

## Affordable Learning Implementation Grant (Open Educational Resources)

Fall 2020

OT 230 / OT 230L – Anatomy & Mechanics of Human Movement

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### Thank You

Thank you for the opportunity to explore options for open educational resources for our students during the Fall 2020 semester. I appreciate the guidance and support received from the Weinberg Memorial Library (Kelly Banyas and Ian O'Hara), PCPS (Dean Pellegrino and Assistant Dean Castellanos) and the Occupational Therapy department (Dept Chair Carol Coté).

### Grant Activities

The OER grant was utilized in Fall 2020 for OT 230 and OT 230L. Since the application, plans were revised as necessary due to COVID-19 restrictions as well as transitions from in-person to online learning models. OT 230 and OT 230L is a new course previously consisting of material from OT 256/OT 256L (Human Anatomy for OT) and OT 275/OT 275L (Clinical Kinesiology). During the Fall 2020 semester, OT 230 was changed to an online, asynchronous course and OT 230L continued as an in-person course.

In terms of required course materials, OT 256/OT 256L required two textbooks and OT 275/OT 275L required two textbooks. Recommended materials for these courses included a human atlas of choice, a medical dictionary and a goniometer. These required and recommended materials would carry over to the new courses, OT 230/OT 230L, with two additional textbooks required.

With the assistance of resources and guidance provided by the WML OER website and staff, plans were made to decrease the cost of materials to student while increasing materials available for learning. Students were required to only purchase a total of two textbooks for both courses (OT 230 & OT 230L). Additional required materials and recommended materials were provided through open educational resources (OER). All materials were provided to students via Desire to Learn content via links or in person. During the Fall 2020 semester, all University and OT department protocols were followed using materials as indicated for the safety of the students and faculty during COVID-19.

OER for OT 230/OT 230L included:

- Established rental system of goniometers to students from the OT dept
- Supervised use of models, study materials and additional textbooks within the OT dept
- Online support via course instructor and elder OT students
- Library databases
  - Net Anatomy
  - Visible Body Human Anatomy Atlas
- Ebooks

- Norkin, C., & White, D. J. (2016). *Measurement of joint motion, 5e : A guide to goniometry*. ProQuest Ebook Central <https://ebookcentral-proquest-com.ezp.scranton.edu>
- Wieben, K., & Falkenberg, B. (2015). *Muscle function testing - a visual guide*. ProQuest Ebook Central <https://ebookcentral-proquest-com.ezp.scranton.edu>
- Digital flashcards
  - Lippert, L., & Deusterhaus, M. M. A. (2017). *Kinesiology flashcards, 4e*. ProQuest Ebook Central <https://ebookcentral-proquest-com.ezp.scranton.edu>
  - Hansen, J. T. (2010). *Netter's anatomy flash cards : With online student consult access*. ProQuest Ebook Central <https://ebookcentral-proquest-com.ezp.scranton.edu>
- Online videos
  - Hislop: Daniels and Worthingham's Muscle Testing, 9th Edition
  - F.A. Davis's Goniometry Videos
- Dr Edmund Kosmahl's course material (used with permission)
  - Goniometry <https://www.scranton.edu/faculty/kosmahl/courses/gonio/index.shtml>

### Outcomes & Impact

OT 230 / OT 230 L students were reluctant to utilize OER. Faculty and elder OT students continuously educated students on their availability, location and advantages. COVID-19 protocols limited accessibility to materials such as reserve textbooks, flashcards and models.

Regarding cost of materials, the average cost of required and recommended materials for OT 230/OT 230L would be \$400-\$500 per student. Utilizing this grant, students spent an average of \$95 for required and recommended materials. Students conveyed appreciation and satisfaction with this saving.

Use of materials by students varied. Utilizing completion information on Desire to Learn, students accessed links to Ebooks 95% of the time. Students accessed online videos at a rate of 84%. The least used OER were digital flashcards, library databases and department materials per desire to learn statistics (55% use of electronic flashcards, 53% use of library databases and 0% use of department materials). Please note that department materials were highly limited due to COVID-19 protocols on an individual basis but were utilized during in person labs and lab review sessions. Percentage of use of electronic materials may be skewed as students may use other means to access such materials, IE directly through library website versus d2l link, etc.

Comparison of grades demonstrated an improvement in the final calculated grade average of students after OER implementation. The average combined final calculated grade for OT 256/OT 256L and OT 275/OT 275L was 86% and the combined final calculated grade average for OT 230/OT 230L was 88%.

An anonymous course survey was conducted at the conclusion of the semester via Google Surveys. 40 out of 54 students completed the survey. The percentage of students who strongly/agree are indicated per items below:

- Satisfied with lessened cost of required course materials –70%
- Adequate accessibility of supplemental course materials – 63%

- Use of supplemental materials
  - Ebooks – 65%
  - Library databases – 41%
  - Videos – 72%
  - Digital flashcards – 33%
  - Dept models – 57%
  - Dept textbooks – 48%

### Challenges

The following were considerations in utilizing OER:

- Increased time spent by course instructor to prep materials including researching appropriate materials, checking for conflicting information between materials, providing links and organizing such on desire to learn, educating graduate and lab assistants regarding location and use, and educating students on use, location and benefits of same
- Accessibility of materials may change due to technical problems (websites down, virus protection, mac vs desktop use, etc), COVID-19 protocols and student effort

### Future Use

I plan to continue the use of OER in this course. If in person instruction is permitted, I plan to decrease the amount of required use and change such to optional use to enhance student learning of material. I plan to add more information regarding benefits, location and use of OER to my course syllabus/desire to learn pages as well as in person review of materials at the beginning of the semester. In addition, I would consider applying for such a grant in other courses to improve materials available for student use while decreasing student cost.