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# The Impact of Corequisite Math Remediation at UCA

COMPLETE  
COLLEGE  
AMERICA

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**ABOUT US**



# By the Numbers

## UCA

- 11,350 total enrollment
- 1,937 first-time freshmen
- 24.3 Average ACT
- 362 students in remedial math

## Dept. of Student Transitions

- 13 full-time faculty
- 6 full-time math faculty
- 0-1 adjunct faculty for math
- Over 75 years teaching experience

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## PLACEMENT

Refining the pathway



# Before Data: Placement Guide



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Placement Scores	Majors: Fine Arts / Communication Liberal Arts Undecided	Majors: Business, Education, Health and Behavioral Sciences, Natural Sciences and Mathematics
Math ACT 17 – 18	UNIV 0360 – Foundations of QL <b>AND</b> MATH 1360 – Quantitative Literacy	UNIV 0390 – Foundations of CA <b>AND</b> MATH 1390 – College Algebra  <b>--OR--</b>  <b>Accelerated:</b> UNIV 1340 – Intermediate Algebra <b>AND</b> MATH 1390 – College Algebra
Math ACT 16 or below	<b>Full Term Courses:</b> UNIV 0331 – Progressive Mathematics <b>OR</b> UNIV 1340 – Intermediate Algebra	

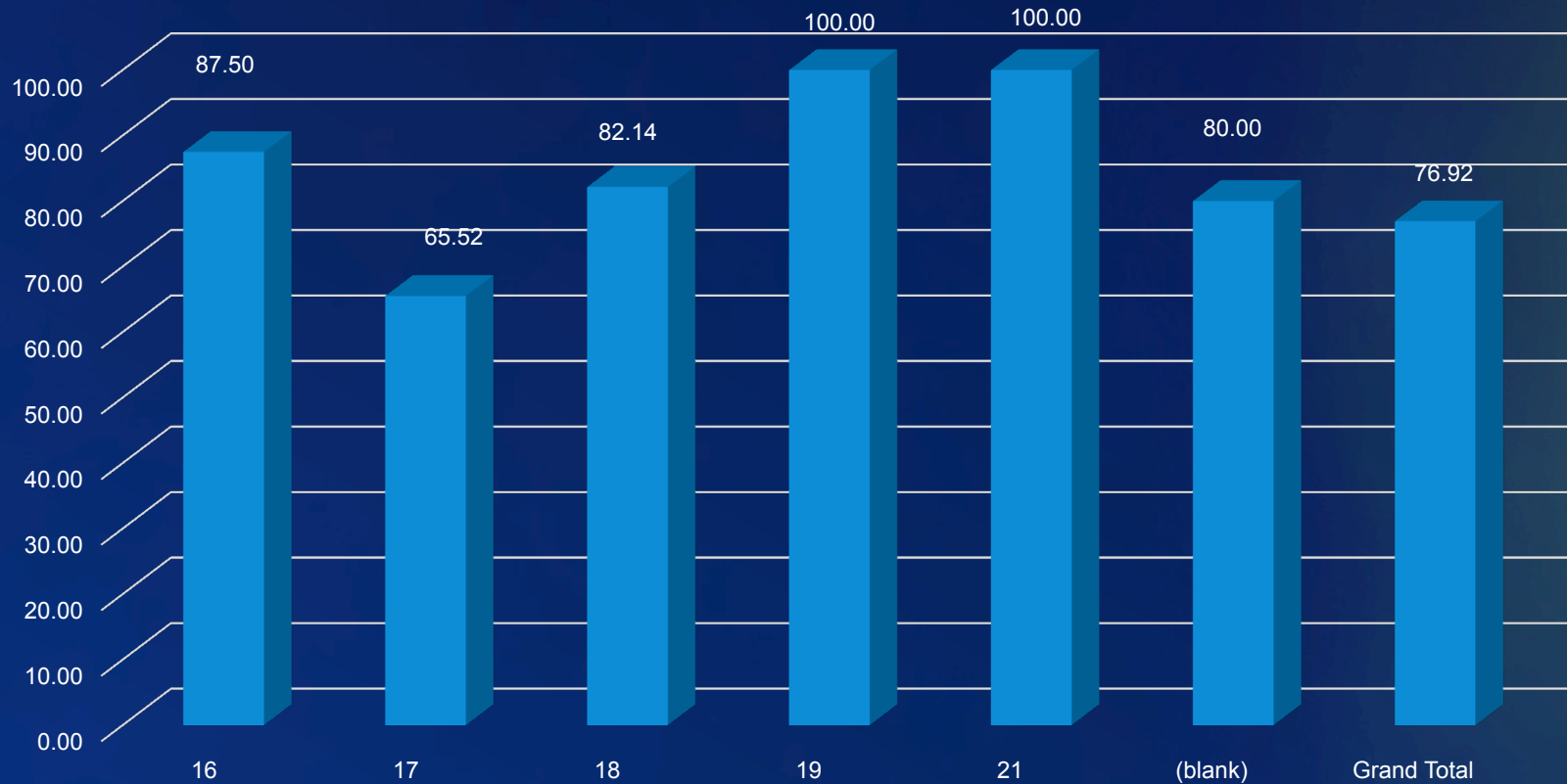
# Pilot: Co-requisite College Algebra

- Math ACT 17 – 18
- Data showed all ACT scores were successful



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Pilot Success Rates by MATH ACT



# After Data: Placement Guide



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Placement Scores	Majors: Fine Arts / Communication Liberal Arts Undecided	Majors: Business, Education, Health and Behavioral Sciences, Natural Sciences and Mathematics
Math ACT < 19 (or equivalent)	UNIV 0360 – Foundations of QL <b>AND</b> MATH 1360 – Quantitative Literacy	UNIV 0390 – Foundations of CA <b>AND</b> MATH 1390 – College Algebra

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## LOGISTICS

Creating effective options





# Before Data: Scheduling Courses



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Student  
data-  
informed  
decisions



# Factors that Influenced Our Design

- Number of Faculty vs. Number of Students
- Size of Classrooms
- Student Makeup
  - Traditional vs. Non-traditional
  - On campus vs. Commuter
- Other Outside Factors
  - Lack of Student movement between departments
  - What the students took next...
  - Control of courses involved



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# Scheduling and Design Options



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## Scheduling

- 2 day vs. 3 day vs. 4 day vs. 5 day
- Foundations before vs. Foundations after, if on same day

## Student and Faculty Makeup

- Co-mingled vs. Non co-mingled
- Paired or Not-Paired





# After Data: Course Schedules

- 5 day versus 3 day
  - Statistically no difference (80% vs. 81%)
- 5 day versus 2 day
  - Statistically 5 day performs better (80% vs. 66%)
- 5 day versus 4 day
  - Statistically no difference (80% vs. 77%)



# After Data: Course Schedules

- 5 day and 3 day are best, statistically
- Non co-mingled
- 1 Faculty



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# Overall Fall vs. Spring Completion Rates

Completion is a C or higher



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**78%**

**Fall Semester**

**62%**

**Spring Semester**



# After Data: Course Schedules

- 5-day-a week spring co-requisite courses.
- Embedded tutors



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## CURRICULUM

Developing and refining course content





# Before Data: Developmental Curriculum

- 2 separate courses (IA or PM then CA/QL)
- 2 sets of content (supposedly aligned)
- 2 different semesters



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# College Algebra Final Data, Non-remediated



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Fall 2017

A = 103

B = 117

C = 78

D = 89

F = 144

Total = 531

Fall 2016

A = 114

B = 111

C = 78

D = 73

F = 208

Total = 584

Fall 2017

Percent C or Higher: **57%**  
(n = 566, 321 made C or Higher)

Fall 2016

Percent C or Higher: **52%**  
(n = 623, 324 made C or Higher)



# Co-requisite College Algebra Final Data



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Fall 2017

A = 90

B = 85

C = 67

D = 30

F = 53

Total = 325

Fall 2016

A = 49

B = 64

C = 56

D = 44

F = 52

Total = 265

Fall 2017

Percent C or Higher: **76%**  
(n = 290, 219 made C or Higher)

Fall 2016

Percent C or Higher: **64%**  
(n = 232, 148 made C or Higher)



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## ASSESSMENT

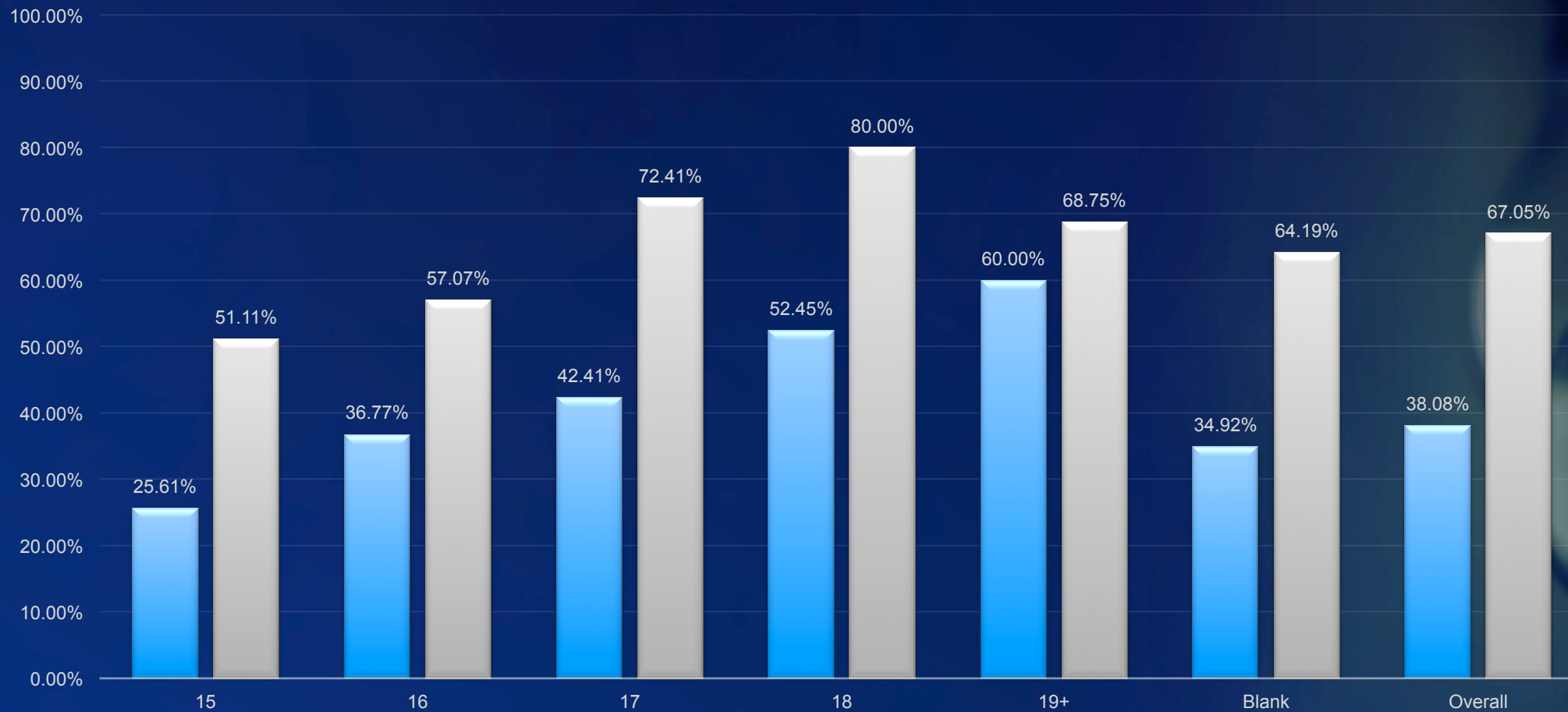
Evaluating effectiveness of co-requisite design





# Data Before Co-requisite Design

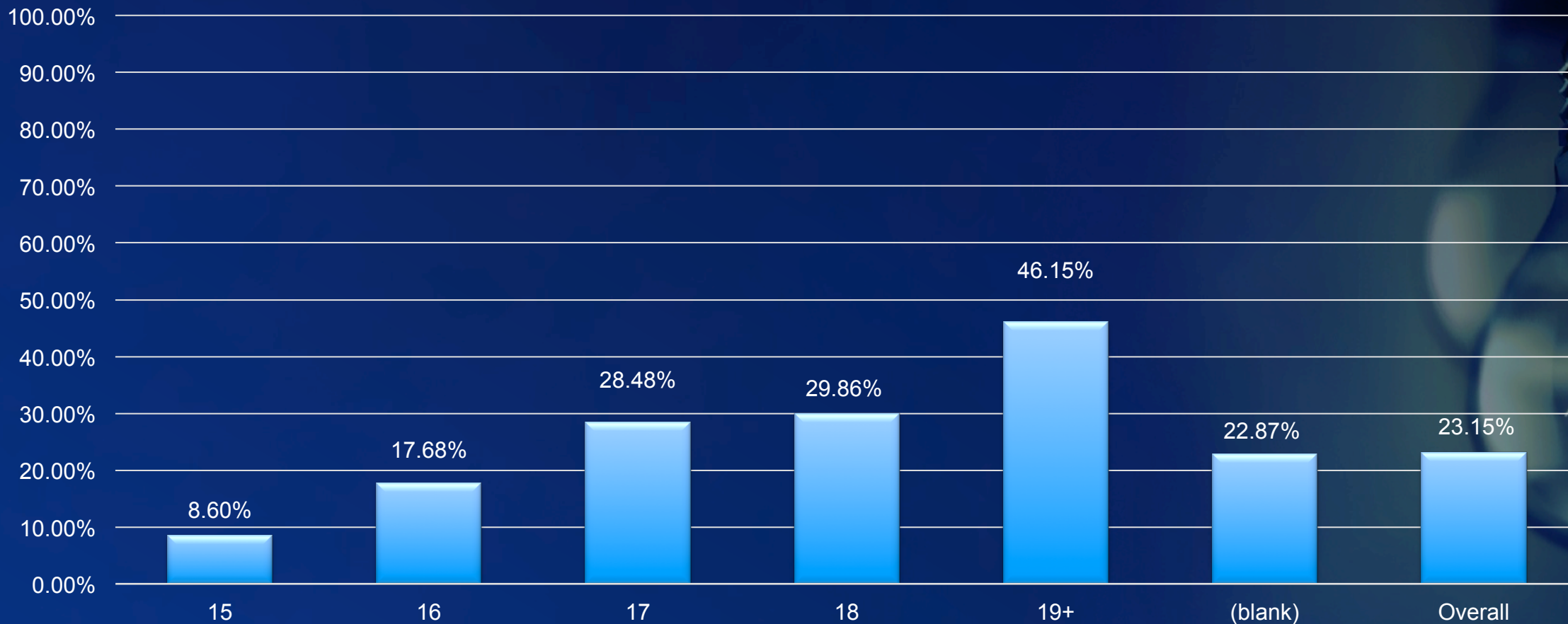
## Progressive Math versus Intermediate Algebra Pass Rates





# Data Before Co-requisite Design

## 1-year Success Rates in Dev Ed and College Algebra

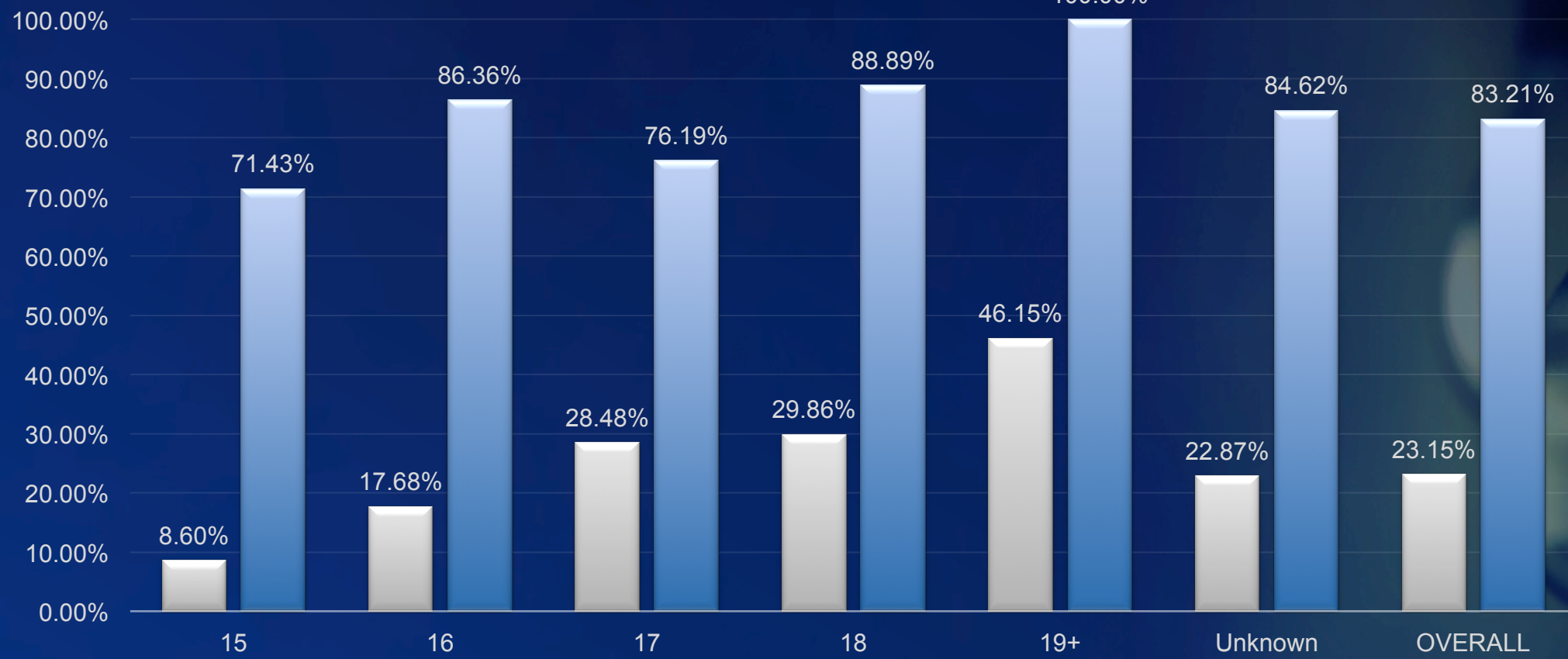


### Math ACT Scores



# Data After Co-requisite Design

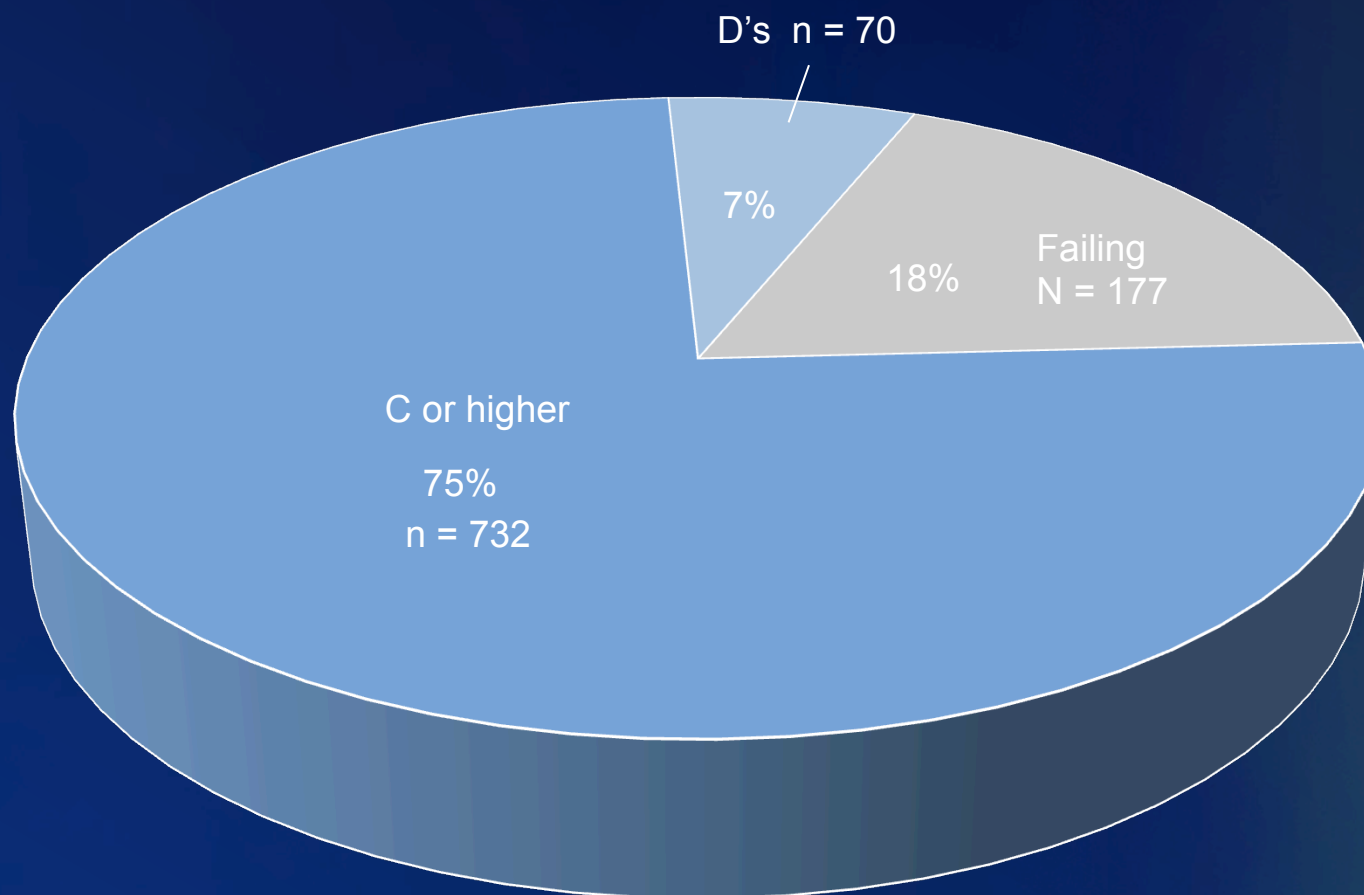
## 1-Year College Algebra Completion Versus FCA



## Math ACT Scores



# College Algebra Pass Rates





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## Next Steps

Discovering the next frontier



# Goals for 2019

- Digging deep into data student variables
- Considering additional statistical comparisons of course designs
- Creating spring semester interventions



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