Research Certificate Program

Program Syllabus, Requirements, and Expectations

The purpose of the Research Certificate Program (RCP) is to provide participants with the foundation to conduct research projects and support those interested in pursuing a career with continued scholarly efforts. The Program is designed to enhance research quality and collaboration amongst Medical College of Wisconsin (MCW) School of Pharmacy, Froedtert & the Medical College of Wisconsin (F&MCW), Children's Wisconsin, Milwaukee Veteran's Affairs Healthcare System, Concordia University Wisconsin School of Pharmacy, and other greater Milwaukee partners.

Goals and Objectives:

1. Increase comfort and awareness of the various research processes and resources available
    a. Improve understanding of how to develop a research question.
    b. Improve understanding of research processes.
    c. Decrease barriers to research.
    d. Familiarize participants to research to increase the number of research mentors.
    e. Increase engagement in research.
2. Improve quality of research project submissions.
3. Develop skills and approaches to successfully disseminate research results.
4. Increase ability to apply appropriate statistical tests while writing a protocol and analyzing results.

Additionally, the Program is designed to enhance the research development curriculum of American Society of Health-System Pharmacists (ASHP) accredited residencies, as outlined below.

Goal	Objectives
PGY1 Residency R2.1: Conduct practice advancement projects.	• R2.1.1: (Analyzing) Identify a project topic, or demonstrate understanding of an assigned project, to improve pharmacy practice, improvement of clinical care, patient safety, healthcare operations, or investigate gaps in knowledge related to patient care. • R2.1.2: (Creating) Develop a project plan. • R2.1.3: (Applying) Implement project plan.. • R2.1.4: (Analyzing) Analyze project results. • R2.1.5: (Evaluating) Assess potential or future changes aimed at improving pharmacy practice, improvement of clinical care, patient safety, healthcare operations, or specific question related to patient care. • R2.1.6: (Creating) Develop and present a final report.

PGY2 Residency R2.2: Demonstrate ability to conduct a quality improvement or research project to improve patient care or for advancing the pharmacy profession.	• R2.2.1: (Analyzing) Identify and/or demonstrate understanding of a specific project topic to improve care of (PGY2 specialty) patients or a topic for advancing the pharmacy profession or (PGY2 specialty) pharmacy. • R2.2.2: (Creating) Develop a plan or protocol for the practice quality improvement or research project for the care of (PGY2 specialty) patients or a topic for advancing the pharmacy profession or (PGY2 specialty) pharmacy. • 2.2.3 (Evaluating) Collect and evaluate data for the practice quality improvement or research project for the care of (PGY2 specialty) patients or a topic for advancing the pharmacy profession or (PGY2 specialty) pharmacy. • R2.2.4: (Applying) Implement quality improvement or research project to improve care of (PGY2 specialty) patients or a topic for advancing the pharmacy profession or (PGY2 specialty) pharmacy. • R2.2.5: (Evaluating) Assess changes or need to make changes related to improve care of (PGY2 specialty) patients or a topic for advancing the pharmacy profession or (PGY2 specialty) pharmacy. • R2.2.6: (Creating) Effectively develop and present, orally and in writing, a final project or research report suitable for publication related to care for (PGY2 specialty) patients or a topic related advancing the pharmacy profession or (PGY2 specialty) pharmacy at a local, regional, or national conference.

Program Co-Chairs:	
Kristin Busse, PharmD, BCPS, RAC-Drugs *Assistant Professor of Regulatory Sciences* School of Pharmacy *Regulated Research Oversight Program Director* Office of Research Medical College of Wisconsin 8701 W Watertown Plank Rd Milwaukee, WI 53226 kbusse@mcw.edu	**Co-Chair Vacant**
Program Advisory Group:	
Joel T. Feih, PharmD, BCCCP *Clinical Pharmacist, Froedtert Hospital* *PGY2 Critical Care Pharmacy Residency Program Director* Froedtert & the Medical College of Wisconsin 9200 West Wisconsin Avenue Milwaukee, Wisconsin 53226 joel.feih@froedtert.com	**William J. Peppard, PharmD, BCPS, FCCM** *Pain Stewardship Coordinator* Froedtert & the Medical College of Wisconsin william.peppard@froedtert.com
Audrey Kostrzewa, PharmD, MPH, BCPS *Medical Utilization Pharmacist* Froedtert & the Medical College of Wisconsin *Associate Professor* Concordia University School of Pharmacy audrey.kostrzewa@froedtert.com Audrey.Kostrzewa@cuw.edu	**Anne Zechlinski, PharmD, BCPS** *Pharmacy Coordinator* *PGY1 Pharmacy Residency Program Director* Froedtert & the Medical College of Wisconsin anne.zechlinski@froedtert.com
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Staff Support:	
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Contact information for all MCW School of Pharmacy administration, faculty and staff is available on the MCW School of Pharmacy Phone List. Faculty biography information is available on the MCW School of Pharmacy website.

Audience: Any pharmacy resident, preceptor, or project advisor at the Medical College of Wisconsin or greater Milwaukee area healthcare partner is eligible to complete this certificate program. Non-pharmacist affiliated healthcare professionals are also welcome to audit the program or complete all of the components to receive the certificate.

Components for Completion of the Certificate:

- Attendance at 100% of Research Development Series sessions
- Active participation in the Research Development Series sessions, whether joining live or virtual
- Completion of a brief quiz after each session [Required - Due 30 days after each session]
- Program evaluation and feedback [Required – Due 30 days after each session]
- Abstract Submission [Required - Due 4/1/2026]
- Poster or oral presentation at a national-, regional-, or state-level meeting [Required - Due 6/1/2026]
- Poster presentation at the MCW School of Pharmacy Research Forum in May [Required]
- Preparation of a manuscript suitable for publication in a peer-reviewed journal [Optional]

Note: For Residents, Residency Program Director approval is required prior to granting the certificate. The Research Certificate is optional for most residents. However, individual residency programs have the opportunity to require additional components as part of certificate completion; they may also require the certificate as part of residency completion requirements. Discuss with your Residency Program Director what their expectations are for the Research Certificate.

Logistics and Expectations for Completion:

The participant is responsible for tracking their own completion of the program and ensuring that program leadership have all the necessary components to award a certificate at the end of the year. Reminders will not be sent to request the needed materials.

Attendance at 100% of the Research Development Series sessions is required. Participants should make every effort to attend live and in-person. Virtual attendance will be allowed.

As part of completion, participants will be expected to complete any assigned pre-session readings or activities and the post-session project activities described below. Pre-session readings or activities will be distributed by the session leader in advance and should be completed prior to attending the session. Session presentation materials will be distributed to participants after the session. Post-session project activities should be completed by the participant in a timely fashion after the session. These deliverables do not need to be submitted to the program leadership.

Participants will be expected to share final deliverables for their poster or presentation and manuscript (optional) prior to the end of the residency or the fiscal year (exception for PGY1 HSPAL transitioning into PGY2). These deliverables should be emailed to SOPRCP@mcw.edu at least 4 weeks prior to the end of the residency or fiscal year. See deadlines for deliverables above.

Participants will be expected to complete program evaluation after each research development series session. Questions intended to engage learners to identify areas of improvement for the Program will be included in the attendance quiz required to document participation at each research development session.

Research Development Series (RDS):

Most sessions are approximately 1 hour long and will occur during a typical Academic Afternoon schedule. To achieve 100% attendance, participants will have to view the session either synchronously (in person or virtual) or asynchronously and complete a brief quiz. Sessions will be recorded and provided via Webex Teams.

Each session has associated objectives and recommended project activities. The participant is expected to complete the recommended project activities prior to the corresponding discussion session and then use the information from each session to modify and optimize that component of their residency project

Session #	Timing	Topic	Objectives for the Session	Recommended Project Activities	Leader
1	7/15/2026 1400	Developing a Research Question and Specific Aims (1 hour)	• Describe the services and resources that the library provides and how to access the content. • Describe the steps involved in identifying a research question. • How to build a strong and reproducible search for literature reviews	• Apply concepts from this session to develop your research question further. • Perform a comprehensive literature search to develop your background section of your protocol.	Chelsea B. Rowley, MLIS
2	7/22/2026 1400	Institutional Review Board (IRB) and Institutional Research Resources (1 hour)	• Describe the Belmont Report and ethical principles of research. • Explain the role of IRB and oversight of human subject protections. • Describe the contents of a project protocol that incorporate appropriate ethical standards for research. • Describe institutional resources available for research. • Explain the institutional process for project approval.	• Register in eBridge in preparation for your IRB submission. • Apply concepts from this session in preparing the first draft of your project protocol.	Kristin Busse, PharmD, BCPS, RAC-Drugs
3	7/29/2026 1400	Introduction to Citation Managers and Introduction to Ethical Use of AI in Research (1 hour)	• Review EndNote Citation Manager functionality. • Practice adding literature references to your EndNote account. • Describe how AI can be effectively used for literature searches	• Create an account to log into EndNote • Apply concepts from this session in developing your project background literature search.	Audrey Kostrzewa, PharmD, MPH, BCPS
4	8/5/2026 1400	Study Design 101 (1 hour)	• Compare and contrast various study designs. • Characterize a study based on how its methods are designed. • Describe the methods of a study given its design. • Understand Qualitative Study Designs	• Identify an appropriate and detailed description for your study design. • Describe associated advantages and disadvantages with that design for incorporation into future discussion section of your manuscript.	Audrey Kostrzewa, PharmD, MPH, BCPS

5	8/19/2026 1400	Statistics 101 (1 hour)	• Identify types of data and variables. • Describe the process of determining an appropriate statistical test. • Identify the appropriate statistical test given appropriate details of a study and its outcome(s).	• Review your primary and secondary outcomes and classify the data types. • Using the data type, identify the appropriate measures of central tendency and variability (if applicable) or other appropriate descriptive statistics to summarize that data type. • Review your primary and secondary outcomes to identify if inferential statistics can be applied.	Daniel Kapp, PharmD, BCPS, BCOP
6	9/9/2026 1400	Preparing and Delivering a Research Abstract (1 hour)	• Apply authorship guidelines to establish the most appropriate authorship order for your research project. • Develop presentation objectives and self-assessment questions using Bloom's Taxonomy that are customized and specific for your audience. • Identify and report the most relevant research outcomes in an abstract based on the research methodology, platform for presentation (eg, podium, webinar, poster), audience composition (eg, pharmacist, physician, nurse, multi-professional), and audience level of experience (eg, learners, staff).	• Discuss authorship order for abstracts and presentations of your project with your project team. • Draft (or review and revise) your presentation objectives and self-assessment questions. • Draft (or review and revise) your abstract submission for your project.	William J. Peppard, PharmD, BCPS, FCCM
7	10/14/2026 1400	Data Management: How to Effectively Collect Data (1 hour)	• Describe available electronic platforms for data collection (Excel, Access, RedCap), and identify strengths and limitations for each. • Identify tactics for data organization, creating a data collection tool, and formats for recording data. • Discuss data cleaning after data collection prior to data analysis.	• Discuss with adviser and team which electronic platform will be best for your project. • Identify which data points will require transformation for analysis. • Create your data dictionary and data collection tool.	Jen Panic, PharmD & Audrey Kostrzewa, PharmD, MPH, BCPS

8	2/3/2027 1400	Manuscript Preparation (1 hour)	• Discuss how to establish authorship criteria for a manuscript. • Discuss how to select an appropriate journal with or without a journal finder. • Describe the different sections of the manuscript and the process for writing the manuscript. • Examine the article submission and peer review process with appropriate follow-up actions.	• Invite your project advisor to this session!! • Discuss authorship order for the manuscript with your project team. • Identify options for publication of your project, and narrow selection to target a single journal. • Draft (or review and revise) your manuscript applying the guidelines for your selected journal.	Joel T. Feih, PharmD, BCCCP & Janelle Juul, PharmD, BCCCP
9	2/17/2027 1400	Applied Statistics (1 hour)	• Use statistical software to create demographic tables • Use statistical software to implement basic statistical tests such as chi square and t-test	• Use skills learned in this session to analyze data collected for your project	Ruta Brazauskas, PhD
10	2/24/2027 1400	Data Analysis and Presenting Results (1 hour)	• Using an example data set, practice basic statistical analysis for primary outcome analysis and demographics. • Review best practices of how to present a variety of results.	• Use skills learned in this session to analyze data collected for your project	Ruta Brazauskas, PhD
11	3/3/2027 1400	Meta analysis and scoping reviews (1 hour)	• Explain common characteristics, advantages, and disadvantages of meta-analyses and scoping reviews. • Identify how pharmacy clinicians may be involved in these types of projects	• Review your reference list for any meta-analyses, systematic reviews, or general reviews. • Apply concepts from this session to critique those studies and take note for incorporation into future background or discussion sections of your manuscript.	Audrey Kostrzewa, PharmD, MPH, BCPS & Jennifer Panic, PharmD
12	5/5/2027 1400	How to continue your scholarly pursuits post RCP (1 hour)	• Review approaches to a variety of opportunities for scholarship, including poster and platform presentations, providing professional society meeting content, and other forms of continued scholarship.	• Brainstorm ideas and create a SMART goal for your first scholarly activity post-research certificate achievement	Audrey Kostrzewa, PharmD, MPH, BCPS

Registration Information:

- **Please register by Wednesday, July 8th, 2026,** by completing the registration form. Once registered, program staff will add you to the WebEx Team where you will find more program information.
- Fill out the registration form with the link provided HERE or scan the QR code below.