

Nathaniel Hilliard

Purdue University – Department of Forestry & Natural Resources

1011 N Salisbury Street – West Lafayette, IN 47906

Home: 765-607-2577 – Cell: 765-775-3412

Email: nhilliar@purdue.edu

Professional Profile

- Instructional design through sound learning principles with attention toward audience needs and content accuracy.
- Professional management experience through dynamic problem-solving and creative coordination of resources.
- Excellent time management between research, teaching, and academic demands.
- Ten years of teaching experience with active LMS management and instructional design of laboratory and lecture materials.
- Familiar with research methodology, learning and instructional theories, and various educational technologies.
- Self-motivated with excellent multitasking and communication skills.
- Critically evaluates new technologies in search of improved educational solutions.

Professional Experience

Instructional Design Intern, Purdue University Center for Intercultural Learning, Mentorship, Assessment and Research, 2021 to 2022

- Researched, designed, and implemented a portable intercultural learning module introducing learners to alternate perceptions about science and nature, highlighting how, despite the domination of modern western science in education, other cultures' ways of knowing and coexisting with their environments should be valued and respected rather than appropriated and replaced.
- Responsible for all subject matter research, storyboarding, content design, and implementation in Articulate Storyline.
- Available at: <https://paedagogus.org/science>

Research Laboratory Manager, Purdue University, Dept. of Forestry & Natural Resources, 2005 to Present

- Managed multiple on and off campus, single and multi-faculty research laboratories
- Liaised with a diverse array of students and staff to identify problems and implement solutions required to achieve research goals
- Lead and designed activities for field laboratory in Natural Resources Measurements (FNR 353), 2011 - 2021
- Chaired Departmental Greenhouse Management Committee, 2021 - Current
- Chaired Departmental Laboratory Safety Committee, 2015 - 2019
- Budgeted multiple purchasing accounts while coordinating major equipment purchases
- Supervised training and maintenance for analytical research equipment
- Directed undergraduate students in laboratory and departmental staff positions

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- Designed and implemented laboratory websites and equipment catalog systems

Research Laboratory Technician, Purdue University, Dept. of Medicinal Chemistry & Molecular Pharmacology, 2001 to 2005

- Facilitated multiple research projects involving voltage gated calcium channels

Education

- Learning Design and Technology doctoral program, Purdue University, Current
- Learning Design and Technology master's program, Purdue University, Current
- Master of Science in Environmental Engineering, Purdue University, 2016
- Bachelor of Science in Biology/Ecology, Purdue University, 1993

Teaching Experience

Staff Teaching Assistant, Natural Resources Measurements (FNR 353), Purdue University, Dept. of Forestry & Natural Resources, 2011 to present

- Field lab design and management; Periodic classroom lectures
- Work with faculty to improve student engagement and learning outcomes
- Keying and grading of exams, assignments, and labs; design of supplemental materials
- Experience with Blackboard Learn, Moodle, Adapt Learning, Articulate Storyline

Service

- American Educational Research Association (AERA) Member since 2020
- Peer reviewer for 2022 American Society for Engineering Education Annual Conference & Exhibition
- Purdue Forestry & Natural Resources Greenhouse Management Committee Chair, 2021 - Current
- Purdue Forestry & Natural Resources Laboratory Safety Committee, 2005 - Current
- Treasurer & VP of Marketing, Purdue Association of Learning Design & Technology, 2019-2020
- Forestry & Natural Resources Research Poster Competition Judge, 2021
- Lafayette Regional Science and Engineering Fair Judge at Purdue University, 2017, 2021
- NanoDays Engagement Volunteer Presenter at Purdue University, 2017

Certifications

- Foundations of College Teaching- Purdue University, 2021
- Project Wet & Wild Educator Workshop Certification, 2014
- NAAEE Initial Preparation for Environmental Educators Certificate, 2014

Technical Experience

- Experience with LabVIEW, MATLAB Visual Basic, PHP, HTML/CSS, basic MySQL as well as extensive experience with MS Word, Excel, Outlook, PowerPoint, and Adobe Acrobat Professional.

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Some work with audio/video and other specialized software applications. Work with Brightspace, Blackboard Learn, Moodle LMS, Articulate Storyline, Adapt Learning, Omeka, WordPress, SAP, Ariba, Windows, and Linux.

- I have worked with a variety of software over the years and am always willing to add to my repertoire
- I maintain a Linux VPS hosting installation of Adapt Authoring, Moodle, WordPress, Omeka, MySQL, and Postfix for learning practice as well as work and educational use.

Recent Publications

- Fiock, H., Meech, S., Yang, M., Long, Y., Farmer, T., Hilliard, N., Koehler, A., & Cheng, Z. (2022). Instructional design learners make sense of theory: A collaborative autoethnography. *Educational Technology Research and Development*, 1-27. <https://doi.org/10.1007/s11423-021-10075-8>

Other Publications

- Walsh, K. B., Zhang, J., Fuseler, J. W., Hilliard, N., & Hockerman, G. H. (2007). Adenoviral-mediated expression of dihydropyridine-insensitive L-type calcium channels in cardiac ventricular myocytes and fibroblasts. *European journal of pharmacology*, 565(1-3), 7-16.
- Liu, G., Jacobo, S. M. P., Hilliard, N., & Hockerman, G. H. (2006). Differential modulation of Cav1. 2 and Cav1. 3-mediated glucose-stimulated insulin secretion by cAMP in INS-1 cells: distinct roles for exchange protein directly activated by cAMP 2 (Epac2) and protein kinase A. *Journal of Pharmacology and Experimental Therapeutics*, 318(1), 152-160.
- Liu, G., Hilliard, N., & Hockerman, G. H. (2004). Cav1. 3 is preferentially coupled to glucose-induced [Ca²⁺]_i oscillations in the pancreatic β cell line INS-1. *Molecular pharmacology*, 65(5), 1269-1277.
- Dilmac, N., Hilliard, N., & Hockerman, G. H. (2004). Molecular determinants of frequency dependence and Ca²⁺ potentiation of verapamil block in the pore region of Cav1. 2. *Molecular pharmacology*, 66(5), 1236-1247.
- Liu, G., Dilmac, N., Hilliard, N., & Hockerman, G. H. (2003). Cav1. 3 is preferentially coupled to glucose-stimulated insulin secretion in the pancreatic β -cell line INS-1. *Journal of Pharmacology and Experimental Therapeutics*, 305(1), 271-278.
- Dilmac, N., Hilliard, N., & Hockerman, G. H. (2003). Molecular determinants of Ca²⁺ potentiation of diltiazem block and Ca²⁺-dependent inactivation in the pore region of cav1. 2. *Molecular pharmacology*, 64(2), 491-501.