LEE COLLEGE
# Developmental Leave Application

Employee Name: Curtis White     Employee ID #: 0081402

Job Title: MPEC Division Chair     Department/Division: Mathematics/MPEC

**INSTRUCTIONS:** Applicants must prepare a written response addressing each of the eight items listed below. Attach the written response to this application and ensure all required approvals and signatures are obtained prior to submission to Human Resources. <mark>**Return the completed application to the Human Resources Office no later than 12:00 p.m. on Friday, 2/6/2026 via email (hr@lee.edu) or in person (Rundell Hall, Room 201).**</mark> Applications that are incomplete or missing required documentation will not be considered.

1. Describe your proposed developmental leave, including a project description, expected outcomes, deliverables, and timeline. (*Limit to 2 pages*)
2. Describe how your leave will relate to the College's mission, vision, and strategic plan. (*Limit to ½ page*)
3. Describe how your leave will support the goals of your department/division. (*Limit to ½ page*)
4. Describe how your leave will enrich students' learning experiences. (*Limit to ½ page*)
5. Explain how your leave will make a valuable contribution to your disciplinary field. (*Limit to ½ page*)
6. Describe how your leave will enhance your professional growth. (*Limit to ½ page*)
7. Attach your current resume or curriculum vitae, including accomplishments that have contributed to the College.
8. If your leave will include employment, describe the employment and the reason why it is a required component of your leave. Employment during Developmental Leave must be approved by the Board of Regents and pay from employment will be deducted from the salary provided by the College.

What is your proposed leave time?    ☒ Fall 2026    ☒ Spring 2027   ____ Other:_____

Have you been employed at Lee College in a full-time, regular contract position for five (5) consecutive years?    ☒ Yes   ____ No

Have you previously been approved for/taken Developmental Leave at Lee College?   ____ Yes    ☒ No

If yes, provide the date of your last Developmental Leave: _____

*Lee College expects any employee approved for leave to comply with Board policies, particularly Board Policy CT (Legal and Local) regarding Intellectual Property.*

*Per Board Policy DEC (Local), the recipient of a Developmental Leave must agree in writing to return the entire leave stipend including benefits to the College District if they do not remain employed as a full-time employee with the College District for two (2) years after completion of the leave. An employee who is unable to remain employed full-time due to circumstances beyond their control, such as a worsening medical condition, can apply to the President for a waiver of this obligation, but the approval of a waiver is not guaranteed.*

**SIGNATURES INDICATING APPROVAL/SUPPORT OF PROPOSED DEVELOPMENTAL LEAVE:**

Employee: _____ Date: _____

Division Chair/Supervisor: *Curtis White* Date: 1/22/2026

Director: _____ Date: _____

Executive Director: _____ Date: _____

Associate Vice President: *Janena M. Norris, DNP, MSN-Ed, RN* Date: 01/23/2026

Provost/Vice President: *[signature]* Date: 1/25/2026

**Description of Leave**

I am requesting developmental leave to begin and complete the work on my projected dissertation described below. To maintain continuity as an existing Division Chair, I am formally requesting a leave of 15 hours per week for the Fall 2026 and Spring 2027 semesters. This leave would allow me to continue my work as a Division Chair for 20 hours per week while also focusing on dissertation work without compromising course coverage and divisional responsibilities. If approved, this structure maintains operational continuity. Division Chair responsibilities require immense training and institutional knowledge that is difficult for an interim replacement to quickly learn, whereas teaching coverage is easily covered through adjunct or overload assignments.

Note: The dissertation information below has not been approved by any dissertation committee, but this is what I plan to move forward with.

## Project Description

### *The Problem*

Over the past two decades, dual credit enrollment has grown from approximately 800,000 high school students (Kleiner & Lewis, 2005) to nearly 2.8 million in 2023-24 (Fink, 2025). Prior research indicated that dual credit participation is associated with increased college enrollment as well as improved college persistence, credit accumulation, and completion rates (An & Taylor, 2015; Velasco et al., 2024). However, most dual credit research examines aggregate effects rather than examining the benefits related to the variability of student characteristics, modalities, or factors such as school district resources.

At Lee College, dual credit math courses are either core requirements for non-STEM programs or prerequisite courses for STEM degrees that require additional math beyond these gateway courses. Lee College serves 12 school districts with average district poverty rates from 2021-2022 through 2024-2025 ranging from 29% to 75% (Texas Education Agency, 2025). Dual credit math courses are primarily offered as face-to-face sections taught by credentialed and vetted district-employed instructors, and online sections taught by full-time and part-time Lee College faculty.

Given this structure, it becomes reasonable to question whether delivery models and district economic resources are systematically related. Districts with greater fiscal capacity may be better positioned to hire credentialed mathematics instructors to teach face-to-face dual credit sections on their campuses, whereas high-poverty districts may rely more heavily on online sections. Ryu et al. (2024) revealed that online and hybrid dual credit success rates were lower than face-to-face courses raising questions about whether the success rates of dual credit students from more economically disadvantaged districts are more negatively impacted.

### *Description*

This quantitative research study will address the following primary research question and two subquestions:

- Primary RQ: Does the relationship between dual credit mathematics modality (face-to-face versus online) and student success vary by school district socioeconomic status (SES)?
- Subquestion 1: Does the interaction between delivery modality and district SES vary by mathematics course?
- Subquestion 2: Does the relationship between modality and district SES differ when examining course completion versus performance?

## Expected Outcomes, Deliverables, and Timeline

### *Expected Outcomes*

This study will determine whether dual credit mathematics delivery model effects vary by district poverty levels. Findings will reveal if current dual credit mathematics delivery options create equity gaps or support students equitably across socioeconomic contexts. Results will inform dual credit strategies, resource allocation, and targeted service development.

### *Deliverables*

Dissertation, Report of findings for Dual Credit & Leadership

### *Timeline*

Fall 2026
- Completion of research plan sheet and literature review
- Complete dissertation proposal
- Complete proposal defense

Spring 2027
- Obtain approvals to collect data
- Collect data and perform analysis
- Defend dissertation

## Project Relation to Lee College's Mission, Vision, and Strategic Plan

This research directly relates to Lee College's Vision 2028 strategic plan. Particularly, Strategic Goals II Expanding Opportunities and Goal V Institutional Effectiveness are relevant to this study. Goal II aims to expand opportunities, and this research examines whether recent dual credit mathematics delivery models create equity gaps for students from high-poverty districts (Target 2: tracking dual credit differences by SES) and ensuring dual credit students are learning in their pathways (Strategy II.4 & Pathways Pillar 4). Additionally, this project highlights Goal V in that data will be used to measure the performance of dual credit math students while providing results that will lead to improved instructional quality.

**Project Alignment with Department/Division Goals**

Since gateway math courses, particularly MATH 1314 College Algebra, serve as entry points to STEM programs, this research directly impacts the MPEC division. Findings will inform the MPEC division and Dual Credit office whether student support services or additional resources are needed for economically disadvantaged districts. Additionally, results will impact the instructional quality of dual credit math courses, leading to more effective preparation for students planning to enroll in physics, engineering, computer science, or additional math courses.

**Project Contribution to Student Learning**

This project contributes to student learning using data-driven analysis to examine dual credit mathematics success rates across school districts with varying socioeconomic statuses. Results will inform stakeholders of dual credit student needs based on the economic factors of school districts with an emphasis on course modality. Addressing the challenges dual credit students face in varying modalities ensures significant efforts to move towards equitable learning outcomes regardless of district poverty levels.

**Project Contribution to Disciplinary Field**

This study hopes to address a perceived gap in dual credit research by analyzing delivery model effects related to district socioeconomic status. Although Ryu et al. (2024) revealed that online dual credit yields lower outcomes than face-to-face delivery in Texas, I have not come across any published research focusing on these effects within math dual credit sections and their relationship to district poverty levels. Given the challenges students face in gateway math courses, this project will contribute novel evidence related to the delivery practices of dual credit math courses and whether there are equity implications of these decisions.

**Enhancement to Professional Growth**

Participating in Developmental Leave while maintaining my campus presence as the MPEC Division Chair will allow the time for completion of my dissertation within one academic year without any reduction in divisional leadership. Completing a research project as significant as a dissertation in a timely manner will significantly increase my knowledge and confidence as a research- and data-driven faculty and administrator. Given the growth I have already experienced as a leader and researcher, being granted Developmental Leave will provide me with the time to further develop my research skills which will have a direct impact on my work related to transfer with the Pathways and Transfer Expert teams.

# References

An, B. P., & Taylor, J. L. (2015). Are dual enrollment students college ready? Evidence from the Wabash National Study of Liberal Arts Education. *Education Policy Analysis Archives*, *23*(58). https://doi.org/10.14507/epaa.v23.1781

Fink, J. (2025, September 30). *High school dual enrollment grows to 2.8 million.* Community College Research Center, Teachers College, Columbia University. https://ccrc.tc.columbia.edu/easyblog/high-school-dual-enrollment-grows.html

Kleiner, B., & Lewis, L. (2005). *Dual enrollment of high school students at postsecondary institutions: 2002-03* (NCES 2005-008). U.S. Department of Education, National Center for Education Statistics.

Ryu, W., Schudde, L., & Pack-Cosme, K. (2024). Dually noted: Examining the implications of dual enrollment course structure for students' course and college enrollment outcomes. *American Educational Research Journal*, *61*(4), 803-841. https://doi.org/10.3102/00028312241257453

Texas Education Agency. (2025). *PEIMS standard reports: Student program and special populations* [Data set]. https://tea.texas.gov/reports-and-data/student-data/standard-reports/peims-standard-reports

Velasco, T., Fink, J., Bedoya, M., & Jenkins, D. (2024). *The postsecondary outcomes of high school dual enrollment students: A national and state-by-state analysis*. Community College Research Center, Teachers College, Columbia University. https://ccrc.tc.columbia.edu/publications/postsecondary-outcomes-dual-enrollment-national-state.html

**Appendix**

**Curriculum Vitae**
**Curtis L. White**
cwhite@lee.edu
Phone: 281-425-6254

## Education

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|---|---|
| Ed.D.: 2024 – Expected Graduation Date May 2027 | Lamar University, Beaumont, Texas. Doctor of Education Educational Leadership |
| M.S.: 2009 | Lamar University, Beaumont, Texas. Master of Science Major: Mathematics Thesis: *Some Algebra of Independent Random Variables* |
| B.S.: 2007 | Lamar University, Beaumont, Texas. Bachelor of Science Major: Mathematics. Minor: Physics. |

## Teaching and Administrative Experience

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|---|---|
| 2009-2019 | Mathematics Adjunct, Lamar University |
| 2011-2012 | Mathematics Adjunct, Lee College |
| 2012-Present | Full-Time Mathematics Faculty, Lee College |
| 2020-2022 | Interim Division Chair: Math, Engineering, and Sciences, Lee College |
| 2022-Present | Division Chair: Math, Physics, Engineering, and Computer Science, Lee College |

## Courses Taught

Lamar University: Math 1325 Calculus for Business and Life Sciences, Math 1314 College Algebra, Math 1342 Elementary Statistics, Math 2412 Pre-Calculus, Math 2414 Calculus II.

Lee College: Math 330 Intermediate Algebra, Math 1314 College Algebra, Math 1325 Calculus for Business and Life Sciences, Math 1332 Contemporary Mathematics, Math 1342 Elementary Statistics, Math 1350 Fundamentals of Mathematics I, Math 2412 Pre-Calculus, Math 2413 Calculus I, Math 2414 Calculus II, Math 2415 Calculus III, Math 2320 Differential Equations

## Presentations

*The Monty Hall Problem*. Texas Section of the MAA meeting, 2008, Tarleton State University.

*Forensic Ballistics*. STEM Day, 2014, Lee College.

*What Is GCPASS?* Lee College Mathematics Colloquium, 2014, Lee College.

*An Introduction to GeoGebra*. Lee College GeoGebra Workshop, 2015, Lee College.

*Can You Crack the Code Using Math? Exploring the Shape-Shifting World of Numbers and Letters*. STEM Day, 2025, Lee College.

## Publications

*Smooth Transitions from High School to Community College: Mathematics Curriculum Alignment Guide: A Gulf Coast PASS Project*, Institute for Evidence-Based Change, 2014.

## Grant Experience

| | |
|---|---|
| 2012 – 2014 | Team member working on the Gulf Coast Partners Achieving Student Success (GCPASS) grant to vertically align High School and Community College curricula for the Texas Gulf Coast region. |
| 2014 – 2015 | Took over as Gulf Coast Partners Achieving Student Success Mathematics Professional Alignment Council lead. Leading a team of High School and Community College faculty towards vertically aligning high school and community college curricula. Aided in the creation of a mathematics colloquium. |
| 2016 | Aided students doing undergraduate research for the NREUP and ASA-REU grants at Lamar University. |
| 2017 | Team 2 Lead for the STEM Accelerator Grant at Lee College. |
| 2019 - 2023 | TLL Temple Grant team member. |

## Other Professional Experiences

| | |
|---|---|
| 2014 | Helped organize Lee College Mathematics Colloquium for Lee College and Goose Creek Consolidated Independent School District professional development opportunities. |
| 2014 | Member of the STEM Mini-Grant selection committee. |
| 2014 | Member of the Lee College Student Success Alliance. |
| 2015-2016 | Hiring committee chair for the mathematics lab coordinator hiring committee. |
| 2016 | Academic advisor for the creation of a Math Club at Lee College. |
| 2017 – 2021 | Lee College Faculty Assembly Treasurer |
| 2023 | Co-developed the Lee College Math Convergence for College, High School, and Jr. High School Math Faculty |
| 2025 | Member of the Lee College Transfer Expert Team |
| 2025 | Member of the Lee College Guided Pathways Team |

## Professional Societies

| | |
|---|---|
| 2018 – Present | American Mathematical Association of Two-Year Colleges Lee College Liaison |
| 2023 – Present | Mathematical Association of America Lee College Liaison |

**Certifications**

2019 & 2025 Quality Matters Certification

**Computer and Programming Experience**
GeoGebra, Desmos, LaTeX, Maple, MATLAB, Mathematica, Minitab, R, SPSS, ZogoTech, Blackboard Ultra, PeopleSoft.

**PERSONAL**

Born and raised in Texas.
Hobbies: reading, games, and baseball.

**Developmental Leave Application Follow-Up Questions**

**1. What will the data be used for?**

Primarily, the data will be used for the completion of my Ed.D. dissertation. Additionally, the data will be used to contribute to dual enrollment research, particularly in mathematics-specific delivery models and their relationship to district-level socioeconomic statuses.

At the Lee College level, this data will be used to provide the College leadership with empirical evidence that could impact strategic decision-making surrounding dual credit practices. Within the MPEC division, this data will be used to determine whether additional support services are needed for dual credit instruction focusing on course content delivery methods as a whole or if the focus should be on targeted support services within the economically disadvantaged districts only.

**2. What is your contingency plan if your dissertation is not approved within the proposed timeline?**

The Lamar University Ed.D program's design includes a third academic year focused entirely on completion of a dissertation. However, if I am unable to complete and defend my dissertation within the proposed timeline, I then have Summer 2027 to complete the dissertation process.

Ultimately, I am committed to using the leave time strategically to ensure the completion of my dissertation within the allotted timeframe, which is consistent with my record of meeting institutional deadlines and commitments.

**3. How do you plan to utilize the data to improve the Math Department's teaching and course delivery?**

If the results show that certain modalities are more effective for students from economically disadvantaged districts, I will use these results to work with the Dual Credit office to adjust dual credit mathematics offerings for students from within these districts. Focusing on these specific districts and having guided conversations with relevant stakeholders might reveal information related to targeted support services unique to these students, specific faculty professional development opportunities, and suggestions for allocations of resources to better serve these students.

**4. What is your plan of action for accounting for variables that may not be reflected in the data?**

For variables I am unable to measure directly, such as student motivation, family circumstances, or individual instructor effectiveness, I will be transparent and acknowledge these limitations within the dissertation and interpret the findings accordingly. The analysis will focus on identifying whether the relationship between delivery modality and student success varies by

district economic disadvantage rates while recognizing that observed patterns may be influenced by unmeasured factors.

**5. Which schools and academic years will you be collecting data from?**

I will be collecting data from the 10* school districts within the Lee College service area who have enrolled dual credit students in MATH 1314 College Algebra or MATH 1342 Elementary Statistics during academic years 2019-2024, excluding Spring 2020.

| District | High-School |
| --- | --- |
| Goose Creek CISD** | Goose Creek Memorial |
| Goose Creek CISD** | Sterling |
| Goose Creek CISD** | Lee |
| Barbers Hill ISD | Barbers Hill |
| Dayton ISD | Dayton |
| East Chambers ISD | East Chambers |
| Hull-Daisetta ISD | Hull-Daisetta |
| Crosby ISD | Crosby |
| Liberty ISD | Liberty |
| Huffman ISD | Hargrave |
| Anahuac ISD | Anahuac |
| Hardin ISD | Hardin |

*After speaking with other faculty around campus, I have learned that typically only 10 of the 12 service area districts participate in dual credit mathematics courses.

**Goose Creek CISD includes three high school campuses.