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UNIVERSITY of HOUSTON COLLEGE OF EDUCATION

HCC HOUSTON COMMUNITY COLLEGE

# IMPROVING EQUITY THROUGH COREQUISITE SUPPORT

## EXECUTIVE SUMMARY


## AUTHORS

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# EXECUTIVE SUMMARY

Community colleges are a primary access point to higher education for many students, particularly Black, Latinx,[a] Asian American and Indigenous students, adult learners and students with low incomes. More than two-thirds of community college students nationally are labeled academically underprepared in math and/or English, and racially minoritized[b] students, including Black and Latinx students, are often overrepresented in non-college credit developmental education courses.[1]

The corequisite support model is a reform effort that has been implemented in states and institutions across the United States. In this format, students are concurrently enrolled in a college-level course and a developmental education support course. This allows students to start their college career by taking college-level coursework while also receiving structured academic support.[2] The goal is to enroll students into college-level coursework in their first semester to accelerate students toward graduation or transfer.[3] Ultimately, the corequisite model aims to shift the burden from the students to be "college-ready" to higher education institutions to address the academic needs of their students.

This model has seen promising results with more students transitioning into college-level coursework and graduating after completing corequisite courses.[4] That said, inequities are also found when taking a closer look at the data. Nationally, nearly 30% of students in corequisite courses still do not pass on their first attempt, and racially minoritized students are again overrepresented among this group.[5] These numbers highlight the need to further explore features within the corequisite model that can be improved and optimized to truly address the needs of racially minoritized students working toward a college degree.

This executive summary highlights key findings from a multi-year, mixed-methods research study of the corequisite model at Houston Community College, one of the nation's largest and most racially and ethnically diverse community college systems. The project was executed via a long-standing research-to-practice partnership between the University of Houston and HCC. The goal of our research project was to improve the academic performance, persistence and graduation rates of HCC students required to take corequisite coursework in math and/or English. Collectively, our findings help identify strategies that maximize the effectiveness of corequisite models with careful attention to equity issues, and increasing educational attainment among racially minoritized and students with low incomes.

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a We use the term Latinx as a gender-neutral term for individuals who identify as having ethnic and historical roots to Spanish colonizers and Indigenous groups of present-day Mexico, Central America, South America and parts of the Caribbean (Salinas & Lozano, 2017).

b We use the term minoritized to denote the objective outcomes resulting from the historical and contemporary practices of racial-ethnic exclusion along with the continued social, political and economic existence of marginality and discrimination (Chase et al., 2014). The focus is not on numerical representation, but rather on access to societal privileges within the U.S.

As we discuss equity, we refer to the definition provided by the Center of Urban Education at the University of Southern California, which views equity as "achieving parity in student educational outcomes, regardless of race and ethnicity. It moves beyond issues of access and places success outcomes for students of color at center focus."[6] This also requires institutions to review and change policies and practices that reduce barriers for minoritized students.

# RESEARCH METHODS

**Research Question 1:** To what extent do the structural characteristics of a corequisite course relate to success in corequisite coursework for first-year students across the HCC system? Does the relative importance of these structural characteristics differ by students' race, age and income status?

**Research Question 2:** How do HCC students who fail or withdraw from corequisite sequences differ from students who pass corequisites? What factors predict the subsequent enrollment behaviors (e.g., immediate reenrollment, change major, transfer, stop-out) of students who do not initially pass corequisites?

To answer our research questions and learn more about the HCC corequisite model, we analyzed student data extracted for the 2019–20 and 2020–21 academic years from HCC's administrative files containing student information and course characteristics. These years included coursework taken before the COVID-19 pandemic as well as coursework impacted by the pandemic. To this, we added information about transfers taken from the National Student Clearinghouse.

We also conducted interviews with corequisite faculty and students, as well as student success deans who have direct oversight of the academic advising and support services provided to corequisite students. **Table 1** breaks down our participant numbers. **Table 2** further highlights the diversity of the corequisite students we interviewed, which included a majority of racially minoritized students.

**TABLE 1** STUDY INTERVIEW PARTICIPANTS

| | | |
|---|---|---|
| COREQUISITE STUDENTS | Math | 19 |
| | English | 23 |
| COREQUISITE FACULTY | Math | 26 |
| | English | 25 |
| STUDENT SUCCESS DEANS | | 3 |

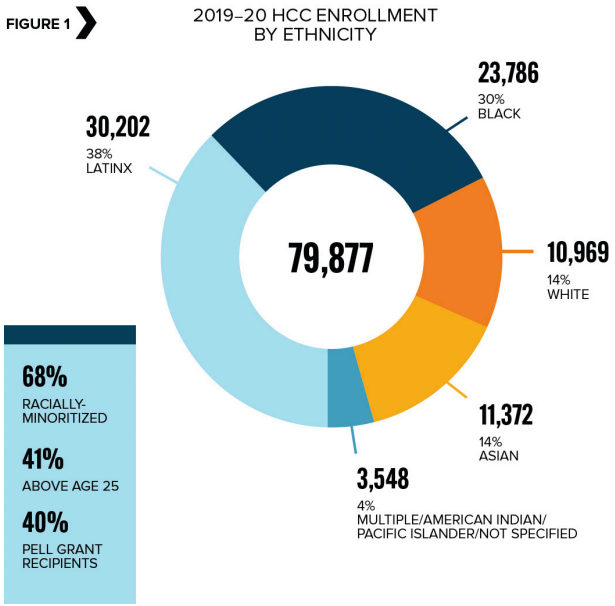
**TABLE 2** COREQUISITE STUDENT INTERVIEWS: DEMOGRAPHIC CHARACTERISTICS

N = 42

| | | | | | |
|---|---|---|---|---|---|
| COREQUISITE COURSE | Math | 19 | GENDER IDENTITY | Woman | 32 |
| | English | 23 | | Man | 9 |
| | | | | No answer | 1 |
| RACE/ ETHNICITY | White | 2 | AGE RANGE | 18–19 | 9 |
| | Black | 23 | | 20–24 | 7 |
| | Asian | 4 | | 25–30 | 9 |
| | Latino/Hispanic | 10 | | 31–40 | 9 |
| | Two or more | 3 | | 41–50 | 3 |
| | | | | 51–60 | 4 |
| | | | | 60+ | 1 |

# BACKGROUND AND CONTEXT

FIGURE 1 ❯




HCC has an annual enrollment of approximately 80,000 students. As a system, it spans nearly 630 square miles — half the size of Rhode Island — and serves seven school districts. HCC offers a range of academic programs, including transfer-oriented and workforce programs. In fall 2019, approximately 38% of new HCC students were referred to developmental education. **Figure 1** highlights 2019–20 HCC student demographics.

In 2017, Texas passed legislation (HB 2223) mandating higher education institutions across the state use the corequisite model to deliver developmental education courses to students deemed academically underprepared.[7] HB 2223 also gave institutions until fall 2020 to have at least 75% of students enrolled in developmental coursework participating in a corequisite model, rather than a prerequisite model.[8] However, institutions were given the autonomy to determine how to structure and implement corequisite courses, as long as the learning outcomes established by the state were met. Beginning in fall 2018, HCC students considered academically underprepared in math and/or English were advised to enroll in corequisite and college-level course pairs rather than the traditional prerequisite sequences.

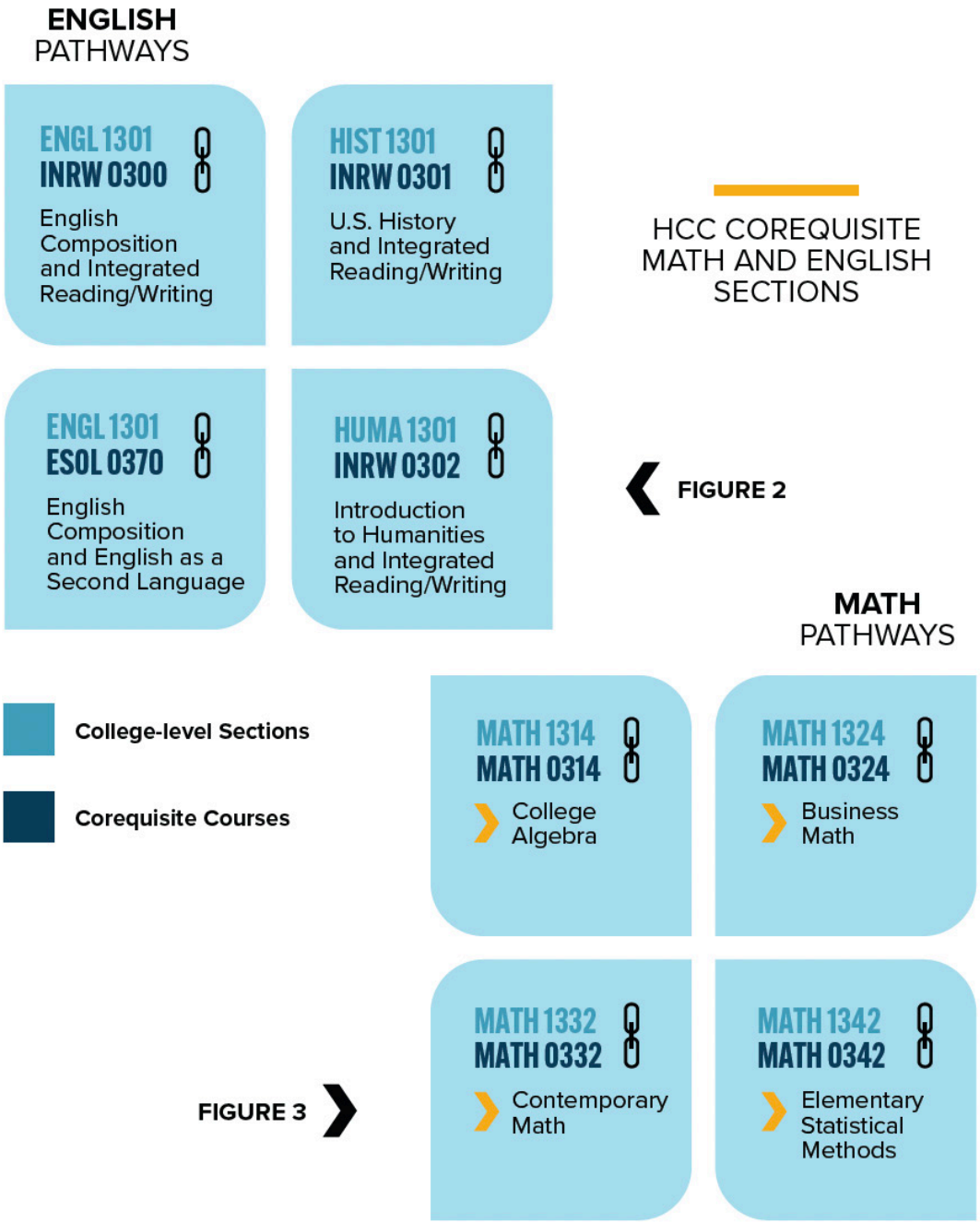
# MATH AND ENGLISH PATHWAYS

### English Pathways

There are also four English corequisite sections that include college level courses in English Composition, Introduction to Humanities and U.S. History. The support course sections paired with the college gateway course are Integrated Reading or Writing and English for Speakers of Other Languages (see **Figure 2**).

### Math Pathways

Here are four college-level math sections — College Algebra, Business Math, Contemporary Math and Elementary Statistics — each paired with its own support course (see **Figure 3**). These Math Pathways are designed to support specific student majors (e.g., STEM vs. Business vs. Social Science).



# OUTCOMES

**Pass rates for the English for Speakers of Other Languages were high.**

Pass rates in the ESOL sequence were very high, highlighting student success in this corequisite model (i.e., students learning English as a second language).

**A select group of students excelled in the Integrated Reading or Writing sequence.** Students who were more likely to pass the corequisite course were:

- Female
- Latinx
- Attending full-time
- Began the semester with a college-level GPA higher than 2.5
- Living in zip codes with higher median incomes
- Majoring in the health sciences

# KEY FINDINGS

**Gender and GPA were associated with student success.**

**Math Corequisites:**

- Students who had previously been successful in coursework at HCC were more likely to succeed than students in their first semester and students with low GPAs.
- Male students and Black students were less likely to pass. However, Latinx students performed similarly to, and in some cases outperformed, white students.
- Specifically for the Business Math sequence, students whose math course was aligned to their major tended to outperform students for whom there was a mismatch. For example, Business students were most likely to succeed in the Business Math sequence, whereas Social and Behavioral Sciences students who enrolled in this sequence were less likely to succeed. This effect was not present for the other math sequences.
- Part-time vs. full-time enrollment was not associated with passing the course, and students who received a Pell grant performed similarly to students who did not receive a Pell grant.

**Corequisite course and faculty characteristics are associated with student success.**

The following course characteristics were examined:

- Course Schedule: Number of days per week and placement of the corequisite
- Number of Instructors: One vs. two
- Instructor Characteristics: Full- vs. part-time
- Modality: Online vs. in-person (confounded with onset of the COVID-19 pandemic)

Overall, there were few differences in student success according to the course scheduling variables. Given the size and flexibility of HCC's course schedule, it seemed likely that students chose the schedule that worked best for them. However, some differences were apparent:

- In both math and English, students taught by part-time faculty were more likely to pass the corequisite than students taught by full-time faculty.
- There may have been differences in rigor; students who pass corequisites taught by full-time faculty tended to be more likely to pass the paired college-level course.
- In many cases, students were more likely to pass the college-level course when the corequisite and college-level course were taught by the same faculty member.
- For students taught by full-time faculty, there were no differences in success between students in in-person vs. online sections. However, in math, when students were taught by part-time faculty, students in face-to-face sections outperformed students taught online.

**Faculty pedagogy and mindsets are critical to corequisite student success.**

Our quantitative analysis revealed that certain course design features are important but, overall, our qualitative data found that what happens inside the classroom is even more critical to student success. Particularly, faculty pedagogy and mindsets about their students proved more important than the nature of their appointment (full time/part time), course structure (one/two instructors) or delivery format (in-person/online).

The most effective faculty members often had pass rates across their corequisite and college level sections that were 15–20% higher than the average pass rates at HCC for English and math corequisite courses. What often distinguished highly effective faculty was an asset-based mindset guiding their belief that every student has the talent and ability to excel academically.

> “I spend a lot of time convincing my students that they have a right to be where they are; they can do it.”
>
> — Math faculty

> “My class is not just about lecturing about a particular topic. I’m not lecturing to my students, I’m having a conversation with them and I’m asking them to tell me, “Where are you? How do you understand this?
>
> — English faculty

> “He really wanted to see what our weaknesses were because he made sure that we didn’t feel bad for asking the wrong question because there was no wrong question in his classroom and I enjoyed that.
>
> — Math student

# RECOMMENDATIONS

Our findings and other studies consistently expose how racially minoritized students and students from low-income backgrounds are more likely to not pass developmental coursework. Though skill-based development is important, the faculty working closely with students taking corequisite courses must also recognize the human element and truly understand the students they are working with. The following recommendations offer ways in which institutional leaders can create more intentional support systems for corequisite students.

**Provide corequisite faculty, advisors and students with clear information on the purpose, goals and benefits of the corequisite model.** Being well informed allows faculty and advisors to better support students who do not understand why they are in corequisite courses and what their options are if they do not pass.

**Develop holistic and wrap-around services between corequisite faculty and student services.** Corequisite faculty connecting with non-academic services, such as advising, counseling and tutoring, can assist with non-academic challenges students may face (e.g., challenges with hunger, housing, finances, transportation, childcare).

**Provide extra support for students who do not initially pass corequisite courses.** A systematic approach of targeted outreach and interventions should be in place for students who do not pass the corequisite course. They should be identified early and provided integrated support services to help them get back on track.

**Assign highly effective faculty to teach corequisite courses.** Faculty play an important role in building students' confidence and helping them be successful in corequisite courses. Departments need to be intentional about who is assigned to teach courses.

**Invest in professional development for corequisite faculty.** Our findings highlight the need to invest in professional development for corequisite faculty. Faculty with asset-based teaching strategies are able to better meet corequisite students where they are and help students build confidence and effective outcomes for success.

**Share disaggregated student data on pass rates by race, ethnicity and gender.** Math and English departments can share student data with corequisite faculty and student services to have a clearer picture of who is struggling the most.

**Review student data and consider long-term measures of student success.** Math and English departments should review student success data after completing the corequisite sequence. Students passing their corequisite course should not be the only measure of success.

# CONCLUSION

As corequisite supports continue to expand across the country, it is critical to identify the classroom practices, institutional strategies and public policies that maximize successful completion of corequisite English and math courses for all students, especially those historically disadvantaged by traditional developmental education models. Our findings and recommendations are aimed at ensuring developmental education empowers, rather than derails, millions of students from eventually realizing their goals of college graduation.

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