

Caroline H. Wilson, PhD

Chapman University, Crean College of Health and Behavioral Sciences

Department of Health Sciences

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Current Positions

- Instructional Associate Professor of Health Sciences, Director Neuroscience Minor and Interdisciplinary Programs, [Chapman University, Crean College of Health & Behavioral Sciences](#), Orange CA; 4 Years
- [Team-Based Learning™ Collaborative \(TBLC\) Trainer Consultant](#); Self-employed, 3.5 Years
- Medical Education Curriculum Consultant, Rose International for [Kaiser Permanente Bernard J. Tyson School of Medicine](#), Pasadena, CA; 1.5 Years
- Active Learning Curriculum Consultant, [Active Learning Curriculum Consultants, International](#); 0.5 years.

Education and Training

Degree Programs

BS Neuroscience (cum laude) & Minor in Philosophy, Allegheny College, Meadville, PA 2000

PhD Neuroscience & Minor in Cellular & Molecular Biology, University of Arizona, Tucson, AZ 2006

Post-Doctoral Fellow

Post-doctoral research, University of Hawai'i, Mānoa, HI, 2008
Supervisor: Dan Hartline, PhD

Academic Activities: Appointments and Educational Roles

Academic Appointments

Teaching Assistant, University of Arizona, Tucson, AZ 2001

Lecturer & Adjunct Professor, Department of Biology, Leeward Community College,
Pearl City, HI 2007-2008

Visiting Assistant Professor, Department of Biological Sciences, Denison University,
Granville, OH 2008-2010

Term Instructor (non-tenure), Department of Biological Sciences, University
of Alaska Anchorage (UAA), Anchorage, AK 2010-2015

Adjunct Professor, WWAMI School of Medical Education, Anchorage, AK 2011

Term Assistant Professor (non-tenure), WWAMI School of Medical Education, Anchorage AK 2015-2017

Affiliate Instructor Creighton University Occupational Therapy Program, Anchorage, AK 2015-2017

Affiliate Assistant Professor, University of Washington Physiology Department, Seattle, WA 2016-2017

Associate Instructional (Teaching, non-tenure) Professor, Health Sciences, Chapman University
Orange, CA 2017 – Current

Academic Committee Service

Neuroscience Bridge Scholar, Biological Sciences & Psychology, Denison University,
Granville, OH 2008-2010

Collaborated with Neuroscience faculty to organize Neuroscience labs for the
concentration.

Molecular & Cellular Basis of Disease Curriculum Committee, University of Washington
School of Medicine, Seattle, WA 2014-2017

Developed syllabi, learning objectives, and assessment questions, designed Canvas
learning web platform for course; developed active learning in-class activities;
collaborated with colleagues from 5 states using virtual meetings to create curriculum

Premedical Advisor Committee Member, WWAMI School of Medical Education, Anchorage AK 2016-2017

Faculty Senator, Crean College, Chapman University, Orange, CA 2018-2020

Institute for Excellence in Teaching and Learning Faculty Ambassador, Chapman University 2018-2021

Assist Chapman instructors in pedagogical techniques, learning management system
(Canvas), and online best practices.

Faculty Technology Advisory Group, Crean College Representative, Chapman University, Orange, CA Reviews technology adoptions (Canvas, Adobe Creative Suite, Proctoring software, Interfolio) and assists with Classroom Technology Focus Group for HyFlex classrooms	2019-present
Premedical / Pre-Health Committee, Doctor of Osteopathy Advisor, Chapman University Advises students, attends information sessions, reviews application materials, writes letters of reference	2019-present
Neuroscience Minor Council, Chapman University, Orange CA Develops and reviews Neuroscience Minor Curriculum, Advises Neuroscience students	2019-present
Internal Communication Working Group, Faculty representative, Chapman University, Orange, CA	2020
Parent Advisory Council Guest, Crean College, Chapman University, Orange CA Discussed best practices for online lab education to parents of Crean students	Fall 2020
Hiring Committee, Public Health tenure track faculty search for Health Sciences	Spring 2021
Advisor, Leukemia & Lymphoma Society Club, Student Club at Chapman University, Orange, CA; club run by Amir Memarian	2021-present
Advisor, Faculty Manual Updates, Non-tenure Track faculty ad hoc representative	Spring 2021

Academic Leadership and Administration

Course Director, Cellular Physiology, WWAMI School of Medical Education, Anchorage AK	2012-2014
Course Director, Musculoskeletal Anatomy, WWAMI School of Medical Education, Anchorage AK	2014
Alaska Brain Bee High School Neuroscience Competition, University of Alaska Anchorage, with community partnership of the Anchorage Museum, Anchorage AK This regional competition is part of the International Brain Bee , a high school competition developed by Norbert Myslinski, of University of Maryland, Baltimore. The AK Brain Bee encouraged Alaskan high school students to become interested in careers in neuroscience. The AK Brain Bee is currently being run by Dr. Rachael Hannah, UAA Biological Sciences.	2011-2017
Co-Course Director Molecular & Cellular Basis of Disease, WWAMI School of Medical Education, Anchorage, AK	2015-2017
Instructor of Record, Clinical Gross Anatomy, Creighton University Occupational Therapy Program	2015-2017
Director, Neuroscience Minor, Chapman University, Orange, CA	2019-present
Director, Interdisciplinary Studies, Chapman University, Orange, CA	2021-present

Teaching in Programs and Courses

Molecular & Cellular Neurobiology recitation, University of Arizona, Tucson, AZ 1 semester 3 credit course, 50 undergraduates	2001
Tide Pool Marine Life, Marine Biology Summer Camp Center for the Study of Deserts and Oceans Puerto Peñasco, Mexico 40 contact hours, 10 middle school students	2003
Utilizing confocal microscopy in molecular biology research, NSF workshop, University of Hawai'i, Mānoa, HI 3 contact hours, 10 graduates, professors	2008
Olfaction/chemoreception lectures for Comparative Animal Physiology, Graduate Neurophysiology, Intro to Neuroscience courses, University of Hawai'i, Mānoa, HI 6 contact hours, 150 undergraduates & graduates	2007-2008
Anatomy & Physiology I, Lecture & Laboratory, Leeward Community College, Pearl City, HI 1 semester 4 credit courses, 24 undergraduates / course	2007
Anatomy & Physiology II, Lecture & Laboratory, Leeward Community College, Pearl City, HI 1 semester 4 credit courses, 24 undergraduates / course	2008
Neurophysiology Lecture & Laboratory, Denison University, Granville OH 1 semester 4 credit course, 30 undergraduates	2008
Molecular and Cellular Biology w/ Laboratory, Denison University, Granville OH	2007-2008

1 semester course, 24 undergraduates / spring course Introductory Neuroscience for Neuroscience Concentration students, Denison University, Granville OH	2007
1 semester 4 credit course, 30 undergraduates Advanced Neuroscience, Lecture & Lab for Neuroscience Concentration students, Denison University, Granville OH	2008
1 semester 4 credit course, 30 undergraduates Anatomy & Physiology I Lecture, University of Alaska Anchorage, Anchorage, AK	2010-2015
1 semester 3 credit course, 80-140 undergraduates / course, 3-4 courses / spring & fall semesters	
Nervous Systems Lecture & Laboratory, WWAMI School of Medical Education, Anchorage AK	2011
1 semester 4 credit course, 20 medical graduates, spring Anatomy & Physiology II Lecture, University of Alaska Anchorage, Anchorage, AK	2012-2015
1 semester course, 80-110 undergraduates / course, 1 course / semester Special Topics in Neuroanatomy & Neurophysiology, University of Alaska Anchorage, Anchorage AK	2012-2014
1 semester 3 credit course, 20-30 undergraduates & graduates / course, 1 course / spring Cell Physiology Lecture, WWAMI School of Medical Education, Anchorage AK	2012-2015
1 semester course 4 credit course, 20 medical graduates, spring or fall Musculoskeletal Anatomy Lecture & Laboratory, WWAMI School of Medical Education, Anchorage, AK	2014
1 semester course 4 credit course, 20 medical graduates, spring Clinical Gross Anatomy Lecture & Laboratory, Creighton University Occupational Therapy Program	2015-2017
1 semester 4 credit course, 20 graduates, 1 course / spring Neurophysiology Lecture, Service-Learning Course, Biological Sciences, University of Alaska Anchorage, Anchorage, AK	2015-2017
1 semester 3 credit course, 20-30 undergraduates & graduates, 1 course / spring Human Gross Anatomy, Lecture & Laboratory, WWAMI School of Medical Education, Anchorage AK	2015-2017
1 semester 3 credit course, 15 undergraduates, 1 course / spring Mind, Brain, Behavior, Small group instruction, WWAMI School of Medical Education, Anchorage AK	2016
3 contact hours / week for 1 unit, 20 medical graduates, Fall Cardiac, Pulmonary & Renal, Small group instruction, WWAMI School of Medical Education, Anchorage, AK	2016
3 contact hours / week for 1 unit, 20 medical graduates, Spring Molecular & Cellular Basis of Disease, active learning facilitator, WWAMI School of Medical Education, Anchorage AK	2015-2017
1 unit 4 credit course, 20 medical students, Fall Human Anatomy Laboratory, Chapman University, Orange, CA	2017-present
1 semester 1 credit course, 20-25 undergraduates, 3-4 courses / semester Utilize <i>Anatomage</i> ™ Virtual Cadaver tables, Complete Anatomy software, stereomicroscopy, and 3D Printing in coursework.	
Applied Human Neurophysiology lecture, Chapman University, Orange, CA	2020-present
1 semester 3 credit course, 20 undergraduates, 1 course / spring Utilize <i>Anatomage</i> ™ Virtual Cadaver tables, Complete Anatomy software, stereomicroscopy, 3D Printing, and Virtual Reality Oculus Go goggles in coursework.	
Introduction to Neuroscience Lecture, Chapman University, Orange, CA	2020-present
1 semester 3 credit course, 21 undergraduates, 1 course / fall Introduction to Neuroscience Laboratory	2020-present
1 semester 1 credit course, 21 undergraduates, 1 course / fall Utilize iWorx Physiological Psychology equipment, imageJ, Python and Allen Institute Educational Resources in coursework.	

Advising and Mentoring (Last 5 years)

Research Students

Thomas Robinson, Tyler Smoker, Oliver Kapusciok, Michelle Warner, Creighton University Occupational Therapy Graduate students, Research advisor for Investigating Perceptions of Blood Bank of Alaska Attendees on the use of Three-Dimensional Model Printing for Patient Education on Rheumatoid Arthritis and Osteoarthritis". All students are practicing occupational therapists	2016-2017
Austin Densmore, Valencia High School, Internship Advisor for 3D printing Attending college	2017-2018
Kinnera Reddy, Chapman University, Research advisor on project "Bringing 3D printed Knee models to the community" Graduated Chapman University Spring 2020	2018-2019
Johnny Altwal, Chapman University, Internship and Research Advisor on Veterinary Uses for 3D Model Printing Senior, Chapman University applying to Veterinary schools	2019-present
Lexi Lee, Chapman University, Research Advisor for Case Study in Neuroscience Senior, Chapman University	2020-2021
Diane Kim & Matthew Kim, Research Advisor for Literature Review on Caffeine Juniors, Chapman University	Fall 2020

Undergraduate & Alumni Advising

Health Science student & alumni advising: 15-60 undergraduates in careers and coursework	2017-present
Neuroscience advising: advise Neuroscience minors in careers and coursework; Additional advising to post-graduate students regarding PhD programs Created advising, internship, career portal on Padlet	2020-present

Faculty & Staff

McKenna Salazar, Western University of Health Sciences, TBLC Practitioner Mentor Program Director, CTE and Dual Enrollment, Porterville College	2019
Gia Diacobbe, PMP, TBLC Practitioner Mentor KPSOM, Manager of Educational Technology	2019-2020
Dale Quest, Texas Tech University Health Science Center, TBLC New Member Mentor Faculty, TTUHSC	2020

Advising and Mentoring Peers (Last 5 years)

Framework for TBL Application Activity Reporting Facilitation (co-presented by Sandra Ehrlich-Mathiesen), UAA Center for the Advancement of Faculty Excellence, Anchorage, AK Learning, Teaching, and the Brain: Developing a Team-Based Learning Tool Kit for Improved Collaboration, Montana Nurses Association Meeting, Continuing Education Update Alaska, Anchorage, AK	2016
Peer Session on Team Based Learning, Institute for Excellence in Teaching & Learning Summer Institute, Chapman University, CA	2017
Improving the Quality of Your Multiple-Choice Questions, Institute for Excellence in Teaching & Learning Summer Institute, Chapman University, CA	2017
Digital Distractions in the Classroom, Institute for Excellence in Teaching & Learning Summer Institute, Chapman University, CA	2018
University Advancement Friday Coffee Guest, Chapman University, Orange CA Discussed best practices for online lab education to Advancement team members	2019
Chapman University Institute for Excellence in Teaching & Learning (IETL) JanCon, Hybrid Teaching at Chapman Panelist & Creator of 2minute Lightning Talk, " Is Orientation the Key for HyFlex Success? "	Dec 4, 2020 Jan 19, 2021
Chapman University Institute for Excellence in Teaching & Learning (IETL) First Year Faculty Experience, Hybrid Teaching Panelist, Adobe Spark Presentation	Feb 26, 2021 Mar 5, 2021

Other Work Experience

Team Based Learning Consultant, Team-Based Learning Consortium, Self-Employed, Silverado, CA	2017-present
Medical Education Curriculum Consultant, Rose International for Kaiser Permanente Bernard J. Tyson School of Medicine, Pasadena, CA	2020-present
Curriculum, assessment, and content writer for Gastrointestinal/Endocrine/Metabolism, Reproductive/Urinary, and Musculoskeletal/Dermatology Units (Histology, Anatomy, Embryology). Curriculum mapping using Elentra Learning Management System.	
Active Learning Curriculum Consultant, Active Learning Curriculum Consultants, International ; Collaborates with international team of colleagues in assisting others transform their teaching using evidence-based active learning approaches.	2021-present

Professional Development Activities (last 5 years)

TBLC Consortium Annual Meetings & Workshop Attendee	2018-2021
Anatomage Table User's Meeting, San Jose, CA	2016-2018
Learned about updates for the Anatomage Virtual Cadaver Tables, InVivo Software for 3D printing with medical imaging	
Chapman University Institute for Excellence in Teaching & Learning (IETL) Summer Institute, James Lang presentation on Small Teaching	2017
Chapman University IETL "What the Best College Teachers Do" Faculty Learning Community	2017
Participated in monthly meetings and discussed book contents	
Flipped Classroom, Brainstorming Worksheet Certification, Flip-It Consulting, LLC by Barbi Honeycutt, Online Training	2017
Chapman University IETL JanCon, Reach Everyone, Teach Everyone with Universal Design for Learning	2018
Learned several techniques for universal course design, gamification, and developing feedback for neurodiverse learners.	
Society for Neuroscience Online Webinar: Undergraduate Neuroscience Pedagogy: Perspectives from Different Institutions	2018
Learned ideas for program development for a minor / major in Neuroscience	
Chapman University Institute for Excellence in Teaching & Learning (IETL) Summer Institute, Generation Z	2018
Learned about the newest generation of college students & their needs	
Chapman University IETL JanCon, Chapman University Technology Tools	2019
Society for Neuroscience Virtual Conference, "Mitigating Implicit Bias: Tools for the Neuroscientist"	2019
TBLC, Online Webinar "Getting Research Ideas with the Aim of Publication"	2019
Chapman University EduTech, "Virtual Reality / Augmented Reality"	2019
Various faculty described how they were utilizing these tools in their courses	
InstructureCon, IETL Crean Representative and workshop attendee.	2019
This is the Canvas LMS Conference to help prepare for the LMS transition to Canvas; workshops on Canvas technology for GIF integration and anatomy videos.	
Occidental College lecture by Josh Medina "Photogrammetry: possible future use cases for 3D scanning and interaction with physical collections in virtual space".	2019
Used materials to apply for pedagogical teaching award.	
Chapman University Institute for Excellence in Teaching & Learning (IETL) Summer Institute, Technology at Chapman	2019
National Center for Case Study Teaching in Science Fall Conference, Buffalo, NY	2019
Learned about creating case studies for teaching.	
Learning to use social media to promote Team-Based Learning virtual webinar (TBLC)	2019
Canvas Complete Course Redesign participant. Chapman University	2019
Mastery of Learning Management system, Canvas.	
Learning to use virtual reality Oculus Go goggles with Jessie Rivera, Faculty Tech Hub, Chapman University	2020
Remote Proctoring Software (Proctorio & Respondus) Training, Chapman University	2020

Diversifying your syllabus, IETL Chapman University Faculty Training	2020
Learned techniques for inclusive syllabi	
Engage Remote Students Online Zoom training, Chapman University	2020
Foundation for Undergraduate Neuroscience Summer Virtual Meeting: Teaching, Learning, and Mentoring Across Distances	2020
Learned techniques for online Neuroscience courses and laboratories.	
Panopto Video Recording Best Practices, Chapman University IETL & EduTech	Fall 2020
Using Proctorio in Canvas, Chapman University IETL & EduTech	Fall 2020
New Course Approval System Training, Chapman University Faculty Affairs	Fall 2020
Proctorio Roundtable Discussion, Chapman University IETL & EduTech	Fall 2020
Chapman University Institute for Excellence in Teaching & Learning (IETL) JanCon, Hypothesis Training & "Planning for the Unknowns (and Knowns) of Future Semesters"	2021
Nuts and Bolts of Tenure and Promotion Workshop, Chapman University	Mar 16, 2021
Canvas Anonymous Grading Training, Chapman University	Mar 18, 2021
Adobe Digital Literacy Café: The Impact of Creativity in STEM	Mar 24, 2021
Chapman University Institute for Excellence in Teaching & Learning (IETL) "Leveling Up Your Teaching" Attendee	Apr 6, 2021
Neuroscience Teaching Conference Attendee	Jul 22-23, 2021

Professional Honors and Awards

NIH/NIA Institutional Predoctoral Training Program in Neuroscience (3 T32 AG007434-05S2 Levine), University of Arizona	2002 – 2003
NIH/NIDCD Ruth L. Kirschstein Individual Predoctoral Fellowship (1 F31 DC006368-01A1), University of Arizona	2003 – 2005
Cades Postdoctoral Fellowship, Pacific Biosciences Research Center, University of Hawaii	2007 – 2008
Mount Desert Island Biological Laboratory New Investigator Award for "Identifying the novel formation of Copepod myelin" (\$8000 towards lab space & housing)	2009
UAA Center for Community Engagement and Learning Mini-grant for the Alaska Brain Bee (\$250-\$2700 / year)	2012 – 2016
Nominee, Chancellor's Award for Excellence in the category of Excellence in Teaching, UAA	2012
Travel Award to attend TBL conference to become a TBL certified Trainer (San Diego & Ft. Worth)	2013 – 2014
Named an Influential person by a first- or second-year student at UAA by Division of Student Access, Advising and Transition office, UAA	2015 – 2016
Chapman University Teaching Pedagogy Innovation Grant for "Utilizing 3D printing and 3D scanning to Train Future Health Care Professionals" \$5000	2019-2020
Chapman University Career Champion Nominee, Crean College	2021

Community Activities (last 5 years)

Education, and Outreach

Community-Based Presentations

Presenter. UAA Planetarium, <i>Neurodome</i> and <i>Nanocam: A Trip into Biodiversity</i> planetarium Shows; led discussions 3-4 times a year about Biology to Anchorage public, STEM teacher training, and NSF EPScOR grant writers (Spring, 2013)	2011-2017
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Community-Based Mentorship

Sponsored a Community Engaged Student Assistant (CESA) each year to help with the Alaska Brain Bee and other Neuroscience Outreach community events (Elementary science nights at Huffman and Oceanview, Creative Activities Fair). CESAS: Sean Costello (2010-13), Sarah Johns (2014-15), Emily Rom (2015-16); Anchorage, AK	2010-2016
Alaska Brain Bee Regional Winner Mentor; Helped Tutor the Winner of AK Brain Bee to be prepared for the National Brain Bee competition.	2013-2017

Community Recognition

Community Builder Award, given to a member of the Anchorage Community for dedication to

community service, Awarded by UAA Center for Community Engagement and Learning 2017

Other Community Activities

OH Yoga Voluntary Advisory Council, OH Yoga, Orange, CA 2020-2021
Provides feedback on yoga protocols during the Covid-19 pandemic quarantine
Canyon Community Garden Co-Leader, Silverado Modjeska Recreation and Park District 2018-current

Professional Association Activities

Professional Memberships

Society for Neuroscience 2001-present
Foundation for Undergraduate Neuroscience 2008-present
Team-Based Learning Consortium 2013-present

Professional Association Leadership Positions or Committee Activities

Team-Based Learning Consortium 2013-present
Membership Committee member (volunteer): 2018-present
This 9-person committee develops methods and programs for active membership recruitment and retention, supports the Communities of Practice, edits/publishes TBLC Global Newsletter and monitors the website. I also helped develop the New Mentor-Mentee program, Zoom Q & A for new members, and the TBL social hour.
Marketing Committee member: (appointed): 2018-present
This 9-person committee reviews and advise on the marketing activities of the collaborative. This committee develops and submits an annual marketing plan to the Steering Committee that will identify and coordinate activities of the TBLC committees with the purpose of marketing the collaborative.
Nominating Committee member (elected): 2018-2020
This 5-person committee determines a suitable group of candidates for election to the Steering Committee
Online TBL Certification Workshop Committee member (appointed) 2020
This 7-person informal committee meets to discuss best practice in teaching online TBL to begin developing a certification program in online TBL practice.

Scholarship – Peer-Reviewed Published Research

Published and Forthcoming Research Articles – Print Journals

*Signifies undergraduate student

1. **Wilson CH**, Christensen TA, Nighorn AJ. (2007) Inhibition of nitric oxide and soluble guanylyl cyclase signaling affects olfactory neuron activity in the moth, *Manduca sexta*. J Comp Physiol [A] 193(7): 715-728.
2. **Wilson CH**, Christie AE. (2010) Distribution of allatostatin C-like immunoreactivity in the central nervous system of the copepod crustacean *Calanus finmarchicus*. Gen Comp Endocrin. 1;167(2):252-60.
3. Kilpatrick H*, Christie AE, **Wilson CH**. (2010) Immunofluorescent localization of voltage-gated sodium channels to identify node-like structures in nerve fibers of the sand shrimp (*Crangon septemspinosa*). MDIBL Bulletin (49): 31.
4. Costello K*, Chung JS*, Skarke S*, Lenz P, **Wilson CH**. (2010) Identification of voltage-gated sodium ion channel genes in the copepods *Calanus finmarchicus*, *Bestiolina similis*, *Undinula vulgaris*, and *Parvocalanus crassirostris*. MDIBL Bulletin (49): 37.
5. **Wilson CH**, Hartline DK. (2011) The novel organization and development of copepod myelin II: non-glial origin. J Comp Neurol (519): 3281-3205. This article was selected by a member of the Faculty of 1000 (F1000), a service that places publications in a library of the top 2% of published articles in biology and medicine. See: <http://f1000.com/prime/11672956>
6. **Wilson CH**, Hartline DK. (2011) The novel organization and development of copepod myelin I: ontogeny. J Comp Neurol (519):3259-80.
7. Lei H, Reisenman C, **Wilson C**, Gabbur P, Hildebrand JG. (2011) Spiking patterns and their functional

implications in the antennal lobe of the tobacco hornworm *Manduca sexta*. PLOS ONE 6(8): e23382. doi: 10.1371/journal.pone.0023382.

8. Altwal J*, **Wilson CH**, Griffon D. (2021) Applications of Three-Dimensional Printing in Small Animal Surgery: A Review of Current Practices. Veterinary Surgery; 1-18. doi: 10.1111/vsu.13739
9. Lee L*, Kim D*, Sternlicht E, **Wilson CH**. Professor Eric Can't Hear: Vestibular Schwannoma Brain Imaging Teaching Case study. Accepted (11/22/21), National Center for Case Study Teaching in Science.

Scholarship – Non-Peer-Reviewed Published Research

Images

1. Honorable Mention, Copepod Nikon Small World Confocal Image Contest 2007
2. Cover of Marine Biotechnology: confocal image of a marine copepod, *Labidocera* species with previously uncharacterized presence of Green Fluorescent Protein; Image was also Figure 4 in: Mocz G. Fluorescent Proteins and Their Use in Marine Biosciences, Biotechnology, and Proteomics. Mar Biotechnol 9 (305-328). 2010
3. Cover of Gen Comp Endocrin for accompanying article 1;167(2):252-60.

Scholarship – Educational/Technological Development and Innovations

Curricula and Educational Materials

1. **Wilson CH**, Developer, Syllabus, Introductory Neuroscience, Denison University, OH 2007
Created interdisciplinary, service-learning course where students learned about neuroscience while volunteering in the local community foundations.
2. **Wilson CH**, Developer, Syllabus, Advanced Neuroscience, Denison University, OH 2008
Created advanced neuroscience course with electrophysiology, physiological psychology and neuroanatomy lab exercises.
3. **Wilson CH**, Developer, Syllabus, Special Topics in Neurophysiology / Neurophysiology Lecture University of Alaska Anchorage (UAA), Anchorage AK 2012-2017
Created neurophysiology course syllabus including service-learning module, human cadaver neuroanatomy lab module, Team-based learning modules (4), and Student-designed Team-based learning modules using a “blank syllabus” approach.
4. **Wilson CH**, Developer, Anatomy & Physiology I & II, Instructional slide decks, UAA 2011-2015
Designed PowerPoint lecture slide decks still being used by faculty at UAA
5. **Wilson CH**, Elswick J. Developers, Clinical Gross Anatomy, recorded narrated lectures 2015-2017
6. **Wilson CH**, Ritter M. Developers, Introduction to Active Learning with HIPPA 2015-2016
First year medical student orientation to why active learning pedagogies are superior to traditional lectures; incorporated HIPPA basics for prework and application exercise
- Wilson CH**, Fuerst P, Hille B. Developers, Molecular & Cellular Basis of Disease, WWAMI School of Medical Education 2014-2017
Prework Readings for Physiology Content (Signal Transduction, Membrane Physiology, Somatosensation, Pain & Reflexes, Autonomic nervous system anatomy, physiology & disorders, Muscle physiology & disorders). Adapted versions still be used currently.
7. **Wilson CH**, Fuerst P. Developer, Molecular & Cellular Basis of Disease, WWAMI School of Medical Education 2014-2017
Active learning, Team-based learning Modules for Physiology Content (Signal Transduction, Membrane Physiology, Somatosensation, Pain & Reflexes, Autonomic nervous system anatomy, physiology & disorders, Muscle physiology & disorders) Adapted versions still being used currently.
8. **Wilson CH**, Fuerst P. Developer, Molecular & Cellular Basis of Disease, WWAMI School of Medical Education 2014-2017
Multiple-choice Assessment questions for Physiology Content (Signal Transduction, Membrane Physiology, Somatosensation, Pain & Reflexes, Autonomic nervous system anatomy physiology & disorders, Muscle physiology) Adapted questions still being used currently
9. **Wilson CH**, Richards DR. Developer, Human Anatomy Lab Curriculum & Syllabus, Chapman University, CA 2017-current

Created updated assessment, syllabus, and curriculum to include virtual cadaver Anatomage Table, Complete Anatomy software, and 3D printing based on medical images.

10. **Wilson CH**, Densmore A, Bird D. 3D Printed Artic Fox, Elephant seal, and Wolverine skulls for educational purposes (BBC Video, conference presentations for D Bird) 2018-2019
11. **Wilson CH**. Developer, Applied Human Neurophysiology Syllabus, Chapman University 2020
Developed flipped classroom approach with modules on virtual neuroanatomy/radiology, 6 modified TBL case studies; 3 student led TBL modules; modified curriculum for online TBL teaching after March 16 Covid lockdown.
12. **Wilson CH**, Belghasem M. Co-Developers, IS2 Genitourinary Reproductive Unit, Bernard J. Tyson School of Medicine, Pasadena, CA 2020
Pework, Modules, Assessment for: male and female genitourinary tract
13. **Wilson CH**, Lopez-Ojeda W, Roehmholdt BF. Co-developers, IS5 Musculoskeletal_ Dermatology Pework, Modules for: musculoskeletal system 2020
Independent Learning Modules for musculoskeletal system
14. Lee L, **Wilson CH**. Developer, Professor Eric Cannot Hear, Case Study on Acoustic Neuroma; Chapman University 2020-21
Writing case study with undergraduate student based on a true story; to be submitted to National Center for Case Studies in Science Institute
15. **Wilson CH**. Developer, Syllabus Introduction to Neuroscience Lecture, Chapman University 2020
Created flipped-classroom curriculum exploring the history, present, and future of neuroscience research.
16. **Wilson CH**. Developer, Syllabus Introduction to Neuroscience Lab, Chapman University 2020
Created online laboratories utilizing online Neurophysiology simulation software, Allen Brain Institute open source databases, and iWorx physiopsychology experiments.

Pedagogical Innovations (last 5 years)

Invited Pedagogical Innovation Presentations

Local

1. Wilson CH. Online Active Learning. Remote Teaching Town Hall. Institute for Excellence in Teaching & Learning, Chapman University. [Presenter] 4/17/2020

National

1. Wilson CH, Ogilvie J, Watson T, Utilizing Case Studies in Online Neuroscience Courses, Moderated Social, Foundation for Undergraduate Neuroscience Virtual Meeting. [Presenter] 7/31/2020

International

1. Wilson CH, Integrating a "Blank Syllabus" with Team-Based Learning (TBL): Student designed TBL modules in a Neurophysiology course, Team Based Learning Consortium 17th Annual Meeting. Round-Table Oral Presentation. San Diego, CA. [Presenter] 3/2/2018
2. Winter L and Wilson CH, Fundamental Principles and Practices of Team-Based Learning. 18th TBLC Annual Meeting, TBLC Practitioner Certification Workshop Tampa, FL [Planned Presenter but missed presentation due to flight delay] 3/14/2019
3. Clark M, Dolowitz A, Leonard B, Wilson CH. Experiences in Moving TBL Online. Team-Based Learning Collaborative Free Online Webinar. TBLC. [Presenter & Organizer] 5/12/2020
4. Clark M, Dolowitz A, McCarter R, Wilson CH, Winter L, The Essentials of Online Team-based Learning, TBLC Webinar, offered to TBL Committee members [Presenter & Organizer] 8/13/2020
5. Clark M, Dolowitz A, McCarter R, Wilson CH, Winter L, The Essentials of Moving to Online Team-based Learning, TBLC International Webinar for TBLC Members. [Presenter & Organizer] 8/29/2020
6. Dolowitz A, McCarter R, Moscovia M, Wilson CH, Winter L, The Essentials of Moving to Online Team-based Learning, TBLC International Webinar for TBLC

- Members. [Presenter & Organizer] 11/13/2020
7. McCarter R, Wilson CH, Winter L. The Essentials of Moving to Online Team-Based Learning; Group for Research in Pathology Education (GRPE) Annual Conference. [Presenter & Organizer] 6/18/2021

Academic Posters, and Abstracts (last 5 years)

International

1. Wilson CH, Poster Presentation, Exploring neuroanatomy technologies: A “brain in hand” approach utilizing 3D models for undergraduate learning. Society for Neuroscience Meeting, San Diego, CA. 024.13SU [Presenter] 10/2018
2. Wilson CH, Clark M, Innovations in Recruitment and Retention for the Team-Based Learning Collaborative (TBLC). TBLC Annual Meeting^, Portland OR. #401 (^meeting canceled due to Covid-19). [Presenter] 3/12/2020
3. Clark M, Dolowitz A, Leonard B, McCarter R, Moscovia, M, Wilson CH, Winter L. Essentials for Moving Team-Based Learning Online: Low-cost, no-cost and widely available tools to help you transform your courses. TBLC Annual Meeting (virtual). [Presenter] 3/7/2021

Community Educational Resource Development and Innovations

1. Kapusciok O, Robinson T, Smoker T, Warner M, **Wilson CH**. Pamphlet & 3D models, Occupational Therapy Patient Perception of Three-Dimensional Printed Educational Models of Arthritis for the Blood Bank of Alaska, Anchorage AK 2016-2017
OT students created materials to disseminate to the public during their research study.
2. Reddy K, Densmore A, **Wilson CH**. 3D-printed knee joint models to teach high school students about knee injury prevention. Chapman University, Orange CA 2018-2019

Blogs and Newsletters– Guest Posts

1. **Wilson CH**. 3D-Printed Neuroscience Models for Everyone. Faculty for Undergraduate Neuroscience Newsletter, January 2019.
URL: https://www.funfaculty.org/blog_home.asp?display=8
2. **Wilson CH**. Team-Based Learning While Remote Teaching. Higher Ed & Technology: Academics at Chapman Blog post. Chapman University, April 20, 2020.
URL: <https://blogs.chapman.edu/academics/2020/04/20/team-based-learning/>
3. **Wilson CH**, Vieira E (Zoom videographer), Rinaldi C, Challenges of Online Application Exercises, Team-Based Learning Collaborative, Global News Special Edition, Vol 10 (1), June 30, 2020.
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