Susan Sayger, PhD, PE, MASCE
Teaching Associate Professor
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Curriculum Vitae - Profile

Dedicated Teaching Professor with advanced and successful university teaching and administration experience, including capstone, estimating, scheduling, and honors course delivery of a full (and overload) workload at East Carolina University, Department of Construction Management. My course delivery is based on current construction management practices, in keeping with accreditation requirements (ACCE), to students from traditional and diverse academic, socioeconomic, and cultural backgrounds. My experience includes strong collegial efforts and developing, and adapting curriculum according to student needs, assessing and improving student learning and evaluating course efficacy. Technical expertise includes OSHA safety trainer certification, Bluebeam, Bentley, Autodesk, Cadd, Revit, Excel, Water Cad, and Hydrocad. Long term goals include university teaching in Texas, student success, undergraduate and graduate level courses, student mentoring and organizations, and publication efforts.

Experience

Fixed-Term Associate Teaching Professor - Department of Construction Management, College of Engineering and Technology, East Carolina University, Greenville, NC.
Present - January 2010

As fixed-term faculty, my typical workload included four different courses (three credits each) each semester, excluding three honors courses. Sample courses taught include:

HNRS 4500 – Honors project

CMGT 4400 Capstone

CMGT 4010 Construction Estimating 2

CMGT 4000 Construction Estimating 1

CMGT 4100 Planning and Scheduling 1

CMGT 4666–Equipment Management.

CMGT 3100 Construction Plans and Analysis.

CMGT 2800 Foundations of Construction.

CMGT 3010 – BIM Construction Modeling and Information Technology

CMGT 2950 - Construction Surveying

CMGT 2951 - Construction Surveying Laboratory

CMGT 2900 - Construction Project Safety Management (OSHA 30-hr cards)

CMGT 2700 - Soils and Foundations

CMGT 2701 - Soils and Foundations Laboratory

CMGT 2600 - Construction Documents and Analysis

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CMGT 2200 - Introduction to the Sustainable Built Environment

Key Accomplishments and Service

- 2025. Promoted to Associate Teaching Professor, fixed-term faculty, with responsibilities divided 90% teaching and 10% service, including either five or six courses each semester.
- 2026. Promoted to Graduate Faculty
- Developed course chart pack covering material and topics of identified weak areas, including math skills, scaling, and terminology, serving to bring all students in the class to an even level of understanding.
- Developed visualization techniques (isometrics) of building components, resulting in better student understanding, and assessment results
- Received multiple Student "The person at ECU who made the most significant positive contribution to his/her education" cards.
- Served as Faculty sponsor/mentor of student organizations, including:
    - Students Honors Program
    - ABC Competition Faculty
    - Global studies Spring and Summer Study abroad Program and Co-Program director
    - Collaborated with HAN University faculty
    - U.S. Green Building Council
    - Women in Construction and Technology
    - National Association of Home Builders

- Served on University, Departmental, and external committees, including:
    - Undergraduate Accreditation Committee
    - Undergraduate Curriculum Committee
    - Graduate Curriculum Committee
    - Undergraduate Scholarship Committee
    - Math Tutoring Faculty Committee
    - Industry Board Faculty Representative
    - ASCE volunteer
    - Library Committee
    - USO volunteer

Director Public Works, Havelock, NC.
Director - Public Services, City of Havelock, North Carolina

Following the devastating destruction and family death (spouse) from Hurricane Florence in 2018, I temporarily left ECU to help the local town rebuild infrastructure as Safety Manager and Director of Public Services/Engineering. As Director I provided management of the infrastructure rebuild after utilizing coalition building skills and outcome-based processes to successfully execute and manage City-wide services and daily coordination of 45 technical, administrative, professional staff, and consultants within the demands of

annual and emergency budget constraints. Oversaw progressive staff training and certification, including safety (certified OSHA trainer). Maintained OSHA/ADA requirements for construction staff, inmate staff, and facilities.

Specific responsibilities included disaster damage recovery of infrastructure systems and facilities from Hurricanes Florence and Dorian. Public service Point of contact with FEMA representatives. Sample annual services and contract projects include City-wide Road paving, gravity and force main line replacement, dry and wet well lift station rehabilitation, and large and small pump replacement, totaling over thirteen million dollars. Sample CIP projects include 36-foot, 300-foot single span bridge (replacement), BOD aeration rehabilitation, SCADA, clarifier rehabilitation, filter media replacement, dry well lift station and conversion, totaling over ten million dollars. These projects often require additional demands, including firsthand training, electrical (VFD, scada), mechanical repairs (pumps), and after-hours emergency response. Other responsibilities included planning and recovery of disaster related sanitary sewer and water distribution repairs, meeting FEMA funding requirements. Beyond programmatic requirements, responsibilities also included responding to complaints requiring successful interaction with City citizens and the public affected by emergencies and construction efforts. Responsibilities require execution and management of City-wide engineering services through software programs such as Cadd, GIS, HEC, and Kronos. Specific accomplishments:

Professional Engineer/Project Manager -KSMJ Engineering, Havelock, NC
March 2006 to 2021

Prior to ECU, I served as engineering PM with experience with engineering disciplines, including hydraulics, hydrology, soil science, 401 and 404 wetlands and nitrogen and sedimentation modeling. Use of multiple software programs in project planning, including Bentley, Autodesk, Cadd, Excel, Water Cad, and Hydrocad. Stormwater facility system design, including nitrogen reduction and sand filtering modeling.

As Project/Safety Manager, responsible for all aspects of commercial construction plans, including multiple engineering disciplines and systems, including materials, water, sewer, fire supply and biological reduction of runoff. Responsibilities also include spatial coordinate reconciliation of parcel coordinates, mathematical analysis, design and permits of systems, as well as all other civil/site details of residential, commercial, and industrial construction projects throughout eastern North Carolina in compliance with Division of Water Quality (DWQ) and Division of Land Quality (DLQ) of North Carolina Department of Environment and Natural Resources (NC DENR), PWSS and other State and local regulations.

Project manager responsibilities also include oversight of cad technicians and cadding of site work, utility design, surveying, estimating and specification writing for construction and permitting within in budget and funding constraints. Construction management includes budget and funding analyses and onsite liaison to

industry contractors and developers of diverse socioeconomic and cultural backgrounds and requirements, sample projects include Designed multiple restaurant project site plans, Musashi, Smithfields, Dairy Queen and Hams, including water and fire suppressant systems, sewer system, mechanical systems, parking, lighting and stormwater drawdown and nitrogen reduction facility.

Education-Licensure-Professional Organizations

- OSHA Certified Construction Safety Trainer, OSHA 30 and 10-hour
- Professional Engineer, North Carolina, No.31324
- Professional Engineer, Virginia No. 25826
- American Society of Civil Engineers
- PhD – Colorado Technical University, Construction Safety. Dissertation – Organizational Direction Influences on Construction Safety
- Master of Science (Civil Engineering), Water Resources, Texas A&M University –Study emphasis – Salinity sources and losses in Brazos River System water resources.
- Bachelor of Science (Civil Engineering), San Diego State University – ABET accreditation.

Study emphasis – Water resources, Hydraulics, Hydrology, and Soil mechanics.

Publications

- Sayger, S. (2025, 2026). Senior Honors Thesis (
- Sayger, S. (2026). CMGT 4000 Estimating course manual chart pack to reduce math, excel and other software deficiencies
- Sayger, S. (2026)CMGT 4010 Estimating 2 course manual chart pack to reduce excel and other software deficiencies
- Sayger, S. (2024). Validity and computational aspect of organizational viscosity in construction safety.
- Wang, W., Hollar, DE., Sayger, S. & Zhu, Z. (2016). Risk considerations in the use of unmanned aerial vehicles in the construction industry. *Journal of Risk Analysis*.
- Sayger, S. (2020). Dissertation – Organizational Direction Influences on Construction Safety.
- Sayger, S. (1992) . Thesis –Study emphasis – Salinity sources and losses in Brazos River System water resources.