9/6/2018

UNE Online
UNIVERSITY OF NEW ENGLAND

The Role of Instructional Design in Health Science Course Development

University of New England
Christopher Malmberg
Olga LaPlante
Wendy DiBrigida
David Bass-Clark

UNE Online
UNIVERSITY OF NEW ENGLAND

Instructional Designers

Adult Learning

Course Design

Instructional Technology

UNE Online
UNIVERSITY OF NEW ENGLAND

Science Prerequisites for Health Professions SPHP

17 health science and math courses

Non-matriculated students

Fully online

Self-paced

Asynchronous

16 weeks

UNE Online
UNIVERSITY OF NEW ENGLAND

Session Goals

Outline course development process

Discuss design challenges

Discuss strategies for active learning

Show the value of Instructional Designers

Illustrate research-based innovations

UNE Online
UNIVERSITY OF NEW ENGLAND

SPHP Course Development Process Overview

Subject Matter Experts

Medical Professionals

Teaching Faculty (offline)

Teaching Faculty (online)

Process Overview

32 Weeks (start to finish)

Curriculum Standards

Design and Development

UNE Online
UNIVERSITY OF NEW ENGLAND

Course Development Goals

Must be authentic/rigorous
- Pathophysiology = Pathophysiology

Challenges to authenticity/rigor:
- Defining the outcomes to make sure Anatomy I = Anatomy I
- Designing activities and assessments to authentically measure Anatomy I learning outcomes

1

UNE Online
UNIVERSITY OF NEW ENGLAND

Outcomes and Authenticity

SME and ID work together to define essential outcomes

Outcomes go to expert committee to be vetted

Outcomes broken down and ordered into learning activities

1
2
3

UNE Online
UNIVERSITY OF NEW ENGLAND

Backward Design in a Self-Paced Health Science Course

IDENTIFY DESIRED RESULTS

DETERMINE ACCEPTABLE EVIDENCE

PLAN LEARNING EXPERIENCES & INSTRUCTION

UNE Online
UNIVERSITY OF NEW ENGLAND

Challenges of Self-Paced: Customizable Experience

- Immediate Feedback
- Adaptive Release (Sequenced Progression)
- Self-Test and Practice Quizzes
- Study Guides

UNE Online
UNIVERSITY OF NEW ENGLAND

Challenges of Self-Paced: Peer Interactions

**UNE Online**
UNIVERSITY OF NEW ENGLAND
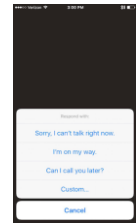
Challenges of Self-Paced: Time Management

- 16-week courses
- Suggested timeline in Syllabus and Course Modules
- Many students don't start at once, while others complete the course in a much shorter time
- Reminders about course pace in assignments

---

UNE Online
UNIVERSITY OF NEW ENGLAND
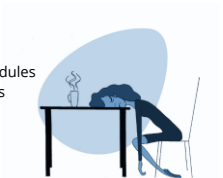
Challenges of Online Science Courses: Lab Experiences (Hands-on and Interactive Activities)
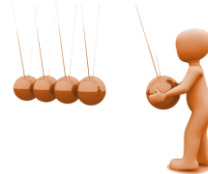
Engaging Activities

- Virtual, dynamic lab environments
- Physical lab experiments with materials delivered directly to students' houses
- Media-rich scenarios and case simulations
- Student presentations
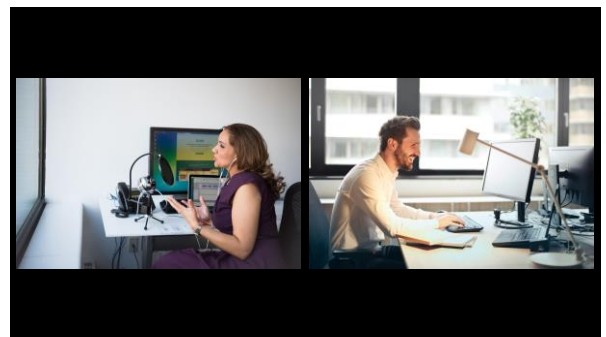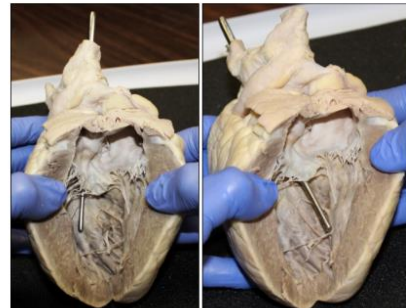
Continuous Development Cycle

- Redesigns as opportunity for innovation
- Educational Technologist role
- Innovative research based solutions

Examples

- Memory Palaces and the Method of loci
- Virtual Reality and 3D Space
- Interactive Narratives

Macula

The light-sensitive layer of tissue lining the interior of the back of the eye

UNE Online
UNIVERSITY OF NEW ENGLAND

UNE Online
UNIVERSITY OF NEW ENGLAND

UNE Online
UNIVERSITY OF NEW ENGLAND

Questions?

Christopher Malmberg - cmalmberg@une.edu
Olga LaPlante – oslastenlaplante@une.edu
Wendy DiBrigida - wdibrigida@une.edu
David Bass-Clark - dbassclark@une.edu