DOCTORAL OF PHARMACEUTICAL AND BIOMEDICAL SCIENCES

Mission and Vision

Mission: To advance health science through the training and mentorship of future leaders in pharmaceutical & biomedical science research.

Vision: Preeminence in pharmaceutical sciences research, drug development skills, and integrated education abilities

Accreditation

Senior Colleges and Universities of the Western
Association of Schools and Colleges (WASC).
California Northstate University is accredited by the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC), 985 Atlantic Avenue, 100, Alameda, CA 94501, 510.748.9001

Program Overview

California Northstate University (CNU) is an institution of higher education dedicated to advancing the art and science of healthcare and to educating, training, and developing individuals who can contribute to improvements in societal health and well-being. The University consists of six colleges: the College of Pharmacy (COP), the College of Medicine (COM), the College of Psychology (CoPsy), the College of Dental Medicine (CDM), the College of Health Sciences (CHS), and the College of Graduate Studies (CGS). COP, COM, CoPsy, and CDM offer PharmD, MD, PsyD, and DMD degrees, respectively. CHS offers a B.S. degree in Health Sciences. CGS currently offers master's degree programs in Pharmaceutical Sciences and Healthcare Administration, it will now also oversee the proposed CNU Ph.D. in Pharmaceutical & Biomedical Sciences program.

The purpose of the CNU Ph.D. in Pharmaceutical & Biomedical Sciences program is to provide training and mentorship that will position students to serve as leaders in the discovery, testing, and clinical implementation of treatments and delivery systems which will support improvements in healthcare.

Program Objectives

- Provide foundational knowledge regarding modern drug design, drug development and drug delivery
- Teach essential technical skills and competencies relating to pharmaceutical and biomedical research
- Develop critical thinking and problem-solving skills which allow for successful design and implementation of innovative research strategies to address complex research questions
- Develop student written and verbal communication skills which allow for effective explanation of ideas, supporting data, and processes
- Promote an environment based on academic and ethical rigor and in which open communication and sharing of ideas is encouraged

Curriculum/Academic Plan

AVAILABLE COURSES FOR THE 2025-2026 ACADEMIC YEAR AND SUGGESTED TIMELINE FOR COURSE COMPLETION

Courses Offered in Ph.D. Degree in Pharmaceutical and Biomedical Sciences. Total Credits = 82 (35 credits for didactic courses, 6 credits for lab. rotation and 41 credits for Dissertation-research)

Semester/Year	Course Number	Course Name	Credit
Fall 2025	DPS 6130R	Introduction of Pharmaceutical Sciences I.	3
	DPS 6422R	Medical Immunology	3
	DPS 6611R	Ph.D - Lab. Research.	3
Total credits for Fall 2025			**9**
Spring 2026	DPS 6330R	Introduction of Pharmaceutical Sciences II.	3
	DPS 6350R	Pharmacokinetics	5
	DPS 6310R	Journal club and Graduate Seminar	1
Total credits for Spring 2026			**9**
Summer 2026	DPS 6133R	Lab Rotation I.	3
	DPS 6440R	Cell Biology and Biochemistry	4
Total credits for Summer 2026			**7**
Fall 2026	DPS 6423R	Clinical Biochemistry	3
	DPS 6420R	Principal of FDA regulatory affairs	3
	DPS 6232R	Lab Rotation II.	3
Total credits for Fall 2026			**9**
Spring 2027	DPS 6131R	Biostatistics	3
	DPS 6221R	Advances in Drug Delivery	2
	DPS 6421R	Preparation for the Qualification Exam	3
Total credits for Spring 2027			**8**
Summer 2027	DPS 6220R	AI and Drug Discovery	2
	DPS 6610R	Dissertation - Research I.	5
Total credits for Summer 2027			**7**
Fall 2027	DPS 6612R	Dissertation – Research II.	**7**
Spring 2028	DPS 6613R	Dissertation - Research III.	**10**
Fall 2028	DPS 6614R	Dissertation - Research IV.	**10**
Spring 2029	DPS 6615R	Dissertation - Research V.	**6**

California Northstate University
Ph.D in Pharmaceutical Sciences
Academic Calendar
Fall 2026 – Summer 2027

SUMMER 2026: 05/04/2026 – 07/31/2026

Event	Start Date	End Date
Orientation	04/30/2026 – Thursday	04/30/2026 – Thursday
Summer Term	05/04/2026 – Monday	07/31/2026 - Friday

FALL 2026: 08/31/2026 – 12/18/2026

Event	Start Date	End Date
Orientation	08/27/2026 - Thursday	08/27/2026 - Thursday
First Day of Classes	08/31/2026 – Monday	12/11/2026 - Friday
Final Exams	12/03/2026 - Thursday	12/11/2026 - Friday
Final Grade Due	12/18/2026 - Friday	

SPRING 2027: 01/04/2027 – 04/23/2027

Event	Start Date	End Date
First Day of Classes	01/04/2027 - Monday	04/16/2027 - Friday
Final Exams	04/12/2027 - Monday	04/16/2027 - Friday
Final Grade Due	04/23/2027 - Friday	

SUMMER 2027: 04/26/2027 – 07/02/2027

Event	Start Date	End Date
Summer Term	04/26/2027 – Monday	07/30/2027 - Friday

HOLIDAYS

Holiday	Date	Holiday	Date
Labor Day	09/07/2006	President's Day	02/15/2027
Thanksgiving	11/26/2026- 11/27/2026	Spring Break	03/08/2027- 03/12/2027
Winter Break	12/14/2026- 01/01/2027	Memorial Day	05/31/2027
Martin Luther King	01/18/2027		

Program Learning Outcomes (PLOs)

Graduates of CNU are expected to demonstrate the following five Program Learning Outcomes (PLOs) at the developed level:

PLO 1: Demonstrates an understanding of foundational knowledge relating to modern drug design, drug development and drug delivery.
PLO 2: Uses essential technical skills relating to pharmaceutical and biomedical research to generate and interpret high quality data
PLO 3: Designs innovative research strategies to address complex research questions through the use of critical thinking and problem-solving skills.
PLO 4: Evaluates and explains ideas, supporting data, and processes relating to pharmaceutical and biomedical research in both oral and written formats
PLO 5: Applies academic and ethical rigor as well as collegiality while participating in pharmaceutical and biomedical research and research discussions

Admissions

Educational Prerequisites

All applicants must have completed a bachelor's degree with a **GPA of 3.0 or higher** from an accredited four-year college or university. They must also have completed math coursework and coursework in either biology, physiology, chemistry and/or computer science/engineering as well as provide evidence of research experience (see Table 1 below for details). If degree transcripts are in a language other than English, they must be translated and independently assessed (e.g. via https://www.naces.org/ or http://aice-eval.org/) and the independent assessment must be included in their application submission. Applicants who are non-native English speakers are required to demonstrate English language proficiency. We accept TOEFL or IELTS scores, applicants must meet these required minimum scores: 80 on TOEFL(iBT) or 6.5 on IELTS. A TOEFL/IELTS exam score submission can be waived only if the applicant received a degree from an institution where English is the language of instruction, or the applicant has 3 or more years of work experience in the US.

Applying to the Ph.D Program:

Students seeking admission to the CNU Ph.D. program in Pharmaceutical & Biomedical Science must submit their application materials through the PharmGrad web portal and pay the associated non-fundable fee: https://pharmgrad.liaisoncas.com/applicant-ux/#/login.

1. Bachelor's degree with a GPA of 3.0 or higher from an accredited four-year college or university
2. Completion of math coursework and coursework in either biology, physiology, chemistry, and/or computer science/engineering.
3. Provide evidence of research experience
4. Demonstration of English language proficiency (for applicants that are non-native English speakers)

Deadlines

The deadline to apply for Fall enrollment will be middle of February of the same year. All supporting documents must be received prior to July 1st for Fall enrollment and official transcripts must be received by the end of August of the same year. The online application must be fully completed to be accepted.

Student Enrollment Agreement

The Student Enrollment Agreement must be completed and submitted to the college in order to show intent to enroll in the program. The Student Enrollment Agreement is a legally binding contract when it is signed by the incoming student and accepted by the institution.
By signing the Enrollment Agreement, the student is acknowledging that the catalog, disclosures, and information located on the website have been made available to the student to read and review.
Any questions or concerns regarding the Student Enrollment Agreement should be directed to the college or university department.

Catalog and Website

Before signing the Student Enrollment Agreement, the prospective student is strongly urged to visit the University and College website at www.cnsu.edu, and to read and review the CNU General Catalog.
The Catalog contains important information and policies regarding this institution.

Students' Right to Cancel and Refund

You have the right to cancel the Student Enrollment Agreement until 12:01 AM on the first calendar day after the first classroom instruction session attended, or until 12:01 AM on the eighth calendar day after a student has signed the Enrollment Agreement, whichever is later.

Cancellation shall occur when you give a written notice of cancellation to the University at the University's address shown at the top of the first page of the Enrollment Agreement. You can do this by hand delivery, email, facsimile, or mail. Written notice of cancellation sent by hand delivery, email, or facsimile is effective upon receipt by the University. Written notice of cancellation sent by mail is effective when deposited in the mail properly addressed with postage prepaid.

After the cancellation period described above, you have the right to withdraw from the University at any time. Withdrawal shall occur when you give written notice of withdrawal to the Registrar at the university's address shown at the top of the first page of the Enrollment Agreement.

Student's Right to Withdraw and Refund

After the cancellation period described above in "Student's Right to Cancel and Refund," you have the right to withdraw from the University at any time. Withdrawal shall occur when you give written notice of withdrawal to the Registrar at the University's address shown at the top of the first page of the Enrollment Agreement. You can do this by hand delivery, email, facsimile, or mail. Written notice of withdrawal sent by hand delivery, email, or facsimile is effective upon receipt by the Registrar. Written notice of withdrawal sent by mail is effective when deposited in the mail properly addressed with postage prepaid.

The written notice of withdrawal should be on the Official College Withdrawal Form provided by the Office of the Registrar but it may also be in any writing that shows you wish to withdraw from the University. Please include your student ID number in your notice. A withdrawal may also be effectuated by the student's conduct showing intent to withdraw, including but not necessarily limited to the student's continuing and unexcused failure to attend all classes.

If you withdraw before or at completion of 60% (and no more) of the current term, you will be eligible for a pro-rata refund for such term. The University will perform a pro-rata calculation of current term tuition as follows:

Step A) Total calendar days* in current term** – Calendar days in current term completed = Total Calendar days Not Completed

Step B) Total calendar days not completed/Total calendar days in current term = % of pro-rata refund

Step C) Institutional charges*** x % of pro-rata refund = Total refund owed

* Total calendar days include weekends and holidays, except:

- Scheduled break of five or more consecutive days when no classes are offered.
- Days of leave of absence are not included in total days.

**Current term generally means the current semester, but when tuition is charged for the entire period of enrollment rather than by semester, then the current term shall mean that period of enrollment.

***Institutional charges excluded from the pro-rata refund are: (1) non-refundable registration fee (applicable to first year, first semester students only), (2) all other non-refundable fees as described in the current General Catalog, (3) Student Tuition Recovery Fund fee, and (4) Student Health Insurance premium estimated at $3,200.00, if applicable; institutional charges included in the pro-rata refund include: (1) current term tuition.

There is no refund for students who withdraw after completing more than 60% of the current term.

If the amount of the current term payments is more than the amount that is owed for the time attended, then a refund of the difference will be made within 45 days after the notice of withdrawal is received by the Office of the Registrar. Refunds owed to the student as a result of a pro-rata calculation will be done in the following order:

- Private Educational Loan(s);
- To the student.

If the amount of the current term payments is less than the amount that is owed for the time attended, it is the sole responsibility of the student to contact the University to make appropriate payment arrangements.

Student Tuition Recovery Fund (STRF) Disclosures

Information on the Student Tuition Recovery Fund disclosures (STRF) can be found on page 221 of the General Catalog.

Tuition, Fees and Related

Other Educational Related Costs [2]	PhD - Y1	PhD - Y2	PhD - Y3	PhD - Y4
Health Insurance Premium [3]	$3,529	$3,529	$3,529	$3,529
Books and Supplies	$1,050	$1,200	$1,200	$950
Room and Board (based on 12 months)	$17,595	$17,595	$17,595	$17,595
Transportation (based on 12 months)	$3,276	$3,276	$3,276	$3,276
Total Estimated Cost per Year	$38,000	$38,000	$38,000	$38,000

Disclosures

All tuition, fees, expenses, and policies listed in this publication are effective as of August 2025 and are subject to change without notice by California Northstate University.

Tuition is charged on a full-time, semester basis. Generally, tuition and fees are charged to a student's account thirty (30) days prior to the start of each semester term. The above is based on the assumption that a student will attend each semester term on a full-time basis, which allows for a student to graduate after successfully completing two (4) years of coursework consisting of 82 semester credit hours.

California Northstate University does NOT accept or otherwise participate in any federal direct student loan program (Title IV) funding, any federal veterans' benefits program (Title 38) funding, or any other government student loan program funding.

If a student obtains a loan to pay for an educational program, the student will have to repay the full amount of the loan plus interest.

International students are not charged additional fees or charges associated with vouching for student status.

2026-2030 DPS Tuition & Fees

Tuition & Fees	PhD - Y1	PhD - Y2	PhD - Y3	PhD - Y4
Annual Tuition[1]	$12,000	$12,000	$12,000	$12,000
Student Activity Fee	$100	$100	$100	$100
Technology Fee	$50	$50	$50	$50
Lab Fee	$250	$250	$250	$250
Enrollment Agreement Fee (nonrefundable)	$100	$0	$0	$0
Orientation Fee	$50	$0	$0	$0
Graduation Fee	$0	$0	$0	$250
Student Tuition Recovery Fee[4] (nonrefundable)	$0	$0	$0	$0
Total Estimated Tuition & Fees per Year	$12,550	$12,400	$12,400	$12,650

Total Estimated Tuition & Fees for entire 4-year PhD program $50,000.

Other Educational Related Costs [2]	PhD - Y1	PhD - Y2	PhD - Y3	PhD - Y4
Health Insurance Premium [3]	$3,529	$3,529	$3,529	$3,529
Books and Supplies	$1,050	$1,200	$1,200	$950

Room and Board (based on 12 months)	$17,595	$17,595	$17,595	$17,595
Transportation (based on 12 months)	$3,276	$3,276	$3,276	$3,276
Total Estimated Cost per Year	$38,000	$38,000	$38,000	$38,000

1. length of the program at the time of signing an Enrollment Agreement with CNU so long as state, federal and oversight fees do not change in any substantive way.
2. Covers regalia, transcripts, etc.
3. Costs a student may incur as part of participation in the applicable year of the Doctorate program, whether or not paid directly to CNU.
4. Optional, estimated and may increase based on number of insured members.
5. Estimated amount.
6. Includes tuition, fees and other estimated educationally related costs, including some costs of living.

General Policies Orientation & Registration

Registration for classes requires:

1. All admission contingencies be fulfilled.
2. Financial aid clearance from the Financial Aid Officer.
3. Completion of all new student paperwork.

Admission contingencies include proof of medical insurance coverage and any other institutional requirements. Students may enroll in the Student Health Insurance Plan to satisfy the insurance requirement.

New students must submit the *Emergency Contact and Medical Information Form* to the Office of the Registrar by the end of Orientation. To make updates, a new form must be submitted to the Registrar. The Office of the Registrar requires submission of the Authorization to Release Student Records if a student desires to grant a personal third-party (such as a parent, spouse, etc.) access to his/her student record. Please refer to the Directory Information and Access to Student Records section of this catalog for more information.

New students should review their local, home, and billing contact information via the Student Portal and update them as needed. It is the student's responsibility to maintain valid contact information throughout their enrollment at CNU. Instructions for accessing the Student Portal are sent by the CNU IT department to the student's CNU email address.

Registration is conducted by the Registrar prior to the start of each semester for new and continuing students. Students with business, financial, or other registration holds on their account will not be registered until the Registrar is notified that the hold has been cleared. Students who are incompliant with institutional requirements or who have a hold on their student account at the time of registration are required to satisfy the requirement and may also be required to submit the Course Add/Drop form by the end of the Add/Drop period to register or make schedule changes.

Address Where Instruction Will Be Provided

Class sessions are conducted in room 277 at 9700 West Taron Drive, Elk Grove CA 95757.

Catalog, School Performance Fact Sheet, and Website

Before signing the Student Enrollment Agreement, students are strongly encouraged to visit the College website and to read and review the CNU General Catalog and School Performance Fact Sheet (SPFS). The SPFS contains important performance data for the institution. The Catalog contains important information and policies regarding this institution. By signing the Enrollment Agreement, the student is acknowledging that the catalog, disclosures, and information located on the website have been made available to the student to read and review.

Instruction/Course Delivery

All courses for DPS are 90% face-to-face on-campus teaching, except for two courses: DPS 6420R – FDA regulation and DPS 6221R - Advances in Drug Delivery. This comprehensive course format is designed using a hybrid teaching format, combining direct faculty-student interaction and eLearning.

All courses are taught in English and English language services are not provided.

Credit Assignment Policy

For each 15-week semester, one (1) unit of credit is assigned per hour each week of classroom and a minimum of two (2) hours of out-of-class student work (homework). For courses that include workshop and/or laboratory time, one (1) unit of credit is assigned per two (2) hours each week of student time spent in this activity. For dissertation courses, one (1) unit of credit is assigned per three (3) hours each week spent in this activity.

Student Services

The Ph.D student is eligible for a position as a Research Assistant in the laboratory of their dissertation supervisor.

Description of Facilities

Information on research laboratories and facilities utilized by California Northstate University in conjunction with the delivery of instruction for all CNU Colleges, can be located on page 229 of General Catalog.

Academic Policies and Procedures

Academic Calendar

The academic calendar consists of two semesters lasting approximately 15 weeks long.

Credit Hour Policy

Code	Course Type	Code	Course Type
AL	Active Learning	**LEC**	Lecture course
LAB	Laboratory	**SEM**	Seminar

For each 15-week semester, one (1) unit of credit is assigned per hour each week of classroom and a minimum of two (2) hours of out-of-class student work (homework) *(LEC/SEM*). For courses that include workshop and/or laboratory time, one (1) unit of credit is assigned per two (6) hours each week of student time spent in this activity (LAB/AL) course.

Grading

A letter grade equal to or greater than a C is considered satisfactory performance (passing) for completion of a course. In order to progress in the program, students must pass all courses with a letter grade of C or higher and maintain a minimum cumulative grade point average (GPA) of 3.0.

The breakdown for assignment of letter grades and grade points for each letter grade are as follows:

90.0 to 100% = A = 4.0

80.0 to 89.9% = B = 3.0

70.0 to 79.9% = C = 2.0

60.0 to 69.9% = D =1.0

Below 60% = F = 0.0

GPA Calculation

To calculate cumulative GPA, letter grades will be converted to their numeric grade point value using the grading convention table above, and then added together. The sum is then divided by the number of courses taken. Grades received in retaken classes will be used in determining cumulative GPA. The grade initially received in the course will not be included in the calculation but is recorded on the transcript.

Course Add/Drop Procedure

Changes in course registration may be made without penalty up to the end of the first week (5 class days) for fall and spring terms. Specific add/drop deadlines will apply for courses offered during the summer term.

Incomplete or Withdrawal from a Course

During a semester, a student may withdraw or fail to complete all required assignments and/or examinations due to extenuating circumstances, such as, but not limited to, an illness or a family emergency. In such cases, the course coordinator may give a grade of Incomplete for the course.

All missed assignments and exams must normally be completed within 10 business days after the end of the semester in which the Incomplete was received, or within a timeframe determined by the course coordinator. Failure to successfully complete the course will result in an earned F grade for the course and placement on Academic Probation.

Withdrawal from a course must first be approved by the course coordinator and the Office of Academic Affairs. Where a student has had to withdraw from a course a grade of W will be applied and the student will have to repeat the course next time it is offered.

Grade Appeals Procedure

A student can file an appeal if there is a disagreement with a final course grade. The appeal must be submitted within ten (10) business days of online grade posting. The student must initiate a formal grade appeal process in writing and present the appeal to the course coordinator.

The faculty member will respond to the student in writing within ten (10) business days. If the appeal cannot be resolved, the student has two (2) business days to appeal in writing to the DPS Director who renders a decision in writing within ten (10) business days of receipt of the formal appeal. (If the course Coordinator is the DPS Director, then the student may appeal the decision directly to the Dean. The student has two (2) business days to submit an appeal in writing to the Dean. The Dean will render a decision in writing within ten (10) business days of receipt of the formal appeal.

If the DPS Director cannot resolve the appeal, the student has two (2) business days to submit an appeal in writing to the Dean. The Dean will render a decision in writing within ten (10) business days of receipt of the formal appeal.

If a grade appeal is approved, the course coordinator must complete a Grade Change Form and submit the form to the DPS Director for final approval. The form must then be submitted to the Registrar so that the grade can be changed on the transcript.

A record of the final decision concerning the appeal will be kept on file in the DPS Director office.

Academic Progression Policy

The Academic Progression Policy applies to all students in the Ph.D. in Pharmaceutical & Biomedical Sciences program.

ACADEMIC PROGRESSION POLICY

I. **POLICY STATEMENT**
This policy establishes California Northstate University's Ph.D. program in Pharmaceutical & Biomedical Sciences standards of academic progression. They are defined to ensure students advance through the curriculum in a timely manner, while maintaining high standards of academic performance and professional conduct. The typical curriculum schedule is found in the student handbook.
II. **PURPOSE**

The purpose of this policy is to ensure students reach and maintain high standards of learning throughout their time in the program and accomplish all program learning objectives. The policy delineates the process for academic progression. A student must complete the program within a maximum time period of 6 calendar years (72 calendar months) from the time they register and attend their first core course. Students are required to pass all courses with a grade of C or higher.
II. **SCOPE/COVERAGE**

This progression policy applies to all didactic classes and lab-based courses as well as the Qualifying Exam and Dissertation Defense.

IV. **DEFINITION OF SATISFACTORY ACADEMIC PROGRESSION**
For a student to successfully progress through the CNU Ph.D. in Pharmaceutical & Biomedical Sciences program, they must pass or remediate all courses each semester and maintain a minimum grade point average (GPA) of 3.0. Students must also pass or remediate the Qualifying Exam and the Dissertation Defense.

Progression Issues

1. **Course Remediation**
A. In the event that a student receives a D or F, the Course Coordinator will complete the Remediation Form and send it to the Ph.D. program committee for review.
B. The remediation of course work is a privilege, not a right. Eligibility is determined by the Ph.D. program committee. Their decision will be based on the total number of courses where an F or D grade is achieved in addition to the student's demonstrated effort in the course, including but not limited to attendance, completion of all high stakes course assessments, the student's required responses to course instructor concerns, participation in recommended tutoring, and/or advising from the course instructor.

C. Preparation for remediation is the sole responsibility of the student. It may consist of, but is not limited to, self-study, tutoring, and/or meetings with the course instructor(s) and/or dissertation committee members as deemed necessary for the student to satisfactorily meet all learning objectives.
D. The format of the remediation will be at the discretion of the course coordinator or dissertation committee. At the conclusion of the remediation period the student must complete a remediation exam. Satisfactory mastery of the material will be decided by the course coordinator or dissertation committee, but generally will be a score of at least 70% on the remediation examination.
E. The remediation attempt should occur within 3 weeks following course or exam failure.
F. If the student passes the remediation exam, the Course Coordinator or dissertation committee chair will complete the Remediation Form and send it to the Ph.D. program committee, which will subsequently report the grade change to the Office of the Registrar for the course(s) for which the remediation examination was satisfactorily completed. A grade of D will be replaced with a grade of C, and a grade of F will be replaced with a grade of C and will be reflected on the student's transcript, indicating that the student completed class by remediation. The student's semester and cumulative GPA will be recalculated using the C grade.
G. If a student does not pass the remediation attempt, they will be dismissed from the program.
H. Students may remediate up to 3 courses. If a student fails more than 3 courses, they will be dismissed from the program.

2. **Extended Study Academic Plan**
The Ph.D. program offers a sequential curriculum that is designed for completion in 4 years. Under certain circumstances a student may be placed on an Extended Study Academic Plan. Students must complete the program within a total of six years or less from the time a student registers and attends their first course.
A. Leave of Absence - A student may request a leave of absence for up to one year for medical or personal reasons. Leaves of absence must be approved by the Ph.D. program committee. Appropriate documentation may be required for approval.

3. Academic Probation
A student will be placed on Academic Probation if:
- the student fails a course
- the student fails to comply with the conditions of an I grade

If either of these conditions occur, the Ph.D. program committee will automatically place the student on Academic Probation and notify the student and the Registrar in writing of the action. When a student has been placed on Academic Probation, the following apply:
A. Within one week of the date that the student receives notification of their dissertation advisor and co-advisor to discuss and establish an academic plan to help support their future success.
B. Once the plan has been agreed, it must be signed by both the student and the dissertation advisor and co-advisor. Failure to sign will mean the student will not be allowed to continue in the program. A copy of the plan will be shared with the Chair of the Ph.D. program committee, the Office of the Registrar, and the Business Office.
C. While on Academic Probation, the student may not hold office in any College or University organization.
D. Students may be removed from academic probation once they demonstrate competency. Typically, competency is demonstrated by passing all courses during the subsequent semester. Students must petition the Ph.D. program committee to be removed from academic probation.

4. Dismissal
A student may be dismissed from DPS for a variety of reasons:
A. Failure of more than 3 courses
B. Failure to maintain a cumulative GPA > 3.0
C. Failure to meet any terms of Remediation or Academic Probation
D. Conduct subject to dismissal as described in the Honor Code section of the Student Handbook and decided by the Ph.D. program committee
E. Foregoing an academic semester without obtaining an approved leave of absence
F. Failure to complete the degree requirements in a maximum of 6 consecutive academic years from the date of the first day the student begins the program.
G. All dismissals must be reviewed and approved by the Ph.D. program committee.

5. Appeal of Dismissal
Students dismissed from the program may appeal the decision in writing within ten (10) business days of notification of dismissal to the Dean of the College of Graduate Studies. The Dean will render a decision in writing within 3 business days of receipt of the formal written appeal. Dean's decision is final. Dismissal can only be appealed once.

of the student. A grade of C to this course will be reported to the Registrar if the remediation examination was satisfactorily completed.

Degree Requirements

Students are recommended and approved for the Pharmaceutical & Biomedical Science Doctoral degree by the program committee. Approval is awarded provided that the student has:

- Conducted her or himself in an ethical, moral, professional, and lawful manner
- Satisfactorily completed all curricular requirements in a timely fashion, not to exceed six (6) years from the date of initial enrollment (including approved leave of absence)
- Cumulative GPA > 3.0
- Passed the qualifying exam
- Passed the dissertation defense
- Fulfilled all tuition and financial requirements and completed all necessary paperwork
- Attends graduation and commencement ceremonies in person. Under special circumstances, the Dean of the College may release the attendance requirement in the preceding sentence.

Attendance Policy

Students are expected to attend and participate in all classes and lab-based experiences and must complete all of the exams and assessments as scheduled (together defined as “coursework”). Missed coursework has the potential to disrupt individual and team learning, invalidate assessment of learning outcomes, create unfair advantages, and divert faculty and student resources away from teaching and learning. However, occasionally an absence from coursework will be unavoidable.

A student may request an excused absence for personal, emergency, compassionate, professional, or health-related reasons. Please refer to the detailed Excused Absence Policy for a full list of reasons for which an excused absence may be requested.

High-stakes absence requests will be held to the highest standard for documentation and communication. A student requesting to receive an excused High Stakes Absence must satisfy FIVE criteria described in the detailed policy available on the website. In total, excused and unexcused absences shall not exceed five academic days per semester. Absences exceeding five academic days per semester may require a student to request a leave of absence or a withdrawal. Please contact the Ph.D. Program Committee Chair for further information.

A student seeking an excused absence should complete the Excused Absence Request Form and seek the Course Coordinator’s signature for each course with missed coursework within 3 business days upon return to courses or campus. The Course Coordinator will determine if an absence will be excused or unexcused for their course based on the categories and criteria outlined in the detailed policy. If approved as a low stakes absence that was checked, signed and dated by their respective Course Coordinator and the process ends; but if it is checked as a high stakes absence, then the final approval will be decided by the Ph.D. Program Committee Chair. The student and concerned parties will then be notified by email and the process here is concluded.

Makeup Expectations

Students are responsible for contacting the course coordinator to arrange makeup coursework. The ability to makeup missed coursework, as well as the makeup time, date, format, duration, and scoring is determined at the sole discretion of the Course Coordinator. Students who do not follow the Excused Absence Policy or the Course Coordinator instructions for makeup will receive a zero for the missed coursework. If makeup coursework is offered, students recognize the special nature of the assessment and may NOT appeal the scoring of makeup coursework. If the absence is determined to be unexcused by the Course Coordinator, the student will receive a zero for missed coursework. See the course syllabus for additional course-related policies pertaining to excused and unexcused absences.

LEAVE OF ABSENCE

A leave of absence is approved for a specific period of time, not to exceed more than a year, and the institution agrees to permit the student to return to the University/College without formally reapplying for admission to the University/College. The student will be required to return to the University/College at the beginning of the semester in which the leave was granted. All students requesting a Leave of Absence should fill out a Leave of Absence Form after discussing their decision with the their dissertation advisor and co-advisor as well as the Chair of the Ph.D. program committee. If a student is requesting a leave of absence, the Chair of the Ph.D. program committee must sign the form. If you are approved for a leave of absence, students are eligible to return without reapplication if the absence is within the approved time frame. Non-attendance does not constitute notification of intent to apply for leave of absence status. The date of leave status is the date the Registrar receives the signed form.

Return from Leave of Absence

The Office of the Registrar will contact a student on Leave of Absence (LOA) approximately 90 days before the LOA expires via certified US mail. The student will receive a request of intent to return from LOA, a form and reenrollment procedures to be eligible to register for classes.

The student will have 30 days to reply to the Office of Registrar with their intent to return to the University/College or officially withdraw. If a student intends to return, they must submit the required form to the Office of the Registrar. They must also meet with the Associate Dean of Academic Affairs at least 30 days prior to the first day of class to review the courses that will be required for the remainder of the student’s educational career at DPS and sign an agreement. The student may also be required to meet with the Dean.

If a student does not return within 1 year of approved LOA they are no longer eligible to return as a continuing student and must reapply to the University/College for admission (See Withdrawal/Readmission in this handbook).

Assisting in Research and Teaching

Under the recommendation of faculty members and the advisory committee, research assistantship and teaching assistantship that cover tuition and other expenses are provided to outstanding graduate students with the final approval from the Dean.

DISSERTATION COMMITTEE

A dissertation committee will be formed for each student once they are enrolled in and have started the Qualifying Exam Preparation Course. The dissertation defense committee will comprise of the student’s dissertation advisor and co-advisor in addition to 3 ranked

faculty members who are affiliated with the CNU Ph.D. program. Students may make suggestions for these additional 3 members to the Chair of the Ph.D. program committee, however, final decisions will be made by the Ph.D. program committee. The Ph.D. program committee will appoint one of the members as committee chair.

Requirements for Laboratory-based Research

Laboratory research is one of the essential components for graduate students in the Doctorate program in College of Graduate Studies at California Northstate University (CNU). Any students working in the Lab must abide by the following standards.

1. Students must complete the Collaborative Institutional Training Initiative (CITI) training and relevant biosafety training that are required for the personnel working in the Lab at CNU. CITI is an on-line service program providing research ethics and related modules to faculty, staff, and students working for research projects or courses. Students must present completion certificates to their major advisors prior to self- directed work in the labs. Students must complete and pass the Responsible Conduct of Research course and the student Biosafety and Biosecurity Course. Additional courses may be recommended or required by their instructors.
2. Students must respect all ethical standards and must observe all federal, state, local, and institutional regulations.
3. Students must abide by all safety regulations while present in the labs, including those regarding appropriate clothing and shoes. Students must wear lab coat, gloves, and other appropriate personal protective equipment when performing procedures in the Lab.
4. Students must follow all standard operating procedures and protocols when conducting research.
5. Students must work in their designated areas. All shared equipment and instruments must be cleaned and stored in their original l Location after completing experiments.
6. Students must maintain original research records, catalogs, and research materials following good practices. Computer records must be consistent with notebooks. Students are strongly encouraged to discuss the records and seek approval from the advisors.
7. All packages, containers, buffers and reagents in the Lab must have discernible, compliant labels that include name, date, identity, and sources.
8. Eating, drinking, or smoking in the Lab are strictly prohibited. Violators will be excluded from research projects or relevant courses.
9. Hand washing with clean, running water is good practice before leaving the Lab, and is required after certain procedures.
10. It is expected that all students will exercise professionalism and decorum while in the Labs. Horseplay, practical jokes, pranks or other inappropriate or distracting behaviors will result in a loss of Lab privileges and may impact student graduation.
11. Please report all unexpected issues to your advisors or Lab Manager.

COMPLAINT/GRIEVANCE POLICY

ACADEMIC COMPLAINTS/GRIEVANCES

All academic-related complaints regarding a course, courses or a faculty member should be filed with the appropriate academic department or Associate Dean of Academic Affairs. Students should use the following guideline:

Course-related grievance: Student should discuss or file the complaint with the course coordinator;

If unresolved, then the student should discuss or file the complaint with the Chair of the Ph.D. program Committee.

Faculty-related grievance: Student should discuss or file the complaint with the Chair of the Ph.D. program committee. If the issue is with the Chair of the Ph.D. program committee, then the student should discuss or file the complaint with the Dean of CNUCGS.

NON-ACADEMIC COMPLAINTS/GRIEVANCES

General complaints or concerns should be directed to the Chair of the Ph.D. program committee. The Chair of the Ph.D. program committee will advise students about the appropriate procedures to follow in resolving a general complaint or concern. An informal process of resolution will be sought unless the incident is severe enough to warrant a formal investigation and hearing. This procedure also applies to all discrimination, harassment, and sexual harassment reports and complaints that may arise in matters involving rights protected under legislation relating to equal opportunity in Employment and Education or any policy of the University/College relating to harassment. General grievances may also be made anonymously by sending a letter to the Chair of the Ph.D. program committee or can be filed online anonymously by visiting: https://californianorthstateuniversity.formstack.com/forms/anonymousreportcnu.

Informal Resolution Procedure

Students are encouraged to discuss and resolve non-academic conflicts, including complaints of harassment, and/ or discrimination, with the individual involved before filing an informal or formal complaint. An informal complaint may be made to the Chair of the Ph.D. program committee by email or in person. The suggested time frame to make an informal complaint is 10 days from the date of the incident. The complaint will be investigated and the outcome of the investigation will be communicated to the student filing the complaint. If the student is not satisfied with the outcome a formal complaint may be filed.

Formal Resolution Procedure

The complaint must be in writing and should describe: the specific action(s) necessitating the complaint, a statement of facts supporting the complaint, actions sought in an informal resolution, and information about why the action did not lead to a satisfactory resolution prior to filing a formal complaint, if an informal process was utilized. The complainant must be willing to be identified as the accuser.

The complaint must be signed and dated by the complainant and filed with the Chair of the Ph.D. program committee within 14 days of the occurrence. A completed Complaint/Grievance form should be included with the letter. The form can be found on the college website. Students may also submit an email or letter without the form if needed. All complaints will be reviewed immediately. If the situation warrants, the incident will be investigated by a committee. If the complaint/grievance is related to harassment under Title IX or the SaVE Act a committee trained in this area will conduct the investigation. The complaint and investigation will be handled in a confidential manner. Investigations will usually be completed within seven (7) business days from the receipt of the complaint.

At the conclusion of the investigation, a report will be provided to the individuals in the situation stating the findings and recommendations. In unforeseen circumstances, or due to the complexity of the investigation, the report time limits may need to be modified. If the outcome was not satisfactory, the complainant may appeal the decision of the committee to the Dean of the College.

The written appeal request must be received in the Office of the Dean within five (5) business days from the written recommendation provided by the Assistant Dean of Student Affairs. The Dean shall provide a written final decision to the complainant within five (5) business days from the receipt of the request. The decision of the Dean will be final.

A confidential record or log of all complaints filed is kept by the Chair of the Ph.D. program committee.

ACCREDITATION STANDARD COMPLAINTS/GRIEVANCES

California Northstate University encourages students to seek internal resolution to any conflict. Complaints may be made directly to the Chair of the Ph.D. program committee. The written complaints will be kept on-file and made available for inspection at onsite accreditation evaluations.

If a student has a complaint related directly to an “accreditation standard” they may file the complaint to the Assistant Dean or directly through the accreditation website listed below for WSCUC (regional accreditation). Students must make sure the complaint is related to accreditation standards and not a general complaint unrelated to accreditation. Academic and general complaints can be made using one of the processes listed above.

Accrediting Commission for Senior University/Colleges and Universities of the Western Senior College and University Commission (WSCUC)

Accreditation by the Accrediting Commission for Senior University/Colleges and Universities of the Western Senior College and University Commission (WSCUC) represents the Commission's judgment that an institution is satisfactorily achieving its mission and educational purposes and that it meets or exceeds the Commission's standards of quality, integrity, and effectiveness. The Commission values information provided by students, employees, and others in determining whether an institution's performance is consistent with the Standards of Accreditation and Commission policies and procedures. The Commission has two established means for receiving comments from students, employees and members of the public about its member institutions: 1. Complaints, 2.Third-party comments

As a general rule, complaints are written by employees and students who have grievances that draw into question the member institution's adherence to one or more Commission Accreditation Standards or Policies. Third-party comments are usually more general comments of a substantive nature about a member institution. Individuals should review the Policy on Complaints and Third- Party Comments in the WASC Policies Manual to ascertain the appropriate means to communicate comments and complaints.

Bureau for Private Post-Secondary Education (BPPE)

A student or any member of the public may file a complaint about this institution with the Bureau for Private Postsecondary Education by calling (888) 370-7589 or by completing a complaint form, which can be obtained on the bureau's internet Web site at www.bppe.ca.gov

DPS Course Descriptions

Core Courses:

DPS 6130R: Fundamental Pharmacology

This course will provide students with an overview of fundamental understanding of current concepts of pharmacology, signal transduction and pharmacotherapies. Topics relating to the following subject will be covered: Drug-receptor interactions, pharmacodynamics, pharmacokinetics, drug metabolism, drug transporters, drug toxicity, pharmacogenetics and pharmacotherapy in diseases like cancer, cardiovascular diseases, neuronal diseases, diabetes mellitus, and microbial and viral infection.

DPS 6420R: Principals of FDA Regulatory Affairs and Drug Discovery
This course focuses on regulatory strategy, guidance and regulatory compliance, legal and ethical issues, processes for product development and the business components of regulation in clinical research, all while reinforcing the science behind the methods. The regulatory affairs course provides students with the knowledge and understanding for the key elements of the regulatory process in various industries, governmental agencies, and consultancies worldwide.

DPS 6131R: Biostatistics and Research Methods
This course is designed to introduce major concepts in biostatistics and research methods in pharmaceutical sciences, two topics that are closely intertwined. Students will develop the ability to interpret and critically evaluate medical literature and to identify findings that have implications for their practice. Emphasis will be placed on an examination of how observational study designs draw upon epidemiologic techniques to address drug effectiveness, safety, outcome assessment and regulatory decision making. Students will also acquire skills in applying statistical analysis concepts learned throughout this course with the use of common computer software.

DPS 6440R-Cellular and Molecular Biology and Biochemistry
The Cellular and Molecular Biology and Biochemistry course is designed to provide students with a fundamental understanding of current concepts of cellular and molecular biology, and human biochemistry. Students are provided an overview of prokaryotic and eukaryotic cell structure and function, virus biology, cellular signal transduction, human carbohydrate, lipid and protein metabolism, biomedical aspects of human nutrition, genetic regulation, the molecular basis of inherited genetic diseases and acquired diseases, principles of commonly used biotechnologies, drug targets screening, and biopharmaceutical products generation.

DPS 6133R, 6232R: Research rotation
Students will learn new lab techniques and/or improve competency in lab techniques through working on a research project with their research rotation mentor. Students are expected to work on the research rotation project for a minimum of 9 hours per week. All required safety training as well as the CITI responsible conduct of research course must be completed prior to starting the course. It is the student's responsibility to check in with both the PI and lab manager to determine the exact requirements necessary prior to beginning each rotation.

DPS 6421R: Qualifying exam preparation
This course will help students prepare for the written and oral components of their qualifying exam. Focus will be placed on supporting students as they generate the following: a description of the research problem and its significance, a scientific hypothesis and related specific aims, a review of supporting literature, proposed research strategy. Students will receive training and formative feedback from their dissertation advisor and co-advisor throughout the course.

DPS 6612R, 6613R, 6614R, 6615R, 6612R: Thesis project and defense
Students are expected to work on their dissertation project for a minimum of 36 hours per week and are expected to make substantial progress towards meeting graduation requirements. During the course, students must meet with their dissertation advisor at least once per week and meet with their dissertation co-advisor and dissertation committee members at least once, to discuss progress and/or challenges. To graduate from the CNU Ph.D. in Pharmaceutics & Biomedical Sciences program, students must complete a total of at least 48 dissertation course units and make a convincing case, both in written and oral formats, that they have made a significant research contribution to the field. Typically, students will publish at least one peer reviewed publication prior to graduation.

Elective Courses

DPS 6423R: Clinical Biochemistry
This course provides a clear and comprehensive introduction to the biochemical basis of disease processes, how these diseases are investigated in biomedical laboratories, and selected clinical cases as framework for class discussion activities. In the class, the students learn new trends of clinical cases and their biochemical basis to further emphasize the link between theory and practice while helping them engage with emerging diseases and how to treat them. In addition, the course provides a biochemical foundation for the understanding of drug action, drug absorption and drug metabolism in the treatment of these diseases.

DPS 6422R: Medical Immunology
DPS 6422R is a broad-spectrum course that covers the fundamentals and clinical aspects of Immunology. The course is divided into 4 major modules: (1) Introduction to Immunology, (2) Innate and adaptive Immunity, (3) T and B cells development and (4) Clinical Immunology. Each module will be followed by an exam covering all the discussed topics within that module. In addition, students will be engaged in journal club activity for classical articles known to be the pillars in the Immunology field.

DPS 6221R: Advances in Drug Delivery Systems

This course gives the students an overview on Drug Delivery Systems in terms of Formulation, Manufacture, and Quality Control. Students will learn Oral, Topical, Parenteral, Transdermal and other Modified-release Drug Delivery Systems. Details are given with respect to advanced technologies such as 3D Printing for Personalized Medicine and Nanoparticle Delivery Systems for Protein and Vaccine Therapeutics. The course also covers basic Pharmacokinetics and Pharmacodynamics considerations, Pharmaceutical Compounding and Calculations.

DPS 6350R: Pharmacokinetics
This course focuses on understanding and applying pharmacokinetic principles for optimizing drug dosage. It is divided into 3 modules: descriptive, quantitative, and pharmacokinetics of special populations. Descriptive pharmacokinetics provides a basic introduction to the key pharmacokinetic principles. This module enables the student to conceptualize principles such as drug bioavailability, distribution, clearance, and excretion. Concepts of drug absorption, metabolism, protein binding, and pharmacokinetic drug interactions will be discussed as well. Quantitative pharmacokinetics covers the mathematical aspects, including the calculation of pharmacokinetic parameters following drug administration and compartment modeling. The third module covers the process of using pharmacokinetic principles to optimize the dose for special population patients.

The purpose of the CNU Ph.D. in Pharmaceutical & Biomedical Sciences program is to provide training and mentorship that will position students to serve as leaders in the discovery, testing, and clinical implementation of treatments and delivery systems which will support improvements in healthcare.

COLLEGE OF GRADUATE STUDIES

College of Graduate Studies Administration and Staff

Name	Position	Email Address
Catherine Yang, Ph.D.	Professor and Dean	Catherine.yang@cnsu.edu
Ahmed El-Shamy, Ph.D	Assistant Dean of Research	<ahmed.elshamy@cnsu.edu>
Aashna Pillay	Administrative Assistant	aashna.pillay@cnsu.edu

Program Director and Program Committee members

Name	Position	Email Address
Ahmed ElShamy, Ph.D.	Associate Professor and Program Director	Ahmed.elshamy@cnsu.edu
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Eslam Mohamed	Assistant professor	Eslam.mohamed@cnsu.edu
Han-Rong Weng, Ph.D.	Associate Professor	Han-Rong.weng@cnsu.edu
Ashraf Mohieldin, Ph.D.	Professor	Ashraf.mohieldin@cnsu.edu

Potential dissertation advisors and research rotation mentors

Name	Position	Email Address	Primary research interests, Webpage
Fakhrul Ahsan, Ph.D.	Professor	Fakhrul.ahsan@cnsu.edu	Pharmaceutics (microfluidic chips, PAH), https://pharmacy.cnsu.edu/directory/bios/fakhrul-ahsan.php
Hang-Ron Weng, Ph.D.	Associate Professor	Han-Rong.weng@cnsu.edu	Pain management (neuroinflammation), https://medicine.cnsu.edu/directory/bios/han-rong-weng.php
Ahmed ElShamy, Ph.D.	Assistant Professor	Ahmed.elshamy@cnsu.edu	Virology (HCV, HBV), https://pharmasciences.cnsu.edu/directory/bios/ahmed-el-shamy.php
Hongbin Wang, Ph.D.	Assistant Professor	Hongbin.wang@cnsu.edu	Inflammation (complement activation pathway), https://pharmasciences.cnsu.edu/directory/bios/hongbin-wang.php
Abdel Farahat, Ph.D.	Assistant Professor	Abdelbasset.farahat@cnsu.edu	Drug design (DNA minor groove binding), https://pharmasciences.cnsu.edu/directory/bios/abdelbasset-farahat.php
Eslam Mohamed, Ph.D.	Assistant Professor	Eslam.mohamed@cnsu.edu	Immunology (antitumor immunity), https://pharmasciences.cnsu.edu/directory/bios/eslam-mohamed.php

Ruth Vinall, Ph.D.	Professor	rvinall@cnsu.edu	Cancer (prostate cancer), https://pharmacy.cnsu.edu/directory/bios/ruth-vinall.php
Linh Ho, Ph.D.	Associate Professor	Linh.ho@cnsu.edu	Adipogenesis (sirtuins)
Zhuqiu Jin, Ph.D.	Associate Professor	Zhuqui.jin@cnsu.edu	Cardiovascular disease (sphingolipids), https://pharmacy.cnsu.edu/directory/bios/Zhuqiu-Jin.php
Islam Mohamed, Ph.D.	Assistant Professor	Islam.mohamed@cnsu.edu	Cardiovascular disease (shear stress modulation), https://pharmacy.cnsu.edu/directory/bios/islam-mohamed.php
Tibebe Woldemariam, Ph.D.	Professor	twoldemariam@cnsu.edu	Medicinal chemistry (natural products), https://pharmacy.cnsu.edu/directory/bios/tibebe-woldemariam.php
Uyen Le, Ph.D.	Associate Professor	Uyen.le@cnsu.edu	Pharmaceutics (nanoparticle drug delivery), https://pharmacy.cnsu.edu/directory/bios/uyen-minh-le.php
Ashim Malhotra, Ph.D.	Associate Professor	Ashim.malhotra@cnsu.edu	Cardiovascular disease (cardiomyopathy, mitochondrial mechanisms), https://pharmacy.cnsu.edu/directory/bios/ashim-malhotra.php
Justin Lenhard, PharmD	Associate Professor	Justin.lenhard@cnsu.edu	Infectious disease (bacterial resistance), https://pharmacy.cnsu.edu/directory/bios/justin-lenhard.php
Damon Meyer, Ph.D.	Associate Professor		Genome stability, DNA damage and repair, https://healthsciences.cnsu.edu/directory/bios/Damon-Meyer.php
Reem Olaby, Ph.D.	Assistant Professor		Genetics and epigenetics of Fragile X Syndrome, https://healthsciences.cnsu.edu/directory/bios/Reem-AlOlaby.php