List of Final Deliverables For Your Learning Portfolio
How Earn the Privilege of Assigning Your Own Grade with Jeff Anderson

In this document, you will find detailed guidance on the work you will need to share with Jeff and your learning partners as part of your learning conference process. The goal of sharing is to get corrective feedback on your progress and to build a team of people who can enhance your work.

Assignments that Jeff will Collect from You

☐ Your Mid-Term Learning Self Evaluation Activity

- This is available on our course homepage in two formats (.docx) or (.pdf)
- Please submit a *hard copy* of your work to Jeff by the start of week 6 during class 11.

☐ Your Final Learning Self-Evaluation Activity

- This is available on our course homepage in two formats (.docx) or (.pdf)
- Please submit this by the start of our final in-class meeting of week 12 during class 23.
- This is the assignment where you determine your final grade. I cannot and will not assign a passing grade without receiving this work from you.
- To earn the privilege of assigning your final grade, you will need to complete your learning portfolio to the best of your ability. If you have not completed your learning portfolio (as described below), you will not earn the right to assign your own grade. For more details about how to complete your learning portfolio, please see pages 2 – 5 below.

☐ Final Course Evaluation (Google form)

- I ask for you to complete this in class during week 12 in our scheduled final exam meeting date.
- Remember, we do NOT have regularly scheduled classes during week 12. Instead, we have a special final exam schedule during our final week 12 of the quarter. For more details about what this looks like in our class, see the course calendar(s) on our course homepage.
- To finish this course evaluation, I will provide you with a link to a Google form sometime during week 12. On that Google Form, I ask for your feedback on how to make myself suck less as a teacher. My motto for my career is: "I suck today, but a little less than yesterday."
- This course evaluation is one of the ways I ask for your help to make me a better teacher. This assignment is required: you can think about this like an in-class final exam.

Components of your learning portfolio

Beginning-Level Meta-Learning Activities

☐ Spring 2024, Class 1: Think-Pair-Share Activity to Explore Your Purpose

☐ Spring 2024, Class 2: Think-Pair-Share Activity on Dialogic Peer-to-Peer Learning

☐ Spring 2024, Class 3: Think-Pair-Share Activity On Growth Mindset or Building Deep Reading Systems

☐ Spring 2024, Class 4: Think-Pair-Share Activity on What You Want For Your Portfolio

☐ Conquering College Lab 1: Schedule to Succeed

☐ Conquering College Lab 2: Prepare for Deep Learning

☐ Conquering College Lab 3: Prepare for Flipped Learning

☐ Conquering College Lab 4: Create Your Dream Binder

More Advanced Meta-Learning Activities

Below are several advanced assignments for students who have already completed Conquering College Labs 1 – 4 and finished their first read of the book Ultralearning. If you have not yet finished that work, please do so *BEFORE* you begin your work on these more advanced assignments. Learning how to thrive in school while also engaging in self-directed learning to set a foundation for a career that you love is a process, like getting into good physical shape. If you're new to this type of process, I encourage you to start with the basics in Conquering College Labs 1 – 5. Once you've done your first pass through that work, then I invite you to level up with the more advanced learning skills that I highlight below.

Of course, I do recommend and expect that every student finish some version of Conquering College Lab 1 every single term that you take classes. Moreover, I hope you continue to improve your scheduling, time-management, and productivity systems for years into the future through active self-reflection and by incorporating new ideas, skills, and techniques into your practice. Perhaps the most important skill for learning how to thrive in college and create a foundation for a career you love involves proactively managing how you spend your energy. As you complete Conquering College Lab 1 each academic term, I hope you learn to be very strategic and effective in allocating your energy towards the projects you care about most.

One of my favorite pieces of career advice goes like this: "In life, there are always going to be things that you must do that you do not enjoy. The key to a meaningful career is to position yourself so that as you grow, you spend more and more of your time doing the things you love to do and less of your time on the things that you dislike." The goal of all this work is to help you position yourself in the world so that you can live the life you want and get paid to do the exact type of work you believe in.

☐ Complete the advanced Conquering College activities including work to (1) create effective systems for thriving on in-class, timed exams, (2) build sophisticated systems for taking advantage of office hours, (3) obtain well-written letters of recommendation, and more. For more information, read Jeff's First Welcome Email and the Conquering College homepage.

☐ Build your Get Paid to Learn systems to apply for and earn scholarship money, paid internships, and valuable work study experience to build your resume towards competing for and creating the exact type of work you want to do in your future. To make progress on building a sophisticated scholarship system, check out all of the following resources:
- Read Jeff's Blog Post: Introduction to the Get Paid to Learn project
- Read Jeff's Blog Post: Get Paid to Learn: Advocate for Change
- Read Jeff's Blog Post: Get Paid to Learn: Six Practices to Earn Scholarships
- Read Jeff's Blog Post: Get Paid to Learn: Essential Check Lists to Earn Scholarship Money
- Complete every item in this essential check list including:
  - Read the book: *The Scholarship System* by Jocelyn Paonita
  - Read the book: *How to Write Winning Scholarship Essays* by Gen and Kelly Tanabe
  - Read the book: *The Ultimate Scholarship Book 2024* by Gen and Kelly Tanabe (find the most recent version)

☐ Engage in career development to move from the classroom to the bank. Build your three-resume system by engaging in expert informational interviews with people who have done the exact type of work you want to do in the future. Use those interviews to reverse engineer your resume and position yourself to be a top competitor in whatever space you choose. In speaking about how to do this, many students have asked me questions about how to design their college degrees and what books might be helpful in thinking through this problem. Below I share a common concern and associated books that may help you address this concern in your life.

How do I build reverse engineer my college degree to prepare for the competitive world of paid labor?
- *So Good They Can't Ignore You: Why Skills Trump Passion in the Quest for Work You Love* by Cal Newport
- *Decisive: How to Make Better Choices in Life and at Work* by Chip and Dan Heath
- *Designing Your Life: How to Build a Well-Lived Joyful Life* by Bill Burnett and Dave Evans
- *Informational Interview Handbook: Essential Strategies To Find The Right Career & A Great New Job* by Jeff Neil
- *Ultralearning: Master Hard Skills, Outsmart the Competition, and Accelerate Your Career* by Scott Young

☐ Any reading that you've done this quarter to propel your learning systems. To do this, you might develop and refine your answers to the following questions:

- Key Questions to Build Reading Systems

For more information about how Jeff answers these questions, check out the following resources:
- Read Jeff's What is Deep Reading? blog post
- Watch Jeff's YouTube video: Develop your deep reading systems

Over the years I have coached students, I have had many students ask me for good groupings of books to target specific features of their learning systems. Below are good groups of books for designing common questions I get from students.

How do I build effective productivity systems to get more done with less stress?
- *Getting Things Done: the art of stress-free productivity* by David Allen
- *The Bullet Journal Method: Track the Past, Order the Present, Design the Future* by Ryder Carroll
- *Atomic Habits: An Easy and Proven Way to Build Good Habits & Break Bad Ones* by James Clear
- *Tiny Habits: The Small Changes That Change Everything* by BJ Fogg
- *The Power of Habit: Why We Do What We Do In Life and Business* by Charles Duhigg
- *Willpower: Rediscovering the Greatest Human Strength* by Roy F. Baumeister and John Tierney

How can I use the science of expertise and talent acquisition to become very good at hard skills that I can get paid for?
- *Peak: Secrets from the New Science of Expertise* by Anders Ericsson
- *The Talent Code: Greatness is Not Born. It's Grown* by Daniel Coyle
- *The Little Book of Talent: 52 Tips for Improving Skills* by Daniel Coyle
- *Talent is Overrated: What Really Separates World-Class Performers from Everybody Else* by Geoff Clovin
- *Deep Work: Rules for Focused Success in a Distracted World* by Cal Newport
- *Mindset: The New Psychology of Success* by Carol Dweck
- *Limitless Mind: Learn, Lead, and Live without Barriers* by Jo Boaler

How do I develop a deeply held send of purpose for my life and work?
- *Drive: The Surprising Truth About What Motivates Us* by Daniel Pink
- *Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes* by Alfie Kohn
- *Man's Search for Meaning* by Viktor Frankl
- *The Power of Full Engagement: Managing Energy, Not Time, Is the Key to High Performance and Personal Renewal* by Jim Loehr and Tony Schwartz
- *Grit: The Power of Passion and Perserverence* by Angela Duckworth

How do I become an expert in applied mathematics, pursue a masters or PhD degree, and get paid to do math?
- *101 Careers in Mathematics, 3 Edition* edited by Andrew Sterrett
- Society for Industrial and Applied Mathematics (SIAM) Career Resources page
- SIAM Careers in the Mathematical Sciences Brochure (found at this website)
- *Mathematical Mindsets: Unleashing Students' Potential Through Creative Math, Inspiring Messages and Innovative Teaching* by Jo Boaler
- *How to Solve It: A System of Thinking That Can Help You Solve Any Problem* by George Pulya
- *How to Read and Do Proofs* by Daniel Solow
- *Mathematics and Plausible Reasoning, Volumes 1 & 2* by George Pulya
- *Getting What You Came For: A Smart Students Guide to Earning a Master's or Ph.D.* by Robert L. Peters
- *Handbook of Writing for the Mathematical Sciences* by Nicholas Higham
- *A PhD Is Not Enough: A Guide to Survival in Science* by Peter J. Feibelman
- *Writing Your Journal Article in 12 Weeks: A Guide to Academic Publishing Success* by Wendy Laura Belcher
- *Writing Science: How to write papers that get cited and proposals that get funded* by Joshua Schimel
- *The Only Grant-Writing Books You'll Ever Need, 4th Edition* by Ellen Karsh and Arlen Sue Fox
- *Winning Grants Step by Step: The Complete Workbook for Planning, Developing, and Writing Successful Proposals, 5th Edition* by Tori O'Neal-McElrath, Lynn Kanter, and Lynn English

Course Content Expertise

To practice your meta-learning skills, I ask you to dedicate your best effort to learning the content in this course. Please do your very best to build deep understanding of the course content by building a rich content section of your learning portfolio for this class. As you create their portfolio, please document the strength of your learning. Remember, you may be going on to more advanced coursework that requires this course as a pre-requisite. Thus, as you build your content expertise, do your best to set yourself up for success in future classes that may depend on content from this course

As you build your learning portfolio, imagine/pretend that you might want to use your work for months, years, or decades into your future. Think about your work in this class as providing a potential foundation for part of your future career. I am not claiming you must continue to work on this material after you finish our course. What I'm asking you to do is to be thoughtful about how you spend your time. Here are two different scenarios that are worth considering as you create your portfolio in this class.

Scenario 0:   You treat your work in this class as "required" and expend a bare minimum of effort to learn in this class. You do not think deeply about your learning and put together a portfolio that is teacher-centered (focused on doing what you think the teacher wants). At the end of the class, you give yourself an A in the class and then go on in your education. You don't improve your learning skills, nor do you take the time to engage with this content for your own benefit. A few years after you finish this class, perhaps when you've transferred to your next or maybe in graduate school or working professionally, you realize that you have a deep intellectual need for the work we did in this class this quarter. When you go back to your work from our class, everything you've produced this quarter is useless to your future self because you did not take ownership over your learning this quarter.

Scenario 1:   You begin to imagine that the work you do in this course is for your own learning. You work to create an experience that you feel is valuable. Although you may not have an exact vision for how your future self might use this knowledge, you remain open and hopeful that you can transform the 12 weeks we spend together into future learning and growth. As you build your portfolio, you spend extra time making that portfolio valuable for yourself so that you can return to your work for years to come. You keep an eye on creating learning skills that you can transfer to the next stage of your education. You also do work in this class with the hope of building your resume. You dedicate energy towards growing your career capital so that you can create a career that you love while doing work that makes you happy. You don't worry about having answers to all these difficult questions about your future. Instead, you treat your portfolio as part of the process of learning. A few years after you finish this class, you realize that you need the work we did in this class this quarter. At this moment, you go back to your portfolio, and you can easily access everything you produced. It's as if no time has passed and you dive right back into your work. You can do this because of how thoughtful you were during our class.

With this in mind, I ask you to do your best to organize your portfolio so it is easy to read, easy-to-navigate, and highlights all the work you've done so far to thrive in this class. Pay special attention to setting up this portfolio so that you can continue to build on your work in the coming weeks, months, years, and perhaps decades.

Below are the features of the content-specific portion of your learning portfolio that I will be looking for during our conferences.

☐   Evidence of your mastery of and proficiency in course content

- Your learning portfolio notes to document understanding of YouTube/Textbook lessons.

- To guide your learning in each lesson of the class, please look at and read the content-specific learning objectives for each class Jeff teaches. These are available on our course homepage. Alternatively, you can read click on the following hyperlinks:

  o   http://www.appliedlinearalgebra.com/s/Anderson_M2B_Lesson_Outcomes_Information_v20190323.pdf

  o   http://www.appliedlinearalgebra.com/s/Anderson_Math_1C_Calculus_III_Lesson_Learning_Objectives_20240308.pdf

  o   Engr 11 Lesson Learning Objectives (TBD ASAP, hopefully by spring 2024)

- As you create your notes, please do your best to capture answers to the questions listed for each lesson. I hope you do much more than this: read the textbook, watch the videos, take detailed notes on the material contained there. However, you can use these are major content-specific learning objectives for this class to guide your thinking and check the knowledge you're building. If you're paying attention as you work, you should be able to answer all the questions I pose in each section. If this was an exam-based class, I would create exam questions to address these learning objectives and test your knowledge. Instead, I'm inviting you to do this for yourself.

- Any solutions to practice problems that you are interested in solving.

- Any applied projects grounded in the content of the course.

- Any code that you've written.

- Any special applied projects you've completed.

- Any laboratory exercises that Jeff provided to you in this course.

- Any other work you've done to deep learn the course content (this is the math/engineering specific content in this course).

Track Your Feedback Sessions with Jeff

Make sure that you finish five different learning conferences. In at least two of these conferences, you will present your portfolio and get formative, corrective feedback on the work you present to Jeff. During the other two formative conferences, you will observe your group mates present their work. The fifth and final conference of the quarter be summative and act as a quick check that you've finished the work you said you would. Assuming you successfully finish your work this quarter, the last conference will be brief as a final check to show your completed your portfolio and earned the privilege of assigning your own grade this quarter.

☐   Formative Conference 1A (during Weeks 3 – 4)

     Date:_____   Start Time:_____   End Time: _____

     Presenter:_____   Note Taker:_____

     Changes You Plan to Make After this Conference:

☐   Formative Conference 1B (during Weeks 5 – 6)

     Date:_____   Start Time:_____   End Time: _____

     Presenter:_____   Note Taker:_____

     Changes You Plan to Make After this Conference:

☐ Formative Conference 2A (during Weeks 7 - 8)

Date:_____   Start Time:_____   End Time: _____

Presenter:_____   Note Taker:_____

Changes You Plan to Make After this Conference:

☐ Formative conference 2B (during weeks 7 – 8 of this quarter)

Date:_____   Start Time:_____   End Time: _____

Presenter:_____   Note Taker:_____

Changes You Plan to Make After this Conference:

☐ Final summative conference (during weeks 11 or 12): This is the last conference of the quarter where you present your completed portfolio and highlight the entirety of your work this quarter.

Date of Conference:_____

The most important part of this class is not what we've finished but what we set you up to do in the future. With that in mind, as you prepare your final portfolio work (see above), please consider the following questions:

1. What comes next for you as you keep building your identity as a strategic deep learner?

   a. What books do you plan to read next and why?

   b. What "ultralearning" projects will you finish in the coming weeks/months/years/decades to propel and develop your dreams for your life and your world?

   c. How can you get other people to pay you to learn? How can develop scholarship, internship, and work-study programs to graduate with minimal debt and a nice nest egg that you can use for the next part of your life?

2. What is your purpose for school and work? Why are all the sacrifices you'll have to make to earn your education and build your career worth your effort? Who do you engage in this struggle for? How badly do you want to build your dreams? Why do you want those dreams to come true in your life?

   a. How can you build your identity and resume as a learner so that, when it comes time to launch your paid career, there is "no competition" as you compete for resources in the future? In other words, what can you do on a day-to-day and week-to-week basis so that you are ready for the next steps, and you enjoy a one-and-done experience when you compete for money: you have one set of interviews and then you receive the full-time offer that you desire.

   b. How can you learn *content* in each of your classes to build deep expertise in your chosen field(s) of interest so that, if you ever want to come back to the work you've done, you can remember your learning in great depth within seconds of looking at your portfolio?

   c. How do you use your experiences building content expertise to increase your potential for improved performance and future learning? What kind(s) of content and expertise are most relevant for your future pursuits? How can you get the training now that you'll need to compete for your future career pursuits?

3. What injustice do you see in your world? What systems oppression make you angry or make you wish for a different world? Why do you feel so strongly about these specific forms of oppression? How is this related to your identity and to the type of work you want to do in your future?

   Examples of oppressive systems include racism, sexism, heterosexism, ableism, classism, ageism, anti-Semitism, poverty, and wealth supremacy, to name a few. These systems often prop up larger economic and political systems of wealth extraction, labor exploitation, class marginalization, cultural imperialism, and violence as a tool for domination and control.

   a. What types of problems do you want to solve in the world? Why do you want to solve these problems?

   b. How is the work you're thinking about doing embedded in large systems of oppression? How might you engage in your work to help dismantle those systems of oppression and transform your world to be more democratic, equitable, and empowering of all people?

   c. How is the money you make (both your own income and the profit you make your employer) related to systems of oppression? Whom do you make richer with your labor? What levers of power do you have in your work to transform these systems of oppression from the inside out?

   d. How can you leverage your career capital to do work you care about?