ARTICULATION AGREEMENT
Russell Sage College and Albany College of Pharmacy and Health Sciences

Russell Sage College (hereinafter referred to as "**RSC**") and the Albany College of Pharmacy and Health Sciences (hereinafter referred to as "ACPHS") together hereinafter known as the "Parties" hereby agree by signature to this document to establish an Affiliation Agreement (hereinafter known as the "Agreement"). This Agreement will guarantee students who meet specified criteria admission to ACPHS's Doctor of Pharmacy Program and upon successful completion of the Program and degree requirements, such students will receive a Bachelor of **Science** degree in **Biology** (or related field) from RSC and a Doctor of Pharmacy degree from ACPHS (hereinafter known as the "Program"). Students will normally complete the Program in seven years.

The academic advising, admission, transfer of credits, enrollment, and monetary conditions under this Agreement will be carried out in accordance with the following policies and procedures:

1. Initial application to the Program will be made to **RSC**.
2. Students will enroll in this Program by declaring a **BS Biology** major either at the time of admission to **RSC** or early enough in their study at **RSC** to permit them to complete all degree requirements in a reasonable time. (See the Appendix for degree options.)
3. Students enrolling under this Program will be considered Russell Sage College students until they complete all requirements for the **BS Biology** degree/major. Once students are admitted to ACPHS according to the policies of this Agreement, they also become ACPHS students for the remainder of the Program.
4. The Program requires seven years of full-time equivalency study. For the first three years the Host Institution for students in the Program will be RSC and for the last four years the Host Institution will be ACPHS. Tuition and fees will be paid to the Host Institution according to its normal policies (including financial aid, etc.).
5. While students are enrolled at a Host Institution they will be personally and independently responsible for applicable fees at the other institution on a per use basis.
6. Students in the Program will make a formal application to ACPHS by February 1 in the fall semester of their third year at Russell Sage College and will be evaluated for admission. Unless otherwise stated by ACPHS, this application should be submitted through PharmCas.
7. Students will matriculate at ACPHS once they have met the following requirements:
    i. completion of at least 90 credits at Russell Sage College with an overall minimum GPA of 3.0 (only grades of C or above will count towards the 90 credits). Students with a GPA of 2.5-2.9 may be reviewed for admission;
    ii. completion of the required Pre-pharmacy courses at **RSC** as specified in the Appendix to this Agreement;

iii. successful completion of an interview at ACPHS;
iv. demonstrated proficiency in writing;
v. passing of a criminal background check;
vi. no significant conduct or academic integrity violations.

8. Students who have been admitted to **ACPHS** as part of the Program will receive a Bachelor of Science degree from **RSC** once they have met all of the requirements for completion of the degree at **RSC** typically after the first year of the Doctor of Pharmacy program at **ACPHS**.

9. Students will complete their requirements for a Doctor of Pharmacy once the prescribed requirements of that **ACPHS** program have been met.

10. In order to predict the correct number of student registrations, faculty advisors for **RSC Biology** and **ACPHS** will annually project the number of students and course enrollments.

11. Credits earned in the Program will appear on both the **RSC** transcript and the **ACPHS** transcript according to the transfer credit policies of each institution.

12. Students in the Program are subject to the policies and procedures of their Host Institution, including but not limited to the academic and financial policies, of their Host institution. The Host Institution will have jurisdiction to suspend or terminate a student based upon its own policies and procedures, subject to written notice to the student and the other institution.

13. Students in the Program will be subject to the **ACPHS** computer requirement once **ACPHS** becomes their Host Institution.

14. All information and correspondence pertaining to student enrollment in this Program will be directed to **the Provost at RSC** and the **ACPHS Dean of Pharmacy**.

15. This Program will be reviewed on an ongoing basis in order to modify the requirements as necessary. The Program may be altered with the prior written consent of both institutions.

16. Should either **RSC** or **ACPHS** wish to terminate the Program, one year advance written notice will be given to the other party to the Agreement by October 15 of the year prior to the termination and students already enrolled in the Program will be permitted to complete their programs of study.

17. Students successfully completing the Program will be eligible to participate in the commencement exercises of each institution.

18. Both **RSC** and **ACPHS** may publicize the Program in the appropriate publications and bulletins, subject to written pre-approval by both institutions. Any use of the marks, logos, or other materials protected by trademark or copyright protections ("Materials") shall be used by the Parties only with the written permission of the other party and only in conjunction with the publicizing of the Program. All such rights of use of this Material shall cease at the termination of this Agreement.

19. Any notice to either party hereunder must be in writing, signed by the party giving it, and shall be served either personally, by nationally recognized overnight courier or by certified mail with return receipt required, addressed as follows:

TO **RSC**
Office of the Provost
Russell Sage College
65 1st Street
Troy, NY 12180

TO ACPHS:
Office of the Dean of the
School of Pharmacy
Albany College of Pharmacy and Health Sciences
106 New Scotland Avenue
Albany, NY 12208

or to such addresses as may be hereafter designated by notice. All notices shall be deemed delivered on the day delivered personally, the next business day when sent by nationally recognized overnight courier, three (3) business days after mailing certified mail with return receipt, or upon refusal to accept such notice or 4 days after mailing through normal U.S. first class mail.

21. This agreement constitutes the entire agreement of the parties hereto and all previous communications between the parties, whether written or oral, with reference to the subject matter of this contract are hereby superseded.

22. The relationship of the Parties to each other arising out of this Agreement shall be that of independent contractors.

23. No failure or delay of either of the Parties to exercise or enforce any of its rights operates as a waiver of any such right. If any provision of this Agreement is held unenforceable, that provision will be enforced to the maximum extent permissible, and the other provisions shall remain in effect.

SIGNATURES

For RSC

Theresa Stand

Provost

Date: 4/6/2026

For Albany College of Pharmacy and Health Sciences

Elena M. Leland

Dean of The School of Pharmacy

Date: 4/7/2026

Appendix

Prerequisite courses for the Doctor of Pharmacy program at **ACPHS** and corresponding courses at **RSC**:

BS Biology/PharmD 3+1
Articulation between and ACPHS

YEAR ONE FALL	YEAR ONE SPRING
BIO 101/101L General Biology I	BIO 102/102L General Biology II
CHM 111/111L General Chemistry I	CHM 112/112L General Chemistry II
WRT-101 Writing in the Community	WRT-201 Researching in the Community
RSC-101 Your Journey Begins	PSY 101 Intro to Psychology
BIO-150- Writing in Biology	
15 credits	**14 credits**

YEAR TWO FALL	YEAR TWO SPRING
CHM 201/201L Organic Chemistry I	BIO 207 Genetics
BIO 208/208L Microbiology	CHM 202/202L Organic Chemistry II
HUM, ART, or Wellness course (Gen Ed)	HUM, ART, or Wellness course (Gen Ed)
RSC-201 Intercultural Perspectives	MAT 201 Calculus 1
MAT 220 Statistics	
16 credits	**14 credits**

YEAR THREE FALL	YEAR THREE SPRING
PHY 101/101L General Physics I	BIO 450 Seminar
RSC 301 Innovating to Impact	BIO 401 Senior Research Project
BIO 359 Research Methods	HUM, ART, or Wellness Course
PHL (Medical Ethics or Bioethics)	BIO 202/202L A&P II
BIO 201/201L A&P I	
17 credits	**13 credits**

RSC CREDITS: 89

In the fourth year of the dual degree program, students would enroll in the following coursework at ACPHS:

Fall Semester		Credits	Spring Semester		Credits
PSC 341	Pharmaceutics I	3	PSC 342	Pharmaceutics II	3
PSC 321	Physiology/ Pathophysiology	4	PSC 322	Physiology/ Pathophysiology II	4
PSC 311	Biochemistry	3	PSC 312	Molecular Biology	3
PSC 369	Molecular Foundations of Drug Action	3	PHM 518	Intro to Pharmacotherapy/Self-Care	3
PHM 510	Foundations of Pharmacy	2	PSL 512	Pharmacy Skills II	2
PSL 511	Pharmacy Skills I	2	PSC 371	Pharmacology I	3
			PHM 585	APhA Immunization Certificate	
	TOTAL	17		TOTAL	18
ACPHS: 35					

PHM 318 – Foundations of Pharmacy
This course provides dynamic introduction to the profession of pharmacy, formally introduces the concept of professionalism, and serves to initiate the professionalization of all students enrolled in the Doctor of Pharmacy degree program.
Coursework is a combination of pre-class readings, live or synchronous and asynchronous online lectures with engagement activities, and post-class assignments designed to expose students to a comprehensive introduction to the Profession and Practice of Pharmacy, Professional Identity Formation, and Pharmacy Career Exploration. Students will write summaries and reflections of topics covered over the course of the semester, engage in peer-peer interaction through online discussion boards and breakout rooms, and participate in role-playing and in-class quizzes and complete various tutorials. The top 100 Drugs U Should Know (DUSK) are introduced as prerequisite preparation for upcoming practice experiences. This course is a prerequisite for the Introductory Pharmacy Practice Experiences (IPPEs). (1) or (2)

PSC 311 - Biochemistry
Biochemistry provides an introduction to important biomolecules and the complex structures and cellular pathways in which these molecules are involved. The first section of the course focuses on proteins with emphasis on enzyme structure and function, kinetics, and reaction mechanisms. Following an examination of simple and complex carbohydrates and lipids, the remainder of the course focuses on metabolic pathways that are responsible for cellular ATP

production (glycolysis, citric acid cycle, and electron transport), fatty acid synthesis and breakdown, cholesterol biosynthesis, and pentose phosphate metabolism. The metabolic intermediates and signal transduction pathways involved in the regulation of key rate limiting enzymes for each pathway provide a focus for understanding how this regulation facilitates functional integration of these metabolic pathways in different organs.

PSC 312 – Molecular Biology
An analysis of the regulatory pathways controlling cell replication, gene expression, and protein synthesis with a central focus of understanding how such knowledge is foundational to therapeutic application and development. Cancer cells, retroviruses, and bacteria serve as thematic models to demonstrate how the principles embodied in these studies translate into functional applications. Problem solving and data analysis play a central role in reinforcing didactic material and fostering intellectual development. In addition to canonical topics, specialized subjects such as dideoxynucleotide therapeutics, RNAi, viral vectors in gene therapy, stem cells, and cloning are discussed to illustrate both the practical – and potential – applications of this ever-evolving field. (3); Prerequisites: PSC 311

PSC 321/PSC 322 – Physiology/Pathophysiology I/II
This course sequence (PSC321, PSC322) will focus on normal physiological principles of homeostatic regulation of the human body. Important anatomical structures, pathologies and disease states will be presented to support underlying physiological regulation. Physiology/Pathophysiology I will include in-depth discussions of the physiology and pathophysiology of cell structure, electrophysiology, the nervous systems and the cardiovascular system. Pre-requisites: BIO 121 and BIO 102 (General Biology I and II). Pre-requisites: BIO 121 and BIO 102 (General Biology I and II)

PSC 341 – Pharmaceutics I
This course studies the physicochemical principles of pharmaceutical dosage forms and drug delivery. It introduces and integrates the physical, chemical and mathematical principles, theories, terminology, calculations and methodologies of physical pharmacy, dosage forms and drug delivery systems. The topics include introductions to pharmaceutics, principles and properties of solutions, solution dosage forms, properties of dispersions, dispersion dosage forms, pre formulation, quality standards, and the process of new drug development and approval. Pre-requisites: BIO121, CHE122, PHY222 and MAT111, or Permission of instructor

PSC 342 – Pharmaceutics II
The Pharmaceutics course sequence focuses on the principles of drug delivery and produce designed. Pharmaceutics II covers the foundations of physical pharmacy and biopharmaceutics. The physical, chemical, mathematical and biological principles are applied to the design of dosage forms and drug delivery systems. Commonly used pharmaceutical ingredients and manufacture methods are introduced. Topics include principles of biopharmaceutics, topical and transdermal drug delivery, solid dosage forms and oral drug delivery systems, sterile products, nasal and pulmonary drug delivery, specialty products, advanced drug delivery systems and novel drug delivery strategies. (3); Prerequisites: PSC 341 or Permission of the instructor.

PSC 369 – Molecular Foundations of Drug Action
This course explores the fundamental principles that define the relationship between chemical structure and the biological action of drug molecules. A major focus of the course is the application of these chemical principles to biopharmaceutical properties of drugs and the molecular mechanisms of pharmacological activity. The relationships between drug structure, therapeutic properties, and physicochemical characteristics will be discussed. Structure activity relationships (SAR), structure-property relationships (SPR) and ADME (absorption, distribution, metabolism, and excretion) will be explored through case studies. Although an emphasis will be placed on orally bioavailable small molecules, various drug modalities will also be discussed. Since the material covered in this course is applicable to all of the drug classes, this course is a prerequisite for all of the PTPM modules.

PSC 371 – Pharmacology I
This course is the first in a sequence of two pharmacology courses required for both PharmD and B.S. Pharmaceutical Sciences students. The course reviews clinically relevant topics in Pharmacology that are continued in Pharmacology II and lead into the PharmD Therapeutics sequence. Topics covered include principles of receptor and ligand interactions, dose response curves, pharmacokinetics (absorption, distribution, metabolism, and elimination of drugs), pharmacodynamics (mechanism of action, efficacy and potency of drugs), biotransformation of drugs, enzyme polymorphisms that affect drug action and elimination, and other factors affecting drug action (drug interactions. formulations and chemical properties). The course will additionally focus on clinically relevant drugs that affect the nervous systems (autonomic drugs, antipsychotics, antidepressants, analgesics, etc.) and the cardiovascular system (antihypertensives, diuretics, anti-dyslipidemics, anti-coagulants, anti-arrhythmic agents, etc.). The pharmacodynamics and pharmacokinetics of each clinically relevant drug class will be thoroughly considered. (3); Prerequisites: PSC311 and PSC369. Corequisite: PSC312.

PSL 511 – Pharmacy Skills I
The Pharmacy Skills Courses prepare Doctor of Pharmacy students to provide pharmaceutical care by encouraging students to practice skills used in the process of medication preparation, delivery and patient monitoring. This series of six required courses is designed to instill values, attitudes and skills that enable lifelong intellectual, personal and professional growth. Students will exercise critical thinking, communication, self-learning abilities, responsible use of ethics, and social interaction. The courses are designed as a progressive sequence as students continue to build on concepts throughout the series. The minimum passing grade for all Pharmacy Skills courses is 70%. In Skills I the focus of the course is on pharmaceutical calculations, extemporaneous compounding of common dosage forms and basics of patient communication. Students will become familiar with USP Chapter 795 requirements and will learn to accurately prepare compounded preparations. The laboratory component allows practice of these principles and skills. Skills I concentrates on preparing the student to practice as a community pharmacy intern. This series of courses is offered by the Department of Pharmacy Practice, and faculty who facilitate discussions and demonstrations are licensed pharmacists that have practiced in a variety of health-care settings. (2); Prerequisite: Doctor of Pharmacy Students only

PSL 512 – Pharmacy Skills II
The focus of this course is on professional communication with patients and other healthcare

professionals, medication dispensing, patient counseling, and extemporaneous compounding of capsules, suppositories and PLO gels. Students will learn fundamental federal and state law related to community pharmacy. The laboratory component allows practice of these principles and skills at the benchtop, in the mock pharmacy and in the private counseling rooms interacting with standardized patients. Skills II completes the students' preparation to practice as a community pharmacy intern. The minimum passing grade for this course is 70%. This series of courses is offered by the Department of Pharmacy Practice, and faculty who facilitate discussions and demonstrations are licensed pharmacists that have practiced in a variety of health-care settings. (2); Prerequisite: PSL 331

PTP 518 – Introduction to Pharmacotherapy/Self-Care
This course will guide the student through an interactive approach to self-care with an emphasis on patient assessment and the clinical thought process. The foundation of the patient care process will continue to be emphasized in the pharmacotherapy sequence as well as practiced in integrated problem-solving sequence (IPS). An appreciation of the pharmacist's role in self-care will be taught with an emphasis on a patient case problem-solving model to aid in the triaging of patients and self-care therapy selection. Treatment options discussed will include non-pharmacologic therapies, over-the counter medications, herbal products, and dietary supplements. These OTC and supplements will serve as the backbone for various disease states where pharmacologic therapy is then expanded upon. After completing the course, students will be able to determine if patients are self-care candidates and recommend appropriate self-care therapy. Prerequisite: PHM510, Doctor of Pharmacy Students only.