In Your Shoes 42 Years Ago: Thoughts for Incoming MSU Freshmen

CSAM Summer Accelerator Program

Quantitative Sciences

August 11, 2025

Ben Lis, Montclair State – Class of '87

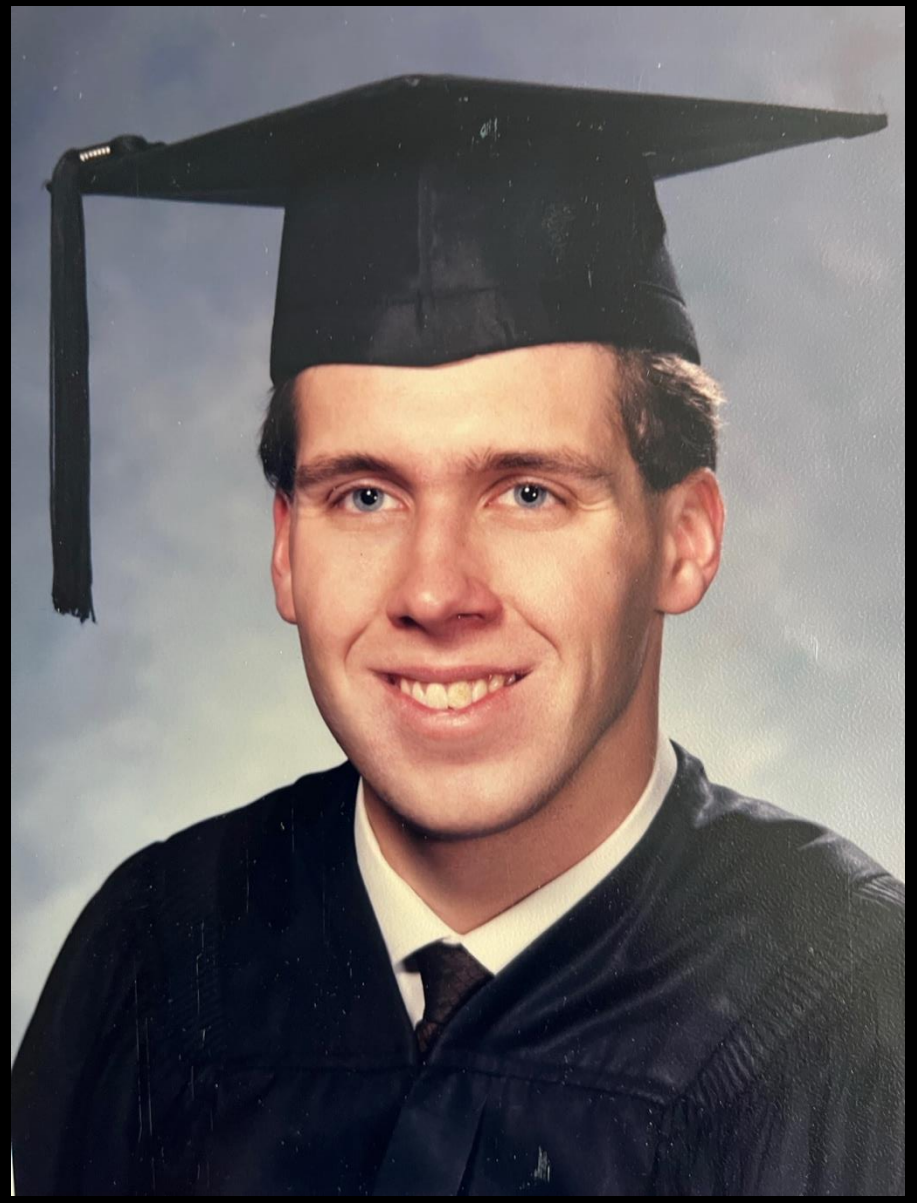
What You’ll Get from this Talk

Practical tips, techniques, and ideas for getting the most from your Montclair State education.

Agenda

- Why Me
- Your Objectives
- Power-Ups
- The Fall Semester
- Discussion with Professors
- Student Q&A

Why Me?



Disclaimer

- Your Mileage May Vary
- Take What Works For You
- Last 40 Years != Next 40 Years

Change has been the Constant in My Career

- 12+ Programming Languages
- Many Operating Systems, Databases, Computers, Methodologies
- 12+ Job Titles
- Different Industries & Organizations

Your Objectives

What do you want to achieve with your degree?

Program Objectives

- Prepared for a professional career or graduate studies in computer science
- Apply computer science principles to real-world problems
- Skills to work effectively within an organization
- Understand ethical, professional and social issues related to the practice of their profession
- Engage in continuous learning.

Continuous Learning

Continuous learning keeps skills updated and relevant.

Embrace new technologies and evolving programming languages.

Seek feedback and adapt to new challenges regularly.

Participate in workshops, courses, and professional communities.

Develop a mindset open to growth and change.

Working Effectively in An Organization

COMMUNICATE EFFECTIVELY IN A VARIETY OF PROFESSIONAL CONTEXTS

FUNCTION EFFECTIVELY AS A MEMBER OR LEADER OF A TEAM

Core CS

- **Analyze a complex computing problem** and to apply principles of computing and *other relevant disciplines* to identify solutions.
- **Design, implement and evaluate a computational solution** to a set of requirements in the context of the program's discipline.
- Apply **computer science theory and software development fundamentals** to produce computing-based solutions.

Gym Analogy

- Repeated Practice → Code, debug, and problem-solve daily, just like regular workouts
- Progressive Overload → Problems get harder, understanding gets deeper and broader
- Professors = Trainers → Teach proper form, set challenges, give feedback
- Seemingly Irrelevant Drills → Small, abstract exercises build hidden strength for real-world challenges
- Goal → Strong enough to design your own “workouts” and tackle complex problems independently

Power-Ups

Academic & Learning Power-Ups

- Use Office Hours Effectively
- Study Groups
- Learning How to Learn
- AI (as permitted)
- Take Advantage of Innovative Curriculum
- Scholarship and Financial Aid Opportunities

Career & Opportunity Power-Ups

- Get a LinkedIn Account
- Internships/Cooperative Education
- Minor or Double Major
- Publish Your Projects on GitHub
- Increase Your Surface Area for Luck

The Fall Semester

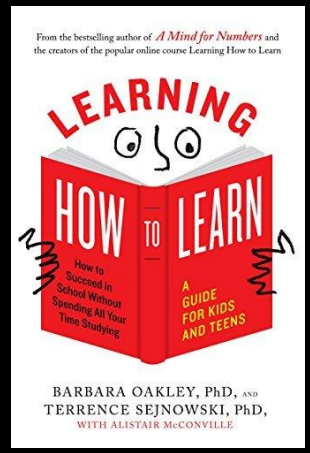
10 Tips for the Fall Semester & Beyond

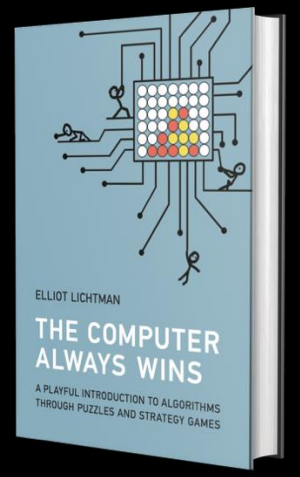
1. Attend Class (and Use Office Hours Effectively)
2. Submit Assignments on Time & Study Effectively
3. Treat Full-Time Study as a Full-Time Job
4. Eat Well, Sleep Well, Stay Active
5. Make Friends
6. Enjoy Yourself
7. Be Kind to Everyone (Including Yourself)
8. Be Honorable (Student Code of Conduct)
9. Don't Stress Yourself Out
10. Ask for Help When You Need It

Study Time Rules of Thumb

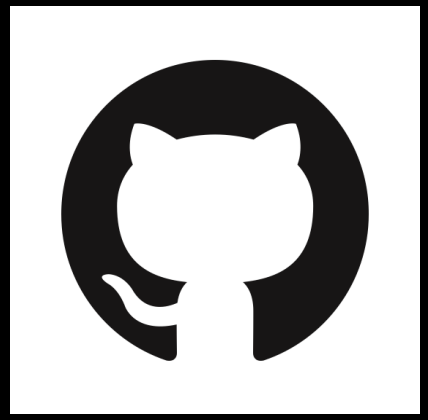
- 2-3 hours for study and assignments for each hour in the classroom
- 3 credit course:
  - 3 hours in class + 6-9 hours per work for study and assignments
  - 9-12 hours per week
- Use a calendar

Things You Can Do Before the Semester





Slides & Contact Info



https://github.com/benjlis/MSU-CSAM-Accelerator-Talk

https://www.linkedin.com/in/benlis/

Discussion


Good Luck!

Appendix

My Career Path