

# Kevin G. Lancaster

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## EDUCATION

- **College of Charleston** Master of Science in Mathematics and Graduate Certificate in Operations Research (2020-2022)
  - Mathematics Concentration (Expected Graduation 2022)
    - **Advanced Linear Algebra** with both advanced theory and application of vector spaces, linear transforms, dual spaces, matrix factorizations and norms, determinants, eigenvalues and diagonalization, bilinear forms, projections, orthogonal and unitary transformations, Jordan canonical form, and infinite dimensional spaces, with applications in computation and spectral theory.
    - **Partial Differential Equations** with theory and applications of all three main classes of first and second order PDE in linear and nonlinear forms and both initial and boundary value problems, including various analytical solution methods and Green's and Bessel functions as well as transforms and numerical solution methods.
    - **Applied Abstract Algebra** with specific application of group, ring, and field theory to coding and homomorphism theorems.
    - **Numerical Methods** to approximately solve and simulate various forms of ordinary and partial differential and matrix equations, including approximations of functions, solutions by direct and iterative methods, computing eigenvalues and eigenvectors, systems of nonlinear equations, finite difference and finite element methods, and optimization, as well as an introduction to parallel computing, including practical application of all concepts.
    - **Mathematical Statistics** with an emphasis on proof of the underlying measure theory upon which probability and various fundamental statistics (expected value, variance, correlation, independence, etc.) are built, including Borel and Lebesgue measures and various related theorems.
    - **Bayesian Statistical Methods** including a comparison with classical statistical methods which are extended to include the Bayesian paradigm, as well as Monte Carlo methods, Gibbs sampling, and Metropolis-Hastings algorithms.
  - Graduate Certificate in Operations Research (Expected Graduation 2022)
    - **Linear Programming and Optimization** with an introduction to deterministic models in Operations Research including linear programming, network analysis, dynamic programming, and game theory.
    - **Operations Research** with an introduction to probabilistic models in Operations Research including queueing theory, applications of Markov chains, simulation, integer programming, and nonlinear programming.
  - Additional Coursework
    - **Graduate Teaching Seminar** addressing practical and theoretical aspects of teaching in higher-level education, specifically including the development and use of lesson plans, quizzes, exams, and syllabi, as well as time management and effective teaching techniques for college-level courses.
- **Charleston Southern University** Bachelor of Science in Mathematics with a minor in Computer Science (Programming Emphasis) (2017-2020)
  - **Bachelor of Science – Mathematics**
    - **Single and Multi-variable Calculus** with theory and application, including Physics, Chemistry, and Economics

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- **Linear Algebra** with both theory and application of matrices, systems of linear equations, determinants, vector spaces, and linear transformations. Use of a computer algebra system to apply concepts.
- **Discrete Mathematics and Abstract Algebra** with both “real” and “abstract” concepts of logic, sets, groups, rings, fields, number theory, functions, combinatorics, and proving techniques.
- **Differential Equations** including application for engineering, with various theoretical methods of solving as well as transforms and numerical solution methods.
- **Real Variables** with a rigorous treatment of limits and continuity, differentiation, integration, sequences, and series.
- **Mathematical Statistics** including probability and statistical analysis and modeling
- **Capstone** intensive study of a topic in mathematics, including a research paper with oral presentation and taking the ETS Major Field Test for Mathematics (186/200, 90<sup>th</sup> percentile).
- **Computer Science Minor – Programming Emphasis**
  - **Procedural and Object-Oriented Programming** approaches to problem solving, using C++ and Java, including command-line and graphical methods of user interface.
  - **Business Application Programming** using Visual Basic to provide graphical user interfaces.
  - **Scripting** using Perl, Python, and general shell scripts.
  - **Applied Networking** including an understanding of hardware, protocols, and web application programming in HTML, CSS, PHP, and JavaScript, as well as back-end programming with MySQL.
  - **Ethics in Computing** – part of every course, with research and discussion.

## TEACHING EXPERIENCE

- **Adjunct Professor (Mathematics)** The Citadel (Charleston, SC) (2022-Present)
  - Teaching two sections of MATH 104 (Elementary Mathematical Modeling) and two sections of MATH 119 (Pre-Calculus)
    - Hold Office Hours, proctor and grade tests, quizzes, and homework
    - Teach class meetings
    - Hold Exam Review sessions
- **Adjunct Professor (Mathematics)** Trident Technical College (North Charleston, SC) (2022-Present)
  - Teaching one section of MAT 110 (College Algebra) and one section of MAT 120 (Probability and Statistics)
    - Hold Office Hours, proctor and grade tests, quizzes, and homework
    - Teach twice-weekly class meetings
    - Hold Exam Review sessions
- **Professional Tutor** Charleston Southern University (North Charleston, SC) (2022-2022)
  - Tutoring Bridge Mathematics Program – Intermediate/Remedial Algebra
    - Provide one-on-one extra instruction to supplement classroom instruction and homework
- **Graduate/Teaching Assistant** College of Charleston (Charleston, SC) (2020-2022)
  - Co-teaching one section of MATH 111 (Pre-Calculus)
    - Hold Office Hours, proctor and grade tests and homework
    - Assist with SCAMP online learning system
  - Teaching one section of MATH 110 (College Algebra, course number change)
    - Teach twice-weekly class meetings
    - Hold Office Hours, proctor and grade tests and homework using ALEKS online learning system
    - Host Exam Review sessions
  - Teaching one section of MATH 101S (College Algebra Support)
    - Host weekly class meetings
    - Hold Office Hours, proctor and grade tests, quizzes, and homework

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- Co-teaching one section of MATH 101 (College Algebra)
  - Host Exam Review sessions
  - Hold Office Hours, proctor and grade test using ALEKS online learning system
- Certified Tutor in Center for Student Learning Math Lab
  - Tutor all levels of students in Algebra, Statistics, Contemporary Mathematics, Pre-Calculus, and Calculus
- **Mathematics Tutor** Charleston Southern University (North Charleston, SC) (2018-2020)
  - Tutor all levels of students in Algebra, Pre-Calculus, Calculus, Linear Algebra, Differential Equations, Abstract Algebra, and Statistics
- **Naval Nuclear Instructor**
  - **Journeyman Instructor Training** – Workspace Trainer
    - Provides knowledge and skills required to train personnel in the informal and semi-formal settings of the workspace.
  - **Instructor** – Electronics Fundamentals
    - Teach the basic fundamentals of electronics to prospective Naval Nuclear Power operators in a classroom and laboratory setting. Includes curriculum development, examination writing, evaluation of teaching effectiveness, and counseling of students to improve their level of knowledge and examination scores.

## AWARDS and HONORS

- **Summa Cum Laude** (GPA 3.94/4.0) from CSU
- **Outstanding Student Veteran** (May 2020)
- **Alpha Chi National Honor Society** (April 2018)
- **Military Outstanding Volunteer Service Medal** (March 2013)
- **Navy and Marine Corps Commendation Medal** (March 2013)
- **Three Navy and Marine Corps Achievement Medals** (June 2004, November 2007, August 2009)

## CONFERENCES

- **Texas Instruments Webinar** (Host: Ron Lawrence, 2020)
  - Using Photos, Videos, and TI Technology to Connect Mathematics With the World Around Us
- **Desire2Learn (D2L) OAKS Integrated Learning Management System Webinar** (Host: Mindy Miley, 2020)
  - Overview of OAKS to assist faculty in the transition to all-online coursework
- **Getting Started with Zoom Webinar** (Host: Katie Rose, 2020)
  - Overview of Zoom teleconferencing software to assist faculty in the transition to all-online coursework, specifically addressing potential classroom lecture issues and methods to overcome them
- **ALEKS Webinar** (Host: Jimmy Bartlett, 2020)
  - Assessment and LEarning in Knowledge Spaces is a Web-based, artificially intelligent assessment and learning system
- **VoiceThread Webinar** (Host: Chris Meshanko, 2020)
  - Overview of VoiceThread to assist faculty in the transition to all-online coursework as an asynchronous alternative to synchronous methods (like Zoom)
- **Math Frontiers Conference** (Hosts: Emily DiGiovanna and Noah Evans, McGraw-Hill, 2021)
  - **Keynote Session: The State of Being Stuck** (Ben Orlin, author of *Math with Bad Drawings*)
    - Explore how Andrew Wiles conquered a 350-year-old problem, and what lessons his patient persistence can teach us
  - **Finding Your Fit** (Host: Nathalie Vega-Rhodes, Lone Star College Kingwood (TX))
    - Identifying and Implementing a Corequisite Model

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- Interactive exploration of Corequisite models to identify which one fits the institution and student needs – with experience
- **Learning to (Google) Drive** (Host: Andrew Kennon, FSC Jacksonville (FL))
  - Sparking collaboration and engagement in Statistics courses
  - Leveraging the power of Google Drive, a free service to all students
- **Beyond Math: Supporting the Growth of the Whole Student** (Hosts: Jessica Lickeri and Amy Hatfield, Columbus State Community College (OH))
  - Learn best practices for enhancing study skills, growth mindset, time management, and other foundational skills for students

## WORK EXPERIENCE

- **Adjunct Professor** The Citadel (Charleston, SC, 2022-Present)
- **Adjunct Professor** Trident Technical College (North Charleston, SC, 2022-Present)
- **Professional Tutor** Charleston Southern University (North Charleston, SC, 2022-2022)
- **Graduate/Teaching Assistant** College of Charleston (Charleston, SC, 2020-2022)
- **Mathematics Tutor** Charleston Southern University (North Charleston, SC, 2018-2020)
- **Maintenance Electrician** U.S. Coatings, Inc (Detyen's Shipyard – North Charleston, SC, 2015-2017)
- **Assistant Manager (Shift Manager)** A&E, LLC (Little Caesar's Pizza – Columbia, SC, 2013-2015)
- **Training and Development Specialist** U.S. Navy (NNPTC – Goose Creek, SC, 2009-2013)
- **Assistant Manager (Leading Petty Officer)** U.S. Navy (USS Columbus – SSN 762, 2004-2009)
- **Work Control Technician** U.S. Navy (PHNSY&IMF – Pearl Harbor, HI, 2001-2004)
- **Submarine Electrician** U.S. Navy (USS Alaska – SSBN 732-G, 1998-2001)
- **Submarine Electrician** U.S. Navy (USS Tunny – SSN 682, 1995-1998)

## CERTIFICATIONS AND LICENSURE

- **Naval Enlisted Classification Code (NEC) 9502** Navy Instructor (2009)
- **NEC 3354(N140)/3364(N14S)** Submarine Nuclear Electrical Operator/Supervisor (1995/1999)

## MILITARY EXPERIENCE

- **U.S. Navy** General and Specialized Training: Electrical and Electronics Systems, Nuclear Power Generation and Control, Leadership, and various other aspects of Naval operations, maintenance training.
  - **Naval Nuclear Power Pipeline** (1993-1995)
    - **Completed Nuclear Power School** – highest Electrician's Mate GPA in class.
    - **Qualified Electrical Operator** 12 weeks early during initial Prototype Training at the S5G plant in Idaho Falls, ID.
  - **Leadership Training Continuum** – All ranks available; continuing training throughout career.
  - **Naval Nuclear Instructor**
    - **Journeyman Instructor Training** – Workspace Trainer  
Provides knowledge and skills required to train personnel in the informal and semi-formal settings of the workspace.
    - **Instructor** – Electronics Fundamentals  
Teach the basic fundamentals of electronics to prospective Naval Nuclear Power operators in a classroom and laboratory setting. Includes curriculum development, examination writing, evaluation of teaching effectiveness, and counseling of students to improve their level of knowledge and examination scores.
  - **Quality Assurance Inspector** – Provide knowledge required to accurately assess all aspects of quality assurance program, including inspection procedures, technical documentation and specifications, and record keeping.

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- **Shipboard Gage Calibration Technician** – Provide knowledge and skills required to perform calibration and maintenance of various types of pressure and temperature instruments, including operation and maintenance of standards.
- **Basic Electronic Test Equipment** – Provide knowledge and skills required to operate and maintain all types of electronic test equipment, including multimeters, function generators, and oscilloscopes.
- **Command Financial Specialist** – Assist the command in establishing, organizing, and administering the command personal financial management program by training and counseling of all members of the command in all aspects of personal finance including budgeting, checkbook balancing, and credit management, and referral to professional resources for more serious and dedicated help.
- **Electrical Generator Regulator Operation** – Operation, troubleshooting, and repair of speed and voltage regulators for submarine power generating equipment.
- **Navy Substance Abuse Prevention Program (PREVENT)** – Discussion-based instruction on preventing alcohol/drug abuse for myself and recognizing it in others, including best practices to mitigate negative effects on personnel and mission.