

Taylor Gibson

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EMPLOYMENT HISTORY	North Carolina School of Science and Mathematics , Durham, North Carolina	
	Dean of Mathematics	2018 – Present
	Mathematics Instructor	2013 – Present
	Greenhill School , Addison, Texas	
	Mathematics Instructor	2011 – 2013
LEADERSHIP ROLES	Plano East Senior High School , Plano, Texas	
	Mathematics Instructor, Coordinator for Instructional Technology	2010 – 2011
	Roswell High School , Roswell, GA	
	Mathematics Instructor	2007 – 2010
	Dean of Mathematics	2018 – Present
	Responsible for program design and implementation for NCSSM's Durham, Morganton, and Online programs	
	<ul style="list-style-type: none"> • Oversees 2 department chairs, 23 faculty members, and 2 support staff members • Leads NCSSM's program in Data Science • Collaborates across the institution to support 1,500 students, 150+ faculty, and 100+ staff 	
	Mathematics Department Coordinator	2017 – 2018
	Manages day-to-day and long-term logistical planning for the department	
	<ul style="list-style-type: none"> • Screens applications, organizes interview groups, and creates schedule for each candidate • Assists the Dean in scheduling department course offerings, assigns classrooms and exam rooms • Runs department meetings when Dean is unable to attend • Facilitates faculty initiatives for Open House, Discovery Day, and Welcome Day • Coordinates grading of admissions and placement tests 	
CURRICULUM DEVELOPMENT	Strategic Planning Team , Internal Facilitator	2017 – Present
	<ul style="list-style-type: none"> • Led NCSSM through the 2018 update to the Strategic Plan • Trained in Strategies by the Cambrian Group, December 2017 	
	Faculty Senate , Senator	2014 – 2018
	Served two terms on the Faculty Senate	
	<ul style="list-style-type: none"> • Served as a liaison to the NCSSM Foundation Board • Served as a liaison to the Board of Trustees Distance Education subcommittee 	2016 – 2018 2014 – 2016
	Strategic Planning Team , Co-Chair: Action Planning Team	2015 – 2016
	<ul style="list-style-type: none"> • Led a 12 member team to develop action plans for Strategy 7 in the NCSSM strategic plan 	
	Foundations of Data Science , Curriculum Development	2020 – Present
	Lead instructor for adopting UC Berkeley's Data 8 course as MA4110 at NCSSM	
	<ul style="list-style-type: none"> • Set up a JupyterHub environment on Kubernetes cluster for over 250 active users • Developed lectures and activities for the instruction of students • Trained 3 additional instructors course content and best-practices in pedagogy • Over 60 students completed the course in the first year it was offered 	
	Introduction to Cryptography , Curriculum Development	2017 – Present
	Created a new interdisciplinary course in Math and Computer Science.	
	<ul style="list-style-type: none"> • Developed open source online textbook available at https://www.macs358.org • Course teaches an introduction to programming in Python through mathematical ciphers • No prerequisites to enroll to help ensure this unique opportunity is available to all students • Summer 2021 revisions will revise curriculum to improve accessibility to new programmers 	
	Contemporary Precalculus Through Applications , Revision Facilitator	2016 – 2021
	Project lead on revisions for NCSSM's CPTA textbook.	
	<ul style="list-style-type: none"> • Led the effort to bring this textbook back into publication • Revised two chapters of existing textbook, edited all other chapters • Coordinated layout and publication with UNC Press • Programmed the textbook in PreText schema to allow for online and print publication 	

EXTERNAL INITIATIVES	Mathematics Teacher: Technology Tips Column , Editor	2017 – 2020
	The official journal of the National Council of Teachers of Mathematics.	
	<ul style="list-style-type: none"> • Collaborates with the editorial panel to referee journal articles • Works with authors to revise their manuscripts for publication 	
	Mathematical Modeling Faculty Mentorship Network	
	Math Modeling Faculty Mentoring Fellow	2017 – 2018
	<ul style="list-style-type: none"> • Collaborates with experienced teachers of math modeling to learn about, discuss, and implement math modeling instructional approaches and materials • Provides feedback on resources in anticipation of the official launch of the the Math Modeling Hub in Fall 2018 	
	Cary Academy , Cary, North Carolina	
	Standards-Based Grading Workshop Facilitator	Nov 2017
	<ul style="list-style-type: none"> • Led a workshop on how to implement standards-based grading in the Upper School mathematics program 	
	College Board , Kansas City, Missouri	
COMMITTEE INVOLVEMENT	AP Calculus Exam Reader	Jun 2016
	<ul style="list-style-type: none"> • Worked with other educators to grade almost 500,000 AP Exams in 7 days 	
	North Carolina School of Science and Mathematics , Durham, North Carolina	
	Cryptography Instructor, Summer Accelerator	2015 – 2018
	<ul style="list-style-type: none"> • Developed and taught cryptography and programming curriculum for a three-week cryptography summer enrichment program for high-school aged students 	
	Winston-Salem State University , Winston-Salem, North Carolina	
	Workshop Facilitator, Center for Mathematics, Science, and Technology Education	Jul 2015
	<ul style="list-style-type: none"> • Led a two-day workshop on implementing modeling activities in the Common Core curriculum 	
	Duke University , Durham, North Carolina	
	Cryptography Instructor, Duke Youth Programs	Jul 2014
SERVICE TO STUDENTS	<ul style="list-style-type: none"> • Co-developed and co-taught a two-week cryptography summer enrichment program for high-school aged students 	
	UNC System Mathematics Pathways Task Force , Member	2017 – Present
	Defining a vision and guiding recommendations for improving student success in mathematics across UNC System campuses	
	Student Information System RFP Ad-Hoc Committee , Faculty Representative	2017 – 2018
	Testing and researching different SIS options to co-write an RFP	
	Calendar and Timetable Committee , Co-chair	2016 – 2017
	Led team of 20+ members of the school community in researching new calendar and timetable proposals	
	Admissions Committee Application Reader	2016, 2017, 2019
	Served as the mathematics department representative to read admissions applications	
	Graduation Requirements Ad-Hoc Committee Math Department Representative	2014 – 2015
	Assisted in updating the graduation requirements to include Engineering/Technology coursework	
	North Carolina School of Science and Mathematics , Durham, North Carolina	
	Mathematics Instructor, Summer Bridge Program	2015 – 2017
	<ul style="list-style-type: none"> • Developed and taught mathematics curriculum to incoming students to help them succeed at NCSSM • Created teaching schedule for the 2.5 week program 	
	Varsity Cross-Country Assistant Coach	
	Works with the varsity boys and girls cross-country teams	2015 – 2020
	<ul style="list-style-type: none"> • Ensures eligibility for 100+ member team • Assists in planning and implementation of workouts 	
	Hall Sponsor , Third Beall	2017 – Present
	Sponsored Third Beall Residence Hall. Student Life Instructor: Mary Lassiter	
	Safe Space Training	2014
	Attended NCSSM sponsored Safe Space training facilitated by Ross Knight	

RECENTLY TAUGHT COURSES	MA4110: Foundations of Data Science	
	MA/CS 4200: Cryptography	
	MA4020/4022: AP Calculus AB with Advanced Topics	
	MA4030/4032: AP Calculus BC with Advanced Topics	
TEACHING AWARDS	NCSSM Outstanding Teacher Award	2019
	NCSSM Exceptional Contribution Award in Classroom Innovation	2018
SELECTED PRESENTATIONS	“Starting a High School Program in Data Science”	Nov 2020
	<i>NCSSS Professional Conference, Virtual</i>	
	“A Co-Requisite Model to Increase Access to Upper-level Math Coursework”	Nov 2019
	<i>NCSSS Professional Conference, Seattle, WA</i>	
	“Designing an Interdisciplinary Course in Cryptography”	Nov 2018
	<i>NCSSS Professional Conference, Houston, TX</i>	
	“Soap Bubbles: Mathematical Modeling Spanning from Geometry to Calculus”	Apr 2018
	<i>NCTM Annual Meeting, Washington, D.C.</i>	
	“Standards-Based Grading”	Jan 2018
	<i>Teaching Contemporary Mathematics Conference, Durham, NC.</i>	
	“Designing Desmos Activities to Promote Mathematical Investigation”	Jan 2018
	<i>Teaching Contemporary Mathematics Conference, Durham, NC.</i>	
EDUCATION	“Standards-Based Grading in the STEM Classroom”	Nov 2017
	<i>NCSSS Professional Conference, Chicago, IL.</i>	
	“Dive into Modeling, the Mathematics of Sustainability”	Apr 2016
	<i>NCTM Annual Meeting, San Francisco, CA.</i>	
	“Standards-Based Grading, an Honest Assessment”	Nov 2015
	<i>NCCTM Annual Meeting, Greensboro, NC.</i>	
	“Modeling the Cycloid from Geometry to Calculus”	Apr 2015
	<i>NCTM Annual Meeting, Boston, MA.</i>	
CERTIFICATION	“Standards-Based Grading in an AP Calculus AB Classroom”	Jan 2015
	<i>Teaching Contemporary Mathematics Conference, Durham, NC.</i>	
	“Modeling Using Difference Quotients”	Oct 2014
	<i>NCCTM Annual Meeting, Greensboro, NC.</i>	
EDUCATION	University of Georgia, Athens, Georgia	
	Masters of Education (M.Ed) in Mathematics Education	Jun 2006 – Jul 2007
EDUCATION	Georgia Institute of Technology, Atlanta, Georgia	
	Bachelor of Science (B.S.) in Biomedical Engineering	Aug 2002 – May 2006
CERTIFICATION	SP2 Professional Educators License, State of North Carolina	
	Mathematics (9-12), Middle School Mathematics (6-8)	Aug 2013 – Present
CERTIFICATION	National Board Certification, National Board for Professional Teaching Standards	
	Mathematics: Adolescence and Young Adulthood	2017 – Present
PROFESSIONAL AFFILIATIONS	North Carolina Council of Teachers of Mathematics, Raleigh, NC	
	Member	2013 – Present
PROFESSIONAL AFFILIATIONS	National Council of Teachers of Mathematics	
	Member	2007 – Present

North Texas Area Association of Advanced Placement Mathematics Teachers

President

May 2012 – May 2013

Member

May 2011 – May 2013

COMPUTING PROFICIENCIES

Python & Jupyter Notebooks, github, Linux, Docker Desmos, Microsoft Office, PreText, \LaTeX

TEACHING TOOLS

Desmos, Gradescope, Canvas, Edpuzzle, NearPod, Mathematica

REFERENCES

Katie O'Connor

Vice Chancellor for Academic Programs

North Carolina School of Science and Mathematics

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Mahmoud Harding

Instructor of Mathematics

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