Practitioner-Taught Program Analysis

Center for Purposeful Work

Bates Center for PURPOSEFUL | WORK

Bates College

Undergraduate Mathematics Major w/ a Concentration in Digital Computational Sciences

Class of 2025

Jamil Mouehla

jmouehla@bates.edu | 914-434-7458

Link to Master Sheet (converted .csv file):
https://docs.google.com/spreadsheets/d/13oSJj54WhIKcrH5rLX7mf46haxB_pHeeZK60oLPZnXA/edit?usp=sharing

Executive Summary

The Practitioner-Taught Course (PTC) at Bates College is a short-term program led by expert practitioners external to the Bates faculty. These courses focus on imparting practical skills and competencies essential for early success in various professional fields. PTCs contribute to expanding the Bates curriculum, introducing new expertise, and offering students exposure to diverse career paths, enhancing their practical skill sets, and widening their professional networks.

A key emphasis of the PTC program is on promoting participation and access among students from racial and ethnic demographics. In alignment with Bates College's equity commitment, Purposeful Work, through financial aid, ensures access to education and supports students for success on campus. The PTC program serves as a bridge to post-college life, with a specific focus on addressing the needs of students from families lacking strong professional networks. Monitoring the first-generation college status of PTC participants is a priority, with the aim of increasing participation among "Bobcat First" students. The program also actively tracks and promotes awareness and access among students of color, acknowledging the historical challenges of structural racism and limited opportunities faced by these students throughout their educational journey.

The overall value of the PTC program is evident in overwhelmingly positive student evaluations. Consistently, students express the high value of PTCs as an integral part of the curriculum, with satisfaction rates consistently in the high 90th percentiles. The positive feedback underscores the ongoing relevance and importance of the PTC program, with students advocating for the continuation of course topics that they find particularly beneficial. The program's success is reflected not only in its ability to provide practical skills but also in its positive impact on students' educational and professional journeys.

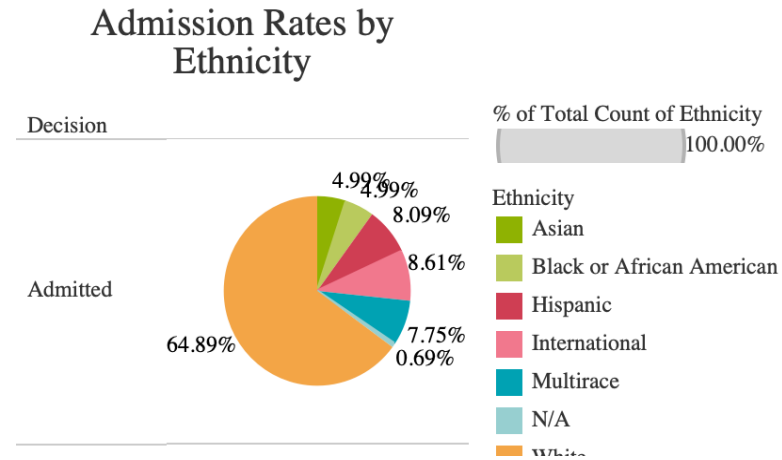
Analysis of demographic data from the past 11 Practitioner-Taught Course (PTC) yearly-classes at Bates College is crucial for informed decision-making. By examining factors such as race and major, I gain insights into the program's impact on diverse student populations. This data guides decisions related to admissions, withdrawals, and waitlisting, ensuring a more equitable experience. The findings also inform targeted outreach efforts to underrepresented groups and help tailor course offerings to meet the diverse needs and interests of students. Bates College's commitment to inclusivity is underscored by the integration of demographic insights into the decision-making process for the PTC program.

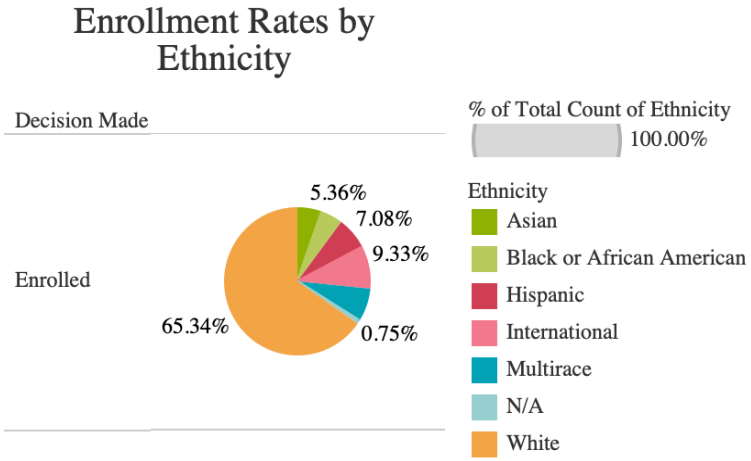
Technology

To effectively manage data for the Practitioner-Taught Course (PTC) program at Bates College, I use a practical technological approach. First, I dug into the data using Python and Excel to extract valuable info about student demographics and course evaluations. Then, I clean up the data in Excel, addressing missing bits and inconsistencies. Next, SQL helped me analyze the structured data, revealing patterns and trends crucial for decision-making. Finally, I visualized the insights using Tableau, creating easy-to-understand graphics that delineate the data provided. This integrated tech approach ensures a smooth and informed process, aligning with the PTC program's goals and commitment to inclusivity.

Insights

I've developed ethnic-focused visualizations based on 11 years of demographic data from Bates College's Practitioner-Taught Course (PTC) program. These visuals highlight the program's impact on diverse student populations, aiding informed decision-making regarding admissions, withdrawals, and waitlisting. Aligned with the college's commitment to inclusivity, the visualizations guide targeted outreach efforts and ensure a more equitable experience, reflecting the PTC program's dedication to providing practical skills and opportunities for success to students of all backgrounds. They play a crucial role in advancing the program's inclusivity goals and enhancing its positive impact on students.





Over the course of the past decade, an analysis of admission data reveals that approximately 35% of students accepted into the Practitioner Taught Course program have been individuals from diverse ethnic backgrounds. Notably, this admission rate closely mirrors the proportion of students of color within the broader student body. Furthermore, it surpasses the percentage of students from diverse ethnicities in the total application pool for the program. This suggests a commitment to inclusivity and diversity within the program's admissions process, as evidenced by the consistent representation of students from various ethnic backgrounds over the years.

These visualizations center on admission rates and decisions, drawing insights from 11 years of demographic data from Bates College's Practitioner-Taught Course (PTC) program. These visuals meticulously analyze the program's influence on diverse student cohorts, offering valuable insights into admission outcomes, withdrawals, and waitlisting trends. Aligned with the college's unwavering commitment to inclusivity, these visualizations serve as indispensable tools for strategic decision-making related to admissions. They facilitate a nuanced understanding of the admission landscape for each graduating class, guiding targeted outreach efforts and fostering a more equitable experience. In accordance with the PTC program's core dedication to providing practical skills and opportunities for success to students of all backgrounds, these visualizations play a pivotal role in advancing inclusivity goals and amplifying the program's positive impact on students.

Admission Decisions by Graduating Class Year

	Decision			
Class	Admitted	Declined	Waitlisted	Withdrew
2015	59.18%		38.78%	2.04%
2016	58.06%	9.68%	14.52%	17.74%
2017	60.61%	10.10%	18.18%	11.11%
2018	62.89%	10.31%	15.46%	11.34%
2019	60.16%	10.57%	19.51%	9.76%
2020	61.74%	9.57%	24.35%	4.35%
2021	78.18%	9.09%	10.91%	1.82%
2022	85.33%	5.33%	8.00%	1.33%
2023	68.48%	4.35%	25.00%	2.17%
2024	64.29%	4.76%	28.57%	2.38%
2025	60.94%	1.56%	35.94%	1.56%
2026	23.73%		72.88%	3.39%

Admission Percentage
1.33% 85.33%

Admission Rates by Graduating Class Year

Decision	Class	
Admitted	2015	4.99%
	2016	6.20%
	2017	10.33%
	2018	10.50%
	2019	12.74%
	2020	12.22%
	2021	7.40%
	2022	11.02%
	2023	10.84%
	2024	4.65%
	2025	6.71%
	2026	2.41%

Admission Percentage
2.41% 12.74%

These comprehensive visualizations integrate admission rates and decisions by graduating class within the PTC program. Spanning from 2014 to the suspension years in 2020 and 2021, the admission rates by the Graduating Class table unveils peak rates for the classes of 2017, 18, and 19, coinciding with increased program popularity. Post-suspension, recent classes show potential for higher admission rates. The accompanying admission decision by the Graduating Class table highlights outliers, such as the 2026 class waitlisted in 2023 for a non-accepting class. Notably, the class of 2022, despite program suspension, exhibits a higher admission rate, indicating a trend of increased commitment to the career-oriented practicum course as the program gains popularity.

Last, our final analysis delves into the intricate dynamics shaping the popularity of academic disciplines at Bates College. Rather scrutinizing specific majors, this development helps focus on the broader implications of understanding application patterns. While recognizing prevalent trends, our primary aim is to identify majors with consistently low application rates, unraveling potential barriers to student engagement with the Practitioner-Taught Course (PTC) program. This analysis offers a strategic lens through which to consider the transformative role of Purposeful Work in breaking down barriers and enhancing the program's appeal across a spectrum of majors.

Applicant Rates by Major

Class

% of Total Count of Major
0.81% 38.10%

Major	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Africana								1.33%				
American Studies		1.61%	2.02%			1.74%		2.67%				1.69%
Anthropology		1.61%	1.01%			0.87%	1.82%					
Art & Visual Cult..	4.08%		2.02%	2.06%	0.81%	0.87%		2.67%	1.09%			
Asian Studies						0.87%						
Biochemistry	2.04%	1.61%	3.03%		0.81%	4.35%			4.35%		7.81%	8.47%
Biology	6.12%	1.61%	4.04%	6.19%	4.07%	2.61%	5.45%		1.09%		1.56%	1.69%
Chemistry	4.08%	3.23%		1.03%		0.87%				2.38%		
Chinese		3.23%								2.38%		
Classical & Medi..	4.08%	3.23%			0.81%		3.64%		1.09%			
Dance		1.61%	1.01%	1.03%	0.81%	0.87%						
Earth and Climate..	2.04%	1.61%		1.03%	0.81%		1.82%	2.67%				
East Asian Studies						0.87%						
Economics	14.29%	11.29%	22.22%	23.71%	17.07%	26.96%	18.18%	12.00%	23.91%	38.10%	23.44%	18.64%
Engineering			1.01%					1.33%				
English		3.23%	6.06%	7.22%	6.50%	3.48%	1.82%	2.67%	3.26%	2.38%		
Environmental St..	12.24%	6.45%	3.03%	8.25%	4.07%	2.61%	9.09%	5.33%	2.17%	7.14%	7.81%	
European Studies		1.61%				0.87%					1.56%	
French									3.26%			
History	4.08%		3.03%		0.81%	2.61%	3.64%	1.33%	1.09%			1.69%
Interdisciplinary ..		6.45%	1.01%	1.03%	0.81%	0.87%	1.82%		2.17%		1.56%	
Japanese			2.02%									
Latin American St..				1.03%		0.87%						
Math								1.33%				
Mathematics	2.04%	4.84%	3.03%	2.06%	5.69%	0.87%		1.33%	1.09%	4.76%	6.25%	3.39%
Music		1.61%	2.02%		2.44%			1.33%		2.38%	1.56%	
N/A			2.02%	2.06%	8.13%	3.48%			1.09%	2.38%	3.13%	5.08%
Neuroscience		4.84%	1.01%	6.19%	1.63%	6.96%	9.09%	6.67%	2.17%	9.52%	1.56%	1.69%
Philoshophy	2.04%	3.23%	1.01%	2.06%	2.44%	0.87%	3.64%	2.67%		4.76%		3.39%
Physics	4.08%	1.61%	2.02%	1.03%	0.81%	4.35%	3.64%	1.33%	5.43%		3.13%	
Politics	16.33%	11.29%	8.08%	2.06%	14.63%	8.70%	1.82%	17.33%	20.65%	11.90%	20.31%	25.42%
Psychology	8.16%	11.29%	18.18%	7.22%	13.01%	10.43%	16.36%	16.00%	9.78%	7.14%	6.25%	3.39%
Religious Studies	2.04%				0.81%	0.87%						1.69%
Rhetoric	2.04%	8.06%	6.06%	13.40%	2.44%	0.87%	5.45%	2.67%	2.17%	2.38%		1.69%
Sociology	8.16%	3.23%	4.04%	8.25%	8.13%	5.22%			5.43%	2.38%	3.13%	3.39%
Theater	2.04%	1.61%	1.01%			1.74%	1.82%	1.33%			1.56%	
Undecided				3.09%	2.44%	3.48%	10.91%	16.00%	8.70%		9.38%	18.64%

Major applicant rates in this table primarily illustrate the popularity of majors. Economics, a prominent major at Bates, has a significant number of students applying for the PTC program. The table is useful for marketing strategy by identifying majors with consistently low application rates. It helps assess barriers to program participation and determine if Purposeful Work can address and alleviate these barriers or offer courses beneficial to these majors.

Wrap-Up

In our analysis of the Practitioner-Taught Course (PTC) program at Bates College, I used data and technology to improve decision-making and make education more inclusive. I started by collecting key information using Python and Excel to understand student demographics and course evaluations. Then, I cleaned the data in Excel to fix errors, and used SQL for a detailed analysis, especially focusing on how the program affects different types of students. Finally, I used Tableau to turn the complex data into easy-to-understand visuals.

This data-driven approach has led to many benefits. The PTC program now makes decisions about admissions, withdrawals, and waitlisting based on a deep understanding of the student body. I also use demographic insights to reach out to different groups of students, promoting fairness and inclusivity. By constantly analyzing data, I ensure the PTC program stays relevant and responsive to students' changing needs. Overall, this tech-savvy method supports the program's goals and Bates College's commitment to providing a fair and impactful education.

As I conclude this data project, it's clear that combining technology with careful analysis has transformed the PTC program. Positive student feedback shows the success of our efforts, highlighting its crucial role in shaping the educational and professional paths of Bates College students. This data analysis not only acknowledges past accomplishments but also sets the stage for a future where the PTC program continues to thrive, promoting inclusivity, informed decision-making, and ongoing improvement in the quest for educational excellence.

Thank you, Marianne Cowan, and the rest of the Purposeful Work team for providing me with abundant resources and data to create this project.