack, Gregory Mountain Products, Liberty Mountain, Ogio, Petzl, Rossignol, Voile, EK Accessories, William Joseph, Chums, and Goathead Spikes to name a few. Students participating in the program will have access to the Outdoor Industry Association's summer and winter markets that showcase top outdoor products and companies. Nationally, the outdoor recreation industry sees an estimated \$646 billion dollars in direct sales with \$120.7 billion of that from product sales. If the outdoor recreation has moved from "nice to have" to a "must have" then the new degree program will see the same demand (Outdoor Industry Association, 2012, p. 2). Outdoor recreation contributes more than \$5.8B to the economy, employs more than 65,000 people and is the primary driver behind the \$7.4B tourism industry (Utah Governor's Office of Economic Development, 2015). These factors were enough to motivate Governor Herbert to create Utah's *Outdoor Recreation Vision* and announce the creation of Utah's Outdoor Recreation Office (ORO) in

January 2013 at Outdoor Retailer's Winter Market show in Salt Lake City. Utah thus became the first state to have an Outdoor Recreation Office (Utah Governor's Office of Economic Development, 2015). Since its inception in late summer of 2013, ORO follows this vision: *Establish a nationwide recreation management standard, acknowledging that outdoor recreation is an essential component of Utah's culture, identity, diverse economy, and well-being, and ensuring that the State's natural assets can sustain economic growth and quality-of-life dividends for years to come* (Utah Governor's Office of Economic Development, 2015). The office is housed in the Governor's Office of Economic Development and embodies the state's ongoing commitment to the recreation economy (Utah Governor's Office of Economic Development, 2015).

Student Demand

Students interested in being a technical designer for the outdoor product industry must currently choose from a two-year Associates Degree in Fashion Design option (Salt Lake Community College or Bridgerland Applied Technology College) or an Interdisciplinary Studies degree from Utah State University with an emphasis on fashion design and art. None of these programs meet the demand of the industry for a future workforce that has a bachelor's degree in Outdoor Product Design and Development. The proposed program will meet the student and labor demand by offering a program that integrates experiences in technical design that considers economic, sustainability, engineering and technological factors. Utah is a state with over 500 teachers certified to teach clothing production-related courses. These courses do not have many college and/or career opportunities for students after high school. The proposed program would be an important career pathway for students who currently participate in these courses in Utah and who have an interest in outdoor recreation and product development. Transfer students with an Associate's Degree from Snow College, Salt Lake Community College or Bridgerland Applied Technology College could pursue the new program and have a viable career upon completion.

In Utah, a new career pathway program is being developed for secondary students. The pathway will transition from Fashion Design, Merchandising and Manufacturing to Design Entrepreneurship. In 2011, the enrollment for courses within the pathway was approximately 34,730 students (according to data collected by Pearl Hart, Family and Consumer Sciences Specialist at the Utah State Office of Education). Further, eighth grade students receive initial experiences in apparel/clothing design and product development in an exploratory family and consumer sciences course. Total enrollment in 2011 was approximately 21,000 students out of a total of 41,435 enrolled eighth graders in the state. Since 2011, a new course titled "Design Entrepreneurship" has been developed and implemented. Data is not currently available on the total number of students enrolled. For the 2016-2017 academic year, two new courses will be available to high school students titled "Sports and Outdoor Products 1" and "Advanced Sports and Outdoor Products". These courses have been developed to respond to the identification of outdoor products and recreation as one of Utah's key economic clusters by the Governor's Office of Economic Development.

At Utah State University, there has been an increase in expressed interest by prospective and current students in design and entrepreneurship-related degree programs. According to central advising, approximately 75 students are working towards completion of an Interdisciplinary Studies (ITDS) major focusing on design combined with an entrepreneurship emphasis. These identified students would be better served by the new outdoor product design and development major. The Interdisciplinary Studies major at Utah State University is only designed "to provide the small number of students whose degree needs cannot be met with other majors". The increased number of students pursuing this option suggests the need for a formal degree program that integrates design, entrepreneurship, engineering,

product/technical design, and other fields. By working with current students in the ITDS major, the opportunity exists to graduate approximately 15 students in year four of the program.

It is the priority of the faculty involved in the design of the program to work towards building relationships with other post-secondary institutions in the state to offer a career pathway program that has multiple entry and exit points to better serve the state, current and prospective students, and one of the key economic clusters in the state. There is opportunity to develop stackable credentials across the education continuum.

Similar Programs

There is not a similar program offered at other Utah Institutions or in the region. The closest programs recognized by the industry as appropriate for preparation to work in the outdoor product design and development field are located in Canada and Europe. Two-year fashion design programs are offered in Utah, but the industry demands an interdisciplinary program that integrates technical clothing design with engineering, considerations of the environment and sustainability, business skills, and advanced technology applications.

Collaboration with and Impact on Other USHE Institutions

There are no other programs similar to the proposed program in the other USHE Institutions.

Benefits

USU and the USHE will benefit by offering the Bachelor of Science in Outdoor Product Design and Development because it represents a new and innovative approach to preparing an important industry to Utah's economy. The proposed curriculum will be a model for other programs across the nation as it is the first program of this nature available in the United States. Strategic partnerships are an integral part of the proposed program and will bring industry-relevant curriculum to students at Utah State University. There is a direct connection between the degree program and career opportunities in the outdoor product development industry. The new degree is intended to reflect the care and concern of professional educators in providing current, relevant, real-world problems to talented, motivated students. Students receive a relevant and rigorous educational experience that will help them develop a career not only as a designer, but also in many other sectors of the outdoor product industry.

This degree will contribute to the Governor's Outdoor Recreation Vision by offering students a degree option that directly relates to the current and future economy of the state.

Consistency with Institutional Mission

The mission of Utah State University is to be one of the nation's premier student-centered land-grant and space-grant universities by fostering the principle that academics come first, by cultivating diversity of thought and culture, and by serving the public through learning, discovery, and engagement.

The new Bachelor of Science degree in Outdoor Product Design and Development reflects the University mission and goals by:

- Offering a program that is current and directed at the needs to the students
- Providing learning, discovery, and engagement opportunities directly relating to the students talents, skills and career objective

- Attract outstanding students in an environment that is highly competitive, demanding and engaging. The degree will help retain good students and be a major factor in them completing their college education
- The degree program will encourage interdisciplinary opportunities (courses focusing on technology and engineering, sustainability, business skills and hands-on design studio experiences). The program will also offer industry-based field experiences and internships
- Offering faculty new challenges and opportunities to use their talents and skills in areas for which they are highly qualified by the traditional degrees have not required them to use some of their abilities
- Encouraging the formation of new partnerships with the outdoor product industry
- Supporting the regional campuses with online courses for training for the industry and other special programs throughout the state

Section IV: Program and Student Assessment

Program Assessment

The School of Applied Sciences, Technology and Education will conduct on-going assessment of the degree program and make improvement or adjustments as needed. The competencies selected for this program include skills and knowledge outlined by industry leaders. Instructors will use student course evaluations as a formative step in the entire program as they see instantaneous reaction to their teaching. The program faculty will have the opportunity to interact and work with other design faculty from across campus. The department will also conduct exit interviews/surveys of graduating students. The program will survey alumni at approximate five-year intervals to provide an opportunity for student reflection on the program outcomes and overall value.

Expected Standards of Performance

Core Standards of Performance:

- Explain and interpret the organization and structure of the global product development industry for soft goods.
- Develop textile/apparel products for specific target markets within the outdoor industry to meet expectations for cost and quality (materials, performance, and aesthetics).
- Demonstrate effective leadership, teamwork, and communication skills.
- Plan, develop, and present merchandise lines for identified market segments within the outdoor product industry.
- Explain and apply the basic decision-making, production, and creative processes involved in the conversion of materials to finished textile/apparel products for the outdoors.
- Assess and evaluate the manner in which historic, cultural, economic, and environmental factors impact outdoor products.
- Evaluate the characteristics and performance of materials in textile/apparel products for the outdoors.
- Use technology and quantitative, analytical, and creative concepts in addressing a design dilemma.

Design Standards of Performance:

- Assess and evaluate aesthetic, historic, and trend information from a variety of sources to create innovative and artistic textile and apparel products for the outdoors.

- Apply the creative design process and evaluate outcomes.
- Develop and create images of fabrics and apparel in an artistic and informative manner using a variety of techniques, computer technology, and media.
- Apply technical knowledge and skills in pattern making, fit assessment, materials selection, and assembly processes to meet customer demand.
- Communicate creative and design work to professionals and consumers.

Production Standards of Performance:

- Analyze factors affecting human resource management issues, production planning, scheduling, and inventory control relative to business goals and professional development.
- Develop and analyze production methods appropriate to products, quality, cost, and equipment.
- Develop and analyze quality and engineering specifications and production standards for products and processes.
- Apply technology and work measurement to increase productivity, decrease costs, and shorten delivery time.

Merchandising Standards of Performance

- Assess market and consumer factors that influence apparel and textile merchandising and marketing decisions.
- Analyze merchandise assortments and line dimensions from a marketing perspective.
- Interpret and apply mathematical concepts and financial statements related to merchandise planning, control, and distribution.
- Demonstrate understanding of relationship management strategies with vendors, customers, employees, and other industry stakeholders.
- Recognize the types, functions, and significance of store and non-store retailing in contemporary global markets.

Section V: Finance

Department Budget

Three-Year Budget Projection							
Departmental Data	Current Departmental Budget – Prior to New Program Implementation	Departmental Budget					
		Year 1		Year 2		Year 3	
		Addition to Budget	Total Budget	Addition to Budget	Total Budget	Addition to Budget	Total Budget
Personnel Expense							
Salaries and Wages	\$3,572,519	\$35,725	\$3,608,244	\$36,082	\$3,644,326	\$36,443	\$3,680,769
Benefits	\$1,643,358	\$16,433	\$1,659,791	\$16,597	\$1,676,388	\$16,763	\$1,693,151
Total Personnel Expense	\$5,215,877	\$52,158	\$5,268,035	\$52,679	\$5,320,714	\$53,206	\$5,373,920

Non-Personnel Expense							
Travel	\$123,463	\$1,235	\$124,698	\$1,247	\$125,945	\$1,259	\$127,204
Capital	\$43,212	\$432	\$43,644	\$436	\$44,080	\$441	\$44,521
Library	\$18,521	\$184	\$18,705	\$188	\$18,893	\$189	\$19,082
Current Expense	\$432,122	\$4,322	\$436,444	\$4,363	\$440,807	\$4,408	\$445,215
Total Non-Personnel Expense	\$617,318	\$6,173	\$623,491	\$6,234	\$629,725	\$6,297	\$636,022
Total Expense (Personnel + Current)	\$5,833,195	\$58,331	\$5,891,526	\$58,913	\$5,950,439	\$59,503	\$6,009,942
Departmental Funding							
Appropriated Fund	\$4,742,814	\$47,428	\$4,790,242	\$47,902	\$4,838,144	\$48,381	\$4,886,525
Other:	\$368,253	\$3,683	\$371,936	\$3,719	\$375,655	\$3,756	\$379,411
Special Legislative Appropriation							
Grants and Contracts	\$722,128	\$7,220	\$729,348	\$7,292	\$736,640	\$7,366	\$744,006
Special Fees / Differential Tuition							
Total Revenue	\$5,833,195	\$58,331	\$5,891,526	\$58,913	\$5,950,439	\$59,503	\$6,009,942
Difference							
Revenue-Expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Departmental Instructional Cost / Student Credit Hour* <i>(as reported in institutional Cost Study for "current" and using the same Cost Study Definition for "projected")</i>	\$236	\$0	\$236	\$0	\$236	\$0	\$236

Funding Sources

Not applicable—all costs will be covered in existing budgets. No new faculty or staff FTE, library, or other operational funds will be required.

Reallocation

No new funding required as the program will use existing resources and mechanisms.

Impact on Existing Budgets

No foreseeable negative impacts upon existing programs, departmental, college, or university budgets are anticipated.

Section VI: Program Curriculum

All Program Courses (with New Courses in Bold)

Course Prefix & Number	Title	Credit Hours
General Education (not met by major requirements): 21 credits		
Various	Breadth Creative Arts (BCA)	3
Various	Breadth Social Science (BSS)	3
Various	Breadth Humanities (BHU)	3
ENGL 1010	Introduction to Writing: Academic Prose (CL1)	3
ENGL 2010	Intermediate Writing: Research Writing in a Persuasive Model (CL2)	3
MATH 1050 or STAT 1040	College Algebra or Intro to Statistics (QL)	3
Various	Depth Social Science (DSS)	3

Course Prefix & Number	Title	Credit Hours
Outdoor Product Design & Development Major Requirements: 99 credits		
OPDD 1700	Outdoor Product Design & Development Prof. Seminar	8(1)
OPDD 1750	History of the Outdoor Industry	3
OPDD 3030	Design Thinking, Methods & Materials	3
OPDD 3400	Color Theory & Design	3
OPDD 3760	Outdoor Product Design & Development Studio I	3
OPDD 3770	Outdoor Product Design & Development Studio II	3
OPDD 4250	Outdoor Product Design & Dev. Industry Experience	3
OPDD 4420	Digital Design Technologies for Outdoor Products I	3
OPDD 4430	Digital Design Technologies for Outdoor Products II	3
OPDD 4440	Aesthetics, Human Factors and Brand Image	3
OPDD 4750	Senior Design Studio I	3
OPDD 4760	Senior Design Studio II	3
OPDD 4770	Senior Exhibit	1
FCSE 1140	Introductory Sewing	2
FCSE 2040	Clothing Production Principles	3
FCSE 3030	Textile Science (DSC, QI)	4
FCSE 3040	Advanced Clothing Production	3
FCSE 3080	Dress and Humanity (DHA)	3
FCSE 4040	Advanced Clothing Studies: Couture and Tailoring	3
TEE 1030	Material Processing Systems	3
TEE 1200	Computer Aided Drafting and Design	3
WATS 1200	Biodiversity and Sustainability (BLS)	3
ART 1020	Drawing I	3
ECN 1500	Intro. to Economic Institutions, History and Principles (BAI)	3
LAEP 2039	Foundations of Sustainable Systems	3
OSS 1550	Business Correspondence (CI)	3
CHEM 1110	General Chemistry (BPS)	3
MGT 2050	Legal and Ethical Environment of Business	3
MGT 3500	Fundamentals of Marketing	3
MGT 3510	New Venture Fundamentals	3
MGT 4070	Retail Management (CI)	3
ENVS 2340	Natural Resources and Society (BSS)	3
Sub-Total	Elective Courses	0
Sub-Total	Track/Options (if applicable)	0
Sub-Total	Total Number of Credits	120

Program Schedule

Freshman Year

FALL	CR	SPRING	CR
OPDD 1700: Professional Seminar	1	OPDD 1700: Professional Seminar	1
OPDD 1750: History of the Outdoor Industry (BCA)	3	FCSE 2040: Clothing Production Principles	3
FCSE 1140: Introductory Sewing	2	CMST 1020: Public Speaking, or CMST 2110: Interpersonal Communication or PHIL 2400: Ethics (BHU)	3

WATS 1200: Biodiversity & Sustainability	3	STAT 1040: Intro to Statistics (QL)	3
ENGL 1010: Introduction to Writing (CL 1)	3	ART 1020: Drawing I	3
ECN 1500: Intro to Economic Inst. (BAI)	3		
Total	15	Total	13

Sophomore Year

FALL	CR	SPRING	CR
OPDD 1700: Professional Seminar	1	OPDD 1700: Professional Seminar	1
TEE 1030: Material Processing Systems	3	TEE 1200: Computer Aided Drafting & Design	3
ENGL 2010: Intermediate Writing (CL 2)	3	CHEM 1110: General Chemistry (BPS)	3
FCSE 3040: Advanced Clothing Prod.	3	OPDD 3030: Design Thinking, Methods, & Mat.	3
OPDD 3400: Color Theory & Design	3	FCSE 4040: Advanced Clothing Production	3
LAEP 2039: Fdn. of Sustainable Systems	3		
Total	16	Total	13

Summer

OPDD 4250: Outdoor Product Design & Development Industry Experience 3 credits

Junior Year

FALL	CR	SPRING	CR
OPDD 1700: Professional Seminar	1	OPDD 1700: Professional Seminar	1
FCSE 3080: Dress & Humanity (DHA)	3	OPDD 3770: OPDD Studio II	3
FCSE 3030: Textile Science (DSC, QI)	4	ENVS 2340: Nat. Resources & Society (BSS)	3
OPDD 3760: OPDD Studio II	3	JCOM 2010: Media Smarts (BSS)	3
OSS 1550: Business Correspondence (CI)	3	OPDD 4430: Digital Design Technologies II	3
OPDD 4420: Digital Design Technologies I	3		
Total	17	Total	13

Summer

OPDD 4250: Outdoor Product Design & Development Industry Experience 3 credits

Senior Year

FALL	CR	SPRING	CR
OPDD 1700: Professional Seminar	1	OPDD 1700: Professional Seminar	1
OPDD 4750: Senior Design Studio I	3	OPDD 4760: Senior Design Studio II	3
MGT 3500: Fundamentals of Marketing	3	OPDD 4770: Senior Exhibit	1
MGT 2050: Legal & Ethical Env. of Bus.	3	MGT 4070: Retail Management (CI)	3
OPDD 4440: Aesth. Human Fctrs, Brand	3	CMST 3330: Intercultural Communication (DSS)	3
		MGT 3510: New Venture Fundamentals	3
Total	13	Total	14

Section VII: Faculty

The School of Applied Sciences, Technology & Education has broad expertise in technical and content-related skills as well as existing specific expertise to support an outdoor product design and development

degree program. The table below shows faculty with general expertise areas followed by the faculty who have expertise/credentials related directly to Business Education.

ASTE	Faculty	Teach	Res	Ext	Serv	Admin	Degree	University
Richard	Beard	8		76	8		PhD	Texas A&M Univ, Extension Ed.
Kelsey	Hall	65	30		5		EdD	Texas Tech Univ, Agric. Ed.
Rebecca	Lawver	65	30		5		PhD	Univ of Missouri, Agric. Ed.
Bruce	Miller	20			5	75	PhD	Iowa State Univ, Agric. Ed.
Betty	Murri	95			5		MS	USU, Clothing and Textiles
Michael	Pate	65	30		5		PhD	Iowa State Univ, Agric. Ed.
Edward	Reeve	65	25		10		PhD	Ohio State Univ, Ind. Tech. Ed.
Lindsey	Shirley	70		25	5		PhD	Iowa State Univ, Family & Consumer Sciences Ed.
Debra	Spielmaker	60		35	5		PhD	USU, Curriculum & Inst.
Denise	Stewardson			90	10		MA	Univ of Maryland, Industrial Arts Ed.
Gary	Stewardson	65	30		5		PhD	Univ of Maryland, Industrial Arts Ed.
Brian	Warnick	70	25		5		PhD	Oregon State Univ. Education
Julie	Wheeler	95			5		MS	USU, Home Economics & Consumer Education

References

Outdoor Industry Association (2012). *The Outdoor Recreation Economy*. Retrieved from http://outdoorindustry.org/pdf/OIA_OutdoorRecEconomyReport2012.pdf

Utah Governor's Office of Economic Development, Outdoor Products and Recreation Cluster (2013). *The State of Utah Outdoor Recreation Vision*. Retrieved from <http://www.utah.gov/governor/docs/OutdoorRecreationVision.pdf>

Utah Governor's Office of Economic Development (2015). *Outdoor Recreation Office*. Retrieved from <http://business.utah.gov/programs/outdoor/>