

Curriculum Vitae - James Frankenfield (Teaching CV, Abridged)

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Summary

An experienced educator, engineer, and scientist. M.Sc. degrees in Physics (Seasonal Snow and Avalanches) and Mathematics (Dynamical Systems) from Utah State University and a B.Sc. degree in Electrical, Computer and Systems Engineering (Semiconductor physics; Systems analysis) from Rensselaer Polytechnic Institute. Teaching experience in almost a dozen schools and universities. Also trained, skilled and experienced in mountain safety and rescue, risk management, and mountaineering.

Education

Degrees:

M.Sc. Mathematics, Utah State, 1990, 3.9/4.0 (Dynamical Systems, Higher Education)

M.Sc. Physics, Utah State University, 1989, 3.9/4.0 (Seasonal Snow and Avalanches)

B.Sc. Computer and Systems Engineering, RPI, 1983 (3.3/4.0)

Additional Graduate Education:

Oregon State University, 1993 (Unsaturated Fluid Flow in Porous Media)

Oceanography, Oregon State University, 1994 (Physical Oceanography)

Civil Engineering, Oregon Institute of Technology, 2009-2013 (Part Time, non-degree)

Standard Exam Scores

(Taken one time; no special preparation, study or courses)

SAT: 760/590 Math/Verbal

GRE: 790/760/610 Quantitative/Analytical/Verbal (97% / 97% / 83%)

Administrative and Leadership Background

Eagle Scout with several Palms

1.5 years in Army ROTC, including leadership courses and labs

Graduate Coursework in Public Administration

President of the Board of Directors, Utah Avalanche Center - 1992-1995

Founder and Executive Director of the CSAC Avalanche Center, est. 1994

Teaching Experience

Higher Education Experience

University of Georgia, 2017-Present

School of Law Invited Lecturer – Legal English

San Diego State University – Georgia, 2016-2019

Calculus and Pre-Calculus for STEM students

“Help Desk” organizer and coordinator

Exam integrity, general program quality, and various other tasks

Oregon Institute of Technology, 2008-2013

Adjunct – Departments of Mathematics and Mechanical Engineering

Course Assistant – Department of Civil Engineering

University of Maryland European Division, 1990-1991

Lecturer – Mathematics, Physics, Computer Science

Utah State University, 1986-1989

Teaching Assistant, Physics and Mathematics

Graduate Engineering Course Developer/Instructor

Rensselaer Polytechnic Institute, 1981-1983

Teaching Assistant, Department of Computer and Systems Engineering

University Courses Taught

RPI = Rensselaer Polytechnic Institute, <http://www.rpi.edu/>

USU = Utah State University, <http://usu.edu/>

UMD = University of Maryland, European Division, <http://www.europe.umuc.edu/>

OIT = Oregon Institute of Technology, <http://www.oit.edu/>

SDSU = San Diego State University, Georgia, <https://georgia.sdsu.edu/>

UG = University of Georgia, <https://www.ug.edu.ge/>

Introductory College Physics - Calculus Based for Engineers (USU)

College and Pre-College Algebra (USU, UMD, OIT)

Modeling and Analysis of Dynamic Systems (RPI, OIT)

Computer Organization and Logic Design (RPI)

Semiconductor Layout and Fabrication – Graduate EE (USU)

Introduction to Chaotic Dynamical Systems – Graduate Engineering (USU)

Basic Computer Skills (UMD)

Engineering Senior Project (OIT)

Closed Conduit Fluid Systems - Water/Sewer/Storm Systems (OIT)

Calculus I and Pre-Calculus (SDSU-Georgia)

Legal English (UG)

Grades 6-12 Experience

2013-2020, Various Schools and Programs

September 2013 – December 2013: Chagler International School, GCSE curriculum.
(This school was later closed by the Ministry of Education.)
Taught physics for grades 9 through 12 and SAT preparation.

September 2013 – February 2016: Queen Victoria British International School, GCSE
Served as Assistant Director responsible for all academic non-business functions.
Taught middle school science, grade 9-10 math and physics, grade 9 chemistry, and
for a short time history.

September 2016 – June 2017: American Academy in Tbilisi (GZAAT),
Standard American curriculum.
Taught grade 12 math and grade 11 physics. Gained experience with the Harkness
method, including limitations and challenges.

Additional experience: In 2016 I began an experiential education program called
“Caucasus Snow School”. Due to limited time and funding so far this was offered on
a trial basis for one public school and one private for four years before the
pandemic. It has been successful and has generated requests from more schools.

Industry Experience

For additional details please request a full unabridged CV.

IBM, 1981-1983; Computer Design, Microelectronics Production Yield Forecasting
Intel, 1984-1985; Process Engineer, Lithography, Microelectronics Fabrication
Morton Thiokol, 1985-1986; Plant Engineering, Rocket Motor Manufacturing

Self-Employment Experience, 1994-Present

AlpenPro (www.AlpenPro.com) – Snow avalanche technical consulting
Mountain Guiding (www.mountain-guiding.com) – Currently inactive
Snow and Avalanche Center (www.avalanche-center.org) - Since 1994
Snow School in Georgia – A new initiative

Research Experience

Unsaturated Porous Media – Oregon State University, 1993-1994
Cloud and Fog Physics – Utah State University Meteorology, 1994
BJT Transistor Physics/Fabrication – Rensselaer Polytechnic Institute, 1984

A full unabridged CV is available on request.