

# Pharmacy Phoenix: Reviving Student Knowledge for On-Time Progression

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## Introduction

The Accreditation Council for Pharmacy Education (ACPE) Standard 17.2 requires pharmacy programs to implement early intervention programs to identify academic and behavioral issues to promote on-time progression.<sup>1</sup> As a result, more proactive measures have been integrated into pharmacy curricula to avoid attrition. Despite these measures, there are other student-specific factors that contribute to unsatisfactory performance in courses and result in program-specific decisions about a student's progression.<sup>2</sup> In 2021, Wittstrom and colleagues<sup>3</sup> reported a survey of over two-thirds of pharmacy programs and found that 34% of programs' remediation process was to have a student repeat the course the next time it was offered. This practice leads to a delay in progression and affects attrition and on-time graduation rates, metrics often used to evaluate the quality of a program. In 2022, Buring and colleagues<sup>2</sup> reported that a summer course remediation process resulted in a reduction in dismissals and had a success rate of 72-87% in passing the summer course and graduating on-time.

The University of Tennessee Health Science Center (UTHSC) defines a 'retake' as taking a course for a second time. The Academic Standing and Promotion Review (ASPR) committee at the UTHSC College of Pharmacy reviews academic performance and meets with students with two or more D or F grades to provide a recommendation for final decision by the Dean on the student's individual academic plan. Starting in summer 2018, students could be requested to retake a maximum of two courses over the summer to correct a deficiency (F grade) or an unsatisfactory grade (D grade) to remain on-time in the curriculum.

## Objective

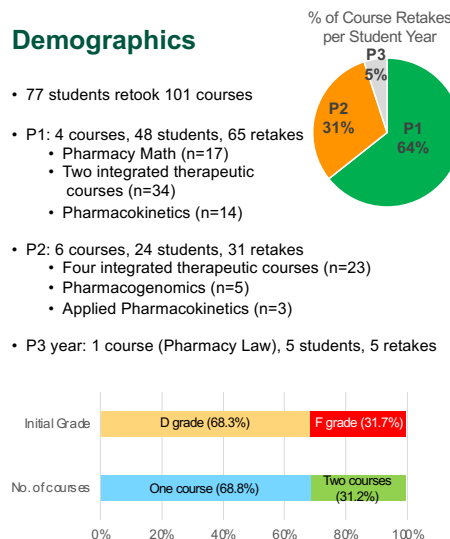
To evaluate the impact of summer course retakes on on-time student progression at the UTHSC College of Pharmacy.

## Methods

- Course retakes at the UTHSC College of Pharmacy are completed asynchronously in an accelerated format over a 4-8 week period (depending on the defined credit hours).
- Data on student allowed to retake coursework beginning in summer 2018 to summer 2022 was collected.
- Data collected included overall and course-specific academic performance, student academic status, and course name and when offered in the curriculum.
- Descriptive statistics were used to analyze the data, which included the reason for the retake, academic performance in the original and retake course, and the students' academic status after the retake.

## Demographics

- 77 students retook 101 courses
- P1: 4 courses, 48 students, 65 retakes
  - Pharmacy Math (n=17)
  - Two integrated therapeutic courses (n=34)
  - Pharmacokinetics (n=14)
- P2: 6 courses, 24 students, 31 retakes
  - Four integrated therapeutic courses (n=23)
  - Pharmacogenomics (n=5)
  - Applied Pharmacokinetics (n=3)
- P3 year: 1 course (Pharmacy Law), 5 students, 5 retakes

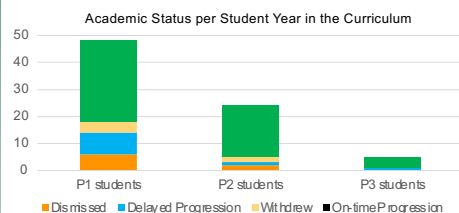


## Results

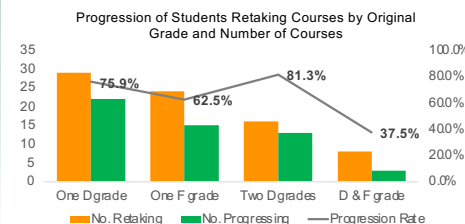
- Original course percent**

  - Mean 65.6%
  - Range 52.2-74.6%\*
- Retake attempt percent**

  - Mean 77.1%
  - Range 43.3-95.0\*
- \*Passing in Pharmacy Math was 75%.
- A higher grade was earned in 83 of 101 retakes (82.2%).
  - The mean post-retake score was significantly higher ( $p < 0.0001$ ).



- 53 of 77 (68.8%) students ultimately progressed and/or graduated on time.
- P3 students had the highest progression rate (80%), followed by P2 students (79.2%)



- Students retaking two courses with two D grades originally earned had the highest curricular progression rate.
- Students retaking two courses with one D and one F originally earned had the lowest curricular progression rate.

## Conclusions

- Retaking courses in the summer allowed the majority of students to progress on time in the curriculum.
- P2 and P3 students had higher progression rates than P1 students. Given the variety of factors that may impact P1 students, a more personalized approach to retaking coursework may be more beneficial.
- Students with an F grade had lower progression rates and may require more intervention.
- Retaking courses provided insight on curricular content and sequencing resulting in course and curricular revisions.

## Limitations

- Other factors that may affect student success in the course or curriculum were not collected, including the COVID pandemic.
- Academic performance after the retake was not collected to see if student performance improved.

## References

1. Accreditation standards and key elements for the professional program in pharmacy leading to the Doctor of Pharmacy degree ("Standards 2016"). Accreditation Council for Pharmacy Education; February 2, 2015. Accessed: July 2, 2023.
2. Buring SM, Williams A, Cavanaugh T. The life raft to keep students afloat: early detection, supplementation instruction, tutoring, and self-directed remediation. *Curr Pharm Teach Learn*. 2022;14:1060-67.
3. Wittstrom KM, Godwin DA, Bleske BE. Intervention and remediation: a descriptive study of practices in pharmacy education. *Curr Pharm Teach Learn*. 2021;12(3):206-12.