

LSC Use Only
Number: _____
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Action Date: _____



UWUCC USE Only
Number: 97-9
Submission Date: App. 2/17/98
Action Date: Senate app. 3/3/98

CURRICULUM PROPOSAL COVER SHEET
University-Wide Undergraduate Curriculum Committee

I. CONTACT

Contact Person Dr. James Mill Phone 357-2770
Department Health and Physical Education

II. PROPOSAL TYPE (Check All Appropriate Lines)

☒ **COURSE** Therap Modalities
Suggested 20 character title

☒ **New Course *** HP 446 Therapeutic Modalities
Course Number and Full Title

☐ **Course Revision** _____
Course Number and Full Title

☐ **Liberal Studies Approval +** _____
for new or existing course Course Number and Full Title

☐ **Course Deletion** _____
Course Number and Full Title

☐ **Number and/or Title Change** _____
Old Number and/or Full Old Title

_____ New Number and/or Full New Title

☐ **Course or Catalog Description Change** _____
Course Number and Full Title

☐ **PROGRAM:** ☐ Major ☐ Minor ☐ Track

☐ **New Program *** _____
Program Name

☐ **Program Revision *** _____
Program Name

☐ **Program Deletion *** _____
Program Name

☐ **Title Change** _____
Old Program Name

_____ New Program Name

III. Approvals (signatures and date)

Marilyn P. Burt
Department Curriculum Committee

James Mill
Department Chair

Mary E. Sumlin 12/17/96
College Curriculum Committee

David E. Wingard 23 Dec 96
College Dean

+Director of Liberal Studies (where applicable)

*Provost (where applicable)

I. Catalog Description

HP 446 Therapeutic Modalities

(3c - 2l - 4sh)

Prerequisites: HP 365

A basic introduction to the use of therapeutic modalities and the role they play in the rehabilitation of athletic injuries. Physical agents used in the care of athletic injuries will be presented highlighting the physiological effects of each modality, as well as indications and contra-indications for their use.

I. Catalog Description

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II. Course Objectives

The student will be able to:

- A. describe the physiological effects of tissue trauma
- B. assess the immediate and long-term effects of the tissue healing processes which occurs following athletic injury
- C. explain the physiological principles, theories, and laws which relate to the use of therapeutic modalities
- D. identify the modalities which would be most appropriate for the healing and pain management of common sports related injuries
- E. explain the principles, physiological effects, indications, contra-indications and precautions of therapeutic agents
- F. describe and demonstrate the proper technique in the application of each therapeutic agent

III. Course Outline

- A. What role do therapeutic modalities play in injury rehabilitations?
(4 lecture hours)
 - 1. Importance of therapeutic modalities for healing process
 - 2. Therapeutic modalities as an inexact science
 - 3. Value of formal classroom instruction in the use of therapeutic modalities
- B. Pain and mechanisms of pain relief
(3 lecture hours)
 - 1. Physiology of inflammation
 - 2. Types of pain/physiology of pain

3. Inflammation and repair of tissue
4. Neurophysiologic explanation of pain control

C. Basic therapeutic modalities (4 lecture hours/4 lab hours)

1. Overview of various types of modulation used in athletic training
2. Specific guidelines governing modality usage
3. Role of therapeutic modalities in pain management
4. Clinical applications of modalities

D. Classification of modalities

1. Massage (2 lecture hours/2 lab hours)
 - a. Physiologic effects
 - b. Principles of technique
 - c. Equipment/application
2. Cryotherapy (3 lecture hours/4 lab hours)
 - a. Tools of cryotherapy
 - b. Application of techniques
 - c. Ice Massage
 - 1) Equipment
 - 2) Treatment
 - 3) Physiologic response
 - 4) Consideration
 - d. Superficial ice packs
 - e. Cold whirlpool
3. Thermotherapy (4 lecture hours/4 lab hours)
 - a. Hydrocolator
 - b. Superficial hot packs
 - c. Hot whirlpool
4. Intermittent compression (2 lecture hours/2 lab hours)
 - a. Physiologic basis of edema/lymphatic system
 - b. Treatment of edema
 - c. Clinical parameters
5. Traction as a specialized modality (3 lecture hours/2 lab hours)
 - a. Effect and therapeutic value of traction on bone, muscle, ligaments, joint structure, and blood vessels
 - b. Parameters of traction
 - c. Set-up procedures for mechanical, positional, and manual traction
 - d. Contra indicators

6. Basic principles of electricity (6 lecture hours/4 lab hours)
 - a. Electro-therapeutic currents
 - b. Waveform frequencies and modulation
 - c. Physiologic response to electrical current
 - d. Safety in the use of electrical equipment
7. Electrical Stimulation (5 lecture hours/4 lab hours)
 - a. Muscle and nerve responses to electrical currents
 - b. Therapeutic uses of electrically induced muscle contraction
8. Acoustical Therapy (2 lecture hours)
9. Inferential currents (2 lecture hours)
10. Bio-feedback (2 lecture hours/2 lab hours)

IV. Evaluation Methods

- A. Mid-term and Final Exam.....40%
- B. Oral and practical examinations.....20%
- C. Observations and clinical experiences.....20%
- D. Case study.....20%

Grading Scale

90-100.....	A
80-89.....	B
70-79.....	C
60-69.....	D
59 and below.....	F

V. Required Textbooks, Supplemental Books and Readings

A. Texts

1. Prentice, W.E. Therapeutic modalities in sports medicine, 3rd edition. (1995). Mosby Publishers.
2. Underwood, F.B., Quillen, W.S. (1995). Laboratory manual to accompany therapeutic modalities in sports medicine. Mosby Publishers.

B. Student Handouts

VI. Special Resource Requirements

Variety of manual, physical and electrical modality equipment - (items are currently available in the sport medicine clinic.)

VII. Bibliography

- A. American Orthopedic Society for Sports Medicine Education Committee. (1989). Therapeutic modalities for sports injuries. St. Louis, MO: Mosby Publishers.
- B. Arnheim, D. D. (1995). Essentials of athletic training. St. Louis, MO: Mosby Publishers.
- C. Arnheim, D.D., Prentice, W. E. (1993). Principles of Athletic Training. 8th edition. St. Louis, MO: Mosby Publishers.
- D. Cromwell, L., Arditti, M., Weibell, F. et.al. (1976). Medical instrumentation for health care. Englewood Cliffs, NJ: Prentice-Hall Inc.
- E. Gould, J.A. III. (1990). Orthopedic and sports physical therapy. 2nd Edition. Mosby Publishers.
- F. Griffin, J., Karselis, T. (1978). Physical agents for physical therapists. Charles C. Thomas Publisher.
- G. Shriber, W. (1983). A manual of electricity and ultraviolet radiation. Williams and Wilkins.
- H. Starkey, C. (1993). Therapeutic modalities for athletic trainers. Springfield, IL: F.A. Davis Co.
- I. Starkery, C. (1995). Laboratory activities for therapeutic modalities. Springfield, IL: F.A. Davis Co.

Case Study

To complete a case study the student is to follow a fictitious athlete through the entire course of an injury from mechanism and predisposing factors to completed rehabilitation, functional testing and criteria for return to play. Rationale should be presented for each decision made during the course of treatment. Decision rationale must be supported by references from professional literature. A minimum of six different sources are required. These sources should be cited and referenced using proper APA format. A final draft, typed, doubled spaced with 1" margins and including a title page and reference list will be due on November 24 . Students will also be required to present their case orally to the class during the final week of the semester.

Criteria for grading will consist of:

1. Credibility of the hypothetical case.
2. Treatment decisions based on accepted and documented standards.
3. Treatment and rehabilitative progressions based on logical and accepted principles.
4. Written communication skills, ie. grammar, punctuation, and APA format
5. Oral presentation skills
6. Multi-media/Audio Visual Presentation

Introduction

In this area a brief but detailed description of the injury/condition is given, common signs and symptoms, staging, patient pre-disposition, and common mechanism of injury is presented.

The Patient

In this area a description is given that is specific to the injured athlete that you are presenting. Information such as sex, age, size, position, specific mechanism, and clinical findings are reported (include advanced diagnostic procedures if necessary).

Initial Management

Treatment throughout the acute phase of injury is presented.

Rehabilitation

Early phase	Criteria for advancement
Intermediate phase	must be present for each phase
Advanced Phase	

Functional testing and return to activity

In this area a description is to be given with regard to any functional or sport specific testing that was performed, as well as the criteria used to determine return to play.

Discussion/Conclusion

Things that worked, things that did not work, problems that arose, how this case could have been handled differently or more effectively, needed research, importance of proper care, etc.

COURSE ANALYSIS QUESTIONNAIRE

Section A: Details of the Course

- A1. This course is required of all students wishing to be certified as athletic trainers. It is a required course in the recently proposed athletic training track, and the content of this course is required for NATA certification, as well as for Pennsylvania State Licensing as an athletic trainer. Most students enrolling in the course will be Health and Physical Education or Physical Education and Sport majors. However, students in other majors may also enroll in this course providing they have completed all prerequisites for the courses HP 345 and HP 346 and HP 365. Students wishing to be certified will have to complete all course in the Athletic Training track as well as other required courses as determined by NATA certification guidelines. The future dictates that any student wishing to sit for this certification exam must have completed their education through an accredited athletic training program (CAAHEP). This course along with two others is being proposed as part of the requirements for the accreditation process which the IUP Department of Health and Physical Education is preparing to go through.
- A2. This course necessitates no change in existing course presently being taught in HPE. However, this course, along with HP 365 and HP 448, will provide advanced coursework necessary for the development of an accreditation program in athletic training.
- A3. This course has been offered as a special topics course in the 1997 Summer Session.
- A4. It is not intended to be dual level course.
- A5. It will not be taken for variable credit.
- A6. This course is taught at West Chester University, the University of Pittsburgh and California University of Pennsylvania.
- A7. This course content is a requirement for certification through the National Athletic Trainer's Association. It is also a requirement for Pennsylvania State Licensing in Athletic Training.

Section B: Interdisciplinary

- B1. Course will be taught by an HPE faculty member holding NATA Certification.
- B2. There is no relationship between the content of this course and the content of courses offered by other departments.

Section C. Implementation

- C1. All resources necessary to teach their course are currently available in the IUP Sport Medicine Lab, as well as off campus clinical sites at Keystone Rehabilitation. In addition, the HPE Department is currently conducting a search for a faculty member certified in athletic training.**
- C2. This course will not be funded by a grant.**
- C3. This course will be taught once during the academic year, and every other summer.**
- C4. One section will be offered.**
- C5. Clinical Lab dictates that course could accommodate 20-25 students in each class.**
- C6. No limitations imposed by professional society.**

Responses from Jim Mill 2-11-98 with reference to HPE proposals: 97-6 to 11. 97-15

97-6 Aquatics track; 97-7 Athletic training track; 97-8 HP 365; 97-9 HP 446; 97-10 HP 448; 97-11 Exercise Sci track; 97-15 Sport Admin track

UWUCC questions/concerns:

Program revision:

1. Our suggestion: add MA 105 to LS math courses. Dept. response: no, students are advised to take MA 217
2. Correct title: Sport Administration (changed throughout proposals)
3. Catalog description of program: new catalog description begins after heading "Bachelor of Science Degree (Physical Education and Sport)" and replaces the current paragraph. The YMCA paragraph stays.
4. Omit "greater" in first sentence of new catalog description (from "provides greater emphasis" to "provides emphasis")
5. 97-6 and other places: HP 319 is 1-3 sh (not 3 sh--Jim will double check with catalog editor; he doesn't know how that error was made, the course is listed a var-3 in 97-98 catalog)
6. We had a concern re: faculty workload; Jim repeated that the department currently has 2 faculty and is presently hiring a 3rd with specialization in athletic training. These faculty normally teach two sections of Health & Wellness and 2 sections/courses (new). The "modalities" course will be offered in Fall and Spring and also in the summer to attract students from outside IUP
7. Internship strongly recommended (not required); "free electives" not electives; "track" not "emphasis area"
8. 97-15 correct title (Sport Administration see 2 above); e-mail received from Bob Camp; 18 credit semester corrected

New courses:

9. 97-8 objective C (changed to "discuss differences in the assessment methods utilized for athletes of varying ages, gender and developmental levels" from "discuss differences in the assessment methods utilized for athletes of varying ages, gender, developmental levels and ethnic backgrounds.")
10. 97-9 A-1 prerequisite is HP 365 (incorporates HP 345 and HP 346); change from "a course which is required for NATA" to "the content of this course is required for NATA"; also change in A-7 from course to content.
11. 97-10 A-1, A-7 same as above
12. 97-11 HP 319 (1-3 sh); BI 151 (not BI 155); inform Bio