**Purpose and Instructional Need (include goals and objectives)**

**Purpose:** To provide an evidence-based learning experience, for AT students, in the area of therapeutic modalities for musculoskeletal injury treatment. Currently, our student have limited exposure to the vast variance in models available in the current market and to widen their exposure would better prepare them for future employment and practice.

**Instructional Needs (Goals and Objectives)**

a.) Develop the common techniques and procedures for the use of therapeutic electrical stimulation and ultrasound for the treatment of musculoskeletal injury treatment and healing.

b.) Be able to become proficient in selecting and administering proper treatment dosage and duty cycles for a variety of musculoskeletal conditions and treatment parameters

c.) Be able to apply evidence-based principles with treating patients in the clinical experience.

**Identify how project will impact and benefit student learning include % affected and number affected.**

**Evidence of Student Access to Technology:** The following courses will benefit from this technology: AT1010 Introduction in Athletic Training and Applied Health Care, AT 6030 Advanced Acute Care in Athletic Training, AT 6032 Advanced Acute Care Clinical Skills, AT 6060 Athletic Training Organization and Professional Responsibility, AT6070 Advanced Therapeutic Interventions I, AT6072 Advanced Therapeutic Interventions I Clinical Skills, AT 6080 Advanced Therapeutic Interventions II, AT 6082 Advanced Therapeutic Interventions II Clinical Skills, AT6150 Advanced Athletic Training Clinical Skills, AT 6255 Preventative Health Techniques.

**Evidence of Student Impact (% affected and number affected):** This technology will benefit approximately 100% of the 94 undergraduate/graduate students currently declared as Athletic Training and Rehabilitation Studies, Athletic Training MATR, or Graduate Assistant Certified Athletic Trainers working within the UNI Athletic Training Services Clinical Facilities. Currently our student have very limited exposure to the vast variance in models, engineering and protocols that are available with each different type of Stim-Ultrasound Combo Modality and no access to a Hivamat Deep Oscillator. All of their knowledge is currently gained through 3 main types of machines for the E-stim/US Combo – two of which are no longer even available for purchase as they are no longer in production. The knowledge available for deep oscillation is based on experience with a product similar but far out of production and no longer in circulation. This technology would provide them with a learning opportunity and allow them to become proficient with their use of electrical stimulation and ultrasound application as well as more adaptable to different machines. Thorough knowledge and application of the three...
modalities built into this unit are required by the accrediting body (CAATE) and will be found within the context of the certification test (BOC) that student will take in order to enter the field. Additionally for those already certified individuals this allows them continued education and field advancement. Additionally, and indirectly this will benefit over 400 student-athletes on a constant basis.

3) Describe how project aligns Educator Preparation Conceptual Framework and/or your department/division program goals.

Alignment with Educator Preparation Conceptual Framework:
1.) Candidates must deeply understand and reflect on their content and pedagogy;
   a. Students will gain learning opportunities that allow them to gain a greater understanding of the uses and applications of therapeutic modality for the treatment of a large array of patients with musculoskeletal injuries. Therefore, connecting theory to practice through reflection and application.
2.) Candidates must engage in rich, purposeful, and authentic field-based experiences to develop appropriate dispositions and practices
   a. This technology (Combo E-stim/ US & Deep Oscillation) will allow our students the opportunity to administer electrical stimulation and therapeutic ultrasound in a real-world clinical environment. This allows the student to develop appropriate evidence practice decisions as it pertains to treatments using this technology for musculoskeletal injuries.

Alignment with existing departmental goals:
   a. To provide the students the opportunity to become competent in all of the athletic training clinical proficiencies
   b. To provide quality instruction that utilizes state of the art resources and technology as well as participating allied health professionals.
   c. To provide experiences that encourage critical thinking and problem solving.

5) Describe your plan to assess the impact of the technology project on student learning.
   a.) Track the AT graduate scores on the Board of Certification Exam in the area of Therapeutic Interventions (specifically as it pertains to Electrical stimulation, Therapeutic Ultrasound and Combination treatment, Pain Management and Deep Oscillation).
   b.) Track the students’ individual proficiency in the clinical decision making and application via course practical competency exams.
   c.) Track clinical proficiency via Clinical Preceptor Evaluation forms (accreditation requirement)

6) Support Needed:
   a. Who will install technology and provide technical support for project?
      No Installation necessary. These are mobile units that are self-contained.
   b. Where will resources be installed? Building ____ HPC ________ Room ______________.
   c. Does this room have the necessary data & electrical infrastructure required for your resources?
      Yes
   d. Does this proposal include funds to add the necessary infrastructure if not present? N/A
Name: Chelsea Love and Don Bishop  
Dept: HRCS Athletic Training  
Project: Therapeutic Modalities

Attach hard copies of price quotes. Indicate which attached page goes with each item below.

<table>
<thead>
<tr>
<th>Product #</th>
<th>Vendor</th>
<th>Product Description</th>
<th>Quantity</th>
<th>Item Price</th>
<th>Total</th>
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<tbody>
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<td>1252264</td>
<td>Henry Schein</td>
<td>Solaris Plus Series Combo 5 Channel</td>
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<td>Therapy Massager Hivamat</td>
<td>1</td>
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</tr>
</tbody>
</table>

Total 8934.38

2006 COE Student Technology Vendor Form

Forms without hard copy quotes will be returned to you.
Unit Stimulation Combo Solaris Plus Custom 5-Channel Ea
1252264 | Dynatronics Corporation - D719T

DESCRIPTION:
Unit Stimulation Combo Solaris Plus Custom 5-Channel 709 Each

PACKAGING OPTIONS (1)

EA EACH

Please note this item may ship standard ground delivery service. If you need priority delivery on this item, please remove the item from the cart and call 800-472-4346 to speak with a sales representative who can assist in having this item expedited from the manufacturer.

Compare

CATEGORY:
Equipment / Sports Medicine & Physical Therapy / Elliptical
Cross Trainers / Equipment

UNSPSC:
42251600

ADDITIONAL ATTRIBUTES

 Specifications
Product specifications and dimensions

ADDITIONAL ATTRIBUTES
709
BRAND
Solaris Plus
CHANNELS
5-Channel

The Solaris Plus is both powerful and versatile. All channels allow fully independent treatment setups, offering 6 stim waveforms, ultrasound and exclusive ComboPlus, as well as the ability to add TriWave light and ThermoStim options. The Solaris Plus includes the standard advantages of Dynatronics engineering, such as customizable treatments, electrode conductance meters, and the popular Target touchpad to move the center of interference directly to the site of the patient’s pain. In addition, the 709 has the option of battery operation, making the devices truly portable. Solaris Plus is covered by a 2-year warranty and backed by the best customer service in the industry. TriWave light probes/pads, ThermoStim probe, and Solaris cart sold separately.
Stimulator Ultrasound Dynatron
25 Series 5-Channel Bx
1251205 | Dynatronics Corporation - D92ST
BX
EARLIER TREATMENT FASTER RECOVERY
Performance Enhancement with Deep Oscillation Therapy

Richmar®
DEEP OSCILLATION THERAPY

HIVAMAT Deep Oscillation Therapy is a unique therapeutic treatment for rehab that is FDA-approved for muscle relaxation, increasing mobility, and pain relief, which are important factors in restoring function and maintaining muscle endurance.

Muscle Relaxation
Deep oscillation therapy is felt as a vibration within the tissue, relaxing the underlying muscles.

Increased Circulation
The massaging effect created by the oscillations within the patient’s tissues work to open pathways and increase the flow of blood and lymph throughout the body.

Pain Relief
Activating the lymphatic system and increasing blood flow, pressure upon the nerves is reduced; with the pain subsided, mobility can be reintroduced earlier.

Deep oscillation therapy is not indicated in the following cases: acute infections • acute inflammations with participation of pathogenic agents • active tuberculosis • acute venous diseases (unreated thromboses) • untreated malignant neoplasia • encephalitis • patients and therapists with cardiac pacemakers and other electronic implants • heart disorders and diseases, especially cardiac insufficiency, decompenated cardiac edema, and cardiac arrhythmia • pregnancy • hypersensitivity to electrostatic fields • infectious skin diseases
HOW DOES IT WORK?

Oscillations within the soft tissues are the result of intermittent electrostatic fields and friction. Opposing polarities between the patient and hand/applicator creates electrostatic attraction. As the hand/applicator is moved, resonant vibrations are created up to 8 centimeters deep into the tissues of the patient.

THREE PHASES OF TREATMENT

Deep oscillation treatments normally work in three phases that can last up to 20 minutes in total, based on the indications and desired outcome for the affected area:

1. **Dissolution of Lymphatic Waste**
   High frequency oscillations work to break up accumulated solids in the interstitium, such as proteins, lymphocytes, and other waste deposits so that they can be moved through the lymphatic system more easily.

2. **Muscle Relaxation**
   Moderate frequency oscillations relax the surrounding tissue. With less restriction, the lymphatic pathways are opened up to support waste displacement.

3. **Waste Displacement**
   Low frequency oscillations create a synthetic peristalsis, used in conjunction with a homogeneous progression toward the nearest lymph node to evacuate the accumulations from the area.
IF IT WORKS FOR THE PROS...

Your athletes will most certainly also benefit from the reduction of inflammation, pain relief, and increased circulation that results from deep oscillation therapy with the Hivamat 200 Evident. This FDA approved, patented technology (U.S. patent 7,343,203 B2) has a 25 year history of successful practical and clinical results, and is trusted by over 50 professional and collegiate sports teams.

A NON-INVASIVE BOOST TO NATURAL BODY HEALING

- An Adjunct to Traditional Modalities for Pain
- Aids in the Management of Lymphedema
- Supplements Manual Techniques While “Saving the Therapists Hands”
- Complements Kinesio Taping Techniques
- Gentle, Painless Application Allows for Immediate Treatment in Acute Pain Conditions

![Hivamat 200 Evident](Image)

RM02037 Hivamat 200 Evident
RM01004 Evident Trolley
RM01009 Hivamat 200 Portable

**PRODUCT HIGHLIGHTS**

**HIVMAT 200 EVIDENT**

- Full-Color Display with Simple-to-Use Interface
- Pre-Populated Treatment Programs
- Area-Specific Instructional Application Animations
- User-Controlled Parameters
- Save Treatment Programs to Device or Patient Card
- 3 Year Warranty
- Standard Treatment Kit: Hand Applicators / Titanium Rod
- Optional Storage Trolley

**HIVMAT 200 PORTABLE**

- Simple-to-Use Interface
- Practice-Specific Treatment Protocol Cards: Athletic, Chiropractic, Rehab, Continuing Care
- Easily Transportable / Battery Operated
- Standard Treatment Kit: Gloves / Electrodes
- 3 Year Warranty

**TECHNICAL SPECIFICATIONS**

**HIVMAT 200 Evident**

Protection Class 1, Type BF
Power 100 - 240 VAC
Connection +/- 10%
Mains Frequency 50 / 60 Hz
Current 0.2 A at 115 V
Consumption (0.1 A at 230 V)
Power 20-30 VA
Consumption 400 V
Load Impedance 10 MOhm
Output 5 - 250 Hz
Frequency
Dimensions 10.24” x 13.76” x 14.57” (26 x 35 x 37 cm)
Weight 18.95 lbs (8.6 kg)

**HIVMAT 200 Portable**

Protection Class 1, Type BF
Power Source 4X 1.2V NIHM Rechargeable Batteries
Output Voltage 400 V
Load Impedance 10 MOhm
Output 5 - 200 Hz
Frequency
Dimensions 3.9” x 12” x 7.5” (10 x 3 x 19 cm)
Weight 1.5 lbs (.7 kg)

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