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| For Academic Affairs and Research Use Only | |
| Proposal Number | EBS23 |
| CIP Code: |  |
| Degree Code: |  |

**New or Modified Course Proposal Form**

**[x] Undergraduate Curriculum Council**

**[ ] Graduate Council**

|  |
| --- |
| **[x]New Course, [ ]Experimental Course (1-time offering), or [ ]Modified Course (Check one box)** |

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

|  |  |
| --- | --- |
| Amanda Wheeler Gryffin 9/22/2021 **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| Paul Finnicum 9/22/2021 **Department Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Head of Unit (if applicable)** |
| Wayne Wilkinson 10/8/2021  **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| Mary Elizabeth Spence 10/11/2021 **Office of Assessment (new courses only)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
| Lance G. Bryant 10/11/2021 **College Dean** | Alan Utter 11/16/2021  **Vice Chancellor for Academic Affairs** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **General Education Committee Chair (if applicable)** |  |

1. **Contact Person (Name, Email Address, Phone Number)**

Gregory Cantrell, gcantrell@astate.edu, 870-680-8133;   
Veronika Pribyslavska, vpribyslavska@astate.edu, 870-680-8132

1. **Proposed starting term and Bulletin year for new course or modification to take effect**

Fall 2022

**Instructions:**

*Please complete all sections unless otherwise noted. For course modifications, sections with a “Modification requested?” prompt need not be completed if the answer is “No.”*

|  |  |  |
| --- | --- | --- |
|  | **Current (Course Modifications Only)** | **Proposed (New or Modified)**  *(Indicate “N/A” if no modification)* |
| **Prefix** |  | **ES** |
| **Number\*** |  | **4773** |
| **Title** |  | Biomechanics of Human Motion |
| **Description\*\*** |  | An introduction to the mechanics of human motion. Includes linear and angular kinematics and kinetics in the context of human motion; mechanics of fluids; mechanics of muscles; analysis of selected activities. |

***\**** (Confirm with the Registrar’s Office that number chosen has not been used before and is available for use. For variable credit courses, indicate variable range. *Proposed number for experimental course is 9*. )

\*\*Forty words or fewer as it should appear in the Bulletin.

1. **Proposed prerequisites and major restrictions** **[Modification requested? Yes/No]**

(Indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).

1. Yes Are there any prerequisites?
   1. If yes, which ones?

ES 4763-Kinesiology grade of “C” or better OR instructor permission

* 1. Why or why not?

It is important students have a basic understanding of human movement before taking this course. This concern will be met with the listed prerequisites.

1. No Is this course restricted to a specific major?
   1. If yes, which major? Enter text...
2. **Proposed course frequency [Modification requested? Yes/No]**

(e.g. Fall, Spring, Summer; if irregularly offered, please indicate, “irregular.”) *Not applicable to Graduate courses.*

Fall, Spring, and Summer

1. **Proposed course type [Modification requested? Yes/No]**

Will this course be lecture only, lab only, lecture and lab, activity (e.g., physical education), dissertation/thesis, capstone, independent study, internship/practicum, seminar, special topics, or studio? Please choose one.

Lecture

1. **Proposed grade type [Modification requested? Yes/No]**

What is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])

Standard Letter

1. No Is this course dual-listed (undergraduate/graduate)?
2. No Is this course cross-listed?

*(If it is, all course entries must be identical including course descriptions. Submit appropriate documentation for requested changes. It is important to check the course description of an existing course when adding a new cross-listed course.)*

**a.** – If yes, please list the prefix and course number of the cross-listed course.

Enter text...

**b.** – **Yes / No** Can the cross-listed course be used to satisfy the prerequisite or degree requirements this course satisfies?

Enter text...

1. No Is this course in support of a new program?

a. If yes, what program?

Enter text...

1. No Will this course be a one-to-one equivalent to a deleted course or previous version of this course (please check with the Registrar if unsure)?

a. If yes, which course?

Enter text...

**Course Details**

1. **Proposed outline** **[Modification requested? Yes/No]**

(The course outline should be topical by weeks and should be sufficient in detail to allow for judgment of the content of the course.)

Week 1-Forces

Week 2-Linear Kinematics of Human Movement

Week 3-Linear Kinematics of Human Movement

Week 4-Work, Power, and Energy

Week 5-Torque and Moments of Force

Week 6-Angular Kinematics of Human Movement

Week 7-Angular Kinematics of Human Movement

Week 8-Linear Kinetics of Human Movement

Week 9- Linear Kinetics of Human Movement

Week 10-Equilibrium and Human Movement

Week 11-Equilibrium and Human Movement

Week 12-Angular Kinetics of Human Movement

Week 13-Angular Kinetics of Human Movement

Week 14-Human Movement in a Fluid Medium

Week 15- Human Movement in a Fluid Medium

Week 16-Final Exam

1. **Proposed special features** **[Modification requested? Yes/No]**

(e.g. labs, exhibits, site visitations, etc.)

Labs

1. **Department staffing and classroom/lab resources**

None

1. Will this require additional faculty, supplies, etc.?

No

1. No Does this course require course fees?

*If yes: please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Justification**

**Modification Justification (Course Modifications Only)**

1. Justification for Modification(s)

Enter text...

**New Course Justification (New Courses Only)**

1. Justification for course. Must include:

a. Academic rationale and goals for the course (skills or level of knowledge students can be expected to attain)

Currently, exercise science students are briefly exposed to (quantitative) sport/exercise biomechanics in ES 4763 Kinesiology. While biomechanics is an important subset of kinesiology, there is simply not enough time in one semester to effectively teach the material covered in both a typical kinesiology and biomechanics course. Splitting ES 4763 will allow faculty the necessary time required to effectively teach a course focused on quantitative sport/exercise performance analysis. This course will build on content taught in ES 4763. Outcomes for the course include learning how to properly use a variety of mathematical formulas to analyze sport performance.

b. How does the course fit with the mission of the department? If course is mandated by an accrediting or certifying agency, include the directive.

The HPESS Department mission is to provide 1) curricula/instruction to enhance development of physical, mental, social, and emotional qualities essential for living a quality life and 2) quality professional preparation programs that meet appropriate standards at both the undergraduate and graduate levels. Sport/exercise biomechanics is an important component of kinesiology but demands at least one semester to effectively introduce. This course will build on our current kinesiology course (ES 4763) and will provide exercise science students the information needed to quantitatively analyze sport/exercise performance.

c. Student population served.

Exercise Science Undergraduates

d. Rationale for the level of the course (lower, upper, or graduate).

Upper level: students will need a base understanding of kinesiology prior to participating in this course. Success in this course will also require having a basic understanding of college algebra.

**Assessment**

**Assessment Plan Modifications (Course Modifications Only)**

1. **Yes / No** Do the proposed modifications result in a change to the assessment plan?

*If yes, please complete the Assessment section of the proposal*

**Relationship with Current Program-Level Assessment Process (Course modifications skip this section unless the answer to #18 is “Yes”)**

1. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

This course will assess students’ understanding of “biomechanical concepts of human movement”.

1. Considering the indicated program-level learning outcome/s (from question #19), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or contact the Office of Assessment at 870-972-2989.*

|  |  |
| --- | --- |
| **Program-Level Outcome 1 (from question #19)** | Identify the anatomical, physiological, and biomechanical concepts of human movement. |
| Assessment Measure | Final exam |
| Assessment  Timetable | Each semester offered |
| Who is responsible for assessing and reporting on the results? | Exercise Science faculty |

|  |  |
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| **Program-Level Outcome 3 (from question #19)** | Assess health, fitness, and performance of individuals from diverse populations. |
| Assessment Measure | Laboratory activities |
| Assessment  Timetable | Each semester offered |
| Who is responsible for assessing and reporting on the results? | Exercise Science faculty |

*(Repeat if this new course will support additional program-level outcomes)*

**Course-Level Outcomes**

1. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

|  |  |
| --- | --- |
| **Outcome 1** | Apply biomechanical principles to human movement. |
| Which learning activities are responsible for this outcome? | Lectures and labs |
| Assessment Measure | Grades on exams and lab report |
|  |  |
| **Outcome 2** | Use appropriate biomechanics terminology to describe human movement. |
| Which learning activities are responsible for this outcome? | Lectures and lab |
| Assessment Measure | Grades on quizzes and exams and lab report |
|  |  |
| **Outcome 3** | Experiment with methods and measurement systems used to evaluate human movement. |
| Which learning activities are responsible for this outcome? | Lab |
| Assessment Measure | Grades on quizzes and exams and lab report |

**Bulletin Changes**

|  |
| --- |
| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.** |

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Major in Exercise Science

**Bachelor of Science**

A complete 8-semester degree plan is available at https://www.astate.edu/info/academics/degrees/

|  |  |
| --- | --- |
| University Requirements: | |
| See University General Requirements for Baccalaureate degrees (p. 42) | |
| **First Year Making Connections Course:** | Sem. Hrs. |
| HPES 1013, Introduction to HPESS (Making Connections) | 3 |
| **General Education Requirements:** | Sem. Hrs. |
| See General Education Curriculum for Baccalaureate degrees (p. 78)  Students with this major must take the following (Grade of “C” or better required):  *MATH 1023, College Algebra or MATH course that requires MATH 1023 as a prerequisite*  *BIO 2203 AND 2201, Human Anatomy/Physiology I and Laboratory*  *CHEM 1013, General Chemistry I AND CHEM 1011, General Chemistry I Laboratory*  *COMS 1203, Oral Communication (Required Departmental Gen. Ed. Option)* | 35 |
| **Major Requirements:**  Grade of “C” or better required for all Major Requirements | Sem. Hrs. |
| BIO 2223 AND 2221, Human Anatomy/Physiology II and Laboratory | 4 |
| ES 3543, Human Anatomy and Anatomical Fundamentals of Motion | 3 |
| ES 3553, Basic Physiology of Activity | 3 |
| ES 3623, Techniques of Physiological Fitness Assessment | 3 |
| ES 3633, Nutrition for Health, Sport and Exercise | 3 |
| ES 3653, Techniques of Aerobic Conditioning | 3 |
| ES 3713, Cardiovascular Physiology | 3 |
| ES 3743, Research and Statistical Methods in Exercise Science | 3 |
| ES 4673, Exercise Prescription for Special Populations | 3 |
| ES 4683, Exercise Prescription and Fitness Programming | 3 |
| ES 4693, Techniques of Strength Training and Conditioning | 3 |
| ES 4763, Kinesiology | 3 |
| ES 4813, Applied Motor Learning | 3 |
| ES 4843, Practicum/Pre-Internship | 3 |
| HLTH 2513, Principles of Personal Health | 3 |
| HLTH 2523, First Aid and Safety | 3 |
| HLTH 4543, Drug Use and Abuse | 3 |
| HLTH 4633, Health Promotion Assessment Planning | 3 |
| HLTH 4643, Health Promotion Implementation and Evaluation | 3 |
| HPES 1883, Foundations of HPESS  *Must be completed ONLY if HPES 1013 is not completed as the First Year Making Connec­tions Course.* | 0-3 |
| HPES 4896, Internship in HPESS OR  HPES 4863, Internship in HPESS I AND HPES 4893, Internship in HPESS II | 6 |
| PE 1002, Concepts of Fitness | 2 |
| PE 4843, Philosophy and Ethics in Sport | 3 |
| Sub-total | 69-72 |
| **Electives:** | Sem. Hrs. |
| Electives | 10-13 |
| **Total Required Hours:** | **120** |

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ES 4763.Kinesiology Mechanics of human motion and its application to physical activity. Prerequisite, grade of “C” or better ES 3543, or instructor permission. Fall, Spring, Summer.

ES 4813. Applied Motor Learning The study and practical applications of relevant motor learning theories and research related to exercise science, physical education, and sport pro-grams. Prerequisites, grade of “C” or better in ES 3543 and ES 3553, or instructor permission. Fall.

ES 4843.Practicum/Pre-Internship Introduction to field experience in exercise science in order to become familiar with the operational and procedural aspects of clinically based exercise facilities. Prerequisite, grade of “C” or better in ES 3653, ES 3713, ES 4683, and ES 4693, or instructor permission. Corequisite, ES 4673. Spring.

Finance (FIN)

FIN 2013.Personal Asset Management Financial assets as vehicles for saving for the future, investments in combinations of assets to meet financial objectives, and how the financial objec-tives will change over the life span of the investor. Fall, Spring.

FIN 3713.Business Finance Legal forms of American business organization, policies, methods, and institutions involved in financing business. The principles of financial manage-ment will be studied with emphasis on the corporation, including cash flows, securities, financial structures, expansion, and acquisitions. Prerequisite, ACCT 2133 or 2023. Fall, Spring, Sum-mer.

FIN 3723.Financial Analytics and Modeling Fundamental techniques and best practices for financial analysis and modeling. Prerequisite, FIN 3713. Fall, Spring.

FIN 3733.Personal Finance Concerned with management of the personal financial re-sources of the individual and the family. Provides guidance for consumer purchasing and credit, personal insurance, taxation, investing, estate planning, and social security. Designed for non-business majors, course counts only as a free elective, except where required in major. Irregular.

FIN 3763.Financial Institutions and Markets An in depth study of financial institutions such as banks, savings and loans, insurance companies and financial markets. Primary empha-sis will be on depository institutions. Prerequisites, ECON 2313 and FIN 3713. Fall, Spring.

FIN 3773.Financial Risk Management An in depth study of financial risks facing banks, such risks as those arising from fixed income and foreign exchange investments will be covered. Pre-requisites, MATH 2143 or MATH 2194 or MATH 2204; ECON 2113 or STAT 3233; and FIN 3713. Fall.

FIN 3813.International Financial Management and Banking Study of financial concepts and issues in banking as they relate to business decisions in a global economy. Prerequisite, FIN 3713. Irregular.

FIN 4013.Financial Wealth Management The application of financial planning topics to realistic scenarios and case studies involving personal and small business financial planning. Prerequisite, FIN 4723. Spring.

FIN 4293.New Venture Financing Introduction to the dynamic challenges facing new business ventures in securing financial backing to support growth and development. Venture capital, internally generated funding and external sources of funding will be discussed along with debt and equity financing. Irregular.

FIN 4613. Commercial Credit Analysis An in-depth study of the lending process for a Commercial Bank. Topics covered include loan structuring, analysis of commercial and consumer loan applications, analysis of financial statements and tax returns needed to make a lending decision, and detecting problem loans. Prerequisite, FIN 3713. Spring.

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Major in Exercise Science

**Bachelor of Science**

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| **Major Requirements:**  Grade of “C” or better required for all Major Requirements | Sem. Hrs. |
| BIO 2223 AND 2221, Human Anatomy/Physiology II and Laboratory | 4 |
| CS 1013, Introduction to Computers | 3 |
| ES 3543, Human Anatomy and Anatomical Fundamentals of Motion | 3 |
| ES 3553, Basic Physiology of Activity | 3 |
| ES 3623, Techniques of Physiological Fitness Assessment | 3 |
| ES 3633, Nutrition for Health, Sport and Exercise | 3 |
| ES 3653, Techniques of Aerobic Conditioning | 3 |
| ES 3713, Cardiovascular Physiology | 3 |
| ES 3743, Research and Statistical Methods in Exercise Science | 3 |
| ES 4663 Workplace Wellness | 3 |
| ES 4673, Exercise Prescription for Special Populations | 3 |
| ES 4683, Exercise Prescription and Fitness Programming | 3 |
| ES 4693, Techniques of Strength Training and Conditioning | 3 |
| ES 4763, Kinesiology | 3 |
| ES 4773 Biomechanics of Human Motion | 3 |
| ES 4813, Applied Motor Learning | 3 |
| ES 4843, Practicum/Pre-Internship | 3 |
| HLTH 2523, First Aid and Safety | 3 |
| HLTH 4543, Drug Use and Abuse | 3 |
| HPES 4896, Internship in HPESS OR  HPES 4863, Internship in HPESS I AND HPES 4893, Internship in HPESS II | 6 |
| PE 1002, Concepts of Fitness | 2 |
| PE 1111, Physical Conditioning | 1 |
| PE 4853, Applied Psychology of Sports & Exercise | 3 |
| Sub-total | 70 |
| **Electives:** | Sem. Hrs. |
| Electives | 12 |
| **Total Required Hours:** | **120** |

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ES 4763.Kinesiology Mechanics of human motion and its application to physical activity. Prerequisite, grade of “C” or better ES 3543, or instructor permission. Fall, Spring, Summer.

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