

Jennifer Batson

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- OBJECTIVE:** Former corporate employee from the highly technical field of wireless data telecommunications seeks to use career experience coupled with educational background to teach mathematical and STEM principles in the educational field.
- HIGHLIGHTS:**
- * Effectively demonstrated the ability to transfer knowledge of capacity and performance analysis to both customers and employees alike in both a conference room setting and by using online virtual meeting room applications
 - * 22-year STEM career in which complex mathematical concepts were consistently applied to analyze and simulate wireless voice and data networks
 - * Lived and worked abroad to train and transfer knowledge of wireless networks to local employees
 - * Taught mathematics at Sylvan Learning Center and UTSA's PREP program to students of various ages and backgrounds, spanning from elementary to college level students.
 - * 22 years of working with Microsoft Office applications, including MS Excel, MS Word, and MS Powerpoint.
- EXPERIENCE:**
- 09/18 – Present **EASTFIED COMMUNITY COLLEGE, DALLAS, TX USA**
Adjunct Instructor in Mathematics, STEM
Effectively educates and motivates college students in the STEM fields, primary in Mathematics and Developmental Mathematics.
- Provides students with a written course syllabus, maintains accurate and complete course records, and works with colleagues and division dean to achieve shared goals and visions.
 - Uses technology to facilitate learning and to access data, maintain records, generate reports, and effectively communicate with the school and students on academic progress.
 - Uses MS Powerpoint, MS Word, and MS Excel to assist in educating students in STEM coursework.
- 01/10 – 03/17 **CISCO SYSTEMS, RICHARDSON, TX USA**
Packet Core Capacity and Performance Analyst
Provided customers with extensive capacity and performance analysis of Cisco's wireless packet core network.
- Developed capacity and performance monitoring processes as well as mathematical configuration and dimensioning tools to use for modeling and simulating packet core networks.
 - Created capacity and performance whitepapers based on analytical studies using performance measurements obtained from lab and customer call models from the field.
 - Provided regularly scheduled knowledge transfer sessions in a conference room environment as well as using online software meeting application tools to both customers and differing Cisco business units alike.

- 06/08 – 01/10 STARENT NETWORKS, TEWKSBURY, MA USA
Director, Capacity and Performance
 Provided capacity and performance planning leadership for packet core products; travelled extensively both locally and abroad to lead a team of engineers to develop capacity and performance process such that nodal systems could be effectively modeled and simulated. Created capacity tools, statistical metrics, and processes for all available LTE products.
- 12/01 – 06/08 NORTEL, RICHARDSON, TX USA
Packet Core Wireless Systems Engineer
 Provide engineering and major customers with extensive capacity and performance analysis of Nortel's wireless data solutions.
- 01/01- 12/01 NORTEL, UNITED KINGDOM
UMTS Integration and Acceptance Engineer
 Core Network Integration and Acceptance Engineer responsible for the deployment of Nortel Network's 3rd Generation Wireless Network into European customer networks.
- 12/98 – 01/01 NORTEL-DASA NETWORK SYSTEMS, GERMANY
Product and Systems Integration Tester
 Team Leader for the GSM-R Systems Integration Team. Responsibilities include creating project plans, coordinating testing efforts with primes of each system component being integrated, and presenting the team's status at meetings.
- 6/96 – 12/98 NORTEL, RICHARDSON, TX USA
TDMA, Systems Engineer
 Used mathematical principles to forecast potential capacity impact on wireless voice networks for new service and system improvement features.
- 1994 – 1996 SYLVAN LEARNING CENTER, AUSTIN TX USA
 Taught mathematics spanning from elementary to college level students.
- 1992 – 1994 PREP PROGRAM UTSA, SAN ANTONIO TX USA
 Taught mathematics during the summer as part of UT San Antonio's PREP program, a national STEM enrichment program geared to inspire grade-level students to continue studying STEM fields when they enter into college.

EDUCATION:

University of Texas at Dallas
 M.S. Operations Research, 2003
 (please refer to addendum that provides detail of applicable coursework and how Operations Research is essentially applied MATH)

University of Texas at Austin
 B.A. Mathematics, 1996

PERSONAL:

Strong believer in the importance of being taught a solid math foundation

Highly motivated and effective speaker

Avid traveler interested in experiencing different cultures and living in different regions. Have visited 6 continents, lived on 3, and traveled to over 40 countries.

U.S. Citizen

Summary of 20 Hours of Graduate Coursework in MATH

(2 hours) OPRE 6201: Intro to Operations Research

This course is a basic introduction to important models and solution techniques in Operations Research. Operations Research is concerned with the modeling and analysis of complex decision problems that arise, for example, in production planning, investment management, and resource allocation. The basic theme is that of optimization; that is, through modeling and analysis, we attempt to improve the efficiency of complex systems. The emphasis in this course is on deterministic models, focusing primarily on linear programming and dynamic programming. The development of modeling skills is an important part of the course.

- Linear programming
- Graphical solution method
- Simplex Method
- Sensitivity Analysis
- Dynamic Programming

(3 hours) STAT 5311: Applied Statistics for Management Sciences

- Graphical techniques
- Mean, Median, Variance, Standard Deviation, Range, Quantiles
- Probability, Random Variables and their Distributions
- Bivariate, Discrete, Continuous Distributions
- Inference, Linear Pattern and Regression

(3 hours) MIS 6321 Systems Simulation

This course is an introduction to important aspects of a simulation study, including modeling, simulation languages, validation, and output data analysis. Students are expected to gain a sound theoretical understanding of simulation methodologies. The development of modeling skills is also an important part of the course.

- Simulation Modeling
- Input Probability Distributions
- Random-Variate Generation

- Output Data Analysis
- Variance Reduction Methods

(3 hours) OPRE 6361 Production Planning and Control

Analysis of the production system of a manufacturing organization. Classical modeling and decision methods including simulation methods for stochastic models and exact and heuristic solutions of deterministic models.

(3 hours) OPRE 7330 Deterministic Models in Operations Research

Topics include linear programming, sensitivity analysis and duality, assignment problems, network models, integer programming, nonlinear programming, sequencing and scheduling models

(3 hours) OPRE 6363 Inventory Control

Analysis of deterministic and simple stochastic inventory models. Stochastic periodic reorder models with simple deterministic and simulation solutions. Lot size models and their extensions, reorder point determination, price break, Wagner-Whitin, Modigliani-Holn models.

(3 hours) OPRE 7313 Network Flow

Network flow models and solution algorithms. Matrix representations and properties, max-flow algorithms, min-cost flow algorithms, circulation and feasibility theorems, sensitivity analysis, integrality property of solutions, shortest route methods. Problems with special structure. CPT-PERT, multicommodity flows, matching, traveling salesperson problem.