



**JROTC DAI Workshop  
March 11, 2019**

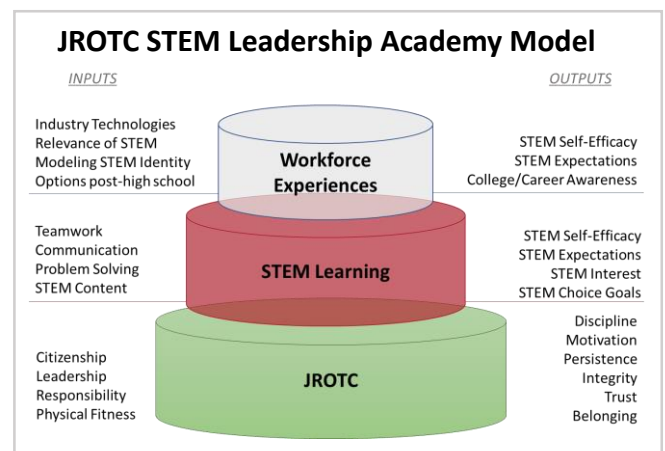
**MCPSS JROTC &  
STEMWorks, LLC**

Robert F. Barrow, LTC (retired)  
Susan A. Pruet, PhD  
James Van Haneghan, PhD  
Melissa D. Dean, ABD  
James M. Duke, MED

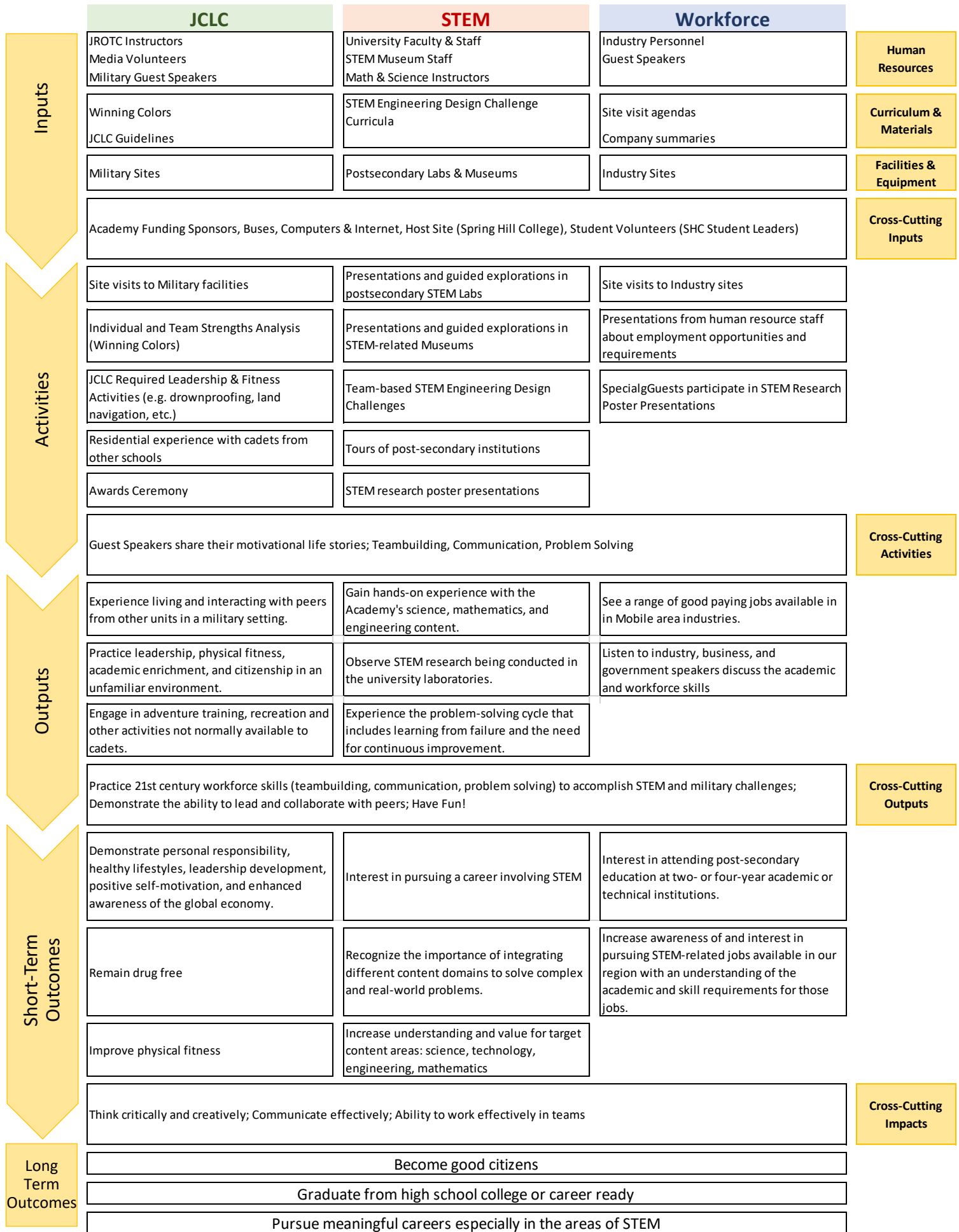


Through the combined efforts of the Mobile County Public School System leadership, business and industry partners, and a dedicated team of JROTC instructors and STEM professionals, over 700 cadets in Mobile County have had the opportunity to participate in an alternative JCLC that incorporates STEM and workforce development activities- the JROTC STEM Leadership Academy. Since 2015, cadets have had the unique opportunity to expand their knowledge through an immersive summer program that challenges them to consider a career in a STEM related field. The purpose of the six-day residential Academy is to engage a unique population of high school students, 9th and 10th grade JROTC cadets, in STEM content, skills, and fields of study needed by business and industry today. The Academy is designed to increase awareness of good-paying STEM career opportunities in our area for Mobile’s youth and what it takes to secure these jobs.

The STEM Academy was conceived as three distinct, interconnected layers to represent the hierarchical structure of the key components: (1) JROTC, (2) STEM Learning, and (3) Workforce Experiences. The foundation of the model lies in the JROTC character education curriculum and culture. Students who participate in the STEM Academy come with differing levels of the character traits, but all have been exposed to the JROTC culture and curriculum for at least one school year prior to the summer experience. The inputs and outcomes of this component are equivalent to the traditional JCLC camp. The STEM Learning component consists of a series of STEM experiences woven through the traditional summer JROTC activities. These STEM lessons extend mathematics and science content knowledge and provide first-hand experience with STEM technology and challenges in order to build interest and efficacy around STEM. Workforce Experiences, such as site visits to local colleges, area industries, and evening motivational guest speakers, reinforce the JROTC character traits and STEM learning. These workforce experiences are designed to engage students in vicarious STEM learning, meaning students learn about STEM and build a STEM identity by observing expert-level STEM professionals at work.



# JROTC STEM Leadership Academy Logic Model



# Logic Model

JCLC	STEM	Workforce	
JROTC Instructors Media Volunteers Military Guest Speakers			Inputs
Winning Colors JCLC Guidelines			
Military Sites			
Site visits to Military facilities			Activities
Residential experience with cadets from other schools			
JCLC Required Leadership & Fitness Activities (e.g. drownproofing, land navigation, etc.)			
Awards Ceremony			
Experience living and interacting with peers from other units in a military setting.			Outputs
Practice leadership, physical fitness, academic enrichment, and citizenship in an unfamiliar environment.			
Engage in adventure training, recreation and other activities not normally available to cadets.			
Demonstrate personal responsibility, healthy lifestyles, leadership development, positive self-motivation, and enhanced awareness of the global economy.			Short-Term Outcomes
Remain drug free			
Improve physical fitness			
			Long Term Outcomes

Note: Language for the JCLC column of the logic model was derived from Cadet Command Regulation 145-2.

# JROTC + STEM Camp Action Plan and Timeline

## Phase 1 – Get Ready (From \_\_\_\_\_ to \_\_\_\_\_)

Secure partners – business, STEM professionals, community  
Form Advisory Team  
Identify resources – human, material, facilities, etc.

## Phase 2 – Plan the JCLC + STEM Camp (From \_\_\_\_\_ to \_\_\_\_\_)

Flesh out Logic Model  
Determine your objectives, outcomes  
Develop activities to support  
Identify, adapt and/or design STEM curriculum  
Secure funding (this never ends!)

## Phase 3 – Launch your JCLC + STEM Camp (From \_\_\_\_\_ to \_\_\_\_\_)

Recruit cadets and staff  
Implement JCLC + STEM experience  
Evaluate results using objectives and planned outcomes  
Share results – widely

## Phase 4 – Make Continuous Improvement (Ongoing)

### LTC Barrow's Essentials to Remember

1. Think Big & Be Ambitious
2. Network, Network, Network
3. Link everything to career opportunities
4. If you do not ask, you shall not receive
5. It's a team effort
6. Be willing to take risks
7. If your purpose is to help students become college and career ready, you can never be wrong
8. Never, ever, ever give up

