



A Post-Semester Course Remediation Program to Promote On-Time Progression for PharmD Students

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INTRODUCTION

- Binghamton University School of Pharmacy and Pharmaceutical Sciences admitted the first PharmD class in 2017.
- To successfully progress in our program, students must:
 - Achieve a "C-" or better (1.7, 66.5%) in all didactic coursework,
 - Earn a cumulative GPA ≥ 2.00 in the P1 year to progress to the P2 year, and
 - Earn a cumulative GPA ≥ 2.50 to progress to P4 year and begin APPEs.
- A remediation program was developed to address isolated learning deficits to promote on-time student progression.
 - All courses are eligible for remediation.
 - Students can remediate up to a maximum of 2 courses in a semester and 4 total courses during P1-P3 years (including IPPEs).
 - If successful in remediation, a student's final course grade is adjusted to C-.
 - Remediation is delivered in a two-week period shortly following the end of the semester.

OBJECTIVES

- To develop a remediation program to support learning recovery and on-time progression for students that experience academic difficulty in PharmD coursework.
- To determine if the current remediation plan is successful in promoting on-time progression to APPEs.

METHODS

Faculty Remediation Plan Guidance

- Faculty course coordinators submit a course remediation plan to Academic Affairs that is reviewed for the following elements:
 - At least 2 meetings with instructors
 - At least 2 assessments
- Students must pass (66.5%) a comprehensive final exam to pass remediation.

Letter Grade	Numeric Grade	Percentage Grade
A	4	92.5-100
A-	3.7	89.5-92.4
B+	3.3	86.5-89.4
B	3	82.5-86.4
B-	2.7	79.5-82.4
C+	2.3	74.5-79.4
C	2	69.5-74.4
C-	1.7	66.5-69.4
D	1	59.5-69.4
F	0	<59.5

Table 1. P1 Remediation Plan PHRM 514 Pharmaceutical Calculations I

Assessments	
Pre-class	<ul style="list-style-type: none"> Quizzes – 2 Cumulative remediation final exam Assignments – 4 problem sets and 5 homework assignments
Classes*	<ul style="list-style-type: none"> 4 problem sets Error reports for incorrect problem set answers rewarded until correct answer achieved 5 in-person classes with practice problems and review of homework assignments (total 7.5 hrs) 1/3/23 to 1/13/23 Complete problem sets and homework assignments on time Attend all classes Satisfactory effort during class and on practice assessments If the student misses classes or fails to make genuine effort, they may be barred from taking the cumulative remediation final exam
Expected Student Behaviors	<ul style="list-style-type: none"> Achieve a grade of 66.5% or higher on the cumulative exam
Requirement to pass remediation	*not including exams and quizzes

Table 2. P2 Remediation Plan PHRM 521 IPT III: Cardiology

Assessments	
Classes	<ul style="list-style-type: none"> Quizzes – 2 Exams – 1 midpoint exam and 1 final cumulative exam Assignments – 7 homework assignments (IPT Study Tool for HTN, dyslipidemia, arrhythmia, VTE, AF, ASCVD, HF) 11 hybrid synchronous classes with review, new practice patient cases and new kinetics problems for lidocaine and digoxin (total 16.25 hrs) 1/3/23 to 1/13/23 Complete homework assignments on time Attend all classes Satisfactory effort during class and on practice assessments If the student misses classes or fails to make genuine effort, they may be barred from taking the cumulative remediation final exam
Expected Student Behaviors	<ul style="list-style-type: none"> Achieve a grade of 66.5% or higher on the final cumulative exam
Requirement to pass remediation	*not including exams and quizzes; AF = atrial fibrillation; ASCVD = atherosclerotic cardiovascular disease; HF = heart failure; HTN = hypertension; IPT = integrated pharmacotherapy; VTE = venous thromboembolism.

RESULTS

Figure 1. Remediation by Topic

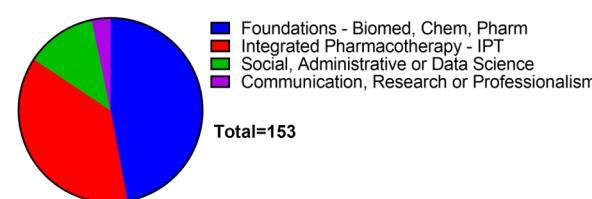


Figure 2. Remediation by Curricular Placement

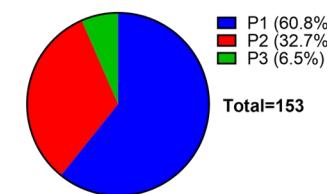


Figure 3. Total Remediations for Students with On-Time Progression to APPEs

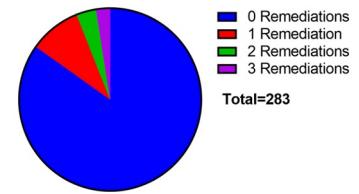
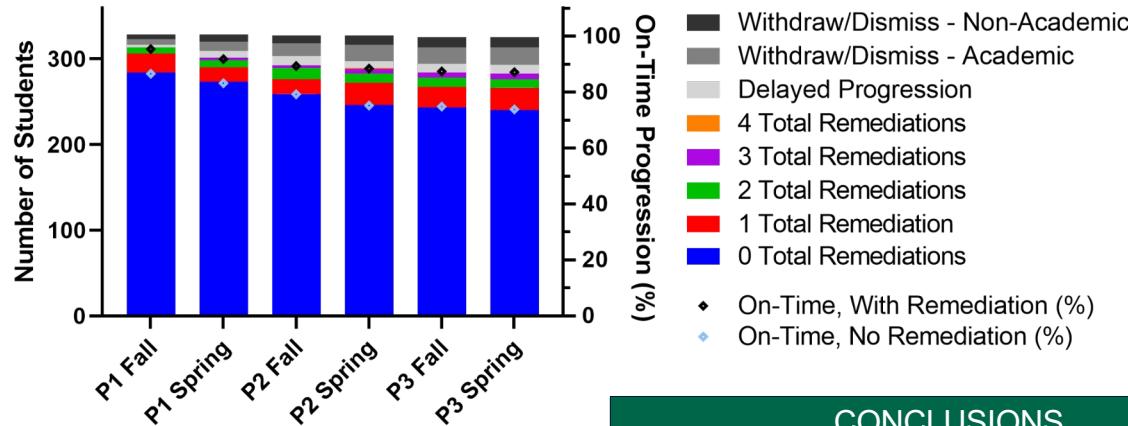


Figure 4. Students' Cumulative Progression Across Didactic Curriculum



DISCUSSION

- 25% of students (cohorts 2021 - 2024) have qualified for course remediation; 25 out of 42 required courses were remediated at least once (skills and compounding labs having never been remediated).
- 87.7% (71/81) successfully remediated to progress on-time to the next semester; 53.1% (43/81) successfully progressed to APPEs on time; 45.7% (37/81) proceeded with delayed progression or were dismissed/withdrew (without exceeding 4 remediations); 1/81 exceeded 4 remediations.
- The majority of remediation happens in the P1 year.

CONCLUSIONS

- The remediation program provides students an opportunity to progress through didactic coursework to APPEs on time
- Review of the data has solidified the continuation of the remediation program in its current form.
- Evaluation of the P1 remediation rates has led to efforts to improve admission processes, identification of at-risk students, and initiation of early interventions.
- Remediation to facilitate student progression extends faculty-mandated instruction time outside of the regular semester and targets faculty who teach in P1 and more challenging courses.