

Christine Renee Hoch

PhD, APRN, ACNS-BC

Assistant Professor

University of Delaware, School of Nursing, Newark, DE

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EDUCATION

University of Maryland, Baltimore	PhD, Nursing	December 2021
University of Delaware	MSN, Adult Health Clinical Nurse Specialist	January 2008
University of Delaware	BSN, Nursing	May 1996

ADDITIONAL EDUCATION

University of Delaware	Communications Training for Researchers	June 2024
Harvard Medical School	Biochemistry HMX Course	March 2018

ACADEMIC APPOINTMENTS

University of Maryland, Baltimore	Visiting Scholar, School of Medicine, Department of Anesthesiology	2023 - present
University of Delaware	Assistant Professor, School of Nursing	2022 - present
University of Delaware	Associate Instructor, School of Nursing	2019 - 2022
University of Delaware	Instructor, School of Nursing	2013 - 2019
Delaware Technical & Community College Nursing Department	Instructor, Nursing	2004 - 2013

NON-ACADEMIC HEALTHCARE INSTITUTIONS

Christiana Care Health Systems	Registered Nurse	2000 - 2015
Southern Chester County Hospital	Registered Nurse	1998 - 2000
Manor Care	Registered Nurse	1996 - 1998

LICENSURE/CERTIFICATIONS

Registered Nurse , Delaware	L1-0025237	1996 - 2025
Registered Nurse , Pennsylvania	RN349872L	2017 - 2025
Board Certified Adult Health Clinical Nurse Specialist , American Nurses Credentialing Center	2013022608	2014 - 2026
Basic Life Support, Instructor	5060091214	2002 - 2025

RESEARCH

AWARDED GRANTS

Internal Grants

Project Funding Award, University of Delaware School of Nursing \$2000 1/2023 –12/2024

Heart Failure Related Fatigue and Cellular Energy Metabolism of PBMCs. This award supports a pilot study assessing the relationship between heart failure related fatigue and oxygen consumption rates of peripheral blood mononuclear cells.

Role: Co-PI

Research Facilitation Award: University of Maryland: Biology and Behavior Across the Lifespan (BBAL) \$5000 2/3/2020 – 2/3/2021

Heart Failure Related Fatigue and Bioenergetics of Peripheral Blood Mononuclear Cells. This award was to complete dissertation work as a student at UMB, assessing the relationship between heart failure related fatigue and oxygen consumption rates of peripheral blood mononuclear cells.

Role: Co-I

External Grants

**Sigma Theta Tau International Honor Society
Beta Xi Research Grant** \$1000 3/5/2024 – 3/5/2025

Heart Failure Related Fatigue and Cellular Energy Metabolism of PBMCs. This award supports a pilot study assessing the relationship between heart failure related fatigue and oxygen consumption rates of peripheral blood mononuclear cells.

Role: Co-PI

UNFUNDED GRANTS

General University Research Grant, University of Delaware \$15,000 Not funded
Heart Failure Related Fatigue and Self-Care: An Explanatory Mixed Methods Study
Role: PI

GRANTS UNDER REVIEW

INBRE Research/Pilot Award	\$40,000	Under review
Iron Deficiency, Vascular Dysfunction, and General Fatigue in HFrEF		
Role: PI		
Sigma International	\$5,000	Under review
Exploring the Moderating Role of Patient-Provider Communication in the Relationship Between Fatigue and Healthcare Utilization in Adults with Heart Failure: An <i>All of Us</i> Dataset Analysis		
Role: PI		

PUBLICATIONS (DB = Data Based)

Refereed

1. **Hoch, C.R.** & Klinedinst, N.J. (2025). Excessive daytime sleepiness, inflammation, and platelet energy metabolism in chronic stroke survivors: A preliminary analysis. *Nursing Research* 74(1), 79-84. <https://doi.org/10.1097/NNR.0000000000000773> **DB**
2. **Hoch, C.R.**, Klinedinst, N.J., Larimer, & Gottlieb, S.S. (2024). Heart failure related fatigue: An exploratory analysis of serum osmolality from the national health and nutrition examination survey. *Heart and Lung* 68(4), 284-290. <https://doi.org/10.1016/j.hrtlng.2024.08.012> **DB**
3. **Hoch, C.R.**, Klinedinst, N.J., Larimer, K., Renn, C., Fiskum, G. & Gottlieb, S.S. (2023). Fatigue in heart failure: A scoping review using the theory of unpleasant symptoms. *Journal of Cardiovascular Nursing* 38(4), E141-E164. <https://doi.org/10.1097/jcn.0000000000000940>
4. Klinedinst, N. J., Schuh, R., Kittner, S. J., Regenold, W.T., Kehs, G., **Hoch, C.**, Hackney, A. & Fiskum, G. (2019). Post-stroke fatigue as an indicator of underlying bioenergetics alterations. *Journal of Bioenergetics and Biomembranes*, 51(2), 165-174. <https://doi.org/10.1007/s10863-018-9782-8>. **DB**
5. Madiraca, J., & **Hoch, C.R.** (2018). Calcium and Phosphorus. *Nursing 2018 Critical Care*, 13(2), 24–31. <https://doi.org/10.1097/01.CCN.0000529938.18274.f4>.
6. Toto, D., Peters, A., Blackman, B., & **Hoch, C.** (2009). Bridging the gap: Answering the need for nursing faculty. *Teaching and Learning in Nursing*, 4(4), 109-114. <https://doi.org/10.1016/j.teln.2009.02.006>.

Under Review

1. Shaukat, S., Horney, J., Ji, X., **Hoch, C.** & Covington, L. (Under Review). The association between social determinants of health and cardiovascular risk in a national sample of pregnant women in the United States. *Journal of Community Health* **DB**

Non-Refereed

1. **Hoch, C.** (2023). 19th Annual Meeting Research and Practice Improvement Abstract Presentations. *Connections: Newsletter of the American Association of Heart Failure Nurses*.

Published Abstracts

1. Hoch, C.R., Klinedinst, N.J., Rangghran, P., Gottlieb, S., Bocar, A. (2025). Cellular Energy Metabolism of Peripheral Blood Mononuclear Cells and Fatigue: A cross sectional, correlational study of Adults with Heart Failure and a Reduced Ejection Fraction. Eastern Nursing Research Society. Nursing Research.
2. ***Hoch, C.R.**, Klinedinst, N.J., Larimer, & Gottlieb, S.S. (2024). Heart failure related fatigue and serum osmolality an exploratory analysis of the national health and nutrition examination survey. *American Association of Heart Failure Nurses Annual Conference. Heart and Lung* 68 (4), 381-382. [https://www.heartandlung.org/article/S0147-9563\(24\)00141-9/abstract](https://www.heartandlung.org/article/S0147-9563(24)00141-9/abstract)
3. Klinedinst, N. J., Fiskum, G., Schuh, R., Kittner, S. J., Regenold, W., Puche, A., **Hoch, C.**, Hackney, A. (2018). Post-Stroke Fatigue as an Indicator of Cellular Energy Dysfunction. *American Heart Association International Stroke Conference*. <https://aha.scientificposters.com/epsAbstractAHA.cfm?id=1>

Book Chapters

1. **Hoch, C.** (2017). *Nursing management: Postoperative care*. In S.L. Lewis, L.B. Bucher, M.M. Heitkemper, & M.M. Harding (Eds.) *Medical-surgical nursing: Assessment and management of clinical problems* (pp. 330 – 348). St. Louis, MO: Mosby Elsevier.
2. **Hoch, C.** (2014). *Nursing management: Postoperative care*. In S.L. Lewis, S.R. Dirksen, M.M. Heitkemper, L.B. Bucher & I. M. Camera (Eds.) *Medical-surgical nursing: Assessment and management of clinical problems* (pp. 367 – 382). St. Louis, MO: Mosby Elsevier.
3. **Hoch, C.** (2011). *Nursing management: Postoperative care*. In S.L. Lewis, S.R. Dirksen, M.M. Heitkemper, L.B. & Bucher (Eds.) *Medical-surgical nursing: Assessment and management of clinical problems* (pp. 349 – 366). St. Louis, MO: Mosby Elsevier.

PRESENTATIONS (DB = Data Based)

National

1. ****Hoch, C.**, Klinedinst, N.J., Larimer, K., & Gottlieb, S.S. (2024, June). *Heart Failure Related Fatigue and Serum Osmolality* [Oral Presentation]. American Association of Heart Failure Nurses: 20th Annual Meeting. Orlando, Florida. **DB**
****Research Oral Abstract Award**
2. **Hoch, C.**, Klinedinst, J. (2023, September). *Sex differences in the association of depression and inflammation among chronic stroke survivors* [Poster presentation]. Council for the Advancement of Nursing: Biosocial Methods to Advance Health Equity, Virtual Conference. **DB**

Local/Regional

1. Hoch, C.R., Klinedinst, N.J., Rangghran, P., Gottlieb, S., Bocar, A. (April, 2025). Cellular Energy Metabolism of Peripheral Blood Mononuclear Cells and Fatigue: A cross sectional, correlational study of Adults with Heart Failure and a Reduced Ejection Fraction. *Eastern Nursing Research Society*.

2. **Hoch, C.** Klinedinst, J., Rangghran, P., Gottlieb, S., Borcar, A. (2024, October). *Energy metabolism in adults with heart failure and a reduced ejection fraction*. The Center of Biomedical Research Excellence in Cardiovascular Health (COBRE) Research Symposium, Newark, DE. **DB**
3. **Hoch, C.**, Klinedinst, J., Fiskum, G. (2023, October). *Excessive daytime sleepiness, inflammation, and aerobic energy metabolism of platelets in chronic stroke survivors* [Poster presentation]. The Center of Biomedical Research Excellence in Cardiovascular Health (COBRE) Research Symposium, Newark, DE. **DB**
4. **Hoch, C.**, Klinedinst, J., Fiskum, G. (2019, November). *The relationship between cellular energy metabolism and general fatigue in early-stage heart failure* [Poster presentation]. The Washington Regional Nursing Research Consortium (WRNRC), Washington, D.C. **DB**
4. **Hoch, C.** & Mastrioplitto, K. (2015, October). *Use of Service Learning to Promote Stroke Education & Screening*. Christiana Care Health Services, Newark, DE.

INVITED PRESENTATIONS

National

1. **Hoch, C.** (2022, October) *HF-Related Fatigue and Cellular Energy Metabolism*. University of Massachusetts, Dartmouth.
2. **Hoch, C.** (2018, June) *Research Hour*. American Association of Heart Failure Nurses. Panel Member

IN THE NEWS

1. Honors: Christine Hoch. UDaily: For the Record. (Aug 2024).
<https://www.udel.edu/udaily/2024/august/for-the-record-friday-august-30-2024/>
2. Faculty Spotlight: Christine Hoch. (Nov, 2024). Instagram @UDSchoolof Nursing
3. Daisy Extraordinary Nurse Faculty Award. (Nov, 2024). Instagram @UDSchoolof Nursing
4. LinkedIn: Post from Jason Martin December 21, 2024. Recognition of contributions to UD Fall Engineering Design Showcase.

Teaching

COURSES TAUGHT

University of Delaware

Graduate Program

Course	Credits	Enrollment Range	Year
NURS 621 Advanced Pathophysiology (Asynchronous Online)	3	5-22	2017-2024

University of Delaware

Undergraduate Program	Credits	Enrollment Range	Year
NURS 365 Adult Medical Surgical I *	3	68 - 86	2020 - 2024
NURS 411 Critical Care Elective *	3	23 - 51	2015 - 2024
NURS 243 Pathophysiologic Foundations	4	36 - 170	2019 - 2023
NURS 480 Nursing Leadership	2	46 - 137	2019 - 2020
NURS 242 Pathophysiology II	3	86 - 88	2018 - 2019
NURS 372 Adult Medical Surgical II *	3	108	2016
NURS 200 Clinical Decision Making	3	87	2016
NURS 466 Independent Study	1	1	2015

** Indicates courses co-taught*

Undergraduate Clinical Courses

Course	Credits	Enrollment Range	Year
NURS 453 Adult Medical Surgical Clinical I	3	7 - 8	2014 - 2017
NURS 473 Adult Medical Surgical Clinical II	3	8	2014 - 2015
NURS 479 Preceptorship	3	11 - 14	2014 - 2018

Undergraduate Laboratory/Simulation Courses

NURS 264 Health Assessment Lab	1	14	2023
NURS 100 (Bed, Bath and Beyond)	N/A	180	2014
NURS 222 (Pharmacology Lab/Sim)	N/A	40	2014
NURS 352 (Adult Med-Surg Lab/Sim)	N/A	78	2014
NURS 372 (Adult Med-Surg Lab/Sim)	N/A	64	2014

RN to BSN Program Asynchronous Online

NURS 312 RN to BSN Pathophysiology	3	6 - 21	2018 - 2019
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Guest Lectures

NURS 881 Nursing Research		November 2020
University of Maryland, Baltimore, School of Nursing		
Role of the RN in the Community for Stroke Prevention.		January 2015
Delaware Stroke Initiative/ Delaware Technical and Community College		
Role of the RN in the Community for Stroke Prevention.		November 2013
Delaware Stroke Initiative/ Delaware Technical and Community College		

HONORS AND AWARDS

Daisy Award for Extraordinary Nurse Educators	Delaware Nurses Association	November 2024
Oral Research Abstract Award	AAHFN	June 2024
Excellence in Teaching Award	University of Delaware	April 2023
Excellence in Teaching Award – <i>Nomination</i>	University of Delaware	July 2021

Excellence in Teaching Award – <i>Nomination</i>	University of Delaware	July 2020
Nursing Excellence , Delaware Top Nurses	Delaware Nurses Association	May 2018
Excellence in Teaching Award – <i>Nomination</i>	University of Delaware	July 2016
Excellence in Teaching Award – <i>Nomination</i>	University of Delaware	July 2014

SERVICE

EDITORIAL ACTIVITIES

Ad hoc peer reviewer:

Heart and Lung (June, 2024). Peer Review of Original Research
 Western Journal of Research (August, 2023). Peer Review of Original Research.
 American Journal of Nursing (January, 2022). Peer Review of Original Research.
 American Journal of Nursing (May, 2021). Peer Review of Original Research.
 American Journal of Nursing (March, 2021). Peer Review of Original Research.

TEXTBOOK CHAPTER REVIEWS

1. Cartwright-Vanzant, R., Myers-Glower, M. & Plummer, E. (2010). Critical Care Case Evaluations. In A.M. Peterson & L. Kopishke (Eds). Legal Nurse Consulting Practices (pp. 371-394). Boca Raton, FL.

PROFESSIONAL ORGANIZATIONS

National

Phi Kappa Phi, University of Maryland Campuses	Member	2021 - present
Heart Failure Society of America (HFSA)	Member	2019 - present
American Association of Heart Failure Nurses (AAHFN)	Member - Active Research Committee	2016 - present
American Heart Association	Member	2015 - present
American Association of Critical Care Nurses	Member	2000 - 2020

Regional

Christiana Care Health Systems Quality and Safety Committee	Board Member	2024 - present
Delaware Nurses Association	Member	2014 - 2020
Delaware Stroke Initiative	Member	2014 - 2017

International

Beta Xi, Sigma Theta Tau International	Member	2006 - present
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Abstract Reviewer

AAHFN, Annual Conference	2017 - 2025
ENRS Student Abstracts	2024

Consulting Activities

Nursing Management of Arterial Lines. <i>**Work received the Chairperson's Award in Biomedical Engineering, University of Delaware</i>	Biomedical Engineering, University of Delaware	Sept-Dec 2023
Nursing Care required for Adults Requiring Pneumatic Compression Devices <i>** Work received Mike Keefe Award, University of Delaware</i> <i>**Nominated for Chairperson's Award in Biomedical Engineering, University of Delaware</i>	Biomedical Engineering, University of Delaware	Sept-Dec 2024

Service to University of Delaware University

Committee on Student Life	2021 – present
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College of Health Sciences

Community Engagement Workgroup	Summer 2023- 2024
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School of Nursing

CCNE Accreditation Standard 1 Task Force	F2022 – present
Research and Scholarship Committee, Member	2022 – present
Workload Project Task Force, Member	03/2022 – 2023
Promotion Tenure and Review Committee, Member	Spring 2022
Student Affairs Committee, Member	2015 - 2021
Student Affairs Committee, Chair	F2018 - S2019
Education Committee, Member	2013 - 2014
CCNE Accreditation Standard IV Workforce, co-chair	2013

Professional Nursing Awards and Special Recognition

Compliment Recognition	CCHS	11/2006
Unsurpassed Excellence, Gold Award	CCHS	01/2006
Recognition by Patient/Family	CCHS	01/2006
Unsurpassed Excellence, Gold Award	CCHS	06/2005
Recognition by a Surgeon	CCHS	06/2003
Recognition by Patient/Family	CCHS	01/2003
Compliment Recognition	CCHS	12/2002
Unsurpassed Excellence	CCHS	11/2002
Compliment Recognition	CCHS	10/2002
Unsurpassed Excellence	CCHS	06/2002

Preceptor Recognition	CCHS	10/2001
Service Excellence Award	CCHS	02/2001
Devotion to Patient Care	CCHS	01/2001
Devotion to Patient Care	CCHS	08/2000