

# Taylor Gibson

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

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

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

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**Mahmoud Harding**

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