

CAAQES MISSION

CAAQES provides the research, technology transfer, and educational programs that will result in appropriate regulation of agricultural operations, rapid adoption of new air pollution abatement technology, as well as increase the number of graduates pursuing careers in environmental air quality fields.

CAAQES faculty conduct research and develop educational programs for technology transfer, and course work for both undergraduates and graduate students. The research results serve as the science and engineering base for the appropriate regulation of air pollution.

CAAQES FACULTY

Dr. Calvin Parnell Jr., P.E.
Director, CAAQES
(979) 845-3985
c-parnell@tamu.edu

Dr. John Sweeten
806)677-5600
JSweeten@ag.tamu.edu

Dr. Sergio Capareda, P.E.
(979) 458-3028
scapareda@tamu.edu

Dr. Brent Auvermann
(806)677-5600
b-auvermann@tamu.edu

Dr. Saqib Mukhtar, P.E.
(979) 458-1019
mukhtar@tamu.edu

Dr. Ken Casey
(806) 677-5619
KDCasey@ag.tamu.edu

Dr. Bryan Shaw
bshaw@tamu.edu

Dr. Marty Rhoades
651-2289
mrhoades@wtamu.edu

Dr. Brock Faulkner, EIT
(979) 862-7096
faulkner@tamu.edu

Dr. Ron Lacey
(979) 845-3967
ron-lacey@tamu.edu

Dr. Gerald Riskowski
979) 845-7619
riskowski@tamu.edu

Air Quality

SHORT COURSES

*CAAQES instruction provided by experienced, trained experts in air quality engineering.
Courses available at any location.*

Air Quality Engineering 3 Days

- Particulate Matter, SO₂, NO₂, Odors-
Measurement methods, GHG emissions
and Regulations

Air Quality Technical Course 2 Days

- Particulate Matter, SO₂, NO₂, Odors
Measurement methods, GHG emissions
and Regulations

Air Quality Managers Course 2 Days

- Permitting considerations, air pollution
controls and design , air quality sampling
equipment

Air Pollution Regulatory Process 1 Day

Survey of EPA regulations, NAAQS,
NSPS, CERCLA, EPCRA, AP-42, Fed-
eral Reference Method samplers

Psychrometrics 1/2 day

Refresher in air density, unit operations,
and basic Psychrometrics required by air
quality professionals

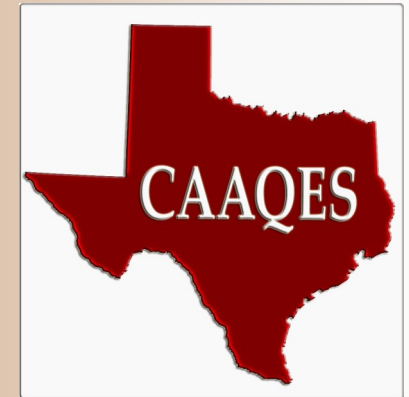
Customized short courses upon request.

Contact: Russell McGee

Phone: (979) 845-3659

Email: romcgee@tamu.edu

**Biological and Agricultural Engineering
Dept.**



Center for Agricultural Air Quality Engineering and Science

**AIR POLLUTION MONITORING
DISPERSION MODELING
RESEARCH AND EXTENSION
ENGINEERING REFRESHER TRAINING**

www.caaqes.tamu.edu

CAAQES

Center for Agricultural Air Quality Engineering and Science

What is CAAQES?

- Texas A&M's center of excellence for air quality research and engineering.
- A team of internationally nationally recognized air pollution and bioenergy experts
- Conducts air quality data collection and research for industry and regulatory agencies.
- Provides education and training for air quality engineers and consultants.
- Serves as the source of graduates for careers in environmental air quality
- Encourages strategic planning for air pollution control and regulation.
- Leverages existing A&M System strengths, including interdisciplinary relationships
- Promotes sound scientific practices in the development of emission factors for regulations



RESEARCH

- Air Quality: Reducing Emissions at Cattle Feedlots and Dairies
- Determining Emission Factors for Agricultural Operations:
 - PM, GHG, RVOC, NH₃
- Particulate Matter Characterization:
 - Particle size distribution
 - PM₁₀, PM_{2.5} ratio to TSP
- Bioenergy development: Onsite power production at cotton gins
- Cyclone Design and Efficiency Improvement
- Impacts of GHG Regulation
- Exposable Dust Testing and characterization

CAAQES OBJECTIVES

- Improve and refine dispersion modeling technology for particulate matter (PM), ammonia (NH₃), reactive volatile organic compounds (RVOC), nitrogen oxides (NO_x), and greenhouse gasses (GHG)
- Develop data bases that characterize PM, RVOC, NH₃ and GHG emitted by CAFO, field operations, cotton gins, grain elevators, mills, and agricultural burning
- Develop accurate emission factors and inventories for PM and gases emitted from agricultural operations
- Develop improved methods to estimate PM emission rates and emission factors based on scientific understanding of the processes and release mechanisms
- Determine the relationship between ammonia and secondary PM_{2.5} formation
- Provide educational programs at TAMU and WTAMU for undergraduate and graduate students that will facilitate careers in air quality engineering and science; and
- Provide training and technology transfer for agricultural producers, scientists, regulatory agencies, and the public.

