

**Eugene Applebaum College of Pharmacy and Health Sciences
Wayne State University
PharmD - Research Scholars Concentration**



Pharm. D. Research Scholars Track: Policy Handbook

A Guide for Wayne State University Pharmacy Faculty

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Research Scholars Program Description

The Wayne State University Research Scholars program is a selective research-intensive concentration within the college's PharmD program that aims to provide pharmacy students a challenging research experience and to enhance their professional education. Students will receive hands-on experience in applying contemporary scientific methodologies in research study design and in modern analytic methods within the broad areas of basic pharmaceutical sciences, clinical/translational research, practice-based research and health outcomes research.

PharmD students in the Research Scholars program will conduct original research projects with faculty mentors and receive individualized counseling about interests, advanced training, and potential career options in research areas of interest. The research experience gained in the Research Scholars program is expected to differentiate students from their peers who plan to apply to post-graduate residencies, fellowships, or graduate degree studies. Students completing the program will obtain a *concentration in research*, noted on their university transcript.

Introducing Research Scholars to Year 1 PharmD students

The Research Scholars program will be introduced during orientation at the start of the P1 year and again in the P1 course, PHA 4125: Drug Literature Evaluation and Foundations of Research.

Students will be notified of the application process and application deadline. The application deadline is **January 15 of the P1 Year**. Notification of acceptance in Research Scholars track is sent out on **February 15 of the P1 Year**.

NOTE: The 2021 Research Scholars application timeline has been extended.

- **Jan. 29, 2021:** Applications for Research Scholars are due.
- **Feb. 26, 2021:** Students will be informed if they are accepted into the Research Scholars program.

Applicants to the Research Scholars program and interested students will meet with their assigned faculty advisors during the late Fall/Winter term of their P1 year. Faculty advisors may guide students in selecting a research mentor or research track. Final mentor selection will be accomplished by the end of spring/summer term in the P1 year during the PHA 4395 coursework. Research mentors will work with students to formulate an individual development plan (**IDP – Appendix 1**) and complete research projects.

Mentor Selection and Mentor Pool

Email notification will be sent each year in the Fall Semester to faculty in PPR and PSC inviting them to participate in the Research Scholars Program as mentors. A pool of faculty volunteers

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from PSC and PPR will serve as mentors to the incoming Research Scholars and will participate in the PHA 4395 course as instructors each year.

The Curriculum Committee decided that requests from Research Scholars students to work with mentors outside of Wayne State University will not be granted because the Research Scholars Program is designed to support the research mission of the Pharmacy Program and oversight of the Research Scholars students' progression needs to remain within the purview of the Pharmacy Program.

Mentor and Mentee Match

Faculty members interested in mentoring a Research Scholars student will be allocated a time slot to present an overview of his/her research in PHA 4395 course. The intent of this session is to familiarize the students with the main focus of research efforts, the methodology used in this research, and the expectations that will likely lead to successful research outcomes. These sessions are intended to be relatively informal, not overly technical, and provide ample opportunity for students to ask questions. This experience is a critical part of the decision-making process for students to determine their preferred matches with mentors. The students submit a ranked list of preferred mentors based on their interests during PHA 4395. Similarly, the mentors review the PHA 4395 research scholars' credentials and interests and submit their preferred ranked list of students. The Research Scholars Task Force (RSTF) reviews the ranking received from students and mentor pool, and completes the matching assignment of research scholar students with prospective mentors.

Mentor Change

In a situation where a change is requested in the mentorship of a research scholar, the student and the current mentor need to formally notify the Research Scholars Task Force (RSTF) leadership (David Pitts & Sarah Agnihotri) of their desire to make a change. A decision will be made by the RSTF in consultation with the student and current mentor and a new mentor may be assigned. A major consideration will be arriving at a decision that causes minimal disruption in the academic progress and research interests of the student. Any change in mentorship will be documented in the students' record for future evaluation of work pertaining to Research Scholars credits and progression through the Research Scholars program.

Research Scholars Program Policies

Eligibility Requirements

PharmD students admitted to the WSU Doctor of Pharmacy program are eligible to apply to the Research Scholars program by **January 15 of their P1 year**.

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NOTE: The 2021 Research Scholars application timeline has been extended.

- **Jan. 29, 2021:** Applications for Research Scholars are due.
- **Feb. 26, 2021:** Students will be informed if they are accepted into the Research Scholars program.

Application requirements include:

1. A grade of "B" or better in PHA 4125 Drug Literature and Foundations of Research Course.
2. A cumulative undergraduate G.P.A. of 3.0 or higher at end of fall semester in the P1 year.
3. A minimum composite score at the 75th percentile on the PCAT, with minimum PCAT component scores at the 75th percentile in the chemistry, quantitative and biology sections. The PCAT requirement can be waived by the Research Scholars admissions committee.
4. Submission of an essay describing interests, career goals, and any past research experiences. Additionally, a resume or curriculum vitae should be included with the application. Guidelines to the essay for application to Research Scholars track can be found on the website (<http://cphs.wayne.edu/pharmd/research-scholars-application.php>) Please check **Appendix 3 (Application Form) and Appendix 2 (Essay Guidelines)** in this manual.

How to Apply

Further instructions for application can be found on How to Apply section from our website (<http://cphs.wayne.edu/pharmd/research-scholars-application.php>).

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DOCTOR OF PHARMACY	Application
PharmD	How to apply
About	PharmD students admitted to the WSU Doctor of Pharmacy program are eligible to apply to the Research Scholars program in their P1 year.
Accreditation	
Admissions	Application window: Jan 1 (of P1 Year) to Jan 15 (of P1 Year)
Curriculum	Decision notified to students: Mid to Late February
Research scholars	To send application package: Please complete the Research Scholars application form and make sure you have all documents necessary ready to submit a complete application.
Application	Only students who have submitted a complete application will be evaluated for admission into the program.
Curriculum	
Policies	Essay guidelines
Projects	Please follow these guidelines for the essay that should be included in your Research Scholars application:
Timeline	Submission of a 500-word essay describing research interests, career goals and past research experiences is required. This essay will be carefully evaluated by the Research Scholars Admissions Committee.
Ability-based outcomes	Please provide a description of the factors that motivated you to apply to the Research Scholars program. Your essay should describe how you see the research scholars program fitting into your long-term career and research goals. In particular, describe in detail any research experience you already have had and how your experience affected your interest in research. Include a description of your contributions to research publications or presentations from your research experiences.
Elective offerings	Final steps
Experiential education	Please email the completed application form and all of the required documents attached in a zipped folder in a single email with subject: Research Scholars Application.
Professionalism curriculum	Email the completed application to minakshi.jahiri@wayne.edu and aa6718@wayne.edu .
Bachelor of Health Sciences	
Dual Program	
Pre-Pharmacy Mentoring	
Academic regulations	

The Research Scholars Task Force will review all applications. Only students who have submitted a complete application will be evaluated for admission into the program. Approximately 10 students will be selected for the program each year and will progress into the pathway in the Spring of P1 year.

Research Scholars IDP and Annual Report Policy

After the completion of PHA 4395, all students enrolled in the Research Scholars program are required to submit a completed Individual Development Plan form to Dr. David Pitts (pitts@wayne.edu) and Sarah Agnihotri (hg8396@wayne.edu) for review by August 1 during the P1 year .

In the P2, P3 and P4 years, all Research Scholars students are required to

1. Complete, meet and obtain signature from your mentors on the Research Scholars Annual Report/IDP form
2. Make an appointment to meet with Dr. Pitts with the completed Annual Report/IDP form. Please follow the deadlines from the Research Scholars Annual Report/IDP Timeline table below. Students should include the credits of all courses that they are currently enrolled in - even if there are no grades yet.
3. Email a copy of the completed Annual Report form with all pertinent signatures to Dr. Pitts (pitts@wayne.edu) and Ms. Agnihotri (hg8396@wayne.edu)

The deadlines for the Annual Report/IDP review and submission for P2, P3 and P4 years are listed in the Timeline table below. Please make appointments with your mentor and Dr. Pitts,

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well ahead of the due date, to allow sufficient time and to complete the activities in a timely manner.

Timeline

All Research Scholars coursework will be counted toward meeting required PharmD elective credit hours and toward completion of the PharmD degree with a concentration in research.

The Research Scholars Timeline for main components of the track can be found on the EACPHS website at <http://cphs.wayne.edu/pharmd/research-scholars-timeline.php>.

NOTE: The 2021 Research Scholars application timeline has been extended.

- **Jan. 29, 2021:** Applications for Research Scholars are due.
- **Feb. 26, 2021:** Students will be informed if they are accepted into the Research Scholars program.

Research Scholars Elective Timeline

Date	Year	Activity	Course No.	Credit Hours
Orientation	P1	Introduction of Research Scholars Program	----	----
Fall Term	P1	Drug Literature Evaluation and Foundations of Research (research component common to all PharmD students)	PHA4125	---
January 15	P1	Application for Research Scholars Program Admission	---	---

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February 15	P1	Notification of Program Admission	---	---
Early Spring	P1	Research Scholars : Meet and Greet event – Welcome Session		
Spring Term	P1	Research Scholars: Research Development	PHA4395	2
By June 30	P1	Research Mentor Match/Meet with mentor to develop IDP and research Presentation/Plan	---	---
By August 1	P2	Research Topic Approval and IDP Development: Submit to Dr. Pitts and Ms. Agnihotri	---	---
September	P2	Research Topic Evaluation meeting with Mentor	---	---
Winter P2 - Winter P3*	P2 - P3	Research Scholars: Research Conduct Elective	PHA5195	4*
Winter P2- Winter P3- By Jan 12	P2, P3	Annual Report/IDP P2 (Review 1), Annual Report/IDP P3 (Review 2) – Meet with Dr. Pitts; Email Signed and completed doc to Dr. Pitts and Ms. Agnihotri		

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September	P3	Research Topic/Progress Evaluation meeting with Mentor	---	---
Fall	P3	Presentation at EACPHS Research Day	---	---
Winter	P3	Seminar; Research Scholars Section	PSC 6285	1
Winter	P3	Social Administrative Sciences and Professional Development VI (research component common to all PharmD students)	PPR 6235	---
September	P4	Research Topic/Progress Evaluation meeting with Mentor: Must have completed 4 credit hours of PHA 5195 by end of W P3 term	---	---
Fall	P4	Advanced Research Scholars APPE	PPR 7195	4
Fall	P4	Presentation at EACPHS Research Day	---	---
Winter P4- By April 1	P4	Annual Report/IDP (Final Review) - Meet with Dr. Pitts; Email Signed and completed doc to Dr. Pitts and Ms. Agnihotri	---	---
Graduation	P4	Receive Doctor of Pharmacy Degree with concentration in Research	---	---

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Total	Credits specified for Research concentration	11
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PHA 5195 Research Conduct Elective

PHA 5195: Research Conduct Elective is a 4 credit research course that all research scholar students will register for after completing the 2 credit PHA 4395. The format of this course will be similar to PHA and PSC Directed Study courses. Following their match with their research mentors during the PHA 4395 coursework the students work with their mentors and prepare an Individual Development Plan. The IDP is necessary for the scheduled completion of the 4 research credits required for PHA 5195. These research credits are distributed across 4 semesters from Winter P2 until Winter P3 (W-P2, SS-P2, F-P3, W-P3) as agreed upon by the student and mentor in the IDP. It is an expectation of the student to initiate any communication and meetings with the mentor needed in order to follow the IDP in a timely manner.

Credit hour distribution for PHA5195

It is highly recommended by the Research Scholars Task Force that the 4 Credit Hours for PHA 5195 be distributed as evenly as possible during the W-P2, SS-P3, F-P3 and W-P3 semesters in order to ensure that the research effort progresses satisfactorily throughout the program. It is particularly important for Research Scholars students to understand the factors that lead to the most successful research outcomes within a mentor's research area and come to a mutual agreement on how to best approach the distribution of research credit hours as a balance between the demands of the non-Research Scholars component of the pharmacy curriculum and the rigors of a successful research effort (e.g., manuscript). This balance may sometimes be best achieved with a variable number of hours spent on research per given week but should be consistent with university policy on a per semester basis (see below). There may be an opportunity available for a more concentrated research effort during the SS_P3 semester (e.g., 2 credits) since other classwork is not typically taken during this time period.

The credit hour policy from Wayne State University Website is <https://policies.wayne.edu/academics/14-1-policy-on-course-schedule-types--credit-hours-and-delivery-modes>:

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<https://policies.wayne.edu/academics/14-1-policy-on-course-schedule-types--credit-hours-and-delivery-modes>

Policies and Procedures

2.2.4 Laboratory (LAB)

Instructor supervises creative or investigational work by students (individually or as a group) in a controlled environment requiring specialized equipment and/or facilities. The primary emphasis is on learning by doing and observing. Labs give students first-hand experience in developing and practicing skills, translating theory into practice, and developing, testing, and applying principles. Labs are most often associated with lectures, but also may be freestanding. For a laboratory, one credit hour shall be assigned for an amount of lab time plus out-of-lab time equaling three hours per week for a total of 45 hours per 15-week term.

Per WSU Credit Hour policy for Laboratory based coursework, 1 Credit Hour will amount to a total of 45 hours of work per 15-week term.

Based on this expectation of credit hour workload, it is reasonable to expect a 1 credit hour PHA 5195 registration during P2 or P3 Fall /Winter semesters and a maximum of 2 credit hours registration during the Spring/Summer semester.

Expected Final Outcome from PHA 5195: Research Conduct Elective

Significant progress on clinical or lab-based research work and pertinent learning with mentor is expected at the conclusion of 4 Credits of PHA 5195. Evidence of progress may be documented by the mentor and conveyed to the Research Scholars task force. Examples of documented evidence of learning may be a presentation of student's research work at a national or local research conference (authorship, not necessarily first), first author presentation at College Research Day or other WSU research conferences, draft of publishable first author manuscript, or authorship on a published paper.

Completion of the Research Scholars program will include development of a manuscript, written in publishable format that is submitted to the Research Scholars committee with the faculty mentor's signature and date on the face page. Evidence of a mentor approved manuscript is required for successful completion of PPR 7195, the Advanced Research Scholars APPE. Submission of an abstract to an external research meeting is *highly encouraged*. Manuscript submission to a peer-reviewed scientific journal is also encouraged.

PSC 6285: Seminar (Research Scholars)

This is a 1 credit PSC seminar course, during P3 Winter semester, and is based on evaluation of current literature and developing presentation skills. Students generally select a topic of current interest on basic science problems relevant to the major disciplines of pharmacy/pharmaceutical sciences, approved by the coordinator of the seminar section and present their findings, evaluation of current literature and research for successful completion of this course. ***The Research Scholars students in the seminar sections are expected to present topics that are related and relevant to their research work in the Research Track.*** The topics of

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student presentation are broadly focused in various areas of research interest in Pharmacy and Pharmaceutical Sciences as agreed upon by the student and the coordinating faculty.

PPR 7195 Advanced Research Scholars APPE

This 4-Credit Hour APPE experience provides capstone research instruction aimed at project completion, writing and peer review processes, and research program advancement.

This 6-week APPE is a required rotation for students in the PharmD Research Scholars Program. Students will work closely with their primary research mentor to complete necessary project-related activities including but not limited to data analysis, interpretation and manuscript development. Periodic group meetings of all of the research track students will enhance the learning experience through collaboration, discussion, workshops and peer feedback.

In addition to the assessments and evaluation within the course, as planned by the course coordinator of PPR 7195, student must demonstrate evidence of an abstract submitted to an external meeting or manuscript submitted to an external peer reviewed journal related to their research project in order to successfully complete this experience. (May have already be submitted prior to this experience).

Program Dismissal

A student who receives an unsatisfactory grade in any of the Research Scholars Course work (<http://cphs.wayne.edu/pharmd/research-scholars-curriculum.php>) is subject to all guidelines (e.g., progression, probation, etc.) described in the Doctor of Pharmacy Academic Regulations policy. A student who fails to meet required criteria described in his or her individual development plan or who receives a failing grade in a required course in the Research Scholars program will meet with his or her research mentor to discuss eligibility for continuation in the Research Scholars program. A student who does not satisfactorily meet the Research Scholars program requirements will either complete a remediation plan or be dismissed from the Research Scholars program.

Remediation

If a student fails to meet required criteria described in the individual development plan, the student's research mentor, along with the Research Scholars Task Force, will decide if he or she is eligible for remediation. A student deemed eligible by his or her research mentor and the committee will be assigned a remediation plan to complete and satisfactorily meet requirements and benchmarks of the individual development plan.

A student will be dismissed from the Research Scholars program if:

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1. The Research Scholars committee finds that he or she is unable to meet benchmarks in the individual development plan.
2. He or she is unable or unwilling to successfully complete program remediation.

Withdrawal from the Research Scholars Program

A student who chooses to withdraw from the Research Scholars program still needs to fulfill PharmD program elective requirements and can do so by taking other professional electives. Successful completion of PHA4395 can be considered as one elective completed for the regular professional curriculum. Completed PHA 5195 research credits can be considered as a regular professional elective credit if there is a minimum of two completed PHA 5195 credits. However, the student and mentor will need to make formal request to the Research Scholars Task Force for approval and change of status for the student. A letter indicating student withdraw from the program will be provided by the Research Scholars Program Coordinator and signed by the student, research mentor, and the Associate Dean of Pharmacy and placed in the student's program file with the Dean's office. An electronic copy of the letter will be sent to the Chair of the Committee on Academic and Professional Progress (CAPP) and the student will be officially withdrawn from the Research Scholars tract curriculum.

A student will not receive research concentration on his or her transcript unless all program and coursework requirements are met. A student dismissed from the PharmD Research Scholars program will not be eligible for readmission to the program. Dismissal from the PharmD Research Scholars program does not mean dismissal from the Doctor of Pharmacy program.

Program review

There will be a planned review of the Research Scholars program in accordance with course review policy and Comprehensive Pharmacy Assessment and Evaluation Plan.

Appendix 1

(IDP form)

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Research Scholar Individual Development Plan

Name: _____ Date: _____

Dept. /Division: _____ Access ID: _____

P1 P2 P3 P4

Professional Goals/Motivation

What are my professional goals and career aspirations?

How do I think my aspirations can best be met at the PharmD –Research Scholars program?

My Strengths: 1. _____
2. _____
3. _____
4. _____
5. _____

What knowledge or skills do I need to enhance?

1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____

****Feedback from mentor.**

Developmental Goals for the next 12 months	Developmental Goals for the next 4 years	Actions I can take to achieve my goals
--	--	--

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What progress have you made towards your goals during the past year?

List your accomplishments in the Research Scholars Program over the past year.

***Feedback from mentor on mentee's progress towards goals during the past year.*

*****Feedback from research mentor on mentee's overall engagement, interest, achievement and progress in the Research Scholars program.*

Plan of Work for Research Scholars Electives

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Semester: Course #	Course Name	Credits Taken	Hours of work per WSU Credit Hour Policy	Grade Received	Pre-Requisites
Spring P1: PHA 4395	Research Scholars: Research Development	2			Research Scholars Selection
W P2: PHA 5195	Research Scholars Elective* (1 - 4)				PHA 4395
Spring P2: PHA 5195	Research Scholars Elective* (1 - 4)				PHA 4395
Fall P3: PHA 5195	Research Scholars Elective* (1 - 4)				PHA 4395
Winter P3: PSC 6285	Seminar: Research Scholar Section	1			PHA 4395
W P3: PHA 5195	Research Scholars Elective* (1 - 4)				PHA 4395
P4: PPR 7195	Advanced Practice Elective Advanced Research Scholars Elective	4			PHA 4395 & PHA 5195
	**Total Credit Hours	**11			

Per WSU Credit Hour policy for Laboratory based coursework, 1 Credit Hour will amount to a total of 45 hours of work per 15-week term.

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This Individual Development Plan (IDP) was reviewed and discussed and will be used as a working document to assist both the research scholar and the faculty mentor regarding the overall goals, endeavors and expectations associated with the research scholar.

Approvals	Name	Signature	Review Date
Student			
Research Scholar Mentor			
Research Scholars Coordinator			

Next Review Date: _____

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(Guidelines for Essay)

Essay guidelines

Please follow these guidelines for the essay that should be included in your Research Scholars application:

Submission of a 500-word essay describing research interests, career goals and past research experiences is required. This essay will be carefully evaluated by the Research Scholars Admissions Committee.

Please provide a description of the factors that motivated you to apply to the Research Scholars program. Your essay should describe how you see the research scholars program fitting into your long-term career and research goals. In particular, describe in detail any research experience you already have had and how your experience affected your interest in research. Include a description of your contributions to research publications or presentations from your research experiences.

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(Application form)



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Doctor of Pharmacy Research Scholars Program
Application Form**

Name:

Date: _____ Access ID:

Grade in PHA 4125 Drug Literature and Foundations of Research:

Cumulative Undergraduate GPA (Most current/Final):

Cumulative Graduate GPA (Most current/Final) (if applicable):

PCAT Composite Score: _____ PCAT Score in Chemistry:

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PCAT Score in Quantitative: _____ PCAT Score in Biology:

I have attached with this application:

____ 500 Word Essay - Please see the Essay Guidelines from EACPHS Research Scholars webpage (*This essay will be carefully evaluated by the Research Scholars Admissions Committee*)

____ Latest resume/CV

____ Copy of undergraduate and/or graduate transcript (could be unofficial)

____ Copy of PCAT transcript

____ Unofficial transcript for P1 Fall Term

Recommendation Letters (Upto 3) may be included with the Application.