NICOLAS LAVALLE

Naples, FL | **Phone:** 239-266-1911 | **Email:** nicolavaus@gmail.com | **Bilingual:** English/Spanish

Physics, Math, and Computer Science Educator

Highly qualified educator with a **Master of Science degree in Physics** and 7+ years of experience teaching at the high school and university levels. Proven ability to effectively teach AP Physics, AP Statistics, Mathematics, and foundational AP Computer Science (CSA, CSP). Leveraging 20+ years in Solution Architecture and Computer Programming to provide students with a strong, application-focused understanding of STEM concepts and to bridge theoretical physics and mathematics with practical computer science solutions (Python, Java).

Teaching Experience

The Village School of Naples – Naples, FL | **Physics and Computer Science Teacher** | **8/2023 – 7/2025**

- Designed and delivered curriculum for four distinct Advanced Placement (AP) courses: **AP Physics 1, AP Statistics, AP Computer Science A (Java), and AP Computer Science Principles.**
- Integrated project-based learning and hands-on laboratory experiences, including the use of **Python with Raspberry Pi**, to teach fundamental Computer Science topics like algorithms, data structures, and physical computing.
- Continuously adapted pedagogical methods and assessment tools to maximize student engagement and performance across diverse learning profiles.

The University of Toledo – Toledo, Ohio | **Teacher Assistant (Physics)** | **9/1986 – 8/1990**

- Instructed and mentored undergraduate students in freshman physics courses and accompanying laboratory sessions over a period of four years.
- Provided direct instruction and grading for calculus-based and algebra-based physics, demonstrating deep subject matter expertise.

Notre Dame High School – Staten Island, NY | **Teacher (Math, Physics, CS)** | **9/1984 – 8/1986**

- Taught a demanding course load encompassing high school Mathematics (Geometry, Algebra), introductory Physics, and foundational Computer Science principles.

Wagner College – Staten Island, NY | **Physics Instructor (Part-Time)** | **1/1984 – 8/1986**

- Served as a Part-Time Physics Instructor, providing instruction and support for introductory physics coursework.

Education and Academic Contributions

The University of Toledo | **Master of Science in Physics** | Toledo, Ohio

Wagner College | **Bachelor of Science in Physics, *Magna Cum Laude*** | Staten Island, New York

Publications (Demonstrating Research & Academic Rigor)

- "Lattice dynamical model of crystalline DNA: Intermolecular bonds and the A to B transition" (1991)
- "Counter ion Effects on the Physical Properties and The A to B Transition of Calf-Thymus DNA Films" (1990)

Technical and Applied Computer Science Skills

Category	Expertise
Programming Languages	Python (Teaching), Java (AP CSA), C/C++, Basic, Fortran, HTML, XML/XSL
Databases & Systems	SQL (DB2, Oracle, MS SQL, MySQL), UNIX, Linux, Windows
Methodologies	Systems Analysis, Software Design and Development, Agile-Kanban, Quality Assurance Testing

Industry Computer Science Consulting (1990–2023)

Summary of 20+ years of technical leadership in large-scale data architecture and software solutions, showcasing applied Computer Science skills in a professional environment.

- Led over 16 years of consulting and architecture engagements, applying advanced programming and systems analysis skills (Java, SQL, Data Modeling) to solve complex business integration challenges.
- Managed globally distributed technical teams of up to 8 developers, overseeing all phases of the software development lifecycle from requirements gathering to solution deployment.

- Successfully executed complex technology projects involving data integration, quality assurance testing, and system conversions for major clients including World Bank, Boeing, and PepsiCo.

Early Career Roles (Condensed)

- **Systems Analyst / Programmer:** Bellsouth Information Systems, Federated Systems Group, Checkfree Corp/Fundtech Ltd. (Various roles pre-2000 focused on software development and systems integration)