



**College of Science, Technology,
Engineering & Mathematics**
Interim Dean Audrey Napier
Presentation to the
ASU Board of Trustees

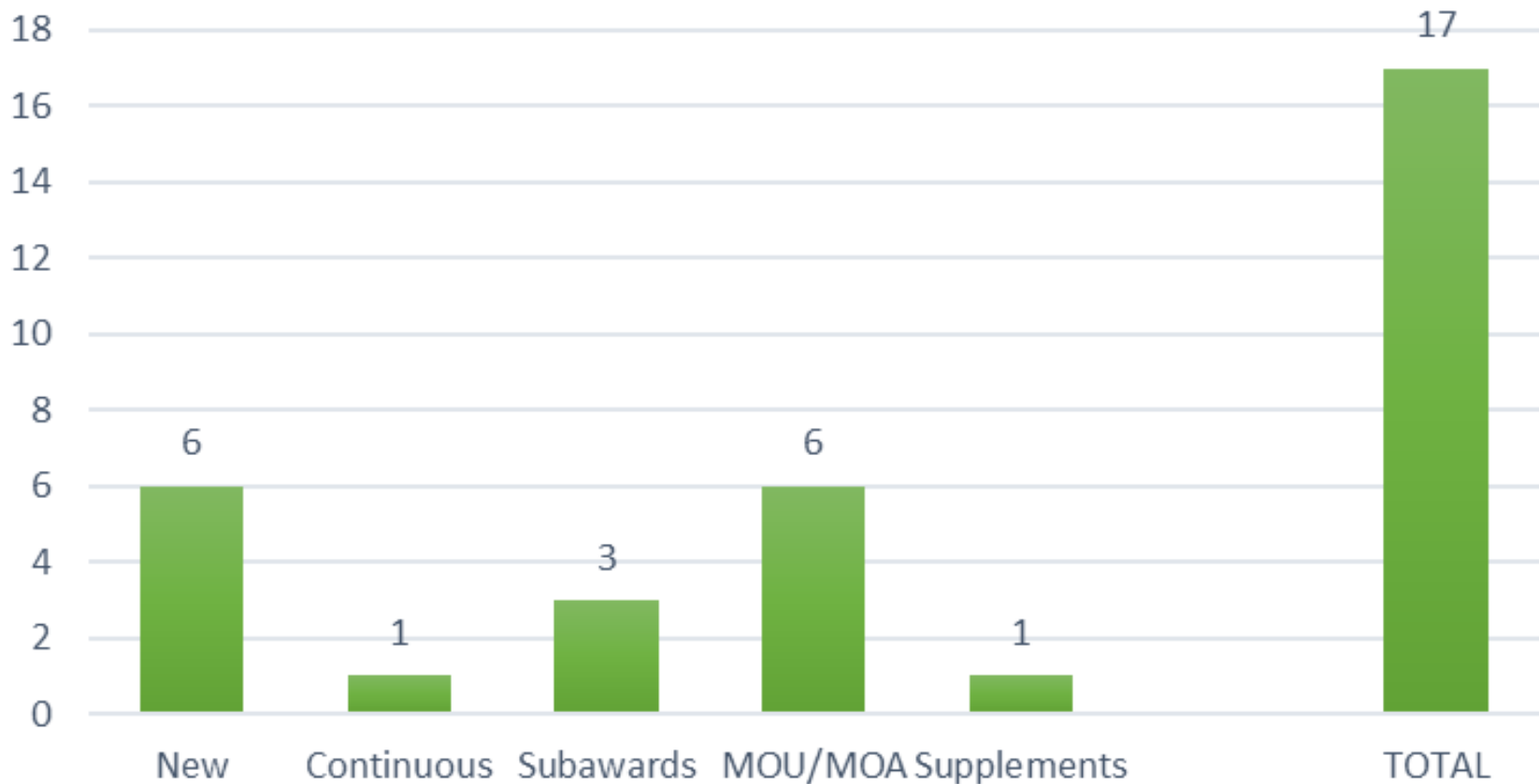
June 25, 2021

Vision for the College of STEM

- Developing socially responsible, highly competitive and culturally inclusive future professionals through Academic and Research Training as well as Collaborations – Redefining the Boundaries
- Focused on the Health of society in all aspects (social, medical and financial etc.)

CSTEM Grants & Scholarly Activities October 2019-June 2021

TYPES OF AWARDS



Notable Accomplishments of the CSTEM

- HBCU Data Science Consortium Mini Grant Award (HBCU-DSC-2021-01), Dr. Michelle Foster, Award amount \$10,000.
- ONR Navy Cybersecurity Grant (ONR Award No. N00014-21-1-2553) Dr. Rajendran Swamidurai, Award amount \$249,958.
- Catalyst Project: Microbial trophic complexity in waterbodies (NSF Award No. FAIN: 2100777), Dr. Muhammad Saleem, Award amount \$150,000.
- DOD Research and Engineering for Electron Microscope, Dr. Derrick Dean, Award Amount \$175,000.
- NSF-REU: Research and Training in Multidisciplinary field of Regenerative Sciences for Undergraduates, 2021-2024, Dr. Komal Vig, Award Amount \$373,985.

CSTEM Grants & Scholarly Activities

October 2019-June 2021

College-Wide Report	Categories								
Department	ART	BK	CPT	PRE	PRO	RG	AIP	OTH	
Biomedical Engineering (BME)	1						1		2
Biological Sciences (BS)	30	1	1	15	1	24	6	1	79
Math & Computer Science (MAT)	37		1	4	15	6		5	68
Physical Sciences (PHY)	22		6	13		9			50
College Totals	90	1	8	32	16	39	7	6	199

Notable Accomplishments of the CSTEM

- Dr. Sabita Saldanha, associate professor in the Department of Biological Sciences, is representing Alabama State University as a selected Leadership Fellow for the Academic Year 2021-22 with the Center for the Advancement of STEM Leadership (CASL).
- ASU C-STEM Faculty Drs. Napier and Burns were being selected among the 1000 inspiring black scientists in the USA. Only 18 were selected from Alabama.
- The BME program led the ASU effort to plan and execute the first BEST Robotics competition in Montgomery. Faculty member Derrick Dean currently serve as the director of the Montgomery Hub.
- Faculty member Derrick Dean initiated a summer STEAM Science, Technology, Art and Mathematics) leadership academy in conjunction with the Maggie Street Community Development Corporation for 30 students during June – July 2019.

**CSTEM Student Achievements
Biomedical Research and Training Program**

**ALABAMA STATE UNIVERSITY
STUDENT GOVERNMENT ASSOCIATION**

AWARDED

**BIOMED CLUB
STUDENT ORGANIZATION OF THE YEAR.**

CSTEM Student Achievements

Biomedical Research and Training Program

39 STUDENTS HAVE BEEN ACCEPTED INTO PROFESSIONAL SCHOOLS WITH A TOTAL OF 24 STUDENTS HAVING GRADUATED FROM SAID PROFESSIONAL SCHOOLS BETWEEN 2012-2021.

- ▶ **Schools of Medicine (13 Accepted / 6 Graduated)**
- ▶ **Schools of Dentistry (4 Accepted / 3 Graduated)**
- ▶ **Schools of Pharmacy (4 Accepted / 4 Graduated)**
- ▶ **Master Degrees (6 Accepted / 6 Graduated)**
- ▶ **School of Nursing (3 Accepted / 2 Graduated)**
- ▶ **ASU Physical Therapy Program (1 Accepted / 1 Graduated)**
- ▶ **Schools of Physicians Assistants (2 Accepted / 2 Graduated)**

CSTEM Student Achievements

Biomedical Research and Training Program

- Biomedical Research has three (3) students leaving from ASU going to professional schools this 2020-2021.
 - **Maia Singleton (2021 ASU Graduate)** headed to Auburn Pharmacy School in Auburn, Alabama.
 - **Todd Jackson (2021 ASU Graduate)** headed to Life University Chiropractic School in Marietta, Georgia.
 - **Anupa Ghimire (2020 ASU Graduate)** headed to the University of Birmingham (UAB) in Birmingham, Alabama.

CSTEM Student Achievements

Biomedical Research and Training Program

STUDENT NAME	GRADUATION DATE	PROFESSION	LOCATION
DR. LEX PIERRE	MAY 2018	DENTISTRY	NEW ORLEANS, LA
DR. SHENELL REYNOLDS	MAY 2019	PEDIATRICS	NORTH CAROLINA
DR. TABITHA LEWIS	MAY 2020	DENTISTRY	BOSTON, MA
DR. CAROL HARDEN	MAY 2020	MEDICAL FIELD	
DR. CHANTE HARRIS	MAY 2020	DENTISTRY	
DR. WINGRATE	MAY 2019	PHYSICAL THERAPY	BIRMINGHAM, AL
DR. KIMBERLY MCWILLIAMS	MAY 2021	PSYCHIATRIST	BIRMINGHAM, AL
DR. JASMINE YOUNG-HARALSON	MAY 2021	FAMILY MEDICINE	TUPELO, MS.
DR. JOSELYN MILLER	MAY 2021	EMERGENCY MEDICINE	RICHMOND, VA

CSTEM Students Achievements REU Program 2019-2020

REU Program 2019		REU Programs 2020	
University	Name	University	Name
University of Pennsylvania	Dax Craig	University of Illinois	Tarik Simpson
Washington University in St. Louis	Keith Hayes	Washington University in St Louis	Mariah Turner
Ohio State University	Jordin Marshall	University of Alabama	Paris Dickens.
Tulane University	Gelena Jones		

CSTEM Student Achievements

- Shannon Brown (2021 Forensic Chemistry Graduate) - Internship with the Department of Energy and accepted into the Chemistry Graduate program at the University of Wisconsin-Madison.
- James Allen (2020 M.S. Graduate in Forensic Science) secured employment as a Forensic Specialist in Fort Gillem, GA
- Cedric Caldwell, CSC major; Cedric is interning at the Alabama Department of Transportation in the Computer Service Department.
- Dangelia Holmes (physics student) was accepted into the SUMMER 2021 – RADIOLOGICAL CONTROL TECHNICIAN (RCT) with Alcorn State University and Los Alamos National Laboratory (LANL)
- Kayla Tillman is pursuing Masters in Prosthetics and Orthodontics from Alabama State University
- Trixia Colubio – Experience Design Internship with Adobe
- Shannon Pittman (M.S. Forensic Science 2019 Graduate) secured employment as a Forensic Pathologist Specialist with ADFS and Forensic Biologist with the GBI

CSTEM Updates on New Programs

- The Department of Mathematics & Computer Science has created three concentrations for the Bachelor of Science in Mathematics degree program: Computational Mathematics, Applied Discrete Mathematics, and Mathematical Statistics. These concentrations were approved by ACHE. Courses will be prepared during the 2021-2022 academic year once they have been added to the University's course register.
- The Department of Mathematics & Computer Science was tasked with creating two micro-credential programs: Programming Skills: Python and Data Mining and Decision Making. Hallmarks of data science, the creation of these micro-credential programs will afford students and professionals the opportunity to set themselves apart in a competitive market with highly sought after skills.
 - The Programming Skills: Python micro-credential will (a) introduce learners to this widely used computer programming language and cover a range of topics-- from basic to advanced--to improve (b) learners' ability to develop simple to more complex applications. The program will consist of nine (9) credit hours.
 - The Data Mining and Decision-Making micro-credential will help learners (a) understand the importance of data in decision-making, (b) analyze datasets using statistical methods, and (c) interpret results and apply analytic skills, particularly through social services. The program will consist of nine (9) credit hours.

CSTEM Updates on New Programs

- The department of Biological Sciences has submitted a proposal for a non-thesis Masters in Biology.
- Biomedical Engineering is preparing to apply for accreditation in approximately two years.
 - Biomedical Engineering has initiated their Continuous Quality Improvement process (May 2021)
 - The Readiness Review should be complete in October 2022.
 - The Request for Evaluation is projected to be submitted January 2023.
 - The projected timeline is to host the on-site visit by December 2023.

What's Next

- Based on the recent Program Viability study that was conducted within the last year, the college is evaluating the feasibility of introducing the following new programs:
 - Mechanical Engineering B.S.
 - Computer Science M.S.
- We need to develop an timeline for FEPAC Accreditation for the Forensic Science programs.
- We are working on an agreement with Wintrio LLC which will assist with obtaining noncompetitive contracts with government agencies. (CIO-SP4 and Polaris)
- NASA STEM service contract opportunities

Questions