Regents' Excellence in Teaching & Learning Felton Jenkins, Jr. Hall of Fame Faculty Award

Marina G. Smitherman

Professor of Biology & Chair of Life Sciences, Dalton State

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Nomination Letter - Dr. Adrian Epps, Provost and VPAA



Provost and VP for Academic Affairs 650 College Drive Dalton, GA 30720 706-272-4420 www.daltonstate.edu

October 31, 2019

Dear Awards Committee Members:

It is my pleasure to write a letter supporting Dr. Marina Smitherman's application for the Felton Jenkins Jr Faculty Hall of Fame Regents Excellence in Teaching and Learning Award. Dr. Smitherman has proven herself to be an excellent teacher and colleague. She implements cutting edge strategies in her classrooms and readily shares her results with fellow educators. Her commitment to teaching and learning can be seen in her classroom strategies, commitment to providing extracurricular activities for Dalton State students, and her involvement in the pedagogy of teaching and learning.

Dr. Smitherman is innovative in her work to improve learning in her classroom. Her learner centered strategies include semi-flipped classrooms, interactive lectures, in-class activities, iClickers/Kahoot, and experiential learning with real-world assignments. Her classrooms are also inclusive; she meets her students where they are, gets them actively involved in their learning, and works diligently to guide them as they progress toward their goals. In addition to her own classroom activities, Dr. Smitherman has made major contributions to the quality of our biology program. She has developed and taught six upper level biology courses, including Research Methods, Scientific Communication, and Research in Biology. These courses are particularly noteworthy due to Dalton State's emphasis on providing our students with an opportunity to participate in an undergraduate research project. To date, she has directed at least twenty-one student research projects and is currently working with three students on additional projects. One of her research students was chosen to present a poster at the Council of Undergraduate Research's *Posters on the Hill* in Washington D.C.

Dr. Smitherman is the founding advisor for the Dalton State chapter of Beta Beta Beta, the Biological Honor Society which promotes scholarship in the biological sciences with a focus on undergraduate scholarship. In its first year, Tri-Beta earned the award for Best Student Club on Campus. Additionally, she has served as the Director of Dalton State's Center for Academic Excellence. Dr. Smitherman's commitment to teaching and learning is also demonstrated by her professional activities in the subject. She has given state and national presentations on the topics of Transparency in Teaching and Learning, High Impact Practices, and Excellence in Undergraduate Mentorship. She received a USG SOTL Fellowship in 2018-2019 to study the impact of a new faculty academy, served as the Director of the DSC Center for Academic Excellence for three years, currently leads the DSC New Faculty Academy, has chaired the Georgia Consortium of Teaching and Learning Directors, and served on the Georgia LEAP Steering Committee. Professionally, she has been active professionally in teaching and learning by publishing a book and a chapter, has another book in progress, and has delivered workshops across the state of Georgia and nationally.

Dr. Smitherman is the founding advisor for the Dalton State chapter of Beta Beta Beta, the Biological Honor Society which promotes scholarship in the biological sciences with a focus on undergraduate scholarship. In its first year, Tri-Beta earned the award for Best Student Club on Campus. Additionally, she has served as the Director of Dalton State's Center for Academic Excellence. Dr. Smitherman's commitment to teaching and learning is also demonstrated by her professional activities in the subject. She has given state and national presentations on the topics of Transparency in Teaching and Learning, High Impact Practices, and Excellence in Undergraduate Mentorship. She received a USG SOTL Fellowship in 2018-2019 to study the impact of a new faculty academy, served as the Director of the DSC Center for Academic Excellence for three years, currently leads the DSC New Faculty Academy, has chaired the Georgia Consortium of Teaching and Learning Directors, and served on the Georgia LEAP Steering Committee. Professionally, she has been active professionally in teaching and learning by publishing a book and a chapter, has another book in progress, and has delivered workshops across the state of Georgia and nationally.

In short, Dr. Smitherman is committed to the improvement of teaching and learning in her own classroom and beyond. The fact that her Dalton State colleagues selected her to receive the Excellence in Teaching Award in 2014 and Excellence in Service in 2013 is evidence that they hold her in high regard and support my recommendation. Please accept this letter as my strongest endorsement of her nomination for the Regents Excellence in Teaching and Learning Award.

Sincerely,

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Adrian L. Epps, Ed.D. Interim Provost and Vice President for Academic Affairs

Letter of Support from a Colleague - Dr. Barbara Tucker, Chair of Communications

October 15, 2019

Awards Committee Felton Jenkins, Jr., Hall of Fame Faculty Awards Board of Regents University System of Georgia

Dear Awards Committee,

It is my distinct pleasure to write this letter of support for my colleague, Dr. Marina Smitherman, Professor of Biology and Chair, Department of Life Sciences, at Dalton State College. She is Dalton State's candidate for the Felton Jenkins, Jr., Hall of Fame Faculty Award. After reviewing the criteria for the award, I can think of no one more qualified than Dr. Smitherman, who has been a tireless and effective advocate on our campus and in the University System for teaching and learning, student success, and innovation in education. A short letter of support cannot do justice in describing all the work she has accomplished in these areas, in addition to her accomplishments in administration and her excellent teaching.

I have known Dr. Smitherman since 2007 when she began teaching here. I was leading the Teaching and Learning Center at the time, and she attended frequently and added much to the discussions about good teaching and facilitating learning. A few years later, she took over the leadership of the newly branded Center for Academic Excellence. She also became highly involved with the other CTL directors in the System, forming strong alliances, presenting at conferences and state meetings on a regular basis, and in general moving the study and practice of college pedagogy forward in the USG.

The criteria for the Felton Jenkins, Jr., Award are as follows:

- Strongly committed to teaching and learning. This commitment might be demonstrated through activities designed to advance the quality and practice of teaching and learning, to develop critical thinking and problem-solving skills, and/or global and multicultural understanding;
- Uses effective teaching strategies to enhance student learning, including, but not limited to innovative uses of technology, active learning, learning communities, student portfolios, and assessment;
- Has a strong commitment to fostering the academic success of students through interaction with students outside of the classroom (e.g., advising, mentoring, recruiting, etc.).

Dr. Smitherman is an excellent, innovative, engaged classroom teacher, as her CV and evaluations would show. Students love her classes and she often teaches Anatomy & Physiology, a required and rigorous course for (nervous) Health Professions students who often do not have the requisite biological background. In her early days teaching at an access institution, she strove to understand and reach her students, especially through experiential learning activities. She also engaged the biology students outside of the classroom through the Beta Chi Nu student

organization and through undergraduate research, which resulted in one student presenting their work on snake venom in Washington, D.C.

There are two areas that Dr. Smitherman has particularly focused on over the last few years. The first is to inculcate a culture of experiential learning through High Impact Practices on our campus. She was a one-person fighter for this cause at the beginning, managing to get a team of five funded to attend the AAC&U High Impact Practices Institute in Los Angeles in 2016. I was a member of the team and had my eyes opened to the value, important, and vision of HIPs. We came back with an ambitious program for bringing HIPs to our campus, and we have seen some good results overall, with a significant rise in awareness among the faculty about HIPs through training and some important successes in course redesign. I give Dr. Smitherman all the credit for this initiative.

Secondly, she has designed and run a remarkable New Faculty Orientation program for the last three years. While I am sure this program is discussed in her documents, I would reiterate that this program largely happened and was successful because of Dr. Smitherman's advocacy and hard work. In the New Faculty Orientation, faculty attend once a month at programs related to teaching and not just administrative paperwork, are observed and assessed by a person who is not their supervisor, and received one-on-one attention through a mentor.

Third, Dr. Smitherman has been awarded two Foundation Awards of Excellence on our campus, one for teaching and one for service, and was nominated for the award in professional development. Obviously, her work is widely valued on our campus. These awards speak to the breadth of her work; she is active in publishing and presenting on CTL leadership and other aspects of faculty and instructional development. She is a regular presenter at the Professional and Organizational Development Network (POD), an international group committed to college faculty development.

Finally, the third criterion for the award is "a strong commitment to fostering academic success of students. . ." In almost every conversation I have with Dr. Smitherman, she comes back to the success of students. It is her passion. As she says, "happy faculty make happy students." Faculty, in my view and I believe in hers, are happy when their work is highly valued and they are given the resources and development to do their primary job of teaching students as well as they possibly can. Dr. Smitherman is not just committed to the students who sit in her classes or who are in the Department of Life Sciences' programs, but to all the students at Dalton State.

I firmly and wholeheartedly support Dr. Smitherman for the Felton Jenkins, Jr. Hall of Fame Award and hope to see her winning it in the near future.

Sincerely,

Barbara G. Tucker, Ed.D., Professor of Communication Chair, Department of Communication Dalton State College

Letter of Support from a Former Student – Dr. Faith Stokes, Doctor of Physical Therapy

I never struggle to find words of praise for Dr. Marina Smitherman, but ALWAYS struggle with where to begin! I will try and capture her vast influence on my life, and others, in this letter and I hope it leaves no question in your mind that the professor you are reviewing for this award is worthy and, beyond doubt, exemplary in every way.

First, she inspired me as a teacher. The very first day of class Dr. Smitherman said this: "Some people go through life with one big dream like curing cancer or becoming the best doctor. I'll tell you why I love teaching. I have all those dreams because I walk into a classroom every day and feed the passion into all of you, believing that these dreams will be yours and cancer will be cured, and my students will become the best doctors, and achieve many other amazing things. I love that teaching gives me the opportunity to inspire you to have better lives and change the world." She never failed to live up to the promise that she would inspire greatness in us every time she walked into a classroom. Her style of teaching taught me how to find my strengths, strengthen my weaknesses, and think for myself. We were never encouraged to regurgitate information; rather, we were taught to research, debate and challenge our own beliefs. Before I finished my first class with her, she changed my opinion of myself, science and my future. All three were somehow greater than I ever thought they could be when I saw them through her eyes. As I moved into every classroom after that, I carried with me a certain confidence that I could do more than I expected from myself. She had taught me micro and so much more.

Next, as my academic adviser, she showed me that she expected the unfettered scientist she created in her class to continue after the final grade was entered. I was passionate about research, but my interests involved investigating the antimicrobial qualities of snake venom and there were concerns about bringing it onto campus. I was resigned to accept the decision. Dr. Smitherman did not accept this as a final answer; in fact, even with her general discomfort concerning snakes, she convinced even the most cautious to allow the research. When everyone expected me to complete a modest, undergraduate level research project, she urged me to work at the level of my ability. What followed was a two-year research project that was lauded as graduate-level work.

Through her guidance and encouragement, I presented my original research at four conferences, winning awards locally and regionally. On the national level, I was 1 of 60 (out of 600 nationwide applicants) undergraduates selected to present to federal lawmakers at "Posters on the Hill" in Washington, D.C. But, Dr. Smitherman didn't just care about my research. Through it all, she urged me to maintain my academics as well, and in 2013, I was awarded the Georgia General Assembly Academic Recognition Award for my academic achievements and my work in research (House Resolution 260). In short, she defended my ambition, un-locked my potential, and guided my success. When I look back on what could have been a very mediocre experience, I find that she was the key to unlocking a priceless educational and academic experience that required immeasurable sacrifice on her part.

When I expressed my interest in establishing an honors group in Biology, she immediately graced it with her unwavering enthusiasm and creative ideas. Together, we founded Beta Chi Nu (BXN), Dalton State's chapter of the TriBeta National Biological Honors Society. She was already juggling a full course load AND my research project, but in true 'Dr. Smitherman fashion', she could not pass up an opportunity to help her students succeed. Through her guidance, BXN continues to win awards locally and nationally. As the charter President, I had

an incredible front row seat to our resulting transformation. BXN is giving biology students recognition for accomplishments in academics and research to name a few things, and we saw a surge in our students being accepted to competitive graduate programs (myself included). Coincidence? No. I argue that you can trace many of their successes directly back to Dr. Smitherman insisting that our school offer research opportunities and BXN.

My narrative would not be complete without helping you read between the lines. While Dr. Smitherman was making a life-long impression on my academic career, she was also nurturing my struggling soul. In July of 2011, my husband and son were both declared disabled due to the sudden progression of their degenerative spine disease. Our family has endured 6 surgeries and home remodels to accommodate wheelchairs, braces, and walkers. The household duties fell squarely on my shoulders and I spent a lot of time traveling to doctors to understand the suddenness of their combined health failure. Dr. Smitherman used every ounce of creativity she had, I think, convincing me to move forward, push harder and discover the potential I had not yet pulled from the depths of myself. Her unwavering faith in my strength motivated me in ways that has left me wondering how I functioned as a student before she became my adviser!

I have continued on my academic journey and Dr. Smitherman's influence didn't stop once I graduated from DSC. I worked on a doctorate in physical therapy at the University of Tennessee at Chattanooga. In case you wondered, Dr. Smitherman still acts as my adviser in many ways because I frequently contacted her for guidance when I was unsure of the right direction. Even in an impressive graduate program, I have not found a suitable replacement that can help me develop my skills as a leader who contributes to her community, her field, and her country.

Through her continued guidance, even from a distance, I continue to improve myself. The deep love for research that she nurtured in me led me to take on the challenge of leading classmates to host yearly fundraisers for the Foundation for Physical Therapy. The Foundation funds research so physical therapists can provide the best, up to date care for our patients. Last summer, due to these efforts, I was flown to Washington D.C. to receive an award on behalf of our program for our initiative. The passion Dr. Smitherman cultivated in me as she guided my leadership skills left me hungry to do more for my community. I continue to serve many hours as a volunteer, and this year I signed up as our Ambassador for the International PT Day of Service. Our local food banks needed produce and I was thrilled to coordinate with local leaders to donate 500lbs for this. I continue to thrive under her guidance and I discover more of my own potential every day.

Dr. Smitherman has positively influenced me in every way and I have seen her affect other people in a similar fashion. You could search forever and I promise you that you could not find someone else who is so effective as a professor or motivator for struggling students. If my letter did not convince you, feel free to contact me. I will never get tired of thanking her even though those two words are entirely inadequate for the contribution she has already made to this college, to myself, and many others just like me. Every day, she is a doctor, a groundbreaking scientist, and many other things because she is the educator that went beyond a textbook, taught us what we were meant to be, and guided us patiently until we believed in ourselves enough to do it.

Thank you for taking the time to read my letter. Sincerely, Faith M Stokes, DPT. Email: <u>faith.stokes@comcast.net</u>

Letter of Support from a Current Student - Emily Statham, B.S. Biology Student

Emily Kathryn Statham Dalton State College Junior estatham@daltonstate.edu

October 21st, 2019

To USG Office of Academic Affairs Special Regents Committee:

It is with great pleasure that I write this letter of recommendation of Dr. Marina Smitherman for the Felton Jenkins Jr. Hall of Fame for the state college sector award. I have spent two consecutive years at Dalton State College as a student and mentee of Dr. Smitherman and I am grateful to have experienced and witnessed the great impact that she has made in the lives of the students at this institution. Dr. Smitherman's commitment to the success and well-being of the students, programs, and community at Dalton State College prove her to be exceedingly qualified and deserving of this award.

In the classroom, Dr. Smitherman is interactive with students and shows genuine care in how well her students are learning and performing academically. Her coursework is always graded fairly and aids in allowing critical thinking skills to flourish in the students of her classes. Her labs allow self-exploration of topics being covered through hands-on experiences, critical-thinking activities, and practice experimentation. She is always easily accessible to answer questions or have deep academic discussions inside and outside of class time. Dr. Smitherman's teaching style is flexible to all learning-styles and will adapt to whatever her students need so that they may grow and gain the most academically from her courses. The most unique aspect of her courses is the opportunities provided during class time like interactive discussions, presentations, challenges, and projects to promote independent thinking that allows students' abilities to shine in class and share their academic passions. Above all, Dr. Smitherman has a niche for encouraging the confidence in students to become deeply inquisitive of science and for finding the academic potential in each student to find their own niche that makes them feel successful and worthy.

Outside of the classroom, Dr. Smitherman has a gift for making each student she encounters feel welcomed and appreciated at Dalton State. Dr. Smitherman is immensely supportive of student organizations, like Beta Chi Nu, that support the success of students and furthermore the community of Dalton. Dr. Smitherman also mentors research students to find fields that they are passionate about and instills the skills necessary to experiment in that field and to one day make their own impact. She also stays involved in the academic pathways of many students by mentoring and unlocking the potential of these students who may feel lost on their way to graduation, professional school paths, and graduate school paths. I have been grateful to have been able to receive these mentorships from Dr. Smitherman during my college career. As a student who once struggled with academic impostor syndrome and was too strongly affected by self-doubt to attempt to pursue medical or graduate school, I have been able to find my true self and confidence through the guidance and encouragement of Dr. Smitherman. She has helped me build the professional skills and belief in myself needed to pursue research and become set on a path to hopefully one day grow into a well-prepared physician and member of society. I know she has done the same for others that she has mentored, and genuinely cares about each of them.

I am appreciative that I and so many others have been able to study under the guidance of Dr. Smitherman. Her impact as an educator is widespread and has changed the lives of her students and their communities for the better. I strongly believe that she is the exemplification of what a college professor should be and for this she is an exemplary candidate for this honor.

Sincerely,

Emily Kathryn Statham

Marina Golding Smitherman, D.Phil., MPH



PROFILE

I currently serve as the Chair of the Life Sciences and Professor of Biology at Dalton State. I have worked collaboratively to spear-head pedagogical development by directing our Center for Teaching & Learning, designing Undergraduate Research programs, chartering an Honors Society, promoting High Impact T&L Practices, and teaching new faculty. I was awarded the 2014 Excellence in Teaching and the 2013 Excellence in Service awards at Dalton State. I have chaired the USG Consortium of T&L Directors and serve on the LEAP Georgia committee. I coauthored "Taking Flight: Making your Center for Teaching and Learning Soar" published by Stylus, VA.

EDUCATION:

- Doctor of Philosophy (D.Phil.) University of Oxford, UK (2002-2005).
- Master in Public Health University of Manchester, UK (2009-2011)
- Bachelor of Science with Honors University of Nottingham, U.K. (1996-2000).

ACADEMIC APPOINTMENTS:

Chair, Department of Life Science, School of Science, Tech, & Math (Aug 2018-current)

Professor of Biology, Dalton State (Jan 2008-current, promoted from Assistant and Associate)

Advisory Chair, Chair & Chair-Elect, GA Consortium of T&L RAC (Sept 2015-July 2018)

Director, Center for Academic Excellence/Coordinator of Committee (June 14-Current)

KEY PROFESSIONAL DEVELOPMENT:

Networks/Consortia:

• GA Consortium T&L Directors, POD Network, CUR Liaison, Associate AAC&U

Awards & Honors:

- USG Scholarship of Teaching & Learning Fellow, 2018-2019
- Excellence in Teaching Award, Commencement Address, 2013-2014, Dalton St.
- Excellence in Service Award, 2012-2013, Dalton State.
- Advisor of the year 2012-2013 for *Beta Chi Nu*, Dalton State.

<u>Curriculum and Pedagogical Development Leadership Institutes:</u>

- AAC&U High Impact Practices Summer Institute Team Leader for 2016-2019 Strategic Plan High Impact Practices Initiative.
- Institute for New Faculty Developers, June 2015.
- AAC&U Project Kaleidoscope STEM Transformation Leaders Institute (2014).

Select Presentations/Interactive Workshops:

- "Stepping up: Engaging Faculty to Lead...", 3hr preconference wshop. POD 2018
- *"Transparency in Teaching & Learning:* various invited 1-3hr workshops at Augusta, Columbus State, West Georgia, ABAC (2017-2019), ICED June 2018
- "UR: Mission Possible" & "Effective Research Mentorship" ABAC March 2018.
- *"Excellence through Experience: Facilitating High Quality High Impact Student Experiences"*, University System of Georgia T&L Conference, April 2017.
- *"Taking it on the Road: Cross-Institutional Collaboration* Rocks!" & *"Collective Impact: ...advocating for Educational Development"*, POD 2017, Montreal.
- *"Taking Flight: Opening or Reinvigorating a Center for Teaching & Learning"* POD 2017 & 2018 Conferences, 3-hr pre-conference interactive workshop
- "High Impact Practices & the Sophomore Slump", CCG Symposium, Sept 2016.
- *"Semi-flip: How to Flip Your Classroom One Activity at a Time"* Invited USG Faculty Development Webinar for Faculty Development Series, Feb 2016.
- *"Antimicrobial Properties of Snake Venom"*, Joint with Undergraduate Faith Stokes, Council on Undergraduate Research Posters on the Hill, April 2014.

<u>Grants:</u> Sept 2013 - Jan 2019 – (\$114,900) ranging from grants for educational transformation including the Reacting to the Past Foundation, open access textbook materials, research equipment, undergraduate research and travel.

Select Publications:

- Cruz, L., Parker, M., Smentkowski, B., & Smitherman, M. (2019). Taking Flight: Making your Center for Teaching and Learning Soar. Sterling, VA: Stylus Press.
- Stokes, Ramos, Cantrell & Smitherman, 2019. *Antibacterial activity of southeastern snake species*. Cell and Molecular Biology (in preparation, with undergraduates).
- Quarterly Director Columns, Journal for Academic Excellence, Vol 3-5 (2014-2017)
- Smitherman, M. (2013). "Incorporating games motivates millennials". JAEx.1 (4):9.
- Tosh, K et al, 2002. A region of chromosome 20 is linked to leprosy susceptibility in a South Indian population. J. Infect Disease 186(8):1190-3
- Siddiqui MR et al, 2001. A major susceptibility locus for leprosy in India maps to chromosome 10p13. Nature Genetics 27(4):439-41.

SELECT SERVICE TO THE CAMPUS & COMMUNITY

- Chartered and advised a new chapter of Biological honors society *Beta Beta Beta* (12-19)
- 2016-2019 Strategic Planning Committee (Oct 2015-April 2016)
- Complete College Georgia & LEAP Steering Committees (2014-current)
- Faculty Development and Welfare Committee through Faculty Senate (2014-2018)
- Mindset Subcommittee of S4S Student Success Committee (2018-current)
- POD Professional Development Committee (2016-current)
- Scholarship Showcase, CAE Leadership, & STEM Undergrad. Res. Committees (12-17)

Teaching & Learning Reflective Statement & Philosophy

"Ideal teachers are those who use themselves as bridges over which they invite their students to cross, then having facilitated their crossing, joyfully collapse, encouraging them to create bridges of their own" – Nikos Kazantzakis.

My teaching philosophy is based on the belief that learning needs to be student centered and that students need to be equal partners in the process. My goal is to facilitate the students gaining the skills necessary to become active participants in learning. I work tirelessly to continually refine my approach to teaching in order to provide students with the best experience possible. I have included example interactive experiential active learning exercises I designed with the scholarly framework for my teaching in the evidence section to give a feel for how my courses run. I encourage the students to work collaboratively, develop soft skills such as writing every class and giving oral presentations, guide peer feedback and development of metacognition.

I realized early in my time at Dalton State that because our students come to us often with lower levels of preparation and readiness for college, and that many have significant family obligations alongside studying, my teaching had to engage students in the material the second they stepped foot in my classroom. I have worked hard to refine my teaching making it as 'real-world' as possible to engage them regardless of their often difficult external circumstances. I use a diverse variety of evidence-based pedagogies, and tailor my courses to the needs of each student group.

I adopt a semi-flipped approach using interactive lecturing combined with active learning techniques and take the time to show the students that I care about their success in my course and in their careers long-term. With this innovative and interactive semi-flipped and experiential approach, I work hard to motivate my students to want to truly learn and understand the material. Without fail I learn their names and get to know them so that they feel invested in my course because I have invested in them. I also work earnestly to help students develop a positive academic mindset despite the large volume of material; it can quickly become demoralizing if a student gets overwhelmed.

I communicate high expectations to my students and provide many resources to help them achieve so that they go into their next course well-prepared. With that in mind, I provide frequent opportunities for formative feedback using Kahoot or quizzes, and guide them in reflecting on their progress to develop their metacognitive skills in post-assessment surveys. I am consistent with my use of Georgia View so that they have total access to class information, resources, grades at all times. I also use an adaptive homework system that customizes the learning activities provided to the students based on where their growth opportunities are to help them continually improve. This is an incredible powerful tool in helping students prepare for summative assessments.

My study of effective pedagogies includes the major books from famous authors including Bain, Barkley, Major, Fink, Nilson, and Zakrajsec. Most importantly however it includes continual study in teaching and learning. As far as I am concerned this work will never be finished because the student populations change with generational shifts and sociocultural factors influence student expectations of their professor and their classroom.

It is challenging to reflect just how much my approach has been defined by the students I have worked with at Dalton State and my exceptional colleagues across the state. It was not necessary to be an excellent teacher in Oxford because those students were the brightest and the best and were going to succeed regardless of my teaching expertise. When I arrived at Dalton State I realized that the students needed so much more from me. Along with the development of the best classroom teaching I could provide, they have inspired and challenged me to develop a series of undergraduate research courses, charter a chapter of the biological honors society TriBeta on our campus and advise it for six years. I took that dedication to providing students with the best to the next level when I moved into faculty development leading our Center for Teaching and Learning and launching an initiative by forming an action team to promote High Impact Practices on our campus.

I am beyond grateful to Dalton State for demanding from me the very best version of teacher that I can be, along with the other dedicated faculty and staff for supporting and mentoring me in these efforts. In addition to the incredible students that I have had the privilege of working with, this packet is dedicated to the teachers that inspired and encouraged me to continually learn on my own journey; colleagues at Dalton State, my innovative GA-CTL colleagues, and my father who embodied true unwavering commitment & dedication to his students' success.

Summary of Innovative Teaching Practices

I take a scholarly evidence-based approach to my classroom. I focus on helping students develop of skills to enhance their future learning. I have provided three brief examples of innovative teaching practices I use; semi-flipped classroom, experiential, and collaborative learning.

1. Semi-Flipped Classroom

My classroom is semi-flipped balancing interactive lecturing with active learning and out of class reading and videos. I began using flipped classroom but discovered if a student is working two jobs or taking care of family they may not be able to do the reading even if incentivized and motivated to do so. This approach is rooted in backward mapping starting from what students need to get out of the course (Fink) and incorporates the principles of small teaching (Lang). My course is highly organized aligning the text, with all lectures, and study materials.

Each class session begins with 1-3 critical questions based on the reading that we will examine. These are displayed as students arrive so that they can begin thinking, often with a meme or a quote to discuss. I walk around the classroom to check-in and answer any questions. We open by summarizing and connecting to the last session, going through the outline or skeletal concept map for an overview of what we will do and complete reading review or video accountability. I then usually use a short interactive lecture following principles of brain-based learning. I use Zen lecture technique so that the students are either actively working, taking notes, processing, or verifying their knowledge. I use think-pair-share for active brain breaks.

Following this, we usually do deliberative retrieval practice using pen and paper quizzes or Kahoot to provide formative feedback Alternatively, I will employ a student-engagement-techniques to help students develop team-working skills and have fun such as games, class discussions, debates, and case studies. Then a problem-solving exercise or integrative case-study exercise might be followed by another brief interactive lecture often incorporating videos and animations to reinforce challenging concepts. At the end we either answer one or more of the critical questions in writing, complete a comprehension quiz or employ a classroom assessment technique such as muddiest/clearest point or one-minute paper.

Most importantly I pay attention to Maslov's pyramid of basic needs guiding them in sleep, exercise, nutrition, providing a listening ear, and meeting them where they are without assumption

or judgment. I work hard to create a safe, inclusive, and welcoming classroom environment. I provide them with my cell phone number so they can always reach me and show them I care by getting to know them as individuals to aid in the development of a positive academic mindset.

2. Experiential or Active Learning Activities. Designing real-world authentic problembased experiential learning assignments is my happy place. These are brief examples:

'Your fifteen minutes of fame': Antimicrobial Drug Design: Your pharmaceutical company was just beaten to the market by a major rival for a new cardiovascular drug. Your CEO believes that a new antibacterial drug could be quick to implement to retrieve lost revenue. She wants to hear pitches from six R&D groups. This could be your big break but there can only be one winner! You have 4 weeks to research and design a novel antimicrobial and prepare a fifteen-minute pitch including; name/rationale, activity, efficacy, side effects, & cost. Get designing and good luck! ^(c)

Playing Devils' Advocate: Debating the impact of Viruses on our Lives: Your group will be assigned to either a 'FOR' or 'AGAINST' side of controversial statements like viruses are living organisms and all viruses cause cancers. Your task is to justify the science regardless of whether you personally agree with these statements and convince the class. May the best scientist win! ©

Pandemic II: Microbes decimate the global population: The purpose of the game is: to design a novel pathogen to cause as deadly a disease as possible; to identify the features that made your disease/s highly infectious, virulent; how long it took your disease to spread globally; what measures countries put in place to prevent deaths; and what else (air/ports, natural disasters) impacts the spread. Make notes to discuss on how this game demonstrates epidemiology principles.

Outbreak Investigation: Food poisoning at a Dalton Church Picnic: It is December 2006. You work for as an Epidemiologist investigating disease. In September, the CDC was alerted to clusters of infection with *E.coli* 0157:H7 in WI, OR, and NM. In November, Tennessee noted an increase in the incidence of *Salmonella*. You are to called investigate a gastroenteritis outbreak. You have two potentially contaminated foods sources to analyze but only funds to test one. Follow the CDC 10 steps to identify the pathogen and contaminated source before anyone else dies!

<u>'You are what you eat' – Interactive Nutrition Lab</u>: Diet restrictions can be challenging to stick to when eating out which can lead to serious diseases and malnutrition. You are Health Department Nurses advising 5 patients on meals that meet their dietary restrictions from their two favorite restaurants. Write a **summary** describing the menus and prepare a **10-minute presentation** on the pros and cons of your restaurants. We will discuss the NY Times article and documentary.

3. Collaborative Learning & Testing

My students work collaboratively in class on stratified assessments. In addition to continuous formative feedback techniques, the first time they experience assessment on any topic is a low-stakes challenge in groups of four to give them retrieval practice to help them identify any knowledge gaps. Late they will take a more rigorous medium-stakes test in pairs. Finally, they then take their higher-stakes exams individually (80%), followed by a group re-take of the test (20%). The group portion enables them to fill gaps in their knowledge, get prompt feedback on their performance test, and have fun in the process.

Criteria 1 - Evidence of Strong Commitment to Innovative Teaching and Learning

Excellence in Teaching and Learning is always a work in progress as the evidence-base and our student needs change. I have demonstrated my strong commitment to teaching and learning through my work in teaching, professional development, and service at through the following:

- <u>Publishing in T&L</u>: Co-authored two books and one chapter in T&L
 - Published Cruz, L., Parker, M., Smentkowski, B., & Smitherman, M. (2019). Taking Flight: Making your Center for Teaching and Learning Soar. Stylus, VA.
 - Submitted/Forthcoming Chapter in "Re-imaging Teaching to Maximize Student Learning", Palgrave McMillan (2020).
 - In preparation Smitherman, M., and Zakrajsec, T. (2020) "Off to a Great Start: Excellence in Teaching and Learning for College Faculty"
- <u>Presenting in T&L</u>: at campus, USG, around GA state, and national level
 - Delivered invited workshops around the state on Transparency in Teaching and Learning, High Impact Practices, and Excellence in UR mentorship
 - National Conference Presentations and POD, CUR, and AAC&U
 - HIPS Institute
 - o PKAL STEM Transformation Leadership Institute
- <u>Actively Researching in T&L</u>
 - USG SOTL Fellowship 2018-2019 to study positive impact of year-long new faculty academy; positive impacts in classroom, for development of teaching philosophy and faculty mindset
 - Five year study on use of post-assessment surveys to build metacognition in freshman and sophomore students.
- <u>Service in T&L</u>
 - o Served as Director, Center for Academic Excellence leading faculty development
 - Lead new faculty academy (2016-on) guiding teaching development grass roots
 - Served as Chair, Chair-Elect, and Advisory Chair of GA Consortium of Teaching and Learning Directors (USG RAC)
 - Served on LEAP GA Steering Committee
 - Developed the first undergraduate research courses at Dalton State
 - Excellence in Service Award in 2013
 - Professional Involvement and Participation in T&L Associations
 - Council on Undergraduate Research (since 2010)
 - o Professional Organizational Development Network (since 2014)
 - Georgia Consortium of Teaching and Learning Directors (2014-2019)
 - Associate with AAC&U (since 2015)



Criteria 1 - Peer Observations of Teaching

<u>Dr. Celeste Humphrey</u> (Faculty Evaluation Committee): "Dr. Smitherman is one of the best teachers that I have ever evaluated. She is poised and confident in the classroom, her passion for the subject and her affection for her students are apparent upon entering her classroom."

<u>Dr. Gina Kertulis-Tartar</u> (Past Chair): "Dr. Smitherman excels in teaching as evidenced by her student evaluations. She worked hard to develop a research track for our BS Biology majors. She works tirelessly to improve her courses and assist students in excelling. On student evaluations, Dr. Smitherman is often praised for her positive attitude, knowledge, classroom demeanor and approachability. She really welcomes students them into her office and works tirelessly to assist. The individualized attention she gives students is essential to their success."

<u>Dr. James Adams</u> (Chair of Promotion and Tenure Committee): "Marina does a first-rate job of teaching. She is knowledgeable about the material and is at ease presenting the material in as many ways as necessary to facilitate student learning. Her rapport with the students is outstanding. She makes the classroom very comfortable for the students so that there is an ease in asking questions."

<u>Dr. John Lugthart</u> (Past Chair): "Marina is first and foremost a teacher, and her passion for education is obvious. Each one of her efforts has focused on things that benefit our students. It is unusual for faculty to take on such significant leadership so early, but Marina has a clear vision for our institution and lots of energy! Her passion for helping our students succeed is inspiring and her service is outstanding. Dalton State is fortunate to have Marina as a faculty member."

<u>Angela Nava</u> (New Faculty Member 2019-2020). "I wanted to say thank you and tell you that I have already improved my teaching just one day after your small teaching session! I so appreciate all you do for us! I love that the interventions were quick and easy to implement but seem to have a real impact."

<u>Deb Richardson</u> (Mid Career Faculty Member): "I just want to take a minute to thank you for the wonderful presentation on the education of students who may not be college ready. Many faculty seem interested only in the success of their own students. It is evident, by the commitment of you & your team, that you desire the success of all students at Dalton State. Thank you for investing in me, & therefore my students."

<u>Todd Zakrajsec</u> (UNC Department of Family Medicine): "I have been consistently impressed with Marina's approach to teaching and her work in faculty development. I am extremely impressed with her creation of a foundation of research, service, and philanthropy in the process of truly engaging her students in the learning process. She is a demanding instructor and provides exceptional opportunities for her students. In this age of many within the academy backing off on expectations of students, those who are a bit more demanding often receive lower student evaluations. This is not the case with respect to Marina. I have been very impressed with her overall learning-centered approach to teaching. She very much understands what solid teaching looks like and then delivers. Her faculty development work is also impressive. I regularly review the work of centers throughout the United States and I have visited over 200 campuses. I find the resources and opportunities she offers at Dalton State to be impressive. It amazes me that she finds the time to both teach and provide this level of faculty support which is so impressive and when I have visited Dalton State it is obvious to me that she is very much admired and respected by both faculty and students alike."

Criteria 1 - Faculty Development in Teaching and Learning

As a result of my commitment to providing our students with the best educational experiences possible, I began leading faculty development in Teaching and Learning in 2012 and was asked to serve as Director of the Center for Academic Excellence (CAE) in 2014. Consequently, I took a deep dive into the evidence-base and began speaking and publishing on the innovative aspects of my teaching. Over three years, I led the Center working collaboratively with colleagues to build it into a vibrant center despite limited resources. Our program is summarized below:

'Part-time Center-of-One' Teaching and Learning Semester Program Summary:

- Annual Teaching & Learning Conference: Keynote speaker, sharing of ideas, successes, failures, discussion on development of classroom experiences (attendance 80-140).
- Journal of Academic Excellence: Recognize faculty achievements, publication of SOTL.
- Friday Workshops: Bring speakers to campus for 2-3 hour workshops, attendance 40-60.
- Coffee and Conversation Reflective Community of Practice: e.g. "Heart of Education". Evidence suggests adults learn best through reading, reflection, discussion, & mentoring.
- Scholarship of Teaching and Learning Writing Group: encourage SOTL research and publication study of their own classroom approaches
- New Faculty Group/Orientation: Training of new faculty in effective teaching etc.
- Thank a Teacher: ensure faculty or staff feel appreciated and valued for their hard work.
- Brown Bags: lunchtime talks on current hot topics like "Becoming an HSI", "OERs".
- CAE Learn Anytime: Videos of Friday workshops, materials and discussions on GaView.
- Personal Confidential Observations & Consultations: Assisting faculty one-to-one.

Our participation rates went from 23% in 2013 before I took over to 62% of the full-time faculty in 2017. One strength of our programming was our Annual conference which had broad campus participation and scholars from local institutions and states. In 2016 there was a structural change in our faculty development that gave me a valuable opportunity to design and lead a year-long new faculty academy. This pairs teaching and learning sessions with personal observations and consultations and peer-mentoring. This has been highly successful and I am proud of the opportunities this affords our new faculty to adjust, refine their teaching, and get ready for promotion and tenure. The impact of this work engaged between 50-60% of our full-time faculty in teaching and learning. This is a testament not only to my work but to our incredible faculty and how much they care about excellence in teaching our students.



It was such a treat seeing you today!! You will forever be my favorite professor 💙

Criteria 2 - Evidence of Excellence in Use of Effective Teaching Strategies: Anonymous Student Evaluations of Teaching

The results from my student evaluations show consistent patterns which are interesting given the students' variation in their levels of preparation and interest in the subject. I always appreciate getting feedback from the students and I find their comments are revealing, fair, and accurate to my approach within each class. This feedback has led to consistent refinements in my approach from making lab more interactive through adding group challenges, to providing the students with opportunities to come prepared to class, and guiding them in developing the study habits required for their long-term success. The scores for my courses have stayed above the division average. As shown in the graph, these have ranged on average from 4.8 to 5.0 out of 5.0.



A couple of outliers are new courses in which I implemented a major innovation. I do not believe these scores alone indicate the positive learning environment I work hard to create. When people ask me how I teach, I often reply that they should ask my students. Student frequently highlight positive aspects of my pedagogy in their anonymous online student evaluations, including my use of student engagement techniques, organization, encouragement, and individual feedback.

"Dr. Smitherman made this one of the best semesters I have had, a great great great professor who is truly interested in her students' success and future endeavors. She has a way of making people feel as if they can do whatever they want and she encourages them to reach for the stars, to dream bigger than they may have thought possible, I'm lucky to have been able to have her as a professor...!"

"Smitherman is a great professor. She has made me really enjoy this course more than i could ever imagine. She always has a great attitude, and is willing to do whatever it take to see her students advance in her class as well as their future goals. She has without a doubt been my best professor."

"Dr. Smitherman, was well organized in ALL of her notes. I have been at Dalton State for about 6 years and she is by far my favorite teacher. She goes out of her way for any student who is willing to learn. She provides an environment for all students to participate and be involved."

"This course is the best class I have ever had. Ms. Smitherman is the best teacher I have ever had! Not many teachers can do all that she does in the classroom. She is passionate. She is organized. She communicates very well on a level that everyone can understand. She encourages us to remember the material through participation and interactions with other students. Ms. Smitherman is very relatable and approachable. She cares very much about her students and does everything possible to help us succeed. I cannot emphasize enough the effectiveness of this class!"

"Dr. Smitherman is by-far one of the best professors I have ever had. I was struggling on whether or not I should drop the class, so she set up a meeting with me and we sat down and discussed my options in great detail. She drew out a plan for me and I ended up staying in her class. She showed me all the resources available to help me learn the material. I am deeply grateful for her. She takes the time to help her students with whatever they need."

"Mrs. Smitherman is an amazing instructor! She truly wants the students to learn and does everything in her power to help us. I wish she could teach all my courses"

"Dr. Smitherman is so enthusiastic about her job that you can't help but love this subject. She made learning so fun and interesting. I can't imagine taking a science class with anyone else. I hated science (especially biology) before taking this class. I love it and now can't wait for next semester."

"Dr. Smitherman is the best professor I've had in my college career, wonderful person, and her classes are the best. Dr. Smitherman always walked into the classroom with a smile on her face. I believe it is easier and fun to learn in the positive atmosphere that she provided."

"Dr. Smitherman is a rare find in the teaching world. Her enthusiasm for knowledge is contagious and motivates her students to learn. Her dedication is evident in her students' success. This class was a wonderful experience."

"Dr. Smitherman is an excellent educator. She has spoken individually to many of my classmates giving them advice and listening to their concerns about what they want to pursue in terms of careers. She is thoughtful of their (and my) interests and strengths and is always giving suggestions about what area we may excel in - that is the mark of a great educator: someone who will go the extra mile to get to know students as people and help them to figure out what this class, this education can propel them to in life. I'm so lucky to have had her and I know Dalton State College is lucky to have her as well."

"Dr. Smitherman is a fantastic instructor. Her passion for this content has really made me enjoy it that much more... I can honestly say that I can never ask for a better professor."

"Dr. Smitherman has really made this class a beautiful experience for me. It may be hard at times, but it pushes me more to study harder because how enthusiasts she is when it comes to anatomy and physiology. I see how much love she has in her teaching and especially for her students, and she doesn't give herself much credit for it because how humble and kind she is. You can clearly see that her student are her priority instead of it being her job. I wished more professors were more like her."

"... I was surprised (and grateful) by how helpful our professor was; she was always going above and beyond to teach the material in an engaging way, trying to reach different types of learners through diagrams, group projects, videos, lecture notes, and discussion and often provided real-world/clinical examples that helped to apply the concepts presented..."

"I've never seen a professor work so hard to cater to her students, working especially hard to make sure everyone had all the support they needed. I always felt I could ask any question and she would be happy to answer and explain in a way that a student could understand. I've never had a professor like this before, it was the best part of the course."

"Due to the instructor, Dr. Smitherman, I have decided to change my living lifestyle so not only have I learned information about this course, but I have been able to apply that information in my daily life."

Criteria 2: Evidence of Excellence in Effective Teaching Strategies: Student Testimonials

Taylor Pence (BS Biology, Class of 2014): "In my opinion, Dr. Smitherman is the best professor I have ever encountered in my undergraduate program. She is passionate about the subject matter that she teaches, and it comes across in her teaching style. She is always trying to create assignments that enable students to better understand a particular concept as well as take away a larger lesson about life. Above all, Dr. Smitherman's passion for her students and their success are what set her apart from her peers. She is always willing to answer questions, stay late to help students learn, and go above and beyond to make sure that her students are able to succeed in their academic and professional goals. Though other professors are willing to aid their students, I feel that Dr. Smitherman goes above and beyond that call. Her passion and kindness are what set her apart from any professor at Dalton State or any other institution."

Brandy Rogers (BS Biology, Class of 2015): "This semester I had the opportunity to participate in Service Learning in Biology by acting as an Undergraduate Teaching Assistant to Dr. Marina Smitherman. Over the semester she encouraged me to try different methods of presenting information and engaging students and I have become much more comfortable in front of the classroom. I will carry this experience with me as I enter a Graduate Teaching Assistantship, I am certain that my prospective students will benefit from what I learned. I also take away the confidence that comes from all the encouragement that was given to me by Dr. Smitherman. She consistently told me what she liked, what she thought was effective, and offered nothing but the most constructive of criticism. I could not have asked for a better mentor. As I continue in my education, I do so with the idea of a teaching career in mind because I have realized that I truly have a love for it and I care deeply about student success. Thanks to this experience with Dr. Smitherman, I may just have found my calling.

Darlene Pascuzzo (RN Student, BS Biology, Class of 2013): "Dear Dr. Smitherman, You are a wonderful teacher that has helped me excel in one of the hardest classes I have taken in a long time. The first day I met you, you made me feel like I could do it. You gave me drive to excel, not just in your classes but I every class I have taken.....Best of all, your enthusiasm is contagious, the human body has always fascinated me and I have learned a lot and this has increased my taste for more. You were the bright spot on my first day back in college, and the sad spot on my last day with you as a Professor. Thank you for being awesome."

Katie Siburkis (RN, Class of 2013): Dr. Smitherman's motivation and dedication to educating her students is remarkable. Dr. Smitherman's lectures and notes are structured and organized, but she also provides review sheets and practice tests so that a student thoroughly knows their material come test day. Dr. Smitherman made herself accessible when needed and always takes the extra time to really explain information not fully understood. She pushes and encourages knowledge by asking questions and continuing to challenge your mind. I have never had a teacher which I enjoyed learning as much from as I did in this class and truly felt I wanted to go to class. Dalton State would benefit if all their teachers were as passionate and dedicated as Dr. Smitherman is."

Denis Mustedanagic (BS Biology, Class of 2015): "I wanted to take the time to thank you for allowing me to gain research experience because that provided me with an advantage over other applicants and I was accepted to Case Western School of Dental Medicine. I'm very excited for this opportunity, but I know it was made possible by teachers like you who invest so much time into your students. Keep doing what you are doing because it is making a huge positive impact on students around you."

Criteria 2: Evidence of Excellence in Effective Teaching Strategies: Student Success Data

I believe the true measure of student success is how well students are prepared to accomplish their current and future academic, personal, and professional goals through the development of knowledge, a sense of responsibility and self-reliance, and a connection to the college and wider community. The success of our students is cumulative, each professor and student contributing. However, DWF rates do indicate levels of student persistence, engagement and achievement. My student success data in our rigorous Human Anatomy & Physiology Courses is presented below demonstrating my students increased persistence, engagement, and achievement.



My average pass rate is 11% higher than the division while my fail rate is 2.5% lower where many additional students made it through the course successfully. My withdrawal rate is over 5% lower than the division average indicating persistence of students in my class which I attribute to my post-assessment feedback surveys to build awareness and reflect on the study skills they are developing through the class and positive academic mindset, midterm semester counseling sessions on study habits and a plan for achieving if students are struggling, and my interest in their long-term development and career plan. Students are more likely to earn a passing grade in my class, they are less likely to withdraw, and my fail rate is lower than the division average. Struggling students are more likely to persist with the class and earn a C or D rather than fail or withdraw. It is worth noting that for some of our students gaining a C is high achievement given their individual students who were more successful. I am proud to work hard for each and every student where they are and I have larger numbers who make it through successfully.



Criteria 3: Evidence of Commitment to Fostering Students' Extracurricular Success

"Do your little bit of good where you are; it's those little bits of good put together that overwhelm the world."— Desmond Tutu

In my twelve years at DSC, I chose to be the change I want to see on campus. To that end, in addition to the expected committee and community service, I committed to major endeavors to encourage research, service, philanthropy, and community outside of the classroom. I designed undergraduate research opportunities and chartered a chapter of the Honor's *society Beta Beta Beta (Beta Chi Nu)* at Dalton State. I am a servant leader by heart and I undertake this work out of dedication to providing our students excellence educational opportunities. I also provided faculty development in teaching and learning. Beta Chi Nu is presented first followed by undergraduate research, and faculty development.

Criteria 3: Chartering & Advising Beta Chi Nu

To provide the students with an opportunity to explore biology outside of the classroom and gain leadership experience, I worked with my Dean, our Foundation, and one of our students, (now Dr. Faith Stokes!), to charter a new chapter of the national Biological Honor's society *Beta Beta Beta; Beta Chi Nu*. I advised this group from inception in 2012 until the 2018 and won the 2012 Advisor of the year and the 2013 Dalton State Excellence in Service awards in part because of this work.

The goals of *Beta Chi Nu* are to reward academic achievement, promote scientific research, create a community, and long-term improvement in our retention and graduation rates and student success outcomes. Our program includes a welcome for new students, student orientations, trail hikes, environmental clean-up events, research lounges to promote undergraduate research opportunities, our "Pie the Popular Professor" fundraiser to raise money for research and attending the annual conference, and much more. My favorite achievement was receiving a grant for building educational signs for the hiking trails behind campus. Beta Chi Nu members built and installed these signs for classes and the community to use them for species identification.

Beta Chi Nu is an awarding winning group. Our awards include the BBB Frank G. Brooks Award for an original research for a project that I collaborated on with Faith Stokes, for which we were also accepted to present at the prestigious Council on Undergraduate Research "Posters on the Hill" event in Washington, D.C. *Beta Chi Nu* has also won the first place History prize for their activity scrapbook at the district meetings and also won a national award. My role consisted of liaising with the national office, registering new members, assisting in running events, supporting students, and mentoring the students as they develop their leadership skills.

Students of Beta Chi Nu describe me in Nomination for the Advisor of the Year: "The award for Advisor of the Year is presented to an advisor who has gone above and beyond the basic requirements. The nominators described their advisor as someone who takes a personal interest in their students and has a selfless commitment to the group. This advisor takes an active role in the group by attending meetings, volunteering their time with events, and recruiting members. The nominee is not only concerned with the success of the organization but focuses time on guiding the members to be better leaders. In the letter the nominators stated: Our advisor is our deeply grounded root system. She pushes the nutrients we need up to us and we grow upwards to the sky. Her students' blossom, grow, and shine with her support. She keeps us grounded and refuses to let us down. This advisor is the quiet slowly growing root system that may appear to do nothing, but in doing nothing, does everything. The advisor of the year is *Dr. Marina Smitherman*."

Criteria 3: Development of Undergraduate Research at Dalton State

"Education is not the filling of a pail, but the lighting of a fire". William Yeats.

In my opinion, undergraduate research is the ultimate form of teaching in science. Is it possible to fully educate scientists if they have not had the opportunity to try independent inquiry rather than 'cookbook' labs guaranteed to work if they follow the instructions? Research enables students to develop and refine the specific skills in independent investigation, self-directed learning, and science communication as well as gain experience in the discipline which is desirable for their future success. As a result of my passion for undergraduate research as a High Impact Practice, I dedicate time to continual improvement of our BS Biology program so that we are graduating students fully prepared for the rigors of a career or postgraduate study. To that end, I designed four new research courses as a complete research track for our program.

The purpose of these classes aimed to facilitate students in pursuing a question that had piqued their interest during a regular class. This happened to a group of students during my General Microbiology class following their 'Real-World' microbiology experiments. These students were so interested in their question, that I supervised them for twice a week in our spare time as they continued experiments to satisfy their curiosity. Their level of motivation and engagement was astounding given that they received no credit on their academic transcripts for their effort which was something I wanted to rectify along with offering other students similar opportunities.

With my VPAA, Chair, & Dean's support, I designed four research courses for STEM programs:

- 1. BIOL 4960 Research in Biology (2010); Propose and research a scientific question, develop the lab or field skills to complete the project, develop planning and time management required for self-directed learning and communicate the findings in oral and written form.
- 2. BIOL 3900 Readings in Biology (2010); Students develop skills in database interrogation and article selection, systematic literature review and write a paper with references.
- 3. BIOL 3000 Research Methods and Science Communication (2012); Course includes laboratory safety, experimental design, ethical conduct of research, discussing research with peers and professors as fellow scholars, understand importance of different methods of scientific communication and prepare a poster, presentation, and scientific paper.
- 4. BIOL 4800 Service Learning in Biology (2012). Students serve as undergraduate teaching assistant on campus or intern for local company. Students set up materials for weekly lab assignments and practical exams; create case studies to present in lab or lecture; prepare and deliver a mini-lecture in lab or class. Students prepare a final paper.

The numbers of students and faculty participating continue to grow since they were approved. These provided a template to offer the same opportunities in Chemistry, Physics, Mathematics, and other schools across campus. I taught students in these courses and witnessed first-hand the impact on the student's confidence, certainty of future direction, increase in GPA, improved communication skills, and benefits from developing relationships through positive interactions with faculty and staff. These opportunities have been revolutionary for our students enabling many more to attend graduate or professional schools, or secure their top choice of career. This is momentous for students in an open-access college in Georgia. As a result, I am currently undertaking a research project assessing this positive impact for students' long-term successes and our retention rates given the AAC&U data on the impact of High Impact experiences.

For example, a female Hispanic student who came to us with a GED lacking the preparation or confidence for college, challenged herself with research and leadership in Beta Chi Nu and became

one of eight students selected nation-wide for the Harvard Translational Medicine Summer Internships. I am beyond proud of the difference these opportunities have made to our graduates, our campus, and our community. Undergraduate Research is now a feature of our capital campaign, which is incredibly exciting. These experiences have significantly increased the number of our graduates entering postgraduate programs, or gaining employment. This impact has been particularly pronounced in minority student populations.

I also led the development of HIPs across campus. As CAE Director, I collaborated to secure funding to take a multi-disciplinary team to the AAC&U High Impact Practices Institute in 2016. Through my team management, we built an intentional plan for increasing HIP opportunities. The team spent three years educating providing workshops and materials for faculty on HIP redesign using the rubrics and guidebook we developed. We continue to support faculty and are currently preparing a guidebook for publication with permission from AAC&U. I organized our campus Student Scholarship Showcase for three years highlighting the student outcomes from undergraduate research. As part of the last Strategic Planning Committee, I advocated for the inclusion of Excellence in Teaching and Learning and HIPs.

Criteria 3: Undergraduate Research Student Outcomes

Student success is a collaborative endeavor. However, I believe having worked one-on-one individually mentoring undergraduate research students, my impact directly contributed to their success in entering graduate or professional school. Undergraduate Research and Service-Learning at Dalton State has anecdotally made a substantial positive impact on the success of our students following graduation in which we are evaluating.

Research Student & Success Outcome	Research Student & Success Outcome
Robert Brice (09-10) M.S.UTC, Teacher	Sharlie Puff (14): MPH
Michelle Pettyjohn (09-10) M.S.UTC	Miles Thomas (14-15): DPharm at PCOM
Angel Montalvo (09-10) M.S. NGA	Brandy Rogers (15): M.S.KSU, faculty GHC
Lisa Kimmerling (10-11), Licensed R.N.	D.Mustendanagic (15): DDS at Case West.
Michael Boatwright (10-11): DO at UNC	Malaka Awad (15): PA at South College
Faith Stokes (12-14): DPT at UTC	Brooke Bingham (15): PA
Flor Mendoza (12-13) M.S.Health Inspect.	Linda Braun (15-16): MS Biology at KSU
Kara Day (12): MA at Lee Univ.	Brandon Hill (15): P.A.
Julie Miller (13): PA at UGA	Ivy Satterfield (15-17): PA at Triveca
Madison Brooks (14): MD at MCG	Daniel Satterfield (16-17): consider MD/PhD
Julie Dotson (14): MLTS at Vanderbilt	Marissa Fraire (15-16): MPH Emory, CDC
Taylor Pence (14): Anast. Asst. at Nova SE	Kailey Barfield (16-17) PA Mercer
Annalia Ramos (16): Applying to MD	Emily Statham (19-20) Applying MD/PhD
Darshan Patel (14): D.Pharm at UGA	H. Bree Walraven (18-19), applied to MD

While perhaps customary at larger schools, the placement of these research students into graduate programs is extraordinary at DSC. Historically, the majority of our students never finish their degrees due to various factors. Compared to our average, this group is high achieving and has benefited for advancement to graduate school from their involvement in Undergraduate Research and Beta Chi Nu.