

Business Intelligence and Analytics with Tableau

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Goal of the project

- Define a business question
- Derive insight from the data to answer the business question
- Visualize the outcome with 
- Provide the direction to the University

Overview of the dataset

- The data file includes students' achievement information for courses offered in a Philosophy program at a university over several terms.



The data description

- Summary for enrollment and grade with 306 rows for 23 courses and 13 terms between 2013 to 2016
- 9 variables showing the number of enrollments, pass, withdrawal failing, no grade by each course and term

Variable Name	Variable Type	Value labels	Variable Description
CourseName	Alpha numeric	n/a	Name of the course
Course Identification	Alpha numeric	n/a	Course Identification (all sections of the same course have the same course identification)
CRN	Numeric	na	Course Record Number (each section has a different CRN; this is a unique identifier; there are no sections that have the same CRN)
PriortoFall16*	Numeric	0 - course taught prior to Fall 2016; 1 - course taught in Fall 2016	Was the course taught prior to Fall 2016 or was it taught in Fall 2016
Term	Alpha numeric	n/a	The semester the course/section was taught
TotalEnrollment	Numeric	n/a	Total number of students enrolled in the section
NoGrade	Numeric	n/a	Number of students who did not receive a grade (received an Incomplete in the course)
WithdraworFailingGrade	Numeric	n/a	Number of students who withdrew or failed the course/section
PassingGrade	Numeric	n/a	Number of students who received a passing grade

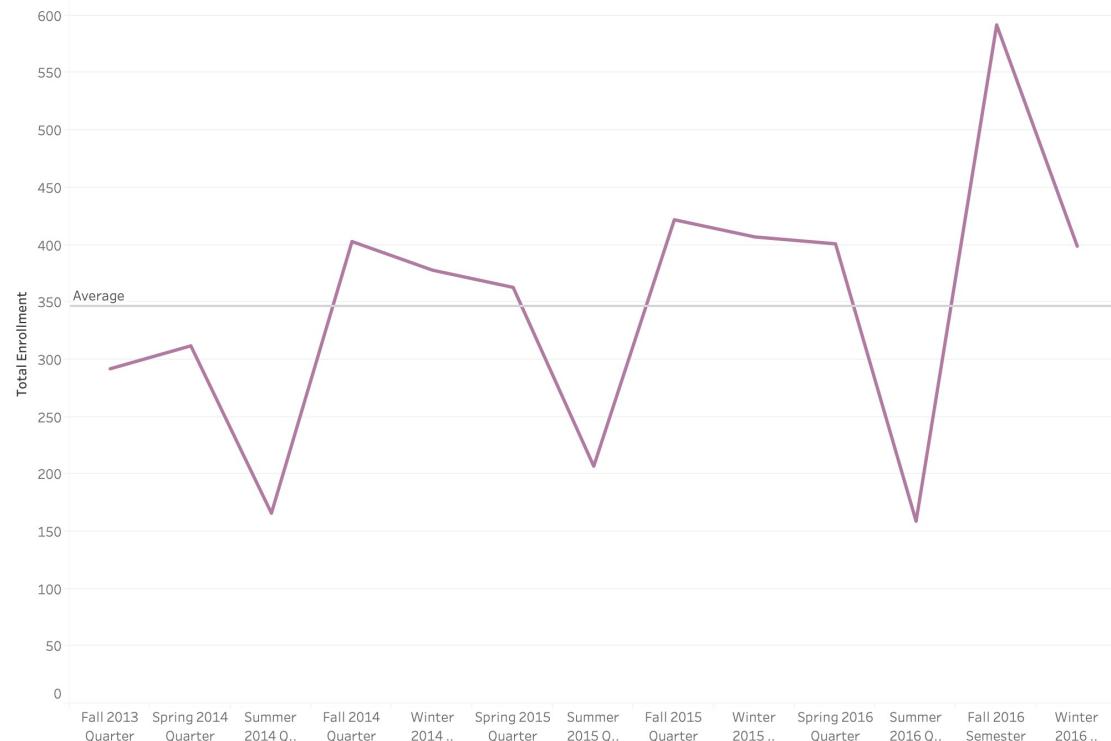
- Added variables of rates for passing grade, withdrawal failing grade, and no grade to compare objectively

=# Calculation Passing Rate %	=# Calculation Withdrawal Failing ...	=# Calculation Passing Remainin...	=# Calculation 1	=# Calculation No Grade Rate %
100.0%	0.0%	0.0%	1	0.0%
100.0%	0.0%	0.0%	1	0.0%
100.0%	0.0%	0.0%	1	0.0%
100.0%	0.0%	0.0%	1	0.0%

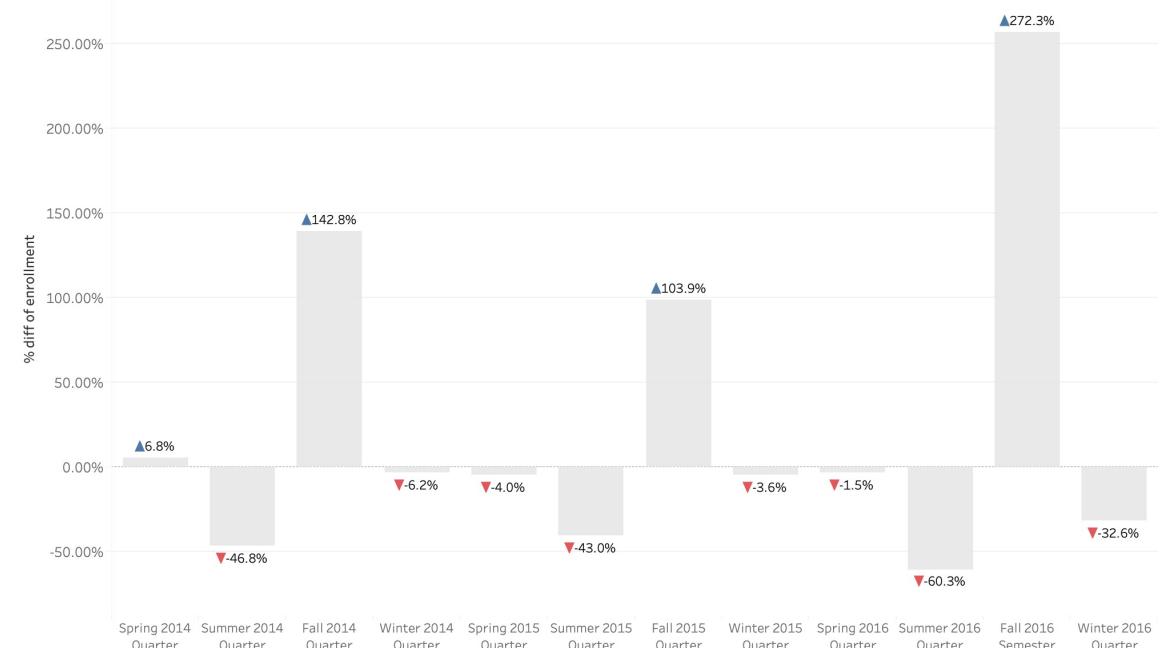
Analysis by Enrollment

- How is the trend of enrollment by each term?
- When is the peak and lowest point for enrollment?

Number of Enrollments by Term



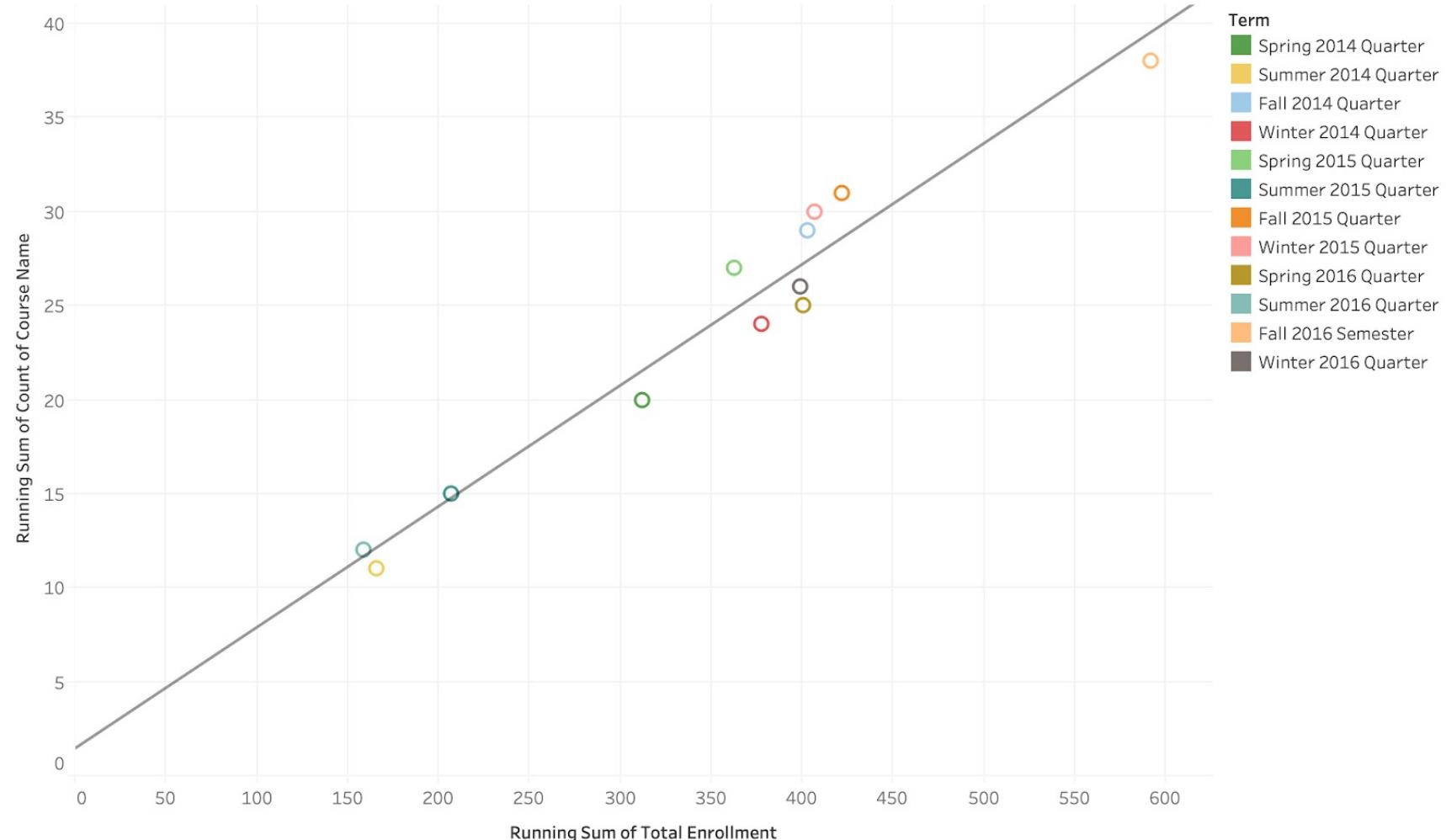
% Difference of Enrollment by Term



Analysis by Enrollment

- Is there a correlation between the number of enrollment and course?

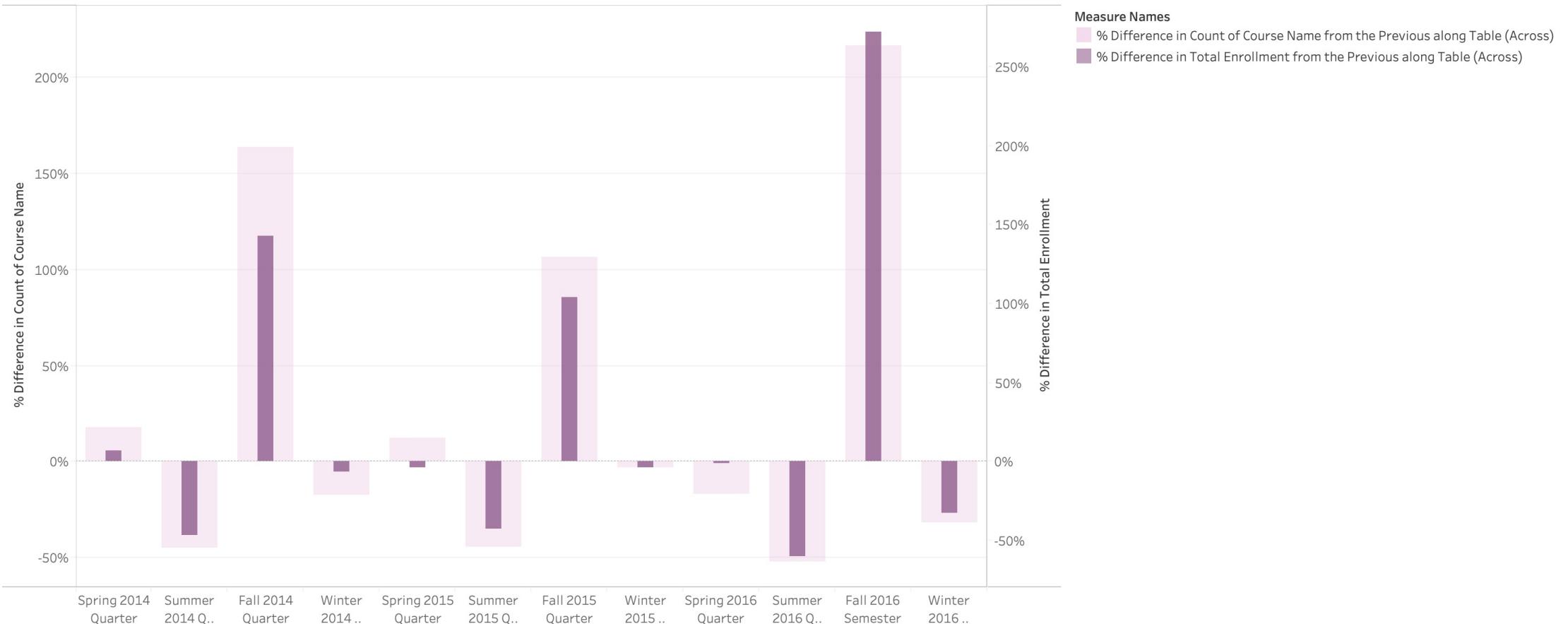
Number of Total Enrollment and Course



Analysis by Enrollment

- Is there a correlation between the number of enrollment and course?

% Difference between Number of Enrollment and Course



Analysis by Grade Rate

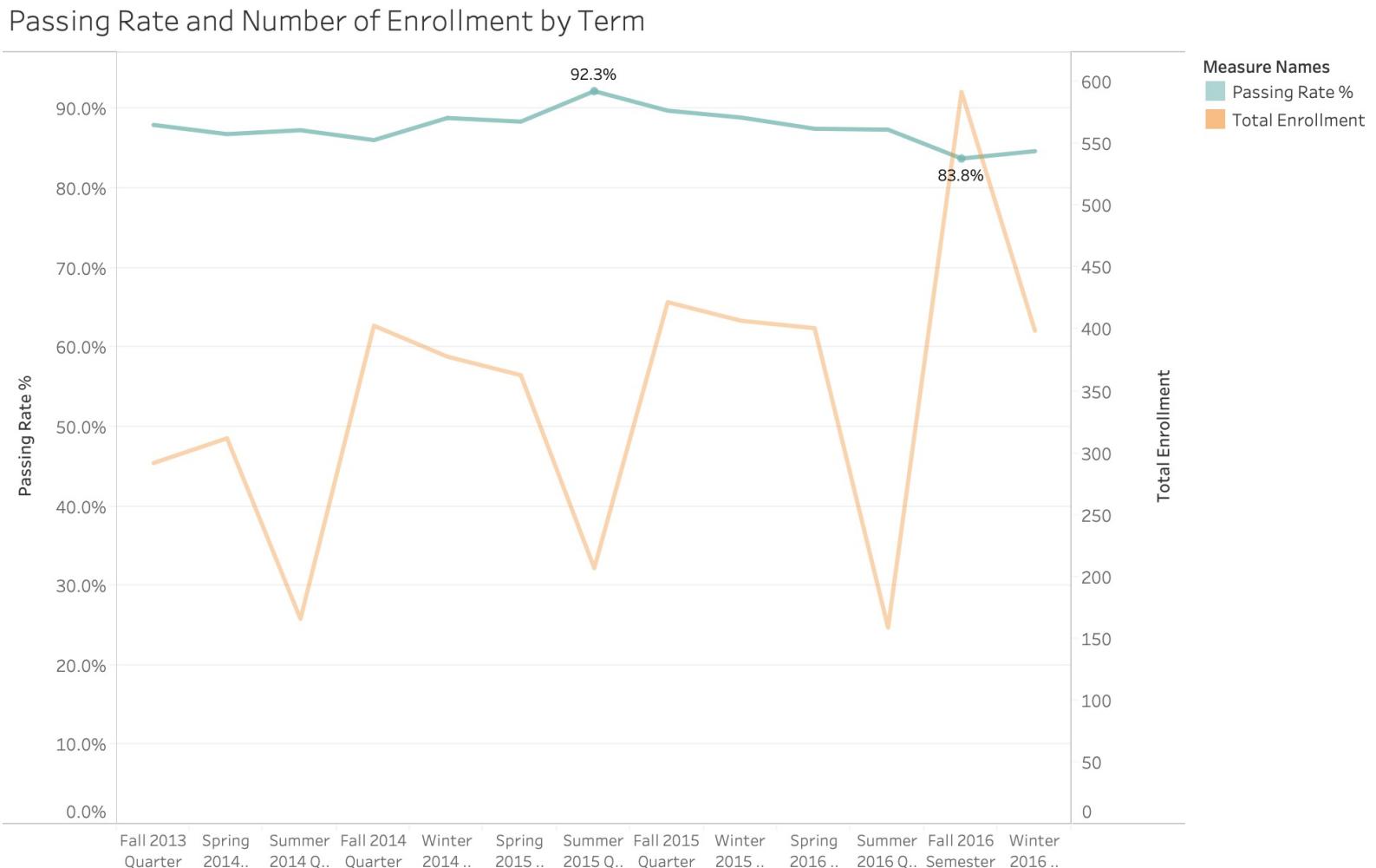
- How is the trend for passing / withdrawal failing / no grade rate by term?

Passing/Withdrawal&Failing/No Grade Rate by Term



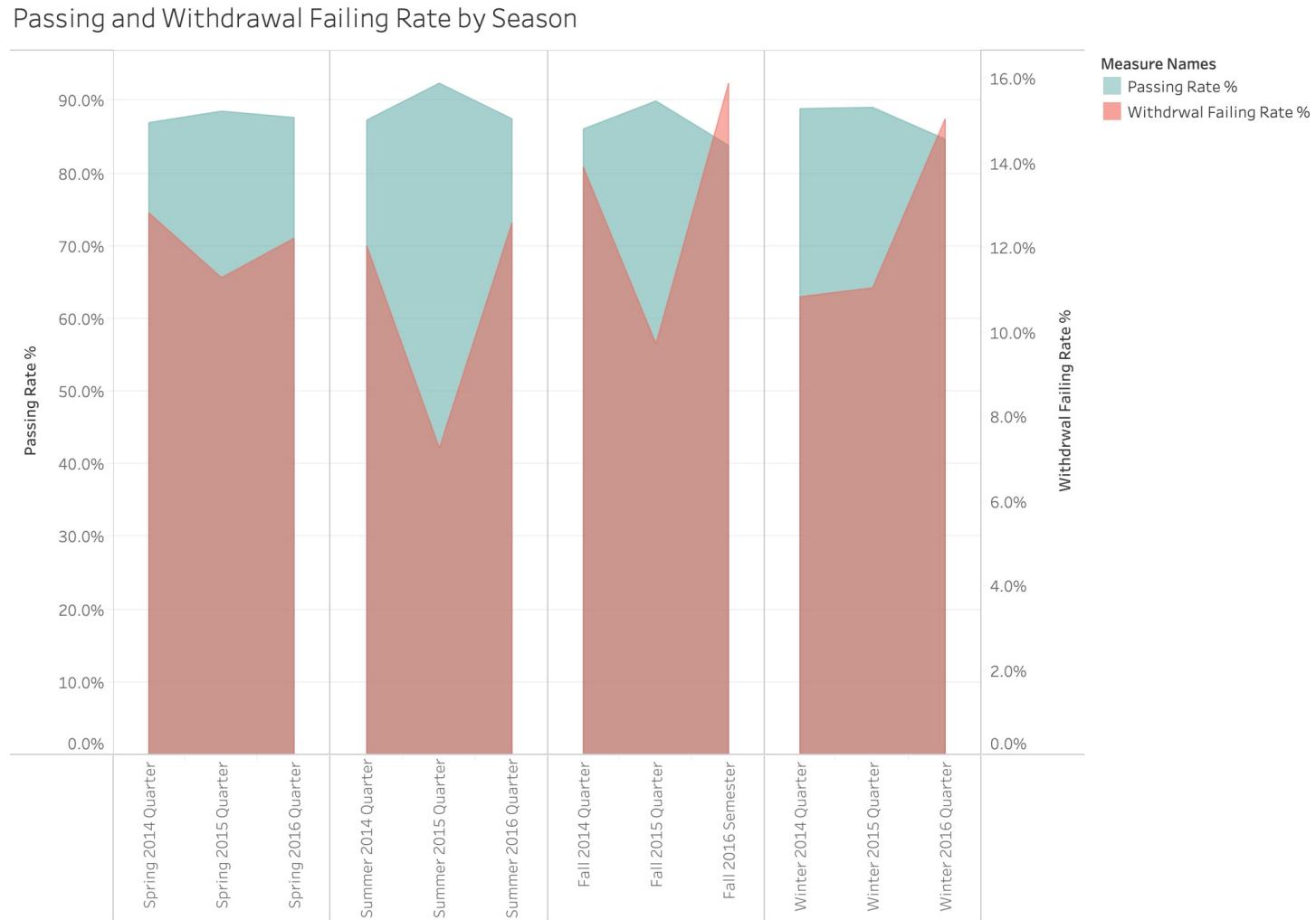
Analysis by Pass / Fail

- Is there any correlation between passing rate and enrollment by term?



Analysis by Season

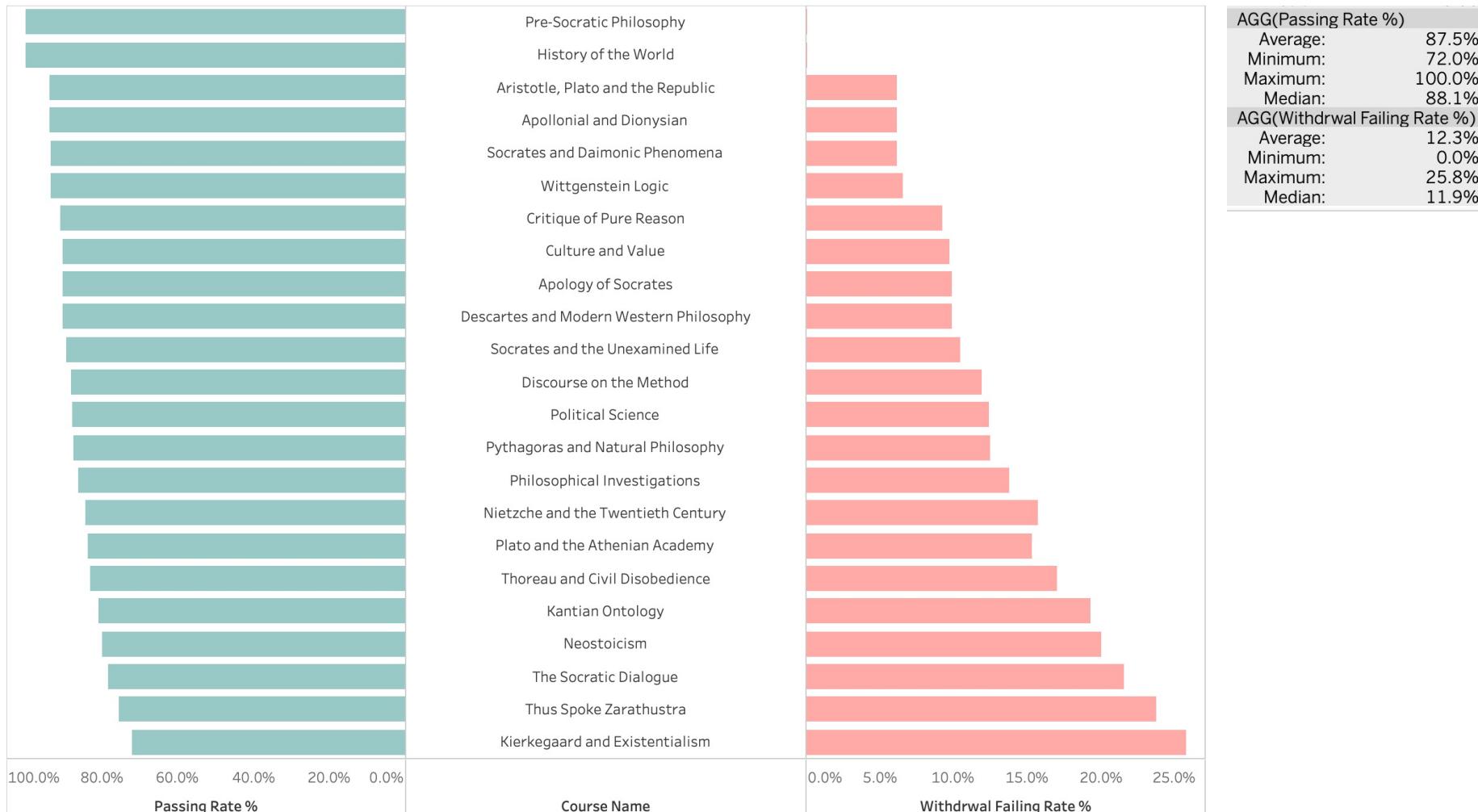
- Is there any trend by season for passing and withdrawal failing rate?



Analysis by Course

- How is the passing / withdrawal failing rate by course?

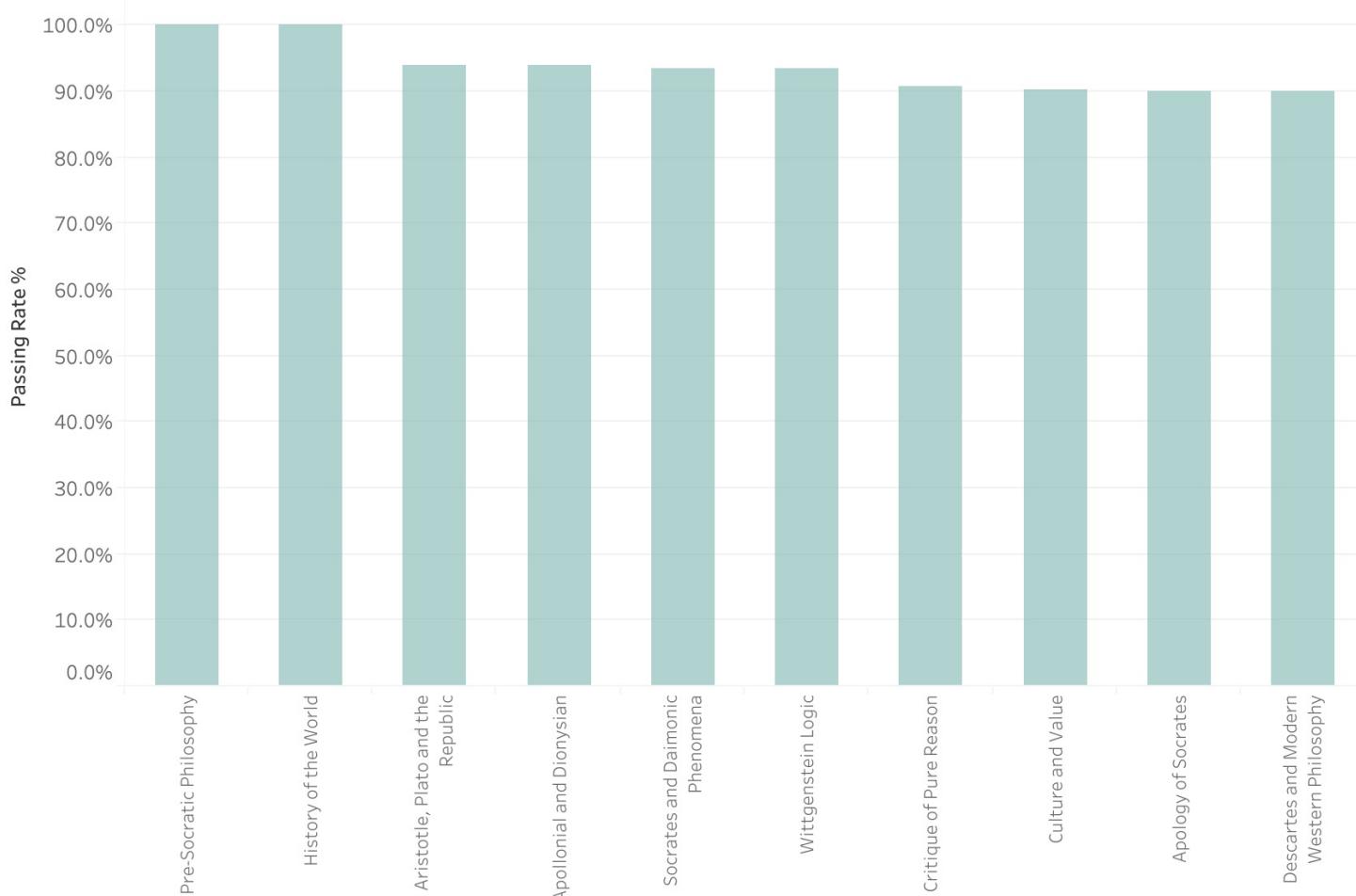
Passing and Withdrawal Failing Rate by Course



Analysis by Course

- What is top 10 courses by passing rate?

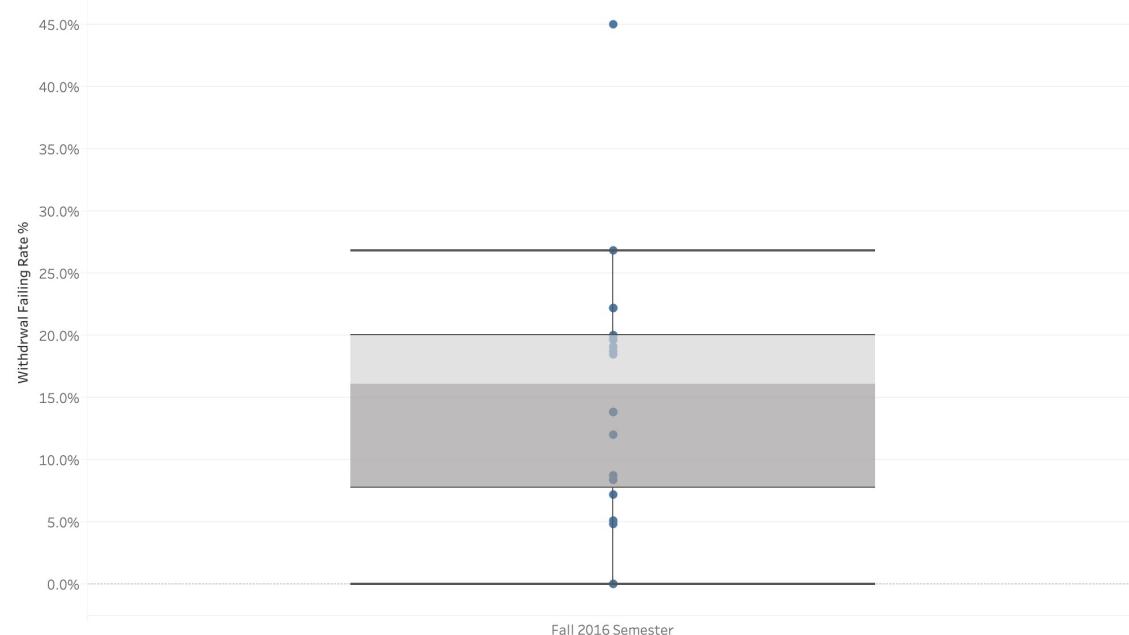
Top10 Courses by Passing Rate



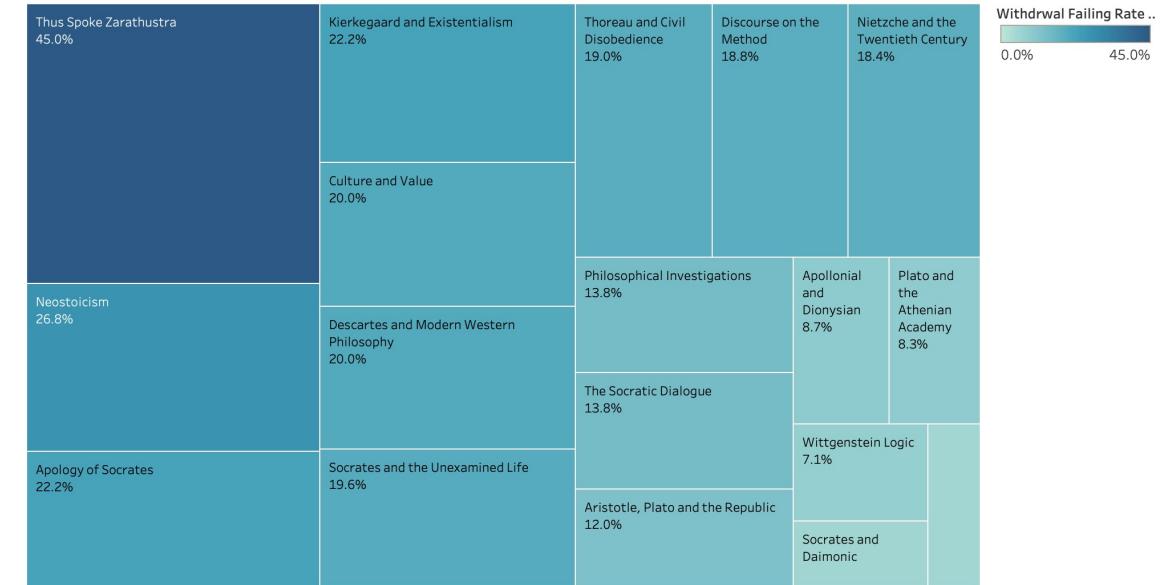
Analysis by Fall 2016

- What is withdrawal failing rate for fall 2016?

Withdrawal Failing Rate for Fall 2016



Courses by Passing Rate for Fall16



Conclusion

- There has been the adverse variance in the number of enrollment from 2014 to 2016; the peak at Fall 2016 and the lowest at Summer 2016.
- Number of courses seem adequate for each term considering the positive correlation with the number of enrollment.
- We can identify that passing rate is at peak on summer 2015, and at the least point on fall 2016. (Withdrawal failing rate shows exact opposite)
- There was not a significant trend between passing rate and the number of enrollment.
- ‘Pre-Socratic Philosophy’ and ‘History of the World’ show the highest passing rate of 100%.
- ‘Thus Spoke Zarathustra’ and ‘Kierkegaard and existentialism’ show the the highest withdrawal failing rate and they are also on the top for Fall 2016 which has the lowest passing rate. We can identify that these courses have been affecting the passing rate and they need to be analyzed deeply to increase increasing rate.
- We need to focus on scheming the courses on each term to increase the passing rate.

Reference

- Frye, C. (2020, 9 4). Retrieved from LinkedInLearning: <https://www.linkedin.com/learning/tableau-essential-training-2020-1/calculate-percentages-within-a-table?u=74653650>
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Thank you

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