



# BACHELOR OF SCIENCE IN URBAN STEM EDUCATION

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 DAVENPORT  
UNIVERSITY



“Davenport’s College of Urban Education is unique in many ways: It’s very diverse, it’s very supportive of students, participants are assigned mentors and it allows participants to learn at their own pace.”

– Arnaldo Melendez, principal, Dickinson Academy, Grand Rapids Public Schools (and Davenport College of Urban Education graduate)

## Revolutionizing STEM connections through culturally responsive teaching

### Education at its best is equitable.

Making the wonders of science, technology, engineering and mathematics (STEM) more accessible — and more readily applicable — begins with culturally responsive teaching. This is especially important in high-needs, underserved urban school districts where teachers must be well equipped to understand the lived experiences students bring to the classroom and build upon each student's strengths. Culturally responsive teaching strategies help teachers make learning relevant to students and remove educational barriers.

Data shows these strategies work. Davenport University’s College of Urban Education master’s programs have already made a significant difference. Students are showing increases in engagement and performance\* that lead to higher academic achievement. We’re generating impact that begins during a student’s K-12 years and can lead to higher education and higher-paying jobs well into their future. Imagine how, together, we can extend that impact to all students in an urban district, throughout all of Michigan and then throughout the nation.

“Davenport’s College of Urban Education classes have provided me with the strategies I need to relate and communicate with students of my own background as well as those from other diverse backgrounds.” — Pashanea Libbett, teacher, Hope Academy of West Michigan (and Davenport College of Urban Education graduate)

Hope Academy of West Michigan is experiencing a 54% increase in student engagement within the classrooms of their teachers who’ve attended Davenport’s College of Urban Education.

\*See Page 8



## This is a game-changing opportunity.

Davenport's groundbreaking Bachelor of Science in urban STEM education programs empower teachers with deep content knowledge in STEM and culturally responsive teaching practices.

These are the only exclusively STEM-focused urban education undergraduate programs in Michigan. Participants will develop a deep expertise in K-12 STEM instruction while being supported in their growing teaching practices through intensive classroom coaching and mentoring. As they matriculate through the program, they will learn culturally responsive teaching strategies that enable them to empower their future students intellectually, socially and emotionally.

### There's an urgent need for STEM educators.

- Teacher retirements are up 44% since August 2020, and urban schools are experiencing even greater talent gaps due to lack of resources, according to a Michigan Educators Survey by Emma White Research and Launch Michigan (July 2021).
- Michigan Department of Education 2020-2021 M-STEP data reveals only 22% of eighth-graders are proficient in science.

Our innovative urban STEM education bachelor's degrees pipeline into our successful College of Urban Education graduate certificate program. Bachelor's degree program graduates who have passed their Michigan Test for Teacher Certification in their senior year can receive an interim teaching certificate immediately upon graduation. This interim certificate allows aspiring educators to earn a salary as a full-time teacher while simultaneously completing Davenport's teacher certification program. The mentoring and coaching Davenport students receive, first through service learning experiences and then through Davenport's graduate certificate program, create STEM educators equipped to bring equity, creativity and opportunity to students that benefit entire communities.

## Bachelor of Science in urban STEM education programs and concentrations

### Bachelor's programs

- Urban STEM education – elementary, B.S.
  - Optional concentration: integrated science
- Urban STEM education – secondary, B.S.
  - Students select a required concentration: math or integrated science

### Graduate certificate

- Urban education certificate (teacher certification preparation)

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– Pashanea Libbett, teacher, Hope Academy of West Michigan (and Davenport College of Urban Education graduate)



“The classroom observers (mentors) focus on the positive. They’re mindful about leveraging your strengths and revealing your unique opportunities for improvement.”

– Ray Marshall, teacher, Hope Academy of West Michigan (and Davenport College of Urban Education graduate)

## Leveraging strengths and revealing opportunities

B.S. in urban STEM education program participants can build additional skills through service learning obtained from placements in after-school STEM programs, summer camps, tutoring and in-class teacher support opportunities. They’ll benefit from ongoing mentoring and coaching throughout the program and 1-to-1 data-informed feedback to refine their teaching, as they continue to learn.

Additionally, participants receive course prep and support toward the Michigan Tests for Teacher Certification (MTTC). Eligible students receive a voucher to cover the cost of the MTTC exam.

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## Outcomes

### **Bachelor of Science in urban STEM education graduates will possess these capabilities:**

- Understand how to design and manage a student-centered classroom
- Demonstrate the ability to adapt and design standard aligned instruction to meet student needs, assets and interests while connecting student language, culture and experiences to learning
- Reflect on how their teaching practices impact the education of all students
- Design and analyze formative and summative assessments to inform instruction based on student progress
- Integrate instructional technology to empower their students to be creative and analytical thinkers, collaborators and good digital citizens
- Understand how to engage in intentional community partnerships and service learning beyond the school setting — supporting student interests, providing learning opportunities and encouraging college and career readiness
- Apply discipline-specific training and current research on how children learn science, and employ culturally responsive pedagogical strategies

## Expansion of our previous success

Davenport's urban education master's programs have already produced significant results for participating teachers and their students.

Grand Rapids Public Schools, the first to participate in our program, experienced the following results from teachers who graduated from our program and the students they teach:

**32%** improvement in students' academic engagement

**35%** improvement in students' demonstration of learning

**30%-40%**

of teachers who graduated from our program were promoted to teacher leaders, assistant principals or principals within two or three years after graduation

**Hope Academy of West Michigan, another Davenport partner school, experienced these results, based on data collected in 2017-2019:**

**1. In-class observations — teachers who attended Davenport's College of Urban Education exhibited improvements in the mastery of these competencies:**

- **95%** (43% increase) in demonstrating knowledge of content/pedagogy
- **100%** (64% increase) in managing classroom procedures
- **100%** (64% increase) in communicating with students
- **95%** (105% increase) in using assessments in instruction

**2. Teacher effectiveness ratings — teachers who attended Davenport's College of Urban Education exhibited improvements in the mastery of these proficiencies:**

- **82%** (54% increase) in student engagement
- **85%** (59% increase) in fostering academic ownership by students
- **78%** (47% increase) in demonstrated learning by students of CUE teachers



“The urban education program prepares participants for long-term educational careers. There's a tremendous curriculum focus on equity, English language learners and students with disabilities. This has gone a long way toward creating a pipeline of well-prepared, culturally responsive teachers. I'm so happy we've been partnering with Davenport since 2015.”

– Ron Gorman, deputy superintendent, Grand Rapids Public Schools

Expanding these strategies for training pre-service teachers at the undergraduate level is a natural progression toward empowering future urban educators in all areas of K-12 academics.

Due to the urgent need for improved performance in STEM throughout Michigan, we developed a new undergraduate program to train STEM educators. Help us spread the word.

**Bachelor of Science in urban STEM education differentiators:**

1. Culturally responsive pedagogical practices are embedded throughout the curriculum
2. Teachers emerging from our program will have the skill set to engage their students through place-based STEM inquiry learning
3. Davenport urban education undergraduates receive teaching experience through service learning assignments in urban environments from day one
4. Weekly 1-to-1 mentoring and coaching occurs throughout the program's duration
5. These programs are based on previous successes observed through our graduate programs, including improved reading and math skills for K-12 students here in Michigan

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## Partner schools expedite the win for greater STEM connections within urban schools.

We're always connecting with fellow educators to expand our list of partner schools. These schools welcome our program participants into their classrooms, and our culturally responsive teaching strategies are generating greater engagement and performance among their students.

Current partners include Detroit Public Schools, Eaton Rapids Public Schools, Grand Ledge Public Schools, Grand Rapids Public Schools, Charlotte Public Schools, Hope Academy of West Michigan, Lansing School District, Kelloggsville Public Schools, Maple Valley Public Schools, Mason Public Schools, Muskegon Heights Public School Academy, National Heritage Academies and Potterville Public Schools.

**If your district isn't among our partner schools, join us in generating impact that starts today and continues for generations to come.**



## Making these programs affordable for aspiring educators

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Dedicated financial aid counselors help participants maximize their financial aid. Each year, 93% of our students receive a scholarship or financial support. Unlike student loans, these funds do not have to be repaid. This is possible thanks to many generous donors.

Participants also may be eligible for partnership scholarships or grants, including the TEACH grant for those who are also pursuing teacher certification. Davenport College of Urban Education transfer students may be eligible for a 20% discount.

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**For more information, including course listings, visit us online at [Davenport.edu/STEMeducationBS](https://davenport.edu/STEMeducationBS) or call or text us at 800.686.1600.**

*Davenport University Financial Aid Awards, 2023/2024*

