

Mathematics Re-Design Institute

Program Gainesville, FL | June 27, 2019

Welcome Letter



Dear Colleague,

On behalf of the Florida Student Success Center, we would like to welcome you to the Florida Mathematics Re-Design Institute. Today represents the culmination of a faculty-driven effort to identify recommendations that will improve student achievement in mathematics across Florida's K-20 education systems.

Through the Florida Student Success Center's work, more than 90 mathematics faculty, administrators and key stakeholders from Florida's K-20 education system spent 2018-2019 analyzing research, data, information and examples from other states to better

understand ways to eliminate mathematics barriers that prevent students from succeeding. The result of such work is a series of recommendations – both policy and practice – designed to increase alignment within and between educational systems.

During the morning plenary session, the chairs of the mathematics re-design workgroups will provide a summary of the recommendations that emerged throughout the process—recommendations that touch statewide policy, institutional policy and practice. You will be asked to consider how mathematics pathways and re-design efforts are being developed, implemented and scaled in your schools, colleges or universities.

Each concurrent session breakout will be led by representatives who have served on the workgroups over the last year. The themes for the three concurrent sessions mirror the themes that emerged in recommendations: 1) prerequisites and course sequencing, 2) advising and communication, and 3) student preparation and course content. The afternoon plenary will include a panel of experts from other states who have been part of mathematics re-design efforts. The day will conclude with a call to action and a summary of next steps.

Through the current mathematics re-design effort, Florida is creating a blueprint for statewide policy and institutional practice efforts that will improve student success in mathematics. While today is a culmination of the efforts of the mathematics re-design workgroups, our work is just beginning. We are pleased to share these innovative recommendations with you, and look forward to our continued work together as we seek to implement mathematics pathways at scale.

With appreciation,

Carrie E. Henderson, Ph.D. Executive Vice Chancellor Florida College System

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Agenda

Thursday, June 27, 2019

Objectives

- Bring together district, college and university stakeholders with national organizations, policymakers and experts from other states to engage in a cross-functional discussion about mathematics pathways re-design;
- Highlight recommendations for state policy, institutional (or local) policy and evidence-based practices designed for scale; and
- Encourage participants to reflect on how their institution is making progress in reducing barriers to student success in mathematics, and identify strategies to take back to their institutions for consideration.

7:45 a.m 8:30 a.m.	Breakfast and Registration
8:30 a.m 8:45 a.m.	Welcome
	Charles Lane, Senior Vice President and Chief Operating Officer, University of Florida Kathy Hebda, Chancellor, Florida College System Braulio Colón, Vice President, Florida Student Success Initiatives, Helios Education Foundation
8:45 a.m 9:30 a.m.	Opening Session: Student Success Stories
	Alexander Dang, Student, Eastside High School Melissa Gonzalez-Lopez, Student, Florida State University Jonathan David Lugo, Student, Broward College Lacie Lynch, Student, Seminole State College of Florida Timothy Rakstang, Graduate, Hillsborough Community College and Florida Agricultural and Mechanical University Justin Rhodes, Student, Indian River State College Abbey Ivey, Director, Florida Student Success Center (moderator)
9:30 a.m 10:15 a.m.	Morning Plenary: Policy and Practice Recommendations from Florida's Mathematics Re-Design Efforts
	Tommy Minton, Dean, Mathematics, Seminole State College of Florida Julie Phelps, Professor, Valencia College Carrie Henderson, Executive Vice Chancellor, Florida College System (moderator)

Agenda

10:15 a.m 10:30 a.m.	Break
10:30 a.m 11:00 a.m.	Mathematics Pathways Self Reflection: Where Are We Now?
11:00 a.m. – 11:50 a.m.	Concurrent Session 1
	Presentations in this session will focus on mathematics prerequisite course requirements, course sequencing and alignment of mathematics course content within and between educational sectors.
12:00 p.m 1:00 p.m.	Lunch
1:00 p.m 1:50 p.m.	Concurrent Session 2
	Presentations in this session will highlight recommendations regarding mathematics pathways advising and placement practices, as well as communication among stakeholders regarding mathematics expectations and outcomes.
2:00 p.m 2:50 p.m.	Concurrent Session 3
	Presentations in this session will explore student preparation and best practices for ensuring students master essential mathematics content and skills.
2:50 p.m 3:00 p.m.	Break
3:00 p.m 3:45 p.m.	Afternoon Plenary Session: Evidence from Other States
	Aaron Altose, Assistant Professor, Cuyahoga Community College Milena Cuéllar, Associate Professor, LaGuardia Community College Mike Sieve, Professor, Ridgewater College Abbey Ivey, Director, Florida Student Success Center (moderator)
3:45 p.m.	Closing/Next Steps
	Carrie Henderson, Executive Vice Chancellor, Florida College System

Concurrent Session 1: Prerequisites and Course Sequencing | 11:00 a.m. – 11:50 a.m.

Session Title A: Streamlining Mathematics Pathways in Florida

Room: Azalea

Presenters:

Wendy Carden, Assistant Professor, Pensacola State College Irma Cruz-White, Professor, Chipola College Thomas Flanagan, Mathematics Faculty, St. Johns River State College Angelina Kuleshova, Assistant Professor, Tallahassee Community College

Description:

In this session, we will discuss emerging issues in mathematics pathways design and implementation in Florida. Drawing on statewide data and evidence-based national practices, we will outline policy and practice approaches to aligning mathematics courses to programs of study and meta-majors. Specifically, we will highlight alternatives to college algebra intended to place students into mathematics pathways that are better aligned with their career or meta-major.

Themes: Pathways, Professional Development, Learning, Re-Design

Session Title B: Ambiguity of Mathematics Sequencing Resulting in Content Overlap

Room: Magnolia

Presenters:

Don Ransford, Mathematics Professor, Florida SouthWestern State College

Description:

The mathematical and quantitative reasoning needs of 21st century students are rapidly evolving and may no longer be best met by measuring the number of mathematics courses/credits, but rather in how students apply those reasoning skills throughout their college/university experience. This session will present recommendations for implementing innovative and established methods and practices to improve the clarity and ensure the quality of students' experiences as they proceed through their college-level mathematics sequence of courses. Suggestions include establishing teams of experts from the field of mathematics education who review and provide recommendations for college-level mathematics of students in expediting their route to achieving their intended goal while focusing on mathematics skills and concepts that best prepare them for their chosen careers.

Themes: Pathways, Re-Design

Session Title C: FCS Mathematics Prerequisite Commonalities Revisited

Room: Hawthorne

Presenters:

Bradley Marovich, Assistant Professor of Mathematics, Eastern Florida State College Lee Klingler, Professor of Mathematics, Florida Atlantic University Karen Hogans, Dean of Mathematics and Science, Lake-Sumter State College

Description:

Participants will be taken on a journey to revisit prerequisites for commonalities in Florida College System mathematics courses. The existing variability in prerequisite requirements across institutions can leave transfer students at a disadvantage, and further consistency across the state could lead to an increase in graduation rates and a decrease in excess credit hours. This session will cover specific recommendations to standardize the expected outcomes of mathematics courses and prerequisite requirements. The presenters will discuss their data-collection process, factors identified that contributed to the challenge, the brainstorming process to determine possible solutions, and the final state and institutional policies and practices recommended to resolve the challenge.

Themes: Pathways, Learning, Re-Design

Session Title D: Learning Outcomes as a North Star: Why it Matters

Room: Dogwood

Presenters:

Harrison Oonge, Assistant Dean, College of Undergraduate Studies, University of Central Florida Burcu Tuncer Karabina, Instructor, Florida Atlantic University Kevin Yee, Assistant Dean, Teaching and Learning, University of South Florida Leslaw Skrzypek, Department Chair, Mathematics & Statistics, University of South Florida Connie Campbell, Assistant Professor, Gulf Coast State College Dalia Gil, Instructor of Mathematics, Palm Beach State College Maria Witherell, Associate Professor, Pasco-Hernando State College Carol Zavarella, Associate Professor, Hillsborough Community College

Description:

Mathematics can be a barrier to student progress towards a degree, matriculation into STEM majors, and/or access to higher level STEM courses. A mismatch in content taught compounds this problem, especially if there are long sequences involved (Dana Center, 2016). In this session, we discuss why alignment matters and propose: 1) need for state level alignment of learning outcomes as a "North Star" for gateway mathematics courses; 2) a "Mathematics Institute" that would lead or champion efforts to transform teaching and learning in mathematics education within the state; 3) on-going faculty professional development on emerging and evidenced based pedagogical practices such as active learning; and 4) establish three mathematics Pathways (STEM Pathway, Business and Social Science Pathway, and Quantitative Reasoning Pathway). The session will feature faculty perspectives through a short presentation and a quasi-panel discussion.

Themes: Pathways, Professional Development, Learning

Session Title E: Suggestions for the Improvement of the State College-to-University Prerequisites Standards

Room: Hickory

Presenters:

Aletheia Zambesi, Lecturer and Assistant Chair, Mathematics and Statistics, University of West Florida Pedro Mora, Assistant Professor of Mathematics and Coordinator of Mathematics and Science, Florida Gateway College

Description:

Our workgroup focused on barriers students may face when transferring from the state college system to the state university system and how to eliminate these barriers. One of the barriers identified by the workgroup were prerequisite requirements for mathematics courses. Prerequisite requirements are inconsistent across institutions, especially in the business/statistics and liberal arts courses, making transfer difficult for students. In this session, we will discuss the current state of prerequisite alignment between the state colleges and the university system, the challenges faced by transfer students when moving to the university from the state colleges, and some suggestions to address alignment throughout both the state college and university systems.

Themes: Pathways, Learning, Re-Design

Concurrent Session 2: Advising and Communication | 1:00 p.m. – 1:50 p.m.

Session Title F: Career Inventory Test Improves High School and College Graduation Rates

Room: Hawthorne

Presenters:

Janet Stevenson, Associate Professor, Hillsborough Community College Niurka Geonaga, Instructor, Miami Dade College Maggie Miller, Lead Trainer for MyCareerShines powered by Kuder Tim Rakstang, FAMU Architecture Graduate, Builders First Source

Description:

High school students need support in matching their interests to available jobs and learning what they need to do to obtain and succeed in those jobs. In this session, we will discuss how a career inventory test can improve high school and college graduation rates, highlighting the differences between an informed and undecided student's career choices.

Themes: Communication and Engagement, Advising and Placement

Session Title G: What Mathematics do I Take? Addressing Placement Strategies for Students

Room: Dogwood

Presenters:

Jimmy Chang, Dean of Mathematics, St. Petersburg College Bobbi Parrino Cook, QEP Director, Indian River State College Matthew Pfaff, Professor of Mathematics, Seminole State College of Florida Ryan Newell, Professor of Mathematics, Pasco-Hernando State College

Description:

This session will present the strategies and benefits recommended by the FCS mathematics sequences huddle for advising and placement of students. When students are placed and advised properly, they will have the most direct and successful pathway to college completion outlined for them. The recommendations that will be discussed include using multiple measures placement, informal mathematics faculty advising and utilizing mathematics pathways. Multiple measures placement incorporates more criteria than a single test to give mathematics placement

recommendations. Informal mathematics faculty advising will provide students with additional resources and guidance towards their mathematics requirements. Utilizing mathematics pathways will ensure students are taking the mathematics courses that are most appropriate for their area of study.

Themes: Pathways, Advising and Placement

Session Title H: What Mathematics Skills do Students Need? Survey and Analyze to Inform Statewide Policy and Practice

Room: Azalea

Presenters:

Teresa Dorman, Associate Dean, University of Central Florida Adam Christopherson, Assistant Professor of Mathematics, Santa Fe College Amy Comerford, Professor of Mathematics, Valencia College

Description:

So what mathematics skills do our students need? Our group proposes a survey of the top-10 majors in the state to determine what actual mathematical skills are needed for a student to be successful in that major and potential careers. The results of this survey will provide discipline-specific input: 1) to guide discussions of mathematical preparation and pathways in the state of Florida; 2) to ensure course offerings align with program needs; and 3) to recommend changes to statewide higher education policy.

Themes: Pathways

Session Title I: Advising with Mathematics in Mind

Room: Hickory

Presenters:

Penelope Kirby, Professor of Mathematics, Florida State University

Description:

This session will talk about advising strategies to guide students in their specific mathematic(s) pathways for timely graduation. Strategies include online advising and mathematics specialty advisors. In addition, advising professional development and user-friendly advisor resources should follow any implementation of recommendations developed by the mathematics re-design workgroups. For example, multiple workgroups recommended a review and possible revision of existing mathematics courses or developing new mathematics courses appropriate for degrees, certificates and/or meta-majors. Such changes should be followed by professional development and user-friendly resources and references for advisors for successful implementation.

Themes: Pathways, Advising and Placement

Concurrent Session 3: Student Preparation and Course Content | 2:00 p.m. – 2:50 p.m.

Session Title J: Come Together, Right Now, Over Me

Room: Dogwood

Presenters:

Al Groccia, Professor of Mathematics, Valencia College Keri Siler, Dean of Mathematics, Valencia College Kris Demarais, Professor of Mathematics, Indian River State College Christine Myers, Professor of Mathematics, Broward College Theodoros Koupelis, Interim Vice Provost, Broward College Hadley Pridgen, Professor of Mathematics, Gulf Coast State College

Description:

Cross-sector communication is key to facilitating student success in mathematics in the K-20 landscape. In this session, we will go over recommendations pertaining to the alignment between high school and postsecondary mathematics, including: 1) holding a large-scale meeting with instructors and stakeholders who work across K-20 for curriculum alignment, assessments, best practices and others; 2) creating K-20 standing groups to make continuous connections between curriculum, assessments and others; and 3) designing professional development that is common for K-20 instructors and providing resources online to support curriculum alignment, assessments, best practices and others.

Themes: Communication and Engagement, Professional Development

Session Title K: Building a Foundation: Rethinking Elementary Mathematics Teacher Certification

Room: Azalea

Presenters: Virginia (Ginny) Hayes, Instructor, Eastern Florida State College

Description:

The ability of students to learn algebra and beyond starts with a strong foundation in basic skills including adding, subtracting, multiplying, dividing, decimals, fractions, percents, geometry and statistics. Students need a teacher with strong mathematics skills, mathematical pedagogy and a true enjoyment of mathematics. The proposal presented in this session will share some research on this topic and discuss ideas to increase teacher preparedness to provide students with more knowledgeable teachers. Discussion will include a shift in strategy for teacher assignments to provide students with highly credentialed mathematics teachers.

Themes: Professional Development, Learning

Session Title L: Improving Fundamental Mathematics Concepts and Skills

Room: Magnolia

Presenters:

Jeremiah Hower, Senior Instructor, Mathematics and Statistics; Program Director, Mastery Math Lab, Florida International University

Kim E. Wuellner, K-12 Mathematics Coordinator, St. Johns County School District

Description:

Improving fundamental mathematics skills is crucial to the success of K-20 students. This session will explore suggested strategies to ensure students are mastering those fundamental skills, including: 1) developing personalized, just-in-time brush-up modules covering foundation skills, especially algebraic manipulation and procedural techniques needed for success on current topics; 2) connecting grade/course specific mathematics topics to real-world applications and meta-majors; and 3) providing professional development, to include training and resources, to teachers on how to ask probing questions that elicit critical thinking and problem solving from students.

Themes: Professional Development, Learning

Session Title M: Promoting a Collaborative Assessment Culture Among Faculty

Room: Hawthorne

Presenters:

Darryl Chamberlain Jr., Lecturer, University of Florida Gabi Booth, Professor, Daytona State College

Description:

One of the major recommendations of the mathematics re-design effort is to create recurring opportunities for K-20 stakeholders to collaborate. We discuss three specific opportunities: 1) developing a web-based toolkit to create, share and improve assessments linked to Florida Standards; 2) recurring sessions to review these assessments; and 3) creating a partnership between high school teachers and college faculty to review assessment policies. The goal of these opportunities is to simultaneously reduce instructors' time building "new" assessments, improve the quality of the assessments that are used in classrooms, and create a state-wide culture that fosters collaboration among educators.

Themes: Communication and Engagement

Session Title N: Ensuring Foundational Preparedness for All Students

Room: Hickory

Presenters: Joanne Mechmech, Professor, Florida State College at Jacksonville

Description:

State standards in developmental mathematics courses are too broad and there is a need for identification of common mathematical processes that are necessary for student success (such as problem solving, reasoning and proving, reflecting, selecting tools and computational strategies, connecting, representing and communicating). This session will discuss recommendations for identifying essential learning outcomes and standardizing them across the state. Included in the presentation will be a question-and-answer session about the proposal.

Themes: Learning

Abbey E. Ivey

Director, Florida Student Success Center



As a higher education professional with experience at both the state and institutional level, Abbey has years of experience serving Florida College System students in a variety of capacities focused on student access, acceleration, progression and success. Abbey currently serves as the Director of the Florida Student Success Center, leading the center's charge to develop student-centered pathways and increase student completion rates through convenings, technical assistance, coaching, support and measurement. Prior to joining the center, Abbey served as the Director of Articulation and Academic Pathways at Miami Dade College and managed programs and initiatives supporting seamless student progression and transition, from high school through degree completion and transfer. Abbey also previously served as Director of Academic Affairs for the Division of Florida Colleges, where she coordinated a variety of activities to facilitate student access, articulation and transfer in Florida's K-20 education system. Abbey holds a Master of Science degree in Higher Education from Florida State University and a Bachelor of Science degree in Psychology from the University of Florida.

Tommy Minton Dean, Mathematics, Seminole State College of Florida



Dr. Tommy Minton has been an educator in the Florida College System for over 20 years and has held the position of dean of the mathematics department at Seminole State College since 2012. He has always been a proponent for the use of educational technology in the classroom and supports faculty initiatives centered around innovative teaching techniques. His research interests include differences in success for online versus traditional on-campus students and community college leadership pathways and competencies. Tommy holds a Bachelor of Science degree in Mathematical Sciences from Clemson University, a Master of Science degree in Statistics from Florida State University, and a Doctorate of Education degree in Educational Leadership – Higher Education from the University of Central Florida.

Julie Phelps

Professor, Mathematics, Valencia College



Dr. Julie Phelps has served as a mathematics faculty member, developmental mathematics coordinator, and the project director of Achieving the Dream at Valencia College in Orlando, Florida, since 1997. Julie earned a doctorate in Curriculum and Instruction specializing in Community College in 2005 from the University of Central Florida. Her current research focus is on student engagement, learning, retention, selfefficacy, growth mindset, utility-value leading to the success of developmental and front door mathematics students. Her experiences with these types of learning evidence are being utilized in such roles as consulting for the Achieving the Dream Initiative, the Developmental Education Initiative, as well as the Center for Community College Student Engagement (CCCSE). Additionally, Dr. Phelps has served in the appointed role as Communication Liaison for American Mathematics Association for Two-Year Colleges (AMATYC) connection to developmental mathematics pathways redesign and is now the chair of the AMATYC Mathematics Standards Committee. She has been the recipient of multiple teaching and leadership awards including the Virginia B. Smith Innovation in Higher Education Leadership Award.

Carrie E. Henderson Executive Vice Chancellor, Florida College System



Dr. Carrie E. Henderson serves as the Executive Vice Chancellor of the Florida College System. In this role, she provides leadership over academic and student affairs, research and analytics, and financial policy. Prior to becoming Executive Vice Chancellor, Dr. Henderson served as Associate Vice President for Institutional Effectiveness and Accreditation at Florida State College at Jacksonville and as Associate Director of Programs at Achieving the Dream, Inc. Her interest and experience include institutional effectiveness, strategic planning, resource development, and institutional research. Dr. Henderson holds a Ph.D. in Higher Education Administration and a graduate certificate in institutional research from Florida State University, a Master of Public Administration from the University of North Carolina at Chapel Hill, and a Bachelor of Arts in History and Political Science from the University of Central Florida.

Aaron J. Altose

Assistant Professor, Mathematics, Cuyahoga Community College



Dr. Aaron J. Altose is an Assistant Professor of Mathematics at Cuyahoga Community College (Tri-C) in Cleveland, Ohio where he began teaching in 2006. For nearly a decade, he has maintained an active role within the Carnegie Math Pathways as a contributor to curriculum, assessment, and faculty support programs; a faculty mentor; and a member of the Carnegie National Faculty advisory group; and he led the development of the Quantitative Reasoning (QR) pathway at Tri-C. Aaron has collaborated with the Ohio Department of Education in various ways, including as a member of the Advisory Committee for Ohio's Learning Standards Revision, and as a Quantitative Reasoning Content Expert for the creation of Ohio's college-level QR learning outcomes and facilitation of faculty training and professional development workshops. Aaron has also served on sub-groups of the Ohio Mathematics Initiative as a department lead, and he recently launched work as a higher education collaborator for the pilot of Ohio's high school transition course, Mathematical Modeling and Reasoning. In 2018, he received the Ralph M. Besse Award for Teaching Excellence at Cuyahoga Community College.

Milena Cuéllar Professor, Mathematics, LaGuardia Community College



Milena Cuéllar is a Professor at LaGuardia Community College (CUNY), in the Department of Mathematics since fall 2012. She is a Theoretical Physicist from Universidad de los Andes in Bogota, Colombia with a Ph.D. in Statistics from The London School of Economics. She is Carnegie National Faculty since July 2015 and received the 2015 Leadership Recognition Award from Carnegie Foundation for her contributions to the network on scaling-up Statway at LaGuardia. Dr. Cuéllar leads the scaling initiative of Statway at LaGuardia since 2013 as a co-requisite course. For her work in supporting the creation and implementation of a guided math pathways at CUNY, she is part of the Math Innovation team that helps CUNY Community and Comprehensive Colleges to design and implement alternatives to math remediation and colleges' math reform in the CUNY system. This work is supported by a three-year Start Strong to Finish grant. Dr. Cuéllar is also part of the leadership team of the Atlantic Center for Learning Communities (ACLC) and has helped develop learning communities in Vaughn College of Aeronautics in Queens, NY and Misericordia University in Dallas, PA. Dr. Cuéllar also helps coordinate the work of faculty teaching Learning communities at LaGuardia. She has worked in institutions in several countries (Colombia, UK, and US) serving culturally and academically diverse student populations.

Mike Sieve

Professor, Mathematics, Ridgewater College



Mike Sieve is a Professor of Mathematics at Ridgewater College in Hutchinson, MN. He earned his B.A. in Mathematics and Computer Science from St. Mary's University and his M.S. in Mathematics from Northern Arizona University. His teaching experience spans over 23 years at both the University and Community College level. Recently, his focus has been on motivating student success in developmental mathematics, specifically for non-STEM pathways. He became involved with the Carnegie Math Pathways in 2012 and is currently a Carnegie National Faculty member as well as a faculty mentor within Carnegie's Networked Improvement Community.

Mathematics Re-Design Workgroup Members

High School to Postsecondary Alignment

Al Groccia, Valencia College (Huddle Lead) Alisa (Lisa) Greenberg, Florida Atlantic University

Christine Myers, Broward College

Christopher Kottke, New College of Florida Cynthia McGinnis, Northwest Florida State College (Chair)

Darryl Chamberlain Jr., University of Florida (Huddle Lead)

Davida Austin, South Florida State College Diana Remesar, Broward College (Huddle Lead)

Douglas Wendel, Eastern Florida State College

Elizabeth (Liz) Pruitt, St. Lucie Public Schools Gabi Booth, Daytona State College

Hadley Pridgen, Gulf Coast State College Janet Stevenson, Hillsborough Community College (Huddle Lead)

Jerry Hower, Florida International University Joi B. Davies, St. Petersburg College (Huddle Lead)

Joseph Pick, Palm Beach State College Keri Siler, Valencia College

Kim Wuellner, St. Johns County School District

Kris Demarais, Indian River State College Lindsey Page, St. Johns County School District Louise Bossardet, Flagler County Schools Mark Billiris, St. Petersburg College Niurka Goenaga, Miami Dade College Pam Weeks, College of Central Florida Pierre Ngnepieba, Florida A&M University Seongchum Michelle Kwon, University of Central Florida

Steven Bellenot, Florida State University Theo Koupelis, Broward College Virginia (Ginny) Hayes, Eastern Florida State College (Huddle Lead)

FCS Mathematics Sequences

Angelina Kuleshova, Tallahassee Community College

Bobbi Cook, Indian River State College Brad Marovich, Eastern Florida State College Carrie Stevens, Palm Beach State College Don Ransford, Florida SouthWestern State College

Edgar Fuller, Florida International University Irma Cruz-White, Chipola College Jimmy Chang, St. Petersburg College Joanne Mechmech, Florida State College at Jacksonville

Julie Phelps, Valencia College (Chair) Kalynda Holton, Tallahassee Community College

Karen Hogans, Lake-Sumter State College Kathryn Pantelis, Hillsborough Community College

Kelly Brooks, Daytona State College Kim Ghiselin, State College of Florida, Manatee-Sarasota

Kimberly Gwydir, Broward College Kristine Buddemeyer, Seminole State College of Florida

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Mathematics Re-Design Workgroup Members

Florida College System to University Alignment

Adam Christopherson, Santa Fe College Agatha Shaw, Valencia College Aletheia Zambesi, University of West Florida (Huddle Lead) Amy Comerford, Valencia College Bonnie Smith, Chipola College Burcu Karabina, Florida Atlantic University Carol Zavarella, Hillsborough Community Collegez

Connie Campbell, Gulf Coast State College Dalia Gil, Palm Beach State College Dustin Files, Eastern Florida State College Eric Hernandez, Miami Dade College Gail Burkett, Palm Beach State College Harrison Oonge, University of Central Florida (Huddle Lead)

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Nydia Nelson, St. Petersburg College (Huddle Lead)

Pascal Roubides, Broward College Paul Atchely, University of South Florida Pedro Mora, Florida Gateway College Penelope Kirby, Florida State University Richard Patterson, University of North Florida Robert Lenich, Florida Keys Community

College Roneet Merkin, Florida International University

Teresa Dorman, University of Central Florida (Huddle Lead)

Tommy Minton, Seminole State College of Florida (Chair)

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Note: Each mathematics workgroup had a chair who was responsible for providing overall leadership, as well as huddle leads who coordinated smaller working groups (4-5) working under the three workgroups.

Thank you!

In appreciation of the generous support of our funders, Helios Education Foundation and Bill and Melinda Gates Foundation.



We would also like to thank our partners, Jobs for the Future, the Kresge Foundation and Florida Virtual Campus.

Event Sponsors:







Institutional Partners:







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